

### Australian Defence Sales Catalogue

### Australian Defence Export Office



2021, Edition 5



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### Foreword

Welcome to the fifth edition of the Australian Defence Sales Catalogue. This year's edition showcases more than 200 quality Australian defence industry businesses across all states and territories. A rise of 25 per cent from 2020. Australia has thousands of small businesses operating in the defence industry sector, with many already exporting, and I am honoured, as Defence Industry Minister, to be leading the work being done to support their activities.

The Catalogue is a major initiative of the Australian Defence Export Office. The office was established to coordinate whole-of-government efforts to drive the export success of Australia's defence industry.

This edition of the Catalogue includes a section on the support available to both the Australian and foreign defence industries, alongside useful information about Australian Defence Export Controls, the Australian Defence Export Office, the Centre for Defence Industry Capability, Team Defence Australia, the Defence Innovation Hub, Export Finance Australia and Austrade.

This year's Catalogue is larger than the previous edition and includes products and services showcased across 10 diverse categories including Space capabilities. Other categories range from Humanitarian Assistance and Disaster Relief, through to Professional Services. Each individual category stream for every company is still featured at the start of the publication for you, the reader, to ascertain the full capability of each company. Like previous editions, you can click through to a company's website from the online version.

The Catalogue also highlights Australian Defence Force platforms that are either surplus to Australia's needs or will shortly be coming out of service. These platforms are available on an international (government–togovernment) sale transfer basis, and partner countries interested in these platforms are encouraged to complete an Expression of Interest.

The Australian Government is investing \$270 billion in our defence capability over the next decade. We are proud of the contribution our defence industry companies are making to the governments of our allies and friends across the globe, and we are keen to continue to promote and grow our innovative defence industry.

I encourage you to use the Australian Defence Sales Catalogue as a guide to the world-class capabilities of Australia's defence industry. I believe the products and services featured here will meet key capability requirements of our international partners, and I commend this edition of the Catalogue to you. If you are interested in seeking further information on the capabilities of Australian defence industry, please discuss with your designated Australian Defence Attaché or contact the Australian Defence Export Office – aust.deo@defence.gov.au



The Hon Melissa Price MP Minister for Defence Industry

# Table of Contents

Index by Alpha Order and Activity	. 3
Introduction	. 8

#### **Section One**

Australian Defence Export Office
Australian Military Sales
Team Defence Australia
Defence Innovation Hub
Export Finance Australia14
Austrade
Sovereign Industrial Capability Priorities
Defence Policy for Industry Participation
Defence Export Controls
Centre for Defence Industry Capability19
International Government-to-Government Process
Expression of Interest Form

#### **Section Two**

Surplus ADF Capability - Land	
Surplus ADF Capability – Sea	 I

#### **Section Three**

Australian Primes and Large Businesses	.31
--	-----

#### **Section Four**

4.01 Electronic	51
4.02 Communications	75
4.03 Development to Delivery	115
4.04 Testing & Sustainment	
4.05 Field	173
4.06 Humanitarian Aid & Disaster Relief	207
4.07 Professional / Training	215
4.08 Maritime	233
4.09 Capability Needs	247
Section Five	
Space Capabilities	

#### **Section Six**

Disposal Scrapping Services

#### Section Seven

mpany Details

# Index by Alpha Order and Activity

Company Name	Section	Page Number	Artificial Intelligence	Autonomous Systems	Communications	Design	Electronic Warfare	Engineering	Field Equipment	Humanitarian	ICT & Cyber	Intelligence, Surveillance &	Reconnaissance	Manufacturing	Medical	Optical	Personal Protection	Research & Development	Robotics	Ship Building	Space Capabilities	Test Equipment	Through-Life Support	Training & Education	Unmanned & Counter	Unmanned Systems	Vehicles & Accessories	Weapons & Ammunition	Other
Advanced Manufacturing Alliance - CDU	4.03	116																											
Advanced Navigation	4.02	76																											٦
Aeromedical Engineering	4.06	208																											٦
AeroPM	4.07	216																											
Aerospace & Mechanical Consulting Engineers	4.03	117			•			-							•			•					•						
Air Affairs Australia	4.01	52																											٦
Allied Data Systems	4.08	234																											٦
AMC Search	4.01	53											1																٦
Amentum Space	5	254											1																٦
AML3D Limited	4.03	118																											٦
ANCA	4.03	119																											
archTIS	4.02	77																											
Asia Pacific Aircraft Storage	4.04	164																											
Aspen Medical	3	32																									+		
Aspire Wellness	4.05	174																									+		
AUCloud	4.02	78																									+		-
Australian Pump Industries	4.08	235																											
Austal Australia	3	34																									+		
Australian Aerospace Corporation	4.07	217																									+		
Australian Defence Apparel	4.05	175																									+		
Australian Performance Vehicles	4.05	177																											-
Australian Patrol Vehicles	4.05	176														-													-
Australian Target Systems	4.03	120														-											+		-
AVI	4.02	79																									+		-
AVT Australia (UAV Vision)	3	54																									+	+	-
Axiom Precision Manufacturing	4.03	121			_	_									_	-											+		-
B&R Enclosures	4.03	122													-				_		-								
BAC Systems	4.05	178			-			-			-		+				-	-					-				+		$\neg$
BAE Systems Australia	3	36																											
Bale Defence Engineering Systems	4.05	179																											
Ballistic & Mechanical Testing	4.03	165																											
Barrett Communications	4.02	80																											
Birdon	4.04	166																											
Bisalloy Steels	4.03	123																											
Black Art Technologies	5	255																											
Black Carbon	4.05	180																											
Black Sky Aerospace	4.09	248																											
Blacktree Technology	4.02	81																											
Blueye Eyewear	4.05	181																											
BMP Precision Engineering	4.03	124																											
Boeing Defence Australia	3	38																											
Cablex	4.02	82																											

Company Name	Section	Page No.	Artificial Intelligence	Autonomous Systems	Communications	Design	Electronic Warfare	Engineering	Field Equipment	Humanitarian	ICT & Cyber	Intelligence, Surveillance & Reconnaissance	Logistics	Manufacturing	Medical	Optical	Personal Protection	Research & Development	Robotics	Ship Building	Space Capabilities	Test Equipment	Through-Life Support	Training & Education	Unmanned & Counter	Unmanned Systems Vehicles & Accessories	Weapons & Ammunition	Other
Carbonix	4.01	55			-	-	-	-	-	-	-		-		-	-	-	-	-		•,						-	-
CBG Systems	4.05	182		_																			_				-	$\vdash$
CGEAR Australia	4.05	183			-	-	-	-	-				-			-		-				-				+-	+	
Chiron Global Technologies	4.05	184																								-	-	H-1
Chironix	4.01	56				_	_							-			-							-			-	$\vdash$
CISTECH Solutions	4.02	83	-	-			_			-		-	-		-			-	-							+-		$\square$
Clearbox Systems	4.02	84			-				-																	+	+	$\left  - \right $
Cobham Aviation Service Australia	4.02	85	-	-	-	-	-					-		-							-	-	-		-	+	+	$\left  - \right $
Codan Communications	4.02	86				_	_			-		-												-		-	-	$\left  - \right $
Cogito Group	4.02	87			-		_	-						-									-			+		$\left  - \right $
Collins Aerospace	4.02	218																								+	+-	$\left  - \right $
Coolon LED Lighting	4.07	125			-		-					-				-							-	-		+	+-	
Craig International Ballistics	4.05	185					_																				+-	┝┻┤
Custom Works	4.03	236				-	_	-										-				-	-			+-	+	$\left  - \right $
CyberMetrix	4.08	230 88					_																			+	+-	$\left  - \right $
Daronmont Technologies	4.02	89																						-		+	+-	$\left  - \right $
Datapod	4.02	90				_		-				-		-					_							+	+-	$\left  - \right $
Defence Communications Industry	4.02	91	-		-		-				-	-														+	+-	$\left  - \right $
DefendTex Military Products	4.02	57			-									_					_				-			+-		$\left  - \right $
Delta Hydraulics		186	-	_			-	-				-					-	-	-		-				-		-	
Direct Edge Manufacturing	4.05						_	-												-			-				<u>'</u>	┝┻┤
Doen Pacific	4.03	126				_	_	_																		+	+-	$\left  - \right $
DroneShield	4.03	127 58	_		_	-	_	-				_					_								_	—		$\left  - \right $
ECLIPS	4.01	- 58 167	•			_	•	_										_								+-	+	$\left  - \right $
Eggler Technology	4.04	-				-	_												_					_				$\left  - \right $
	4.07	219			_		_	•				_				_			_		_		_	•		+	+_	$\left  - \right $
Electro Optic Systems	3	40				_								_												+-		$\left  - \right $
Elphinstone EM Solutions	4.03	128 92			_	-																					'	$\left  - \right $
Envirofluid	4.02						_	_															-			+	+-	
Equatorial Launch Australia	4.05	187					_												_	-	_		-			+	+-	┝┻┤
	5	256																-			-			_		+	+-	$\left  - \right $
ERGT Australia Exact Tech Australia	4.07	220				_		_						_				_			_			•		+	+-	$\left  - \right $
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Ferra Engineering	4.03	130			_	_	_		_									_					_			+	+-	$\left  - \right $
Fiomarine Industries	4.08	237	_			-												•								+	—	$\left  - \right $
Fivecast	4.02	93																								+	—	$\square$
FLAIM Systems	4.07	221																						•		+	+	$\left  \right $
Frontline Manufacturing	4.03	131																								+	+	$\left  \right $
Fugro Australia Marine	4.01	94																								+	+-	$\left  - \right $
Future Fibre Technologies	4.02	95				-					-															+	+	$\square$
GaardTech	4.01	59				_																	_	•		+	+	$\square$
GC Precision Development	4.09	249																										

Company Name	Section	Page No.	Artificial Intelligence	Autonomous Systems	Communications	Design	Electronic Warfare	Engineering	Field Equipment	Humanitarian	ICT & Cyber	Intelligence, Surveillance &	Logistics	Manufacturing	Medical	Optical	Personal Protection	Research & Development	Robotics	Ship Building	Space Capabilities	Test Equipment	Through-Life Support	Training & Education	Unmanned & Counter	Unmanned Systems	Vehicles & Accessories	weapons & Ammunuon Other
General Dynamics Mediaware	4.02	96	~	-	0	-	-	-	-	-	-			~	~	0	-	-	-	0,	0)	-	-	-	<u> </u>		1	
Geng	4.02	132										-	+													-	+	
Geospatial Intelligence	4.03	222				-		-					+													+	+	┽┻┤
Gilmour Space Technologies	4.07	257		-						-	-	-	+			-		-	_				-			+	+	+
Glyde Metal Industries	4.03	133																			-	-			-	+	+	+
Green Eco Technologies	4.03	168						-															-			+	+	
Griffin Marine Services	4.04	134						_	-				-							_						-	+	
H. I. Fraser						_							_	-						-			_			-	+	+
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	4.05	188											-		•				_				-					
Hofmann Engineering	4.03	135						-					_									-					_	+
Holmwood Highgate	4.05	190											-	•				_										+
Hylec Controls	4.03	136											_														+	+
Ideation Product Solutions	4.05	191											_														_	+
Innovaero	4.03	137				-							_														_	
Inovor Technologies	5	258											_	•													+	$\downarrow$
Integrated Design & Engineering Solutions		138				-								•								•	-					
IntelliDesign	4.03	139																									$\perp$	
IPACS Australia	4.08	238																										
Janusnet	4.02	97																									$\perp$	
Jarmyn Enterprise Space	5	259																										
Jenkins Engineering Defence Systems	4.01	60																										
Jet Aviation Australia	4.02	98																										
Kellogg, Brown & Root (KBR)	4.02	99																										
KIAH Health	4.06	209																										
Kord Defence	4.03	140																										•
L3Harris Technologies	3	42																										
LatConnect 60	5	260																										
Leidos Australia	4.02	100																										
Life H20	4.05	192																										
Liferaft Systems Australia	4.08	239																										
Luerssen Australia	3	43																		•								
M4 Medical	4.06	210																										
Marand Precision Engineering	4.03	141																								1		
Marathon Targets	4.01	61																										
Matrix Composites & Engineering	4.03	142																										
Med Rescue Training	4.06	212																									T	
Medical Rescue	4.06	211																									T	
Memko Aviation Aerospace & Defence	4.03	143																								1	$\uparrow$	$\square$
Metromatics	4.03	144																									$\uparrow$	$\uparrow \uparrow$
Microsecure Corporation	4.02	101																									+	
Milspec Manufacturing	4.03	145																										+ -

Company Name	Section	Page No.	Artificial Intelligence	Autonomous Systems	Communications	Design	Electronic Warfare	Engineering	Field Equipment	Humanitarian	ICT & Cyber	Intelligence, Surveillance &	Logistics	Manufacturing	Medical	Optical	Personal Protection	Research & Development	Robotics	Ship Building	Space Capabilities	Test Equipment	Through-Life Support	Training & Education	Unmanned & Counter	Unmanned Systems	Vehicles & Accessories	Weapons & Ammunition Other	
Minecorp Australia	4.05	193																								-			1
Minelab Electronics	4.05	194																								1	-		1
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Moog Australia	4.09	250																											1
MoTeC	4.05	195																										_	1
Neamco	4.03	146																								+	+	-	-
New Touch Industries	4.03	147						_																		+	+		1
Nexus Training Solutions	4.07	224											-	F	-			+		_			-			+	+	+	+
Nobles	4.05	196													-			$\vdash$		_				_		+		+	+
Norcoast Refrigeration Company	4.05	197				-		-														-	-			+		-	-
NORSELD	4.03	148							-	-					-											+	-+	_	-
Norship	4.08	240												F		-					-					+	+		
north Security Digital	4.02	102						-					-										-			+	+	+-	4
Northrop Grumman	3	44									-															-	-	_	-
Nova Systems	4.07	225																								+	+		-
NT Port and Marine	4.08	241		-	-	-	-	-			-							-			-	-		-	-	-	ť	-	-
Ocean Software	4.02	103											-													+	+	+-	4
Ocius Technology	4.01	62			-																			-		+		-	-
Omni Executive	4.07	226		-								-								-						-+-	+	_	-
OPEC Systems	4.05	198			-	-					-	-						-					-		-	-	+		-
Operational Systems	4.02	104			_			-	-	-			-	-	-		-	-			-			-		+	+	+-	4
Orbital UAV	4.01	63									-												-			+		_	-
Pacific Aerospace Consulting	4.07	227				-		-					_	-				-							-	-	-+-		-
Pelican-Trimcast Products	4.04	169		-	-		-	-	-		-	-										-		-		+	+		4
Penten	4.04	105											-								_		-			+	+	+	-
Performance Lubricants Australia	4.02	199	-		-	-	-	ī	-		-	-		-				-				-				-			-
PFG Group	4.03	242						-																					4
Pivot Maritime International	4.00	242																								+	-+-		-
Point Trading Group	4.01	64	-	-	-	-		-					-	-				-		_		-		-		+	+		4
Prism Defence	4.01	65														-				_						+	+	-	-
Prophecy International	4.01	106				-		-					_					-				-		-		+	+		4
QinetiQ	4.02	66									-			-												+	+		-
QPE Advanced Machining & VPG	4.01	149		-	_																					+	+		4
Quartz Internationale	4.05	200						-					-							_	-					+		-	-
Radio Frequency Systems	4.02	107				-		-	-				_	-				-								+	-+-	_	-
RAIDER Targetry	4.02	67			-			-				÷	-		-					_						+			-
Real Response	4.01	229				-	-	-				-	-	-				-	-	_			-	-		+	+	+	4
Redarc Electronics	4.07	150											-	-	-					_						+		+	-
Red Piranha	4.03	108				-		-					-		-					_		-				+	-+	+	-
RUAG Australia											-		-		-			-		_				-		+	+	+	-
SAAB Australia	4.03	151												-	-											$\rightarrow$	+	+	4
SAAD AUSTRAIIA	3	46																									$\square$		

Company Name	Section	Page No.	Artificial Intelligence	Autonomous Systems	Communications	Design	Electronic Warfare	Engineering	Field Equipment	Humanitarian	ICT & Cyber	Intelligence, Surveillance & Reconnaissance	Logistics	Manufacturing	Medical	Optical	Personal Protection	Research & Development	Robotics	Ship Building	Space Capabilities	Test Equipment	Through-Life Support	Training & Education	Unmanned & Counter	Unmanned Systems	Vehicles & Accessories Weapons & Ammunition	Other
Saber Astronautics	5	261			-	-	-		-	-	-		-	-	-	-	-							•	_			
Seeing Machines	4.01	68				-	-				-	-	-					-	_		-					+		
Sentient Vision Systems	4.01	69				-		-				-	-	-										-			-	+-1
Serco Australia	4.08	243	-	-												-										+	+	+
SiNAB	4.07	230				_				-			┼╴		_					-	-		-			+	+	+
SMETEC Services	4.03	152											+											-		+		+
Solutions from Silicon	4.02	109						-					+	-									-			ť	+	
Sonartech Atlas	4.02	110									-		+													+	+	
Southern Launch	5	262		-		-												_								+	+	+-1
Spee3D	4.03	153				-		-													-					+		+
Stahl Metall	4.03	154				-		-		-			+-								-		-	-				+
Stealth Electric Bikes	4.05	201		-	-	-	-	-	-				+			-		-	-	-	-		-					+
Storemasta	4.05	202				-							+	-				-								ť	+	+
Supacat	3	45																								+		+
Supashock	4.01	70				-												-										+
Sure Aqua Corporation	4.06	213	-	_									-					_	_	_	_	_	_			Ŧ	-	+
TAE Aerospace	4.04	170							-	_																+	-	+
Tectonica Australia	4.02	111																								+	-	+
Textron Systems Australia	4.01	71																								+	+	+
Thales Australia	3	48											+													+		
Thomas Global Systems	4.03	155	-	_															_		_							
Titomic	4.03	156																								+	-	+
Toolcraft	4.03	157																								+		
Trakka Systems	4.05	203											+													+	+	+ - 1
Trellis Data	4.01	72																								+	-	+
Tropical Reef Shipyard	4.08	244																								+	-	+
Tufwrap Australia	4.04	171																								+	+	
Ultra Electronics Avalon Systems	4.02	112																								+	+	+ - 1
Universal Motion Simulation	4.07	231											1					•								+	+	
Universal Site Monitoring	4.05	204																								1		+1
Varec	4.03	158																								+	-	+
Varley Group	4.03	159																								1		+
Versalux Lighting System	4.08	245																								╈	-	
Verseng Group	4.04	172																								1		+1
VIPAC Engineers & Scientists	4.03	160																								╈	-	+
W&E Platt	4.03	161																								Ţ		$\square$
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The Whiskey Project	4.08	246																								+	+	+ 1
ХТЕК	4.05	205																								$\uparrow$		
ZCG Scalar	4.02	113																								+	+	+ 1
Zone Products Australia	4.01	73																										$\square$

### Introduction

The Australian Defence Force (ADF) upgrades and replaces equipment progressively and routinely disposes of surplus equipment. Australian Military Sales (AMS) is the group responsible for managing the sale and transfer of surplus ADF equipment inventory to approved foreign government customers under international Government-to-Government transfer arrangements. Not all equipment is available now, however an 'Expression of Interest' (EOI) form (available within this Catalogue and AMS website) can be completed and emailed to AMS for governments wishing to discuss availability.

This is the fifth year AMS has produced the Australian Defence Sales Catalogue (the Catalogue). Editions are available in hard copy as well as soft copy, downloaded from the AMS website at https://www1.defence.gov.au/business-industry/export/australian-military-sales

The Catalogue also includes an Australian defence industry section, where various defence industry companies have been selected to showcase their products and services. These companies represent a cross-section of defence industry from every state and territory within Australia. They have committed to research and development and in many instances the products and services listed have been used by the ADF, developed for use or development is supported by Defence. If you are interested in any of the listed products and/or services please complete the EOI form or visit the company's website. You can do this by clicking on the company's logo at the top of each page on the online PDF version of this Catalogue. A full list of company websites, with a hyperlink (for the online version) is listed at the back of this edition of the Catalogue.

This Catalogue is edition 5.

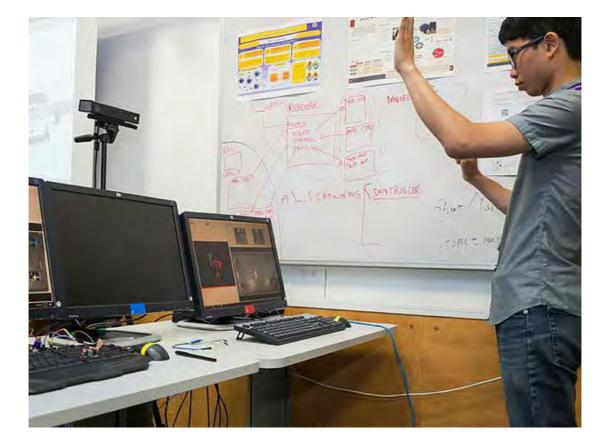
Note: Inclusion of items in this catalogue does not constitute or guarantee availability to any or all parties.

The approval for the sale of defence equipment from Australia is undertaken via a process independent from AMS to ensure appropriate governance. A Defence Export Permit may be required – for further information please refer to Defence Export Controls, on page 18.



# Section One

### **Australian Defence Industry – Doing Business**



### Australian Defence Export Office

#### Defence Export Strategy – helping build a sovereign and sustainable Australian defence industrial base

The Defence Export Strategy (the Strategy) is the Government's plan to support Australian defence industry to achieve greater export success. Over the next decade, the Australian Government's Strategic Goal is to achieve greater export success to build a stronger, more sustainable and more globally competitive Australian defence industry to support Australia's Defence capability needs.

The Defence Export Strategy allows the Australian Defence Export Office (ADEO) to shape important strategic partnerships with Australia's current and future defence partners.

#### The Australian Defence Export Office – the focal point to export support

The ADEO coordinates whole-of-government export support for Australian defence industry. The ADEO works closely with Austrade, the Centre for Defence Industry Capability, the Department of Foreign Affairs and Trade, the Export Finance Australia and Australian defence industry to realise export success. This support includes attendance at international trade shows with Team Defence Australia; targeted



international trade missions; inclusion in the Australian Defence Sales Catalogue; Government-to-Government transfers of defence related materiel and high-level advocacy through the Australian Defence Export Advocate.

The ADEO coordinates engagement with a network of Defence Attachés and Austrade offices, providing advice and support to help Australian defence industry access export opportunities. In collaboration with Austrade, Business Development Managers have been appointed in the United States, United Kingdom, Germany, France, Indonesia, and Japan to further expand our international reach and engagement. The ADEO works across government and industry to understand export opportunities and tailor support to industry through available resources and international networks.

In addition to the Australian Defence Export Advocate, the ADEO utilises senior military reservists for export advocacy, including during trade shows and targeted trade missions. The ADEO also supports Australian industry through advocacy from ministers and senior leaders in the Department of Defence.

To understand how the ADEO can assist your business in its export endeavours, visit the website www.defence.gov.au/Export/Office or email aust.deo@defence.gov.au

### Australian Military Sales



Australian Military Sales (AMS) is part the Australian Defence Export Office. The role of AMS is to support Australian sovereign capability and military sales programs as well as promoting the Australian defence industry through:

- International Government-to-Government sale, gifting or other transfer of surplus Australian Defence Force (ADF) articles
- International Government-to-Government purchase of Australian origin, sensitive technology, and ADF articles
- Supporting Australian defence industry to export to foreign government customers.

The Australian Defence Sales Catalogue (the Catalogue) is a key aid in assisting AMS to achieve their tasks. The Catalogue provides information on surplus ADF equipment for sale across the Air, Land, Sea and Joint domains to foreign government customers. An 'Unclassified' Expression of Interest (EOI) must be completed in accordance with the AMS process in order to commence discussions. The form is treated in confidence. Completion of an EOI does not commit any party to purchase.

AMS offerings are presented in four broad groupings, being:

- 1. Available now materiel and capability systems in the disposals process.
- 2. EOI materiel and capability systems are still in service with the ADF, but may be subject to intensive management if interest is expressed.
- 3. Allied technology Australian defence industry solutions, for which AMS can act as the broker (if requested) for Government-to-Government sales.
- 4. Other capability.

#### Please note:

- Completion of an EOI does not constitute a commitment but rather registers a foreign government's interest in a
  product/service/capability. Likewise there is no guarantee the capability will be available.
- An expression of interest form may be called upon for public release by law under the Australian Freedom of Information Act 1982 (FOI Act).
- Advice on other surplus ADF capability, not catalogued here, may be obtained by contacting AMS.

Equipment information pages identifying the type, quantity, origin and availability of equipment, products and services including any export controls are enclosed. Although not catalogued, equipment spares, and support and test equipment will be available for sale as part of any major item sale or can be sold separately.

Availability dates are a guide only and may be subject to change. Some equipment will be subject to Country of Origin, Foreign Government export approvals. For instance, United States International Traffic in Arms Regulations (ITAR) and require United States Department of State approval. Equipment is offered on the basis of 'as is, where is'.

For further information please email AMS at AMS.mailbox@defence.gov.au

#### Copyright

Commonwealth of Australia

### Team Defence Australia



Sitting in the Australian Defence Export Office (ADEO) Team Defence Australia is the national platform for exportcapable Australian defence and dual-use companies to showcase their goods, services, technology and solutions at international trade events.

Team Defence Australia works with defence industry to help prepare Australian delegation's attendance at overseas and online trade events to provide advocacy and ensure they maximise their international exposure.

Exhibiting with Team Defence Australia is free, with successful companies responsible for their individual expenses. Team Defence Australia provides free space on the custom-built National Pavilion, pre-event support and advice including Austrade's network of business advisors, invaluable senior military support and advocacy, defence industry specific market insight briefings, networking opportunities, B2B matching and on-site support at the show.

Team Defence Australia is supporting small businesses to promote their capabilities to the international market during the COVID-19 pandemic through virtual international trade shows, online trade engagements and offering an Online Pitch Training Program.

Team Defence Australia leverages the ADEO's International Austrade Business Development Manager and Defence Attaché network to engage with overseas businesses and foreign militaries to identify opportunities and provide introductions and advocacy for Australian defence industry.

For details of upcoming international trade events and information on how Team Defence Australia can help your business, email us at **teamdefence.australia@defence.gov.au** 

### **Defence Innovation Hub**



The Defence Innovation Hub provides opportunities for research organisations and Australian businesses of all sizes to put forward innovative technology proposals that can enhance Defence capability. The program accepts proposals that are ready to enter different stages of the innovation process from concept exploration, to technology development, prototyping, demonstration and evaluation. The Hub will invest over \$800 million over the decade with Australian industry to mature and develop innovative technologies that can enhance Defence capability. The Hub runs an open call for proposals against defined innovation priorities, through which industry can submit proposals to Defence 365 days of the year. From time to time the Hub also runs Special Notices, novel challenge-based solicitations that seek innovative solutions to specific Defence capability challenges.

Between its launch in late 2016 and June 2020, the Defence Innovation Hub signed 148 contracts with Australian businesses and research institutions valued at over \$240 million in innovative defence technologies. This investment in Australian innovation is driving the development of a wide range of cutting-edge and world-first technologies to enhance Defence's warfighting capabilities. Hub investments in 2019–20 included over \$46 million in uninhabited and autonomous vehicle technology, around \$10 million in space-related technology, and around \$9 million in radar-related technology.

As the Hub's portfolio continues to mature, its investment in technologies that are closer to delivering defence capability is increasing. Technology developed through projects managed by the Hub has begun transitioning to Defence acquisition programs. For instance, electronic warfare technology developed through a project managed by the Defence Innovation Hub has transitioned into the Modernisation of Maritime Electronic Warfare program. Other Hub technologies are now approaching the stage at which they could be considered for potential acquisition and export ready. A number of technologies featured in this catalogue have received funding from the Hub, including: ECLIPS's Joint Modular Intermodal Logistics System (JMILS), Ocius's Bluebottle, SiNAB's Phoenix JTAC Training Solution (PJTS), and Kord Defence's Rifle Input Control (RIC) system.

For more information about the Hub, visit www.innovationhub.defence.gov.au/

### **Export Finance Australia**



Australian Government



#### About Export Finance Australia

Export Finance Australia is the Australian Government's export credit agency. We help build Australia's export trade by providing Australian businesses with finance solutions to support their export growth.

We provide financial expertise and solutions to support Australian defence exports across a range of sectors including engineering, advanced manufacturing and software. Through our loans, guarantees and bonds we enable SMEs and defence primes to take on export opportunities. We can also provide financing to overseas buyers of Australian defence exports and to companies working in defence export supply chains.

#### The Defence Export Facility

As part of the Defence Export Strategy, we also administer the US\$3 billion Defence Export Facility.

This Facility gives the Australian defence industry the confidence to seek new direct export and supply chain contracts, knowing there is a source of finance available. It also allows us to better help businesses receive the finance they need to grow internationally.

Critical minerals resources and related infrastructure projects are also eligible for finance through the Defence Export Facility. Where the critical minerals have applications to strategically important end-uses, such as for Defence applications, and are otherwise in Australia's national interest, funding may be available through the Facility.

#### What Defence Businesses Can Export Finance Australia Support?

As Australia's export credit agency, we have a track record of helping Australian defence exporters across multiple sectors such as air, land, sea and cyber security to help them win defence contracts overseas or in the export supply chain.

#### Our Criteria

For us to provide our financial solutions, the transaction must:

- Have the necessary level of Australian content or benefit to Australia;
- Be commercially viable; and
- Have the required defence export permit or in-principle approval from Defence Export Controls.

#### Contact Export Finance Australia

For more information on how we could support you, please call us on 1800 093 724 or visit exportfinance.gov.au





Australian Trade and Investment Commission

The Australian Trade and Investment Commission – Austrade – contributes to Australia's economic prosperity by leveraging our deep commercial knowledge and relationships of our international and domestic networks, and the badge of government, to promote trade and attract productive foreign direct investment into Australia. This includes helping Australian businesses, including those in the defence industry, develop international markets for their products and services.

Austrade signed a Memorandum of Understanding (MoU) with the Australian Defence Export Office (ADEO) in 2018. The MoU sets in place arrangements for Austrade and the ADEO to work together – both in Australia and overseas – to support Australian defence exporters. Using its global network covering 49 markets, Austrade:

- connects export-ready Australian businesses to overseas opportunities and works with them to achieve commercial outcomes;
- providing authoritative commercial insights and information to help businesses make informed export and investment-related decisions; and
- provides 1-1 assistance with international market selection and market entry/expansion strategies, identifying partners and arranging tailored introductions.

Austrade has appointed specialist Defence and Security Sector Directors to enhance support for Australian defence exporters. Directors have commenced work in France, Germany, Indonesia, Japan, Singapore, the United Kingdom and the United States of America.

Austrade also supports and delivers a number of activities and programs to support defence exporters, such as:

- supporting Team Defence Australia trade shows through arranging business matching meetings and providing market intelligence;
- delivering targeted defence and dual-use business missions to key defence markets in partnership with the ADEO;
- leveraging our Landing Pads program to support market-ready defence and dual-use startups and scaleups to expand – https://www.austrade.gov.au/landingpads; and
- financial assistance for exporters through our Export Market Development Grants scheme https://www.austrade. gov.au/australian/export/export-grants

Defence exporters can also benefit from Austrade's above mentioned services to support other elements of their business. Notably, Austrade can help businesses to enter or expand into other sectors such as services and technology, infrastructure, international health, tourism and regional investment, resources and energy, food and agribusiness, education and advanced manufacturing and space.

For more information on how Austrade can assist companies succeed internationally, please visit www.austrade. gov.au or email the defence industry team at **defence@austrade.gov.au**.

## Sovereign Industrial Capability Priorities

#### What are Sovereign Industrial Capability Priorities?

Sovereign Industrial Capability Priorities are capabilities that are critical to Defence and must be developed or supported by Australian industry. This means Australia must have access to, or control over the skills, technology, intellectual property, financial resources and infrastructure that underpin the Priorities. The Priorities represent a subset of the industrial capabilities that Defence relies on to deliver its core objectives and will be managed closely across defence and industry planning.

Sovereign Industrial Capability Priorities are those industrial capabilities assessed as:

- operationally critical to the Defence mission;
- priorities within the Integrated Investment Program over the next three to five years; or
- in need of dedicated monitoring, management, and support due to their industrial complexity, Government priority, or requirements across multiple capability programs.

The Sovereign Industrial Capability Priorities identify a number of elements of the Australian defence industrial base at a capability rather than company or technology level. This encourages innovation in existing technologies and provides flexibility in supporting current critical capabilities.

The initial ten Sovereign Industrial Capability Priorities are (in no particular order):

- Collins Class submarine maintenance and technology upgrade
- Continuous shipbuilding program (including rolling submarine acquisition)
- Land combat and protected vehicle and technology upgrade
- Enhanced active phased array and passive radar capability
- Combat clothing survivability and signature reduction technologies
- Advanced signal processing capability
- Surveillance and intelligence
- Test, evaluation, certification and systems assurance
- Munitions and small arms research, design, development and manufacture
- Aerospace platform deeper maintenance and structural integrity.

Defence has released Implementation and Industry Plans for three of the Priorities:

- Land combat vehicle and technology upgrade
- Combat clothing survivability and signature reduction technologies
- Munitions and small arms research, design, development and manufacture Implementation and Industry Plans for the remaining Priorities will be released by the end of 2020.

The Sovereign Industrial Capability Priorities will be reviewed periodically to align with changes in broader strategic planning, including the 2020 Defence Strategic Update and Force Structure Plan.



### **Defence Policy for Industry Participation**



#### Defence Policy for Industry Participation

The Defence Policy for Industry Participation (the Policy) was launched in March 2019. The Policy extends the requirement to maximise Australian Industry involvement in Defence materiel and non-materiel procurements over \$4 million, and to construction services over \$7.5 million.

The Policy's core element is to maximise opportunities for Australian industry to participate in Defence procurements. The approach requires tenderers to demonstrate appropriate and formal consideration of Australian industry locally and nationally with an industry schedule or plan that forms part of their tender response. This new approach will be implemented as follows:

- Procurements valued less than \$4 million no specific Australian industry tenderer documentation required.
- Procurements valued between \$4 million and \$20 million an Australian Industry Capability Schedule.
- Procurements valued at \$20 million or more an Australian Industry Capability Plan.
- Construction services valued at \$7.5 million or more a Local Industry Capability Plan.

Implementation of the Policy, including guidance material for industry, will continue over 2021.

For more information, visit: http://www.defence.gov.au/SPI/Industry/AIC.asp

All inquiries should be sent to: aic.info@defence.gov.au

### **Defence Export Controls**

#### Regulating the Export of Defence and Strategic Goods and Technologies

Australia's export control framework is a key element of the Defence Export Strategy. Defence Export Controls (DEC) administers Australia's export control framework, which operates to ensure Australian trade in military and dual-use goods is consistent with our strategic priorities and the national interest. If you wish to export, supply, publish or broker goods and technologies on the Defence and Strategic Goods List, you must have a permit in specified circumstances. The Defence Export Controls website provides information on when a permit is required and how to apply to obtain a permit – https://www.defence.gov.au/ExportControls/Default.asp

DEC also facilitates membership into the Australia community for the purpose of the Australia-US Defence Trade Cooperation Treaty. More information is available: https://www.defence.gov.au/ExportControls/TradeUSA.asp

In accordance with Australia's export control legislation, all applications considered by Defence are subject to a rigorous risk assessment process. This process considers Australia's international obligations, including under the Arms Trade Treaty, as well as considerations relating to foreign policy, human rights, national security and regional security.

All export applications are administered online through the Defence Export Controls System (DECS). Before submitting an application, exporters must register for a DECS Client Registration Number (DCRN) on the DEC website (http://www.defence.gov.au/ExportControls/). Once you have a DCRN, you may then apply online for:

- a new permit to export, supply, publish or broker military or dual-use goods or technology (including for transshipment through Australia and for repair or return purposes);
- multi-party (project) permits and permits to match contracts;
- an in-principle assessment;
- a permit to export, supply or publish items previously granted in-principle approval; and
- a renewal of a permit or an in-principle approval.

Defence understands that exporters require quick, clear decisions to be commercially competitive. You can help us to provide you with a timely response to your application by ensuring that all the required information is supplied at the time of lodgement. You can do this by ensuring that:

- all sections on the application form are complete and accurate
- a dollar value is included for all items to be exported
- supporting commercial documents are provided (i.e. contracts, purchase orders)
- an end-user certificate is provided when requested by Defence Export Controls. 'DEC03' (commercial entity end-use) and 'DEC04' (foreign government end-use) end-user certificate templates are available on the DEC website (https://www.defence.gov.au/ExportControls/Forms.asp).

You can explore how your goods, technology and specific business activities are subject to export controls using our online tool, available at https://dsgl.defence.gov.au

Defence Export Controls can be contacted by:

- Phone: 1800 66 10 66, or +61 2 6266 7222 from outside Australia
- E-mail: ExportControls@defence.gov.au
- Postal Address:

Department of Defence Defence Export Controls R1-3-A003 PO Box 7901 CANBERRA BC ACT 2610



# Centre for Defence Industry Capability





CENTRE FOR DEFENCE INDUSTRY CAPABILITY

Should your business be in this catalogue?

Is your Australian business:

- thinking about exporting?
- looking to expand its export markets?
- seeking access to global supply chains?

#### The Centre for Defence Industry Capability can help.

We work closely with the Australian Defence Export Office and multinational defence companies to help Australian defence businesses improve their export competitiveness and identify international business development opportunities.

Our national network of Defence Business Advisers and Defence Industry facilitators supports Australian defence businesses with:

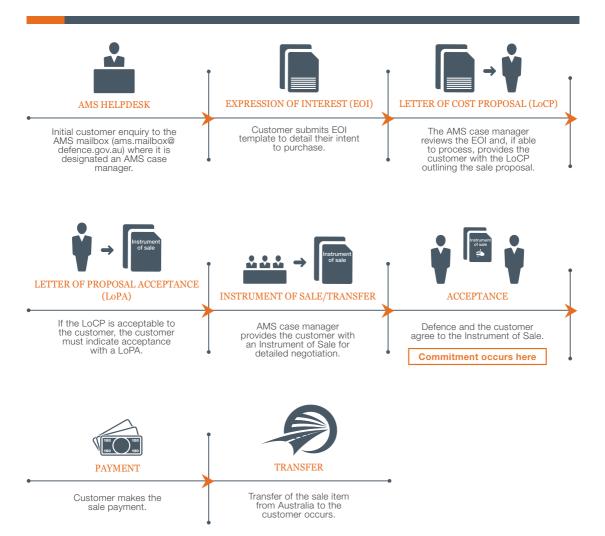
- defence readiness and business maturity assessments, with diagnosis and advice on business improvement strategies for performance in a global marketplace
- facilitated access to defence multinational primes, including through the Global Supply Chain Program
- advice on Defence export controls
- export-related grants and financial assistance.

Defence Global Competitiveness Grants from \$15,000 to \$150,000 are also available to invest in projects that overcome barriers to accessing export opportunities.

Find out how we can help your business connect with export opportunities: business.gov.au/cdic – 13 28 46

# International Government-to-Government Process

### Generic Transfer Flow Chart



### **Expression of Interest Form**



#### **Expression of Interest Form**

Australian Military Sales (AMS)

Please tick appropriate box

ADF equipment Expression of Interest

1: Customer details		Defence industry Expression of Interest
Contact person		
First and last name		
Designation		
Company / Organisation name		
Government or Industry sector		
Address		Country
Email	Telephone	Mobile
	Include area and country code	Include area and country code

#### 2: Product details

Product name		
L Model name / Number (where k Г	nown)	
Quantity requested		
Spares requirements		
Training and support requiremen	nts	
Date required	Intended use	Further information
3: Authorisation		
Authorising officer	Signature	Date
FOR OFFICIAL AMS USE	E ONLY	
Date received	AMS reference number	Action officer
	] [	

Please note: This is an Expression of Interest only and does not constitute a formal agreement or contract between the Australian Government and the customer. For further information on the AMS purchasing process email ams.mailbox@defence.gov.au. All Expressions of Interest are treated as in-confidence unless mutually agreed otherwise. Please note this Expression of Interest may be called upon for public release by law under the Freedom of Information Act 1982 (FOI Act).

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# Section Two

**Australian Defence Force Platforms** 

A Defence Export Permit may be required for the products and services shown on each of the following pages.



## Australian Light Armoured Vehicle (ASLAV) - Family of Vehicles





Australian Light Armoured Vehicle (ASLAV)
LAV25 vehicles from Canada
General Dynamics Land Systems – Australia (GDLS-A)
Yes
Type 1 (general purpose); Type 2 (command, personnel carrier, ambulance & surveillance); Type 3 (fitters & recovery)
Yes
Yes
EOI sought now. Phased withdrawal planned from 2020 delivering up to approximately three Squadrons or up to 12 Troop level capability bricks)
25mm Bushmaster chain gun, 7.62mm pintle mount, smoke dischargers

### **Product information**

The Australian Light Armoured Vehicle (ASLAV), based on the LAV25 vehicle, continues to deliver the Australian Army's armoured, combat reconnaissance and surveillance capability. It is an eight (8) wheel drive, amphibious vehicle modified to deal with Australia's harsh environmental conditions. The ASLAV fleet, of 253 vehicles in seven variants, is designed to require minimal logistic support when deployed.

The ASLAV Type 1 is fitted with an electric turret, enhanced drive train, improved thermal optics, integrated laser range finder, run flat tyres, small arms resistant armour, internal spill protection and a fire suppression system. Selected vehicles are fitted with remote weapon stations.

### Availability

Expressions of Interest are sought for individual vehicles and capability brick offerings: Troop (5 vehicles - general purpose and personnel carrier variants); Squadron (17 vehicles - general purpose, personnel carrier, ambulance and fitters variants).

# **Bushmaster Protected Mobility Vehicle**



Platform	Bushmaster Protected Mobility Vehicle
Orgin	Australia
Original equipment manufacturer / through-life support partner	Thales Australia
Spares and support equipment available?	Yes
Variant	Troop carrier, ambulance, command, assault pioneer, air defence, mortar
ITAR approval required?	No
Australian Export Control approval required?	Yes
Availability	EOI sought now. Phased withdrawal planned from 2030
Weapon systems	Weapon mounts for up to three systems, ability to fit remote weapons station
Powerplant	MTU 6 V 199 TE 20

#### **Product information**

The Bushmaster is a highly mobile, ballistic, mine and improvised explosive device (IED) resistant Protected Mobility Vehicle which provides a high level of crew and passenger protection and survivability through its mobility and monocoque v-shaped armoured hull.

Operated by the Australian Army and Royal Australian Air Force (RAAF) Airfield Defence Guards, the Bushmaster family of modular armoured vehicles offers high levels of protected mobility for combat, combat support and combat service support troops across a diverse range of mission profiles including troop movement, command and control (C2), electronic warfare, air defence, assault pioneer, direct fire support, route clearance and medical evacuation. The Bushmaster is air portable in C-130 aircraft.

#### Availability

Expressions of Interest are sought for individual vehicles and capability brick offerings: Platoon (four vehicles – Troop carrier variant), Company (17 vehicles – Troop carrier, C2 and ambulance variants).

## Australian M113AS4 Armoured Personnel Carrier – Family of Vehicles



Platform	Australian M113AS4 Armoured Personnel Carrier
Orgin	United States – upgraded in 2012 under Australian M113AS4 upgrade project
Original equipment manufacturer / through-life support partner	Upgrade by BAE
Spares and support equipment available?	Yes
Variant	Personnel Carrier, C2, Ambulance, Mortar Carrier, Fitters, Recovery, Combat Service Support
ITAR approval required?	Yes
Australian Export Control approval required?	Yes
Availability	EOI sought now. Phased withdrawal planned from 2025 delivering up to approximately three Squadrons or up to 12 Troop level capability bricks)
Systems	Electrically powered turret fitted for M2A2 QCB 0.50cal MG
Powerplant	MTU 6 V 199 TE 20

#### **Product information**

The Australian Army fleet of M113AS4 Light Armoured Tracked Vehicles are based on an Australian upgraded version of the United States M113AS1 Armoured Personnel Carrier and is an all-terrain vehicle designed to protect and transport its crew and up to ten combatant personnel.

The M113AS4 incorporates armour resistance to small arms fire, ballistic plating for mine blast protection and spall curtains to maximise personnel survivability. The vehicle is capable of rapid deployment by road, rail, sea or air and designed for highway, off-road and cross-country travel while combat laden.

### Availability

Expressions of Interest are sought for individual vehicles and capability brick offerings: Troop (4 vehicles – Personnel Carrier variant); Squadron (17 vehicles – personnel carrier, C2, ambulance, fitters and recovery variants).

### 81mm F2 Mortar System



Platform	81mm Mortar System
Orgin	Australia
Original equipment manufacturer / through-life support partner	OEM-Australian Defence Ordnance Factory / Through Life Support provided by Australian Army and in-house contractor support
Spares and support equipment available?	Yes
Variant	Nil
ITAR approval required?	No
Australian Export Control approval required?	Yes
Availability	Approximately 150 systems
Weapon systems	Nil

#### **Product information**

The 81mm Mortar F2 is a smooth bore, muzzle loaded, high angle of fire weapon with a total weight of 36.6 kg. The mortar is a derivative of the British 81mm Medium Mortar, which was developed in the United Kingdom by the Royal Armament Research and Development Establishment at Fort Halstead. The 81mm Mortar F2 was manufactured under license by the Ordnance Factory Maribyrnong Victoria Australia circa 1976.

#### Availability

Expressions of Interest are sought for the 81mm Mortar System. Approximately 150 F2 Mortar Systems are available for sale. Each system comes complete with a L16A2 Barrel, Blast Attenuating Device, a L5A4 Mortar Mount Bipod and Base Plate. Maintenance records and repair parts are also available upon request. Product detail can be provided on application.

## EC-665 Armed Reconnaissance Helicopter Tiger



Platform	EC-665 Armed Reconnaissance Helicopter Tiger
Orgin	Airbus Europe
Original equipment manufacturer / through-life support partner	Airbus Australia Pacific
Spares and support equipment available?	Yes
ITAR approval required?	Yes
Weapon Systems	30mm cannon, 70mm rocket, AGM-114 Hellfire, Roof Mounted Sight

### **Product information**

The ARH Tiger is a two seat, attack helicopter designed to perform a wide range of missions by day and night and in adverse weather conditions. The Tiger's shape, agility, integrated sensors and weapon systems make it suitable for operating in both reconnaissance and fire support roles. The Roof Mounted Sight (RMS) affords the pilots sensors that can support a range of tasks including but not limited to escort, precision fire support, reconnaissance, and battlefield command and control. The weapon systems includes the HELLFIRE missile, 70mm rockets and 30mm off axis cannon which allows commanders the ability to achieve precision kinetic effects in support of the joint force.

#### Availability

From withdrawal from service; not before 2028.

### Underway Replenishment Ship – Ex HMAS SIRIUS



#### **Product information**

SIRIUS has a full load displacement of 46,755 tonnes, is 191.3 metres in length, with a beam of 32 metres and a draught of 11 metres. Propulsion machinery consists of a single propeller shaft driven by a single Hyundai B&W 6S 50MC diesel, supplemented by a bow thruster.

Top speed is 16.5 knots and the ship has a range of 16,000 nautical miles at 14 knots. Sirius can carry up to 34,806 cubic metres of fuel, including 5,486 cubic metres of helicopter aviation fuel, plus 240 tonnes of dry stores carried in a container deck designed for twelve 20-foot intermodal containers.

SIRIUS is fitted with two underway replenishment points, one on each side, allowing the replenishment of two ships simultaneously. A helicopter landing platform is fitted aft and the ship is fitted with two 70 man lifeboats and two Rigid Hull Inflatable boats. The ship is armed with five 12.7 mm (50 cal) machine guns. The ship's company in Royal Australian Navy service has been 8 officers and 46 sailors.

#### Availability

The ship is planned to be available from December 2021. Please submit an Expression of Interest for further detail.

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# Section Three

### Australian Primes and Large Businesses

Aspen Medical Austal Australia BAE Systems Australia Boeing Defence Australia Electro Optic Systems L3Harris Technologies Luerssen Australia Northrop Grumman SAAB Australia Supacat Thales Australia

A Defence Export Permit may be required for the products and services shown on each of the following pages.



### Aspen Medical

# aspenmedical

Field Equipment | Design | Humanitarian | Logistics | Medical



#### **Company Overview**

Aspen Medical is a global provider of innovative and tailored healthcare solutions. Aspen Medical can provide a scalable and agile solution, from deploying a single nurse or paramedic through to a full spectrum deployable field hospital capability with field medical training services, ambulances, aeromedical evacuations and a full complement of clinical staff. Aspen Medical specialises in providing healthcare in remote, challenging and austere environments.

Aspen Medical is the only commercial organisation in the world certified by the World Health Organization (WHO) as an Emergency Medical Team for surgical and infectious disease clinical response.

Services offered include:

- primary healthcare
- occupational healthcare
- emergency healthcare
- environmental and public health
- disaster and humanitarian response capability

#### Service Information

- dental and allied health
- aeromedical evacuation (AME)
- government health programs
- specialised military medical training
- deployable mobile hospitals (Role 1–3)

Aspen Medical offers Defence clients a turnkey field or garrison healthcare solution which can include facilities, equipment, staffing, medical evacuations, training, consultancy, environmental and public health services. Aspen Medical has supported Defence both in Australia and overseas. Our significant experience in providing complete deployed healthcare services to military clients both in conflict and disaster zones, as well as in peace time, ensures supply of fit-for-purpose solutions with rapid execution, delivered in concert with military logistics infrastructure.

Aspen Medical is a leading provider globally of healthcare solutions in the Defence environment, specialising in onbase health services for Defence personnel, battlefield casualty first aid training and providing mobile deployable hospital solutions and other medical equipment to Defence forces internationally. Aspen Medical has supported the Australian Defence Force (ADF) and other international Defence forces on overseas missions in remote, challenging or under-resourced locations, and is proud to have delivered a broad range of multidisciplinary medical and allied health services to 52 Defence sites around Australia covering 80,000 personnel.



In addition to on-base healthcare expertise, Aspen Medical also provides Primary Healthcare, Emergency Health, Dental Health and Aero-Medical Evacuation (AME) services to Defence forces on overseas missions. As a Registered Training Organisation (RTO) Aspen Medical has provided world-class training in battlefield casualty first aid and were contracted by the Australian Department of Defence to deliver the 'Care of Battle Casualties' first aid training course to all personnel deploying to the Middle East. Aspen Medical also provides medical equipment to Defence forces including incinerators and deployable mobile hospitals.

Aspen Medical capabilities include:

- deploying highly-trained medical and specialist personnel with field experience for short and long term durations
- · establishing temporary soft or hard-skinned medical facilities, including equipment, to any location around the world
- developing and delivering a variety of military-centric healthcare training packages, including combat first aid training, Care of the Battle Casualty training, CBRNE response and customised programs
- providing commercial charter or dedicated air ambulance evacuation services globally.

#### Availability:

- clinical workforce deployment available rapidly within 48 72 hours globally, including disaster response capabilities
- Aero-Medical Evacuation (AME) services available immediately upon request
- Defence Training packages available immediately upon request. Customisable for a range of tactical scenarios and settings to suit your local needs
- medical facilities custom design and manufactured typically within 1 6 months depending on size, scale, features and system requirements

### Austal Australia



Design | Engineering | Manufacturing | Research & Development | Shipbuilding Test Equipment | Through-Life Support | Training & Education

#### **Company Overview**

Austal is Australia's global shipbuilder, defence prime contractor and maritime technology partner; designing, constructing and supporting revolutionary defence and commercial vessels for the world's leading operators.

For over 32 years, Austal has designed and constructed (and continues to deliver) more than 340 vessels for over 121 operators in 59 countries, gaining an enviable reputation for innovative shipbuilding and sustainment, using advanced technologies and processes.

From safe, modern shipyards located in Australia, the United States, the Philippines and Vietnam - and service centres located around the world - Austal offers naval, government and commercial operators the highest quality ships, systems and support.

Defence vessels designed and built by Austal include multi-mission surface warfare combatants, such as the Independence-class Littoral Combat Ship (LCS) for the United States Navy, military high-speed support vessels, such as the Spearhead-class Expeditionary Fast Transport (EPF) for the United States Navy and High Speed Support Vessels (HSSV) for the Royal Navy of Oman.

Austal Australia also designs, constructs and sustains an extensive range of patrol boats for navies, law enforcement and border protection agencies globally; including the Cape-class Patrol Boat for the Australian Border Force, Royal Australian Navy and the Trinidad and Tobago Coast Guard.

Complementing Austal's capabilities in shipbuilding and sustainment is the company's expertise in the development and integration of advanced vessel control and information management systems, such as MOTION CONTROL and MARINELINK that enhance seakeeping and information management. Austal also provides a wide range of in-service support and sustainment services, vessel repairs and maintenance, crew training and instruction and inventory and parts management.

#### High Speed Support Vessel 72

The HSSV 72 is an all-aluminium, high-speed military catamaran that offers fast, multiple-mission SEA LIFT capability; deploying up to 260 embarked troops (and 69 crew), vehicles and cargo, with medium lift aviation support including a deck for helicopters and/ or Unmanned Aerial Vehicles (UAV's).

With a maximum speed of 38 knots and a shallow draft of just 3 metres, the HSSV is an agile, adaptive intra-theatre support vessel ideal for a range of military, search and rescue, humanitarian or disaster relief (HADR) missions.



#### The HSSV 72's large

900sqm vehicle deck, pivoting roll-on/roll-off stern ramp and large 12 tonne gantry crane enable quick payload transfers in any port and the deployment of Fast Response Craft (FRC's) and other equipment such as Unmanned Underwater Vehicles (UUV's) and/or Unmanned Surface Vessels (USV's).

Unlike traditional, single purpose monohull naval vessels, the HSSV can transport more troops, vehicles and equipment, quickly to remote locations, with no or little port infrastructure required.

#### Armidale Class Patrol Boat (ACPB)

Since launch in 2005, the Armidale-Class Patrol Boat (ACPB) fleet has proven to be an effective, reliable and versatile patrol boat platform, operating with the Royal Australian Navy throughout Australian and international waters. Based on Austal's proven aluminium monohull patrol boat platform, developed over the past 20 years, the Armidale Class is ideal for a range of border patrol, surveillance and maritime security and support missions; including illegal drugs and people smuggling interdiction, bio-security and environmental monitoring and search and rescue.

The vessel features two fast response craft (FSC) that may be launched off the port and starboard, allowing the quick deployment of crew for interception, boarding operations or rescue missions.

#### Cape Class Patrol Boat (CCPB)

The Cape-Class Patrol Boat (CCPB) continues to set a new international benchmark for patrol boat design, construction and performance, with enhanced capabilities and amenities providing greater mission flexibility and crew productivity.

The Cape Class is ideal for a range of border patrol, surveillance and maritime security and support missions; including illegal drugs and people smuggling interdiction, bio-security and environmental monitoring and search and rescue. In 2020, the Royal Australian Navy ordered six additional Capes to further enhance is existing fleet of Armidale and Cape-Class Patrol Boats and delivery of these vessels is due to commence from Sept 2021.

The vessel features two fast response craft (FSC) that may be launched simultaneously off the port and starboard, allowing the quick deployment of crew for interception, boarding operations or rescue missions.

#### **Guardian Class Patrol Boat (GCPB)**

The Guardian-Class Patrol Boat (GCPB) is the latest in Austal's proven patrol boat platform that has seen more than 80 vessels delivered to naval, coast guard and auxiliary services around the world since 1998. The 39.5 metre vessel is a steel monohull with a beam of 8 metres and loaded draft of 2.5 metres. With a top speed of 20 knots the vessel has a range of 3,000 nautical miles (@12knots) and can accommodate 23 crew.

The Guardian-Class features a fast response craft (FRC) stern launch and recovery system that allows the deployment of the 6.35 metre long RHIB (ships' boat), underway. The Guardian-class is a cost effective solution ideal for a range of low-level maritime security and support missions, including border patrol and search and rescue.

Austal has is constructing 21 x GCPB's for 12 Pacific Island nations and Timor Leste under the Commonwealth's Pacific Patrol Boat Replacement Project (SEA3036-1), a key element of the Pacific Maritime Security Program (10 vessels delivered as at March 2021).







### **BAE Systems Australia**



Communications | Design | Engineering | Intelligence, Surveillance & Reconnaissance | Logistics Manufacturing | Research & Development | Test Equipment | Through-Life Support | Training & Education

### **Company Brief**

BAE Systems' advanced defence technology solutions protect people and national security, keeping critical information and infrastructure secure. For more than 65 years we have searched for new ways to provide our customers in Australia with a competitive edge across air, land, sea, cyber, space and electronic domains. BAE Systems provides innovative solutions and critical capabilities that perform optimally in complex environments, ensuring the customer maintains the capability edge required. We employ a skilled workforce of some 4,100 people in more than 40 locations across Australia and work closely with local partners to support economic development by transferring knowledge, skills and technology. Our work helps keep Australia safe and contributes to creating a more prosperous and innovative nation.

### Mantlet Miniature ESM



### **Product Information**

Mantlet is suited to low altitude, short range engagements as well as long range high altitude engagements. It's a Miniature ESM for all platforms requiring high performance operating in high density modern electromagnetic environments. Mantlet detects, identifies and categorises complex emitters, whilst recording data for further analysis. This data can give the foundation of a true sovereign ELINT capability, enabling users to take control of their own EW databases and threat libraries whilst providing the capability to create and tailor library files for sovereign needs.

Availability Mantlet<sup>™</sup> is currently in production and subject to a nine month lead time

### High Frequency Systems<sup>1</sup> Cross Domain Solutions<sup>2</sup>





### **Product** information

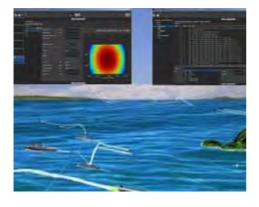
High Frequency Systems<sup>1</sup> – A family of advanced, off the shelf HF transmitter and receiver building blocks for extremely high performance HF radar, sounder and communications systems. Proven multi-channel digital receiver, waveform generation, frequency management and timing reference sub-systems to support HF systems applications. BAE Systems can also provide design and integration capabilities to build custom system level HF solutions. BAE Systems is a global leader in the design, build and operation of HF Wide Area Surveillance and HF communications systems.

#### Availability 6-12 months

**Cross Domain Solutions**<sup>2</sup> – Cross Domain Solutions comprise BAE Systems Data Diode hardware and associated data filtering and orchestration software. It enables the secure sharing of classified information between segregated networks that typically operate at different security classifications. It is unrivalled in preventing data leakage and preserving confidentiality and integrity in highly secure environments. It enables unidirectional transfer of data between segregated source and destination network and prevents reverse data flow - controlling the risk of threats designed to covertly breach and exfiltrate sensitive data. The solution is accredited for use in Defence and intelligence services internationally.



#### Ship Air Defence Model (SADM)



#### Airborne Test and Evaluation | Future Advanced Threat Simulator (FATS) | Mercury Neo – Defence Formal Messaging

SADM is a maritime air defence simulation tool, offering high fidelity operational analysis of Task Group level air and surface warfare engagements. Scientists, engineers, military tacticians and operators are able to collaborate on maximising ship survivability and enhancing mission effectiveness, with SADM providing detailed characterisation of ships, weapons and sensors and their interactions with the Radio Frequency (RF) and physical environments in open sea and littoral operating areas. SADM is in service with the navies and research establishments of 13 nations.

Availability < 3 months

### Airborne Test and Evaluation/ Future Advanced Threat Simulator (FATS)



**Airborne Test and Evaluation** - The BAE Systems Airborne Test and Evaluation (T&E) capability enables civilian and defence customers to develop and prove their products (as pod payloads) in a flexible and cost effective manner.

The capability leverages off standard (20" Diameter Pod and Lightweight Instrumentation Pod) designs which can be cleared for flight off of a customer's aircraft platform (either fixed or rotary wing). A turn-key pod operation can be supplied covering design, manufacture, I&STW and flight clearance to CASA regulations.

**Future Advanced Threat Simulator (FATS)** is a third generation Anti-Ship Missile threat simulation product offering Navy customers

the ability to trial their ASM countermeasures and overall ship preparedness in peacetime. The core FATS capability is a radar system simulating ASM threats in I, J and K frequency bands. FATS is designed to operate in Laboratory, Clifftop, Flight and HWIL configurations. Transfer between configurations is enabled via common hardware and software blocks.

Software tools permit customers to plan trials and program the FATS to emulate the emissions, and processing of the ASM. Where required, custom algorithms may be employed. In Flight configuration, FATS requires customer aircraft to have a suitable wing pylon. The FATS equipment is battery powered. Secure wireless links enable communication between operator, pod and ship. The FATS currently operates as an Active RF ASM emulator. Future phases will implement Passive RF, Passive EO and Dual Mode seekers.

#### Mercury Neo – Defence Formal Messaging



Mercury Neo provides the ADF its core C2 messaging capability. It delivers a web-based user interface which presents a modern look and feel that is similar to commonly available public messaging applications. The product also interacts with "thick client" variants of formal messaging, allowing messaging to be extended to users operating with limited bandwidth (e.g. fleet and deployed units).

Mercury Neo offers a range of advanced features. They include a graphical user interface, attachments to formal messages, rich text message content, receipts and delivery notifications, X509 digital signatures, X500 compliant addressing and enhanced interoperability with allies utilising multiple message format standards.

The product also supports extensive logging and reporting of message activity, routing of messages dependant on message classification, security caveats and a comprehensive management UI. BAE Systems is able to tailor an implementation of the messaging system to meet client needs and can provide through-life product support.

### **Boeing Defence Australia**



Autonomous Systems | Communications | Engineering | ICT & Cyber | Intelligence, Surveillance & Reconnaissance Research & Development | Space Capabilities | Through-Life Support | Design, Electronic Warfare | Test Equipment | Other

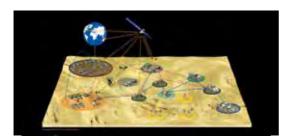
### **Company Brief**

Boeing Defence Australia is integral to the region's defence industry. We design and deliver advanced communication systems including the Currawong Battlespace Communications System and Defence High Frequency Communication System, a world-leading system for critical redundancy.

Boeing designs, develops and sustains integrated mission systems including the Wakulda Battlespace Management System, a command and control system for unparalleled situational awareness, and E-7A Wedgetail, one of the most advanced air battle management capabilities globally.

As prime for all Boeing platform sustainment our "best of Boeing" approach optimises reliability, availability and capability.

### Currawong Battlespace Communications (Land 2072 Phase 2B)



Boeing's next-generation battlespace communications system provides wideband connectivity for deployed military forces without infrastructure, supporting a growing need to securely transfer voice, video and data with different security requirements from tactical to operational and strategic headquarters. The Currawong Battlespace Communications System is designed to be interoperable, agile and scalable using a family of ruggedised modules and advanced networking capabilities. The Currawong system can interface to a wide variety of telecommunications bearers, including satellite, line of site radio, troposcatter, optical fibre and two-wire copper cable. The fit-for-purpose design also includes the secure use of the Internet for flexible connectivity. This scalability delivers a system designed to evolve with the needs of the modern military.

Designed in collaboration with end-users, it also features a sophisticated Mission System Manager with an intuitive user interface for planning and management of the network.

### Tactical Edge Server (TES)



Passively cooled, ruggedised computing platform with server class performance and storage for battlefield de-centralised "Edge" computing. Industry standard and upgradeable computer modules, currently providing Gen6 Intel Xeon processor, 48GB of RAM and two configurable solid state drives.

Options include later Intel Processors and other options through M.2 slots. Qualified to military standards, the TES optimises compute capacity without compromising size, weight and power.

Multiple TES modules may be connected via 10Gbps for distributed requirements. Australian designed and manufactured for the Land 2072 Phase 2B Currawong Battlespace Communication System and also utilised on Land 400-2 in the Boxer Combat Reconnaissance Vehicle (CRV).

#### Radio Interface System (RIS)



The RIS is a rugged hardware platform that hosts analogue and digital radio gateways and supports IP networking, routing and Radio over Internet Protocol (RoIP). It provides the flexibility to bridge disparate tactical radio networks together with physical and soft telephony and when used with deployed or strategic networks it extends the range of tactical radio nets.

The RIS hosts a web-interface to enable users to access connected tactical radio nets locally or from anywhere in the network.

The RIS is designed to integrate with the Currawong Battlespace Communications System, but can be deployed as a standalone device.

#### External Network Access Point (ENAP)



The ENAP provides network automation, network security and intrusion detection in a reduced form factor that allows smaller teams of users to connect using untrusted networks of opportunity.

Designed into a <2kg packaged for flyaway operation, the ENAP incorporates advanced routing technology with simplified management. The ENAP provides connectivity in unplanned environments utilising multiple concurrent external secure connections to maximise network availability.

#### Deployable Data Centre Assembly (DDCA)



Serving 50-500 users with multiple security domains, the DDCA incorporates routing, switching and server functionality with integrated efficient cooling, 8kW diesel generator, UPS and flexible capacity to support applications, voice, video and data. Rapid deployment and automated management simplifies network establishment and adaptability over many communication technologies including integrated High Capacity Line Of Sight mast and SATCOM options. Features include Power Management, blackout and remote operation.

### **Electro Optic Systems**



Communications | Intelligence, Surveillance & Reconnaissance | Optical Space Capabilities | Through-Life Support | Weapons & Ammunition

### **Company Brief**

Electro Optic Systems (EOS) an Australian-owned technology and manufacturing company has been operating in the defence, space and communications markets for over 35 years. EOS' products incorporate a range of technologies including advanced electro-optic and microwave applications based on core technologies in software, laser, electronics, optronics, gimbals, telescopes and beam directors, as well as precision mechanisms and high-end broadband radio transceivers and satellite communications-on-the-move terminals. EOS owns all intellectual property along with complete vertical design allowing for long-term obsolescence management.

### Turret – T2000

### **Product Information**

The T2000 establishes a new technology standard for medium calibre turrets, with advanced features not previously offered in a fully integrated solution that accommodates either 30 or 40mm medium cannon solutions. It is fully integrated with the R400S and R150S remote weapon systems (RWS) and has active protection, through armour vision and embedded simulation. The EOS common user interface ensures that any operator already trained on an EOS RWS can directly transition to the T2000 at a much lower training burden. For organisations with military vehicle fleets comprising multiple platforms and weapon configurations this provides significant cost savings in training, as well as easing the on-going training and annual qualification burdens for all turret or weapon system operators.



### Remote Weapon System - R400S

### **Product Information**

The R400S operates single or dual weapons. In single weapon configuration, weapons mounted range from 5.56mm MG to M230LF 30x113mm cannon and 40mm AGL. In dual configuration, it operates both 30mm cannon and 7.62mm MG, or 40mm AGL and 7.62mm MG. Both configurations can mount ATGM (e.g. Javelin). Its variant, the R150S, is the world's lightest RWS capable of operating machine guns up to and including the 12.7mm. The R400S' optical ISR sensor package operates to sub-milliradian system accuracy with a common interface that is compatible with other EOS RWS. The R400S is currently in service with the Australian Defence Force and seven international customers.



# Counter Drone Defence System – Mopoke

### **Product Information**

Based on the proven EOS R-Series remote weapon systems, Mopoke is a fully integrated, scalable counter unmanned aircraft system (CUAS) suite combining specific detection, command and control (C2), and layered hard and soft kill defeat capabilities necessary to acquire, track, and defeat swarming UAS threats. The Mopoke CUAS configuration incorporates direct fire engagement systems, passive and active soft kill electronic warfare systems, an integrated sensor suite – including pulse-Doppler, software defined radar, day/thermal camera, laser rangefinder, and radio frequency detection systems – plus an optional directed energy hard kill effector (pictured). These systems sit together with, and are integrated through, a proprietary C2 and fire control system developed by EOS.

### Space Domain Awareness

### **Product Information**

EOS develops equipment, systems and facilities for space domain awareness (SDA). Tracking facilities consist of Australian-designed and developed beam director telescopes, high-powered laser systems, enhanced imaging systems and high accuracy timing and positioning systems. EOS also develops and integrates fully autonomous software control for space sensor networks and provides SDA services. Its space object tracking and characterisation far exceeds current accuracy and sensitivity standards for military and commercial space operations. EOS uses active and passive (laser) tracking technologies that are fully operational from LEO to GEO and beyond, and maintains its own substantial space object catalogue that is updated on a daily basis.

### **Continuous Wave Laser Systems**

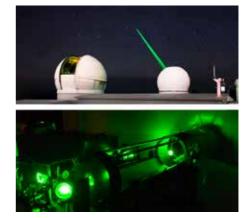
### **Product Information**

EOS' laser technology can be supplied as OEM modules or integrated into space domain awareness or counterspace applications. Its pulsed laser systems deliver high repetition rate and energy pulses for precise and far-reaching, range finding applications with multi-Joule pulses. EOS' lasers operate at either nanosecond or picosecond timescales with wavelength flexibility spanning infrared to visible. Its continuous wave laser systems generate high intensity outputs of controlled profile and excellent beam quality for delivery through agile beam directors. This allows energy and dwell time on targets to be maximised at both close and orbital ranges.









### L3Harris Technologies

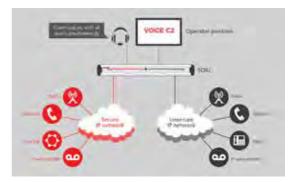


Design | Electronic Warfare | Engineering | Intelligence, Surveillance & Reconnaissance Manufacturing | Optical | Research & Development | Through-Life Support

### **Company Brief**

With a focus on communications, electronic warfare, and build-to-print manufacture, L3Harris in Australia has provided R&D, engineering, manufacturing, supply chain management and sustainment services for advanced technology solutions to government and commercial customers across the region for more than 25 years.

Today, the company has facilities in major cities including Brisbane, Melbourne, Canberra, Sydney, Perth and Adelaide – and employs approximately 520 professionals who understand the unique needs and challenges of customers in the region.



As part of a worldwide organisation, L3Harris customers benefit from global technology and knowledge transfer both in to and out of Australia, ensuring best in the world technologies for the ADF and our allies.

L3Harris' national network supports program execution, business development and government relations, and incountry support and sustainment, including system integration, training, maintenance, and logistic services.'

### Voice C2 Red/Black VCS



### **Product Information**

VOICE C2 Red/Black voice communication system (VCS) provides air defence operators with nationwide access to all assets, including simultaneous access to multiple security domains (secure/non-secure) via a single headset and touchscreen. It provides conferencing and communication with air-toground and ground-to-ground assets such as fixed telecommunications, mobile devices, and radios.

The isolation of secure and non-secure voice and data communications is achieved through streamlined switching equipment, tested to the TEMPEST requirements of NSTISSAM 2/95.

### Contract manufacture and sustainment of military-grade electronics

### **Product Information**

L3Harris can manage the manufacture of military-grade electronics from specification to development, through to full-rate production in low or high volumes. With over 15 years' experience managing complex and high risk technical projects, they can engineering assistance and full project management services including production planning, component procurement, scheduling, subcontract management, environmental qualification testing, sustainment, and complex logistics coordination.

The company has an exemplary performance record for delivery and quality performance in the demanding

technical field of military and aerospace-grade electronics, as demonstrated through their work on Australia's REDWING counter remote controlled improvised explosive device (RCIED) program. L3Harris is a trusted production partner to the Australian Department of Defence, supporting the development, commercialisation and manufacture of life-saving force protection systems to equip mounted and dismounted forces. L3Harris' work on this program proves the company's capability to provide high volume and time critical manufacturing, with in excess of 185,000 life-saving devices produced and supplied to the REDWING program for Afghanistan National Defense and Security Forces (ANDSF) to date.





Manufacturing | Ship Building | Through-Life Support

### **Company Brief**

Luerssen Australia Pty Ltd is the prime contractor building 12 Offshore Patrol Vessels for the royal Australian Navy. Backed by the Luerssen experience of more than 140 years in ship design and construction, Luerssen Australia Pty Ltd can offer naval vessel designs and vessels built in Australia for customers throughout the Pacific, Middle East and South East Asia.

### Offshore Patrol Vessel - OPV 80



### **Product Information**

A capable Offshore Patrol Vessel, based on a mature design and proven in-service capabilities. Constructed in Australia with Luerssen Australia providing the design, management and project supervision.

The Luerssen Australia OPV 80 provides tailored performance and mission equipment. Mission deck and Landing deck allow for flexible fit of further systems and modular mission equipment.

Availability < 12 months. Designed and manufactured to order

Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### Northrop Grumman



Communications

### **Company Brief**

Northrop Grumman solves the toughest problems in space, aeronautics, defence and cyberspace to meet the everevolving needs of customers worldwide. Our 85,000 global employees define possible every day, bringing next-level technology solutions to life in autonomous systems, cyber, C4ISR, strike, space, logistics and modernisation. In Australia, Northrop Grumman is a trusted provider of deployable secure communications equipment to the Australian Defence Force, government agencies and other various customers in critical operational circumstances. The Northrop Grumman Australia team provides full-service solutions from initial deployed network requirements analysis, to delivery and ongoing support of these Australian-designed and developed capabilities.

### Secure Communications Solution family (SCS-100 and SCS-200)





SCS-100

SCS-200

### **Product Information**

Northrop Grumman Australia's Secure Communications System (SCS) family provides secure access for either an individual user (SCS-100) or a small team (SCS-200) to their enterprise network, when and where it is needed. Designed with the end user in mind, the SCS family provides flexible, lightweight and integrated devices that allow simultaneous access to multiple secure networks.

Featuring intuitive touchscreen displays and pre-saved settings, it is easy for an individual or team to operate in a variety of demanding deployment scenarios. Simultaneous connections can be established via multiple bearers and these allow secure access to classified networks.

Availability 3-6 months

Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### Supacat



Design | Engineering | Manufacturing | Research & Development | Through-Life Support | Vehicles & Accessories

### **Company Brief**

Supacat is an innovative engineering company specializing in high mobility all-terrain vehicles and complimentary products and services for the defence market with offices in the UK and Australia.

### High Mobility Transporter (HMT)



### **Product Information**

Developed for use by Special Forces, the HMT Extenda MK II continues to provide unmatched mobility and flexibility for broad ranging tactical, reconnaissance and support operations. The HMT, easily converted between 4x4 and 6x6 operation, can be fitted with mine blast and ballistic protection kit and a variety of mission hampers, weapons, communications, ISTAR and force protection equipment to suit an array of operational roles.

In service for over 10 years, the HMT base vehicle has been adapted in various configurations for many specialist roles with over 600 now in service worldwide.

Availability 6-12 months

Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### SAAB Australia



Communications | Design | Engineering | Intelligence, Surveillance & Reconnaissance | Manufacturing Research & Development | Test Equipment | Through-Life Support | Training & Education

### **Company Brief**

Saab Australia (Saab) is an industry-leading systems provider for defence, civil and security projects world-wide. With over 30 years of proven capability, Saab have developed and integrated technology to protect and empower Australia's Navy, Army and Air Force to keep people and society safe.

Developing high-technology solutions for allied nations, as well as civil security and aviation technologies, Saab has also carried out major installations in prison facilities, airports and iconic public spaces.

A 'thinking edge' philosophy ensures that Saab is always looking ahead for new ways to make the world a safer place pioneering Australia's defence and security capabilities and striving for continual development, growing Saab's solutions to adapt to the changing needs of its customers.

### 9LV Next Generation Combat Management System

Saab's 9LV Next Generation Combat Management System (CMS) provides the striking performance needed to increase the Royal Australian Navy's mission capability. The modular design of the system allows hardware and software to be adapted across multiple platforms, ranging from combat vessels and patrol boats, to frigates and aircraft carriers, as well as submarines and antipiracy, security and surveillance vessels.

Saab's 9LV Next Generation CMS enables seamless interoperability with allied/coalition operations as a part of an international force.



### OneView

OneView is a complete security solution that significantly improves the response process to security crises. With accurate situational awareness, communication and response management, Saab Australia put the control back in the control room.

The core functions and applications of the OneView system cover security/safety resource management, critical communication and physical security information management. By integrating existing security systems with management systems into a seamless situational awareness view, the OneView system provides one comprehensive user interface.



### AUV62-AT

AUV62-AT is a highly capable autonomous underwater vehicle that is used as a sophisticated training aid for anti-submarine warfare (ASW).

AUV62-AT simulates a live submarine, enabling the development of operator and command team training at all levels, replacing the need to use actual assets.

The system can be used as a target for training surface, air and sub-surface ASW assets in any combination and can be programmed to deliver all levels of training. AUV62-AT uses a transducer tail to mimic the acoustic profile of a submarine; these profiles can be varied in complexity and submarine type to meet the needs of the mission.



#### **Deployable Health**

Saab Australia (Saab), Philips Healthcare Australia & NZ, Aspen Medical, Marshall Land Systems and Broadspectrum have partnered to form an Australian based team with a global footprint, delivering deployable health capability comprised of customised healthcare delivery and support solutions.

The Saab solution comprises more than 550 deployable medical modules, which are tailored to best meet the needs of the mission. These modules include sophisticated equipment and facilities including; a surgical theatre, mobile computer tomography (CT) scanner, x-ray and ultrasound equipment along with trauma, intensive care and ward units. Saab's deployable health solution can be ready for national or international deployment within 24 hours.



### TaCCS

Tactical Command and Control Subsystem (TaCCS) is a light weight, highly effective command and control system capable of threat evaluation, weapon assignment, counter-drone, and air defence support functions.

TaCCS maximises the latent potential of ground based air defence systems by reducing reaction times and enabling target intercepts to take place at the maximum weapon range.

The system is readily scaled to meet the required mission profile, it is man-packable, and is also able to be installed in vehicles, at fixed sites, or as a combination of all.



### Thales Australia Limited



Autonomous Systems | Communications | Design | Engineering | ICT & Cyber | Intelligence, Surveillance & Reconnaissance | Manufacturing | Optical | Research & Development | Robotics | Space Capabilities | Through-Life Support | Training & Education | Vehicles & Accessories | Weapons & Ammunition | Artificial Intelligence

### **Company Brief**

Thales Australia is a trusted partner of the Australian Defence Force and present in commercial sectors including air traffic management, ground transport systems, security systems and services - employing around 3,600 people. Thales Australia has a history of investment to build advanced in-country capability across manufacturing, critical systems and services. Close collaborative relationships with local customers, Australian SME suppliers and research institutions combined with technology transfer from our global business enables Thales to tailor high quality solutions for Australian and export markets.

#### **Bushmaster & Hawkei**

In Bendigo Victoria, Thales develops, manufactures and supports military vehicles you can trust with your life. Thales protected vehicles deliver superior protection, mobility and payload for customers that value the survivability of their soldiers and require a versatile, multi-role platform. Designed for the integration of future capability packages and supported by a global TLS organisation for the life of type of the vehicle.

Bushmaster is a highly mobile, ballistic, mine and improvised explosive device (IED) resistant Protected Mobility Vehicle delivering a high level of crew and passenger protection and survivability for up to 10 occupants. Bushmaster is in service with the Australian Army and the defence forces of seven other nations.

The Hawkei represents a new generation in Protected Tactical Vehicles. Designed and produced by Thales in Australia, Hawkei delivers class-leading capability for up to 5 occupants. Now in full-rate production for the ADF.

Top: Thales Bushmaster; Above: Thales Hawkei

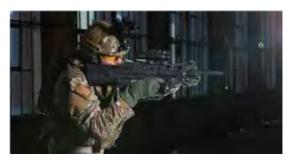




#### F90 Automatic Rifle Family

The F90 MBR (Modular Bullpup Rifle) is a new generation military assault weapon. One of the most compact and lightweight military rifles available, the F90 MBR builds on the in-service and battle-proven Thales F90, delivering new features, improved ergonomics and greater mission flexibility

- NATO standard rails and magazine
- innovative modular design ensure compatibility and interoperability with weapon fleets and allied forces
- US SOCOM OTB qualified and can be fired immediately following water immersion.
- SIMUNITION adapter is also available for Force on Force training
- Integrated side loading 40 mm grenade launcher equipped with a lightweight robust quadrant sight and is compatible with night vision goggles.



Thales F90

#### Ammunition, Components, Propellants and Components

The Commonwealth facility at Benalla in Victoria produces large calibre and small arms ammunition and components to NATO STANAG requirements. Component designs can be manufactured to suit specific customer requirements

- 5.56 mm, 7.62 mm, .50 cal
- 300 Blackout
- 81mm Mortar components
- 105mm components
- 4.5" and 5"/ 54 Naval components
- manufacture of Forged Steel Projectile Bodies
- Large Calibre Case and Primer Manufacture

Explosive Ordnance Services has for many years safely delivered explosive ordnance logistics, transport distribution, storage, maintenance, training and disposal



#### Australian Minesweeping System

Australian Combined Influence Sweep (CIS) was developed with the assistance of the Australian Defence Science & Technology Group (DST Group) and the Royal Australian Navy.

Produced at Thales's Acoustics Centre of Excellence in Rydalmere, Sydney, the Australian CIS is a proven capability deployed across 11 navies. The sweep comprises a magnetic, acoustic and electric multiinfluence sweep; a mine jammer for time limited missions; a sweep tracker monitor system; mission planning support system software; an ECDIS based minesweeping navigation and control system; and a range of integrated logistics support products and services including deployment containers and training.

The Australian CIS provides a naval force with the capability to detonate hostile sea mines designed to target naval and commercial shipping.

Benefits of the CIS:

- clip-on influence minesweeping system
- no external power required
- low maintenance costs
- high reliability and availability
- low risk proven technology



#### **Naval Asset Management Solutions**

Thales is committed to working with navies to deliver improved availability through the implementation of tailored end-to-end sustainment solutions. We utilise asset management principles including ISO55000 and employ proven tools, systems and processes. Thales' tailored endto-end asset management solutions provide:

- acquisition management
- configuration management
- engineering change management
- technical risk management
- inventory investment planning & supply chain management
- Logistic Support Analysis
- maintenance management, planning and execution
- enhancement of indigenous repair capabilities
- ship repair infrastructure optimisation.



#### Stingrae

Stingrae was developed as a force multiplier for Boarding operations. It improves the operational effectiveness of activities where evidence collection, safety and security matter. A secure near real time digital capability integrating mobile, wearable and wireless technologies delivers a step change in capability. It supports the military, paramilitary and other organisations deployed in constabulary, counterterrorism, force protection, surveillance and related roles. Stingrae is delivered under a spiral development cycle that enables the introduction of new emerging technologies in response to evolving operational requirements. The licensing framework provides flexibility and agility to meet specific capability needs.

Key features of the system include:

- capture and transfer large amounts of data in near real time, including streaming video
- homologate artefacts, photos, sketches, interviews into preformatted forms for immediate transfer
- · maintain discreet and reliable communications
- perform digital interrogation of suspect mobile devices
- process data for dissemination to other agencies
- exploit intelligence gathered in near real Time
- capture and log data to evidence quality
- monitor team health for performance optimisation



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# Section Four

### 1. Electronic

Air Affairs Australia AMC Search AVT Australia (UAV Vision) Carbonix Chironix DefendTex Military Products DroneShield GaardTech Jenkins Engineering Defence Systems Marathon Targets Ocius Technology Orbital UAV Point Trading Group Prism Defence QinetiQ **RAIDER** Targetry Seeing Machines Sentient Vision Systems Supashock Textron Systems Australia Trellis Data Zone Products Australia

Artificial Intelligence Autonomous Systems Electronic Warfare Optical

Robotics

Unmanned & Counter Unmanned Systems



### Air Affairs Australia



Autonomous Systems | Design | Engineering | Intelligence, Surveillance & Reconnaissance | Manufacturing Research & Development | Test Equipment | Training & Education | UAV and Counter UAV

### **Company Brief**

Air Affairs Australia (AAA) is an Air Operations and Engineering based company, established in 1995 and 100% Australian owned. AAA manufactures and provides services for the Phoenix Unmanned Aerial Target Drone, and is currently in operational service and providing an extremely cost effective target solution. AAA own and operate a fleet of special mission Learjet aircraft, providing specialised air training support services to Defence. The aircraft are available for other special mission roles. AAA maintains an extensive manufacturing and engineering facility, providing a complete design through to manufacture and certification capability and are the original equipment manufacturer (OEM) for several products.

### Phoenix Jet Unmanned Aerial Target



#### Spares and support Yes equipment available? Australian Export Control Yes approval required?

### **Product Information**

The Phoenix Jet has been developed specifically for the Defence industry as a high performance training solution for a variety of gun and air defence missile systems. The Phoenix Jet provides a realistic threat simulation and enhancements such as MDI, Smoke, IR and Luneburg lenses can be added to meet the requirements of a wide range of weapon systems. AAA provides operational UAV and target drone services: pre-exercise planning, logistic support, flight operations, scoring, tracking, and post trials analysis form part of the turnkey operation.

Availability 3–6 months. Designed and manufactured to order.

### AMC Search



Autonomous Systems | Design | Engineering | Research & Development | Ship Building Training & Education | UAV and Counter UAV

### **Company Brief**

AMC Search is the training and consultancy division of the Australian Maritime College. AMCS delivers a broad spectrum of services in autonomous systems, maritime simulations, computational fluid dynamics, hydrodynamic testing, naval architecture, cavitation, and bespoke maritime training courses. Customers include the Australian Department of Defence's Capability, Acquisition and Sustainment Group, Department of Defence Science and Technology Group, Royal Australian Navy, primes and SMEs. AMC Search also facilitates direct commercial access for organisations to utilise the suite of world-class R&D facilities at the Australian Maritime College including Australia's only commercially available towing tank and Kongsberg Centre for Maritime Simulations.

## Autonomous Underwater Vehicle (AUV) and Autonomous Surface Vehicle (ASV) Training



### Service Information

Australia's only suite of equipment agnostic AUV and ASV training courses that were developed in conjunction with the Royal Australian Navy for defence and civilian personnel who need or want to build their knowledge, skills, and experience in this rapidly growing capability area. The courses cover AUV and ASV fundamentals, basic and advanced system operations as well as management, technical and maintenance aspects. The courses develop trainee understandings and abilities so that they can be positioned to safely and effectively operate, manage or maintain a variety of AUVs or ASVs types.



Australian Defence Sales Catalogue | 2021, Edition 5

### AVT Australia



Communications | Design | Engineering | Intelligence, Surveillance & Reconnaissance | Manufacturing Optical | Research & Development | UAV and Counter UAV

### **Company Brief**

AVT Australia specialises in gyro-stabilised imaging systems, fully integrated solutions and software development for intelligence, surveillance and reconnaissance (ISR), target acquisition, air defence and counter small unmanned aerial systems (C-sUAS) operations, serving the defence, aerospace and unmanned systems industries. AVT Australia's technology solutions are supporting airborne, ground and maritime missions around the world, with systems fielded in over 50 countries. With in-house mechanical engineering, electronics engineering, embedded software engineering, user interface software engineering, control systems, artificial intelligence and machine learning capabilities, AVT Australia delivers bespoke solutions as well as a range of proven, off-the-shelf products.

#### CM262



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### **Product Information**

The CM262 is AVT Australia's latest ground-based optical system that incorporates innovative hardware and software technologies to deliver improved surveillance, air defence and counter small unmanned aerial systems (C-sUAS) capabilities in the field. The system offers enhanced mechanical ruggedisation for long endurance operation in extreme environments, including high-heat and humid conditions.

The CM262 combines four sensor configurations (HD EO, HD MWIR, SWIR and a 10km laser range finder) in a 16kg compact system, and incorporates AVT Australia's cutting-edge video processor for improved performance on-themove. The system offers low user maintenance, supported by AVT Australia's service and support network.

Availability >12 months. Designed and manufactured to order.

### Carbonix



Autonomous Systems | Intelligence, Surveillance & Reconnaissance | Engineering | UAV & Counter-UAV Research & Development | Test Equipment | Through-Life Support | Vehicles & Accessories | Manufacturing

### **Company Brief**

Carbonix is a privately owned specialist UAV (drone) manufacturer based in Sydney, Australia. Our in-house engineers have expertise in developing world-class hydrodynamic and aerodynamic craft. We design our own tools, control testing and managing the entire process at our aerospace factory with advanced composite technicians and honed processes, formed over many years of building high-performance machines.

Our UAVs are constructed from ultra-lightweight, highly durable carbon composite materials, fitted with quality electronics and avionics to enable fully-autonomous operations, together with remotely pilot systems. We offer OEM-type training, maintenance and servicing programs, and comprehensive after sales support on a worldwide basis.



### Domani Unmanned Aerial Vehicle (Drone)

### **Product Information**

The Carbonix Domani is a complete UAV package for aerial surveillance, intelligence and reconnaissance. With a 4.5 metre wingspan, this drone is equipped with Vertical Take Off and Landing (VTOL) systems to launch in restricted spaces for long range fully-autonomous missions. Designed for superior aerodynamic efficiency and built for ideal structural performance, the Domani airframe enables a stable flight and long endurance in some of the toughest conditions. The Domani also allows a range of sensor carrying capabilities including:

- Electro Optical
- Target Tracking,
- Gimballed,
- High Zoom,
- Non-dispersive Infrared sensors,
- Thermal,
- Hyper-spectral and
- LiDAR sensors available.

Offered as either an all-electric powered system capable of carrying up to 5kg payload with more than 2 hours flight time, or a hybrid 'fuel – electric' powered range extender variant capable of carrying the same payload for over 8 hours. The maximum take-off weight allows rapid field deployment in under 15 minutes.

Availability 6–12 months. Designed and manufactured to order.

### Chironix

CHIRONIX ≽

Artificial Intelligence | Autonomous Systems | Field Equipment | Humanitarian | Robotics Vehicles & Accessories ICT & Cyber Intelligence, Surveillance & Reconnaissance | Logistics | Medical | Research & Development Robotics Vehicles & Accessories

### **Company Brief**

Chironix is a company focused on robotic autonomy and artificial intelligence. We are Australian owned and operated, headquartered in Perth Western Australia. Chironix partners with global technology leaders combining their devices with our software engineering expertise to build human-centred products which ease cognitive load and improve work safety and efficiency.

### Field Robotics and Human Augmentation



### **Product Information**

Chironix is an industry leading advanced technology integrator and distributor specialising in the rapid deployment of autonomous ground based robotics and digital wearables. Chironix focusses on enabling humans through technology and extending their will over distance, and are experts in systems integration and software. Relationships with leading robotics and sensor

manufacturers enable Chironix to work with first in class hardware as software solutions are developed. Chironix has relationships and development experience with Boston Dynamics, Universal Robots, Clearpath Robotics, Google X, Google Glass, public cloud services and Precision Technic Defence.

Chironix also develops software solutions and Digital Workforce Management tools to improve situational awareness and decision-making:

- Metix a software solution, incorporates video conferencing on a wearable device
- Glass for Enterprise 2 assists workforce efficiency and safety, ensuring procedural adherence while easing cognitive load in high-stress environments
- Natural Language voice activated workflows facilitate task completion, while video conferencing achieves real-time task oversight and communication.

Availability <3 months. Designed and manufactured to order.

Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### **DefendTex Military Products**



Artificial Intelligence | Autonomous Systems | Electronic Warfare | Engineering | Intelligence, Surveillance & Reconnaissance | Manufacturing | Research & Development | Robotics | Space Capabilities | Vehicles & Accessories | Weapons & Ammunition | Personal Protection | UAV and Counter UAV

### **Company Brief**

DefendTex is at the forefront of novel asymmetric warfare technology development. DefendTex is pioneering low cost swarming munitions in order to support the ADF and allied forces through the development of expendable unmanned systems for ISR, offensive and defensive operations.

### DefendTex UAS



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### **Product Information**

Drone40 is a barrel-launched, low cost, swarm capable nano UAS equipped with GPS enabled flight control system. Its modular design supports multiple radio systems including LTE. The interchangeable payload bay supports a range of ISR, EW, non-lethal and lethal effectors. Drone155 is a larger variant of Drone40 with in excess of two hours flight time and supports payloads of up to 15kgs including an RPG40 multi launch rocket pod for long range strike. RPG40 is a rocket propelled 40mm grenade launched from a low velocity grenade launcher with ranges exceeding 2,500 meters.

Availability <3 months. Designed and manufactured to order.

### DroneShield



Artificial Intelligence | Communications | Electronic Warfare | Engineering | Manufacturing | Intelligence, Surveillance & Reconnaissance | Personal Protection | UAV and Counter UAV

### **Company Brief**

DroneShield focuses on Electronic Warfare (EW), Artificial Intelligence, radio frequency (RF), Intelligence, Surveillance & Reconnaissance (ISR) and C2 solutions. It is a world leader in Counter UAS products, manufacturing sensors and EW hardware and software.

### **RfPatrol MKII**



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### **Product Information**

RfPatrol is an RF sensor with Artificial Intelligence capability to detect and classify the RF environment around it, including UAS and other improvised threats. Existing customers include Australian, New Zealand, and US military and government.

Availability < 3 months. Designed and manufactured to order.

### GaardTech



Autonomous Systems | Field Equipment | Manufacturing | Robotics | Through-Life Support | Training & Education

### **Company Brief**

GaardTech is an Australian founded and owned veteran company based in Australia, and specialises in the design and fabrication of bespoke robotic training systems for high value Defence assets. Its supply chain is 100% Australian Industry Content and it is the first SME to export to the UK Army and RAF.

### GaardTech 3D Robotic Vehicle Systems



### **Product Information**

GaardTech's 3D Robotic Vehicle Systems enable an enemy army to be built for training purposes and controlled wirelessly by GaardTech's Combative Range Software for advanced dry and live fire training.

Availability <3 months

Spares and support Yes equipment available? Yes Australian Export Control Yes approval required?

### Jenkins Engineering Defence Systems



Electronic Warfare | Engineering | Intelligence, Surveillance & Reconnaissance | Research & Development

### **Company Brief**

Jenkins Engineering Defence Systems (JEDS) is a wholly-owned Australian small business that specialises in the design, manufacture and marketing of Electronic Warfare (EW) products including software and the service and support of EW, radar and radio communications systems.

JEDS has specific expertise in bespoke equipment design, manufacture, repair and overhaul, testing, calibration and software support for a range of Defence, government and commercial customers, and also offers a wider project management, systems engineering, training and configuration management capability.



Periscope Antenna Subsystem (PASS)

Spares and support Yes equipment available? Australian Export Control Yes

### **Product Information**

approval required?

The Periscope Antenna Subsystem (PASS) comprises JEDS' Periscope Antenna Unit (PAU) (Direction Finding (DF) capability optional) and updated Radio Frequency (RF) distribution and DF processing:

- Microwave Omni-directional Intercept: 1-18 GHz.
- Tactical Microwave DF (option): 2.7 18 GHz providing 5–7° rms bearing accuracy
- Millimetric Omni-directional Intercept: 18-40 GHz
- Communications Intercept: 20–1000 MHz (extends down to 1 MHz)
- GPS: L1 & L2 (option for including 2 or 4 element CRPA GPS arrays to facilitate GPS anti-jam implementations)
- Inboard Electronics: Suitable for mounting in a 19" rack.

Tailored to customer's requirements:

- Maximum height and width of units,
- Environmentals, and
- Cables.

Availability >12 months. Designed and manufactured to order.

### **Marathon Targets**



Autonomous Systems | Engineering | Manufacturing | Research & Development | Robotics | Training & Education

### **Company Brief**

Marathon makes autonomous robotic targets for live-fire marksmanship training. This unique system addresses a fundamental training gap: the first time shooters engage a realistic moving target is typically in combat. The system has been used to better prepare soldiers for combat since 2008 - end users include Special Forces and regular army. Customers include the ADF, USMC, US Army, USSOCOM, Canadian SF, and units in the Middle East and Europe.

#### **T40 Robotic Target**



Spares and support Yes equipment available? Australian Export Control Yes approval required?

### **Product Information**

T40 is the most capable and versatile of the Marathon family of robotic targets. It has perfect balance of speed, acceleration, armour, target realism, and customisable hit response. Training applications include reactive scenarios (indoor and outdoor), urban operations (including sniping), combat shooting, long-range sniping, combined arms exercises, and robotic OPFOR. Marathon Targets also offer other robotic targets including the T30 and T10. Please refer to their website for further details.

Availability 3–6 months. Designed and manufactured to order.

### **Ocius Technology**



Autonomous Systems | Intelligence, Surveillance & Reconnaissance | Robotics | Ship Building | Vehicles & Accessories

### **Company Brief**

Ocius Technology develops innovative, autonomous solutions to monitor and patrol marine environments. Ocius has a track record of conceiving, funding, and delivering difficult, innovative, high-tech, award-winning projects on time and on budget.

The company has built high-tech, award winning, hybrid electric, commercial passenger ferries to international classification requirements, which together have carried tens of thousands of passengers.

### **Bluebottle USV**



Spares and support equipment available? Yes

Australian Export Control Yes approval required?

### **Product Information**

Ocius is combining world-first hardware with cutting-edge software to build intelligent networks of persistent ocean-going robots called Bluebottles. This is so that Defence, Border Force, industry and scientists can monitor large areas of oceans, above and below the water, with no one in harm's way, at low cost.

Availability 6-12 months. Designed and manufactured to order.

### Orbital UAV



Autonomous Systems | Design | Engineering | Manufacturing | Research & Development Vehicles & Accessories | UAV and Counter UAV

### **Company Brief**

Orbital UAV is a world leader in the design, development and manufacture of propulsion systems and flight critical components for unmanned aerial vehicles (UAVs). From operations in Australia and the USA, Orbital UAV delivers integrated propulsion systems and associated technologies into the world's largest suppliers of tactical UAVs.

The patented fuel injection system enables advanced spark ignition using heavy fuel – a requirement for military applications. Such revolutionary technologies, combined with proven operational experience mean Orbital UAV is uniquely placed to meet the long endurance and high reliability requirements of the rapidly evolving UAV market.

### Spark ignited, heavy fuel propulsion systems for tactical UAVs



### Service Information

Orbital UAV is the world leader in spark ignited, heavy fuel propulsion systems for tactical UAVs.

#### **Design & Development**

- concept definition through to production;
- state-of-the-art analysis tools; and
- design iteration through prototyping and detailed test procedures, measurement and analysis.

#### Machining & Prototyping

- rapid in-house manufacture for prototyping and production; and
- metrology labs.

#### **Testing & Validation**

- Aero-Engine propeller test stands (including durability cycles such as FAR33);
- environmental dynamometers for cold start down to -35°C and hot operation up to 60°C; and
- altitude simulation up to 20,000ft.

Availability 6–12 months. Designed and manufactured to order.

### **Point Trading Group**



Autonomous Systems | Intelligence, Surveillance & Reconnaissance | Robotics | Ship Building | Vehicles & Accessories

### **Company Brief**

Point Trading is an Australian company which has been delivering and supporting high-performance night vision equipment since 1987. Point Trading maintains a technological edge through their ongoing R&D program and collaboration with Europe's leading image intensifier manufacturers. Point Trading's system is supported through life by stringent ISO certified quality assurance and EIA 632 engineering standard compliant processes and a dedicated electro-optical laboratory and testing facility in Australia.

### **Night Eyes**



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### **Product Information**

Night Eyes is a patented Military-grade night vision system, binocular or monocular helmet mount, hand held or weapon mounted devices providing the ability to undertake operations in low-light to very low-light conditions in all environments and terrain. The patented micro-processor on the electronic board internal to the NVG has been integrated, for recording tube and performance data and allowing the configuration of operating parameters.

Availability < 3 months. Designed and manufactured to order.



### **Prism Defence**



Design | Engineering | Research & Development | Test Equipment | Training & Education | UAV and Counter UAV Embarked Aviation Management, Ship Air Interface Integration, Software Development, Test & Trials

### **Company Brief**

Prism Defence are embarked aviation capability specialists that focus on ship-air integration and the provision of innovative solutions that support the operation and management of all aircraft operating to and from a vessel - OPV to aircraft carrier. Prism works with defence forces and industry to conduct embarked flight trials and define operating limits (SHOL) in the harshest maritime environments. Prism's systems enable operators to confidently fly, both manned and unmanned, from ships at sea to the maximum achievable capability. Prism's capabilities include flight trial management, conduct and reporting; engineering and software product development, and consultancy and training services.

### Prism Air Hub - Embarked Aviation Management System



### **Product Information**

Prism Air-Hub is a software application that evolved from SHOL management to become a centralised and whole-of-ship aviation management system. Air-Hub supports planning and briefing, manages hangar and deck movement, reduces cognitive workload in the bridge and flying control positions, provides air control support, whole-of-ship updates (including logistics), procedures simulation, forward planning, airworthiness assurance, and recording and analysis. Standalone or on combat management and bridge systems, AIR-HUB is fully configurable to support the most complex multi-spot aircraft carrier including fixed wing, or a UAV on an OPV with minimal training. Air-Hub enables maximum operational capability and tactical flexibility to be safely realised. Spares and support Yes equipment available? Yes approval required?

Availability <3 months. Designed and manufactured to order.

## QinetiQ

# QINETIQ

Autonomous Systems | Aircraft Structural Integrity services

### **Company Brief**

QinetiQ Australia provides unique solutions that combines depth of knowledge and experience with a collaborative and enterprising approach. QinetiQ works across every aspect of the life cycle of critical equipment and infrastructure, providing services and products that address customers' most pressing challenges. QinetiQ's breadth and depth of experience spans many markets and industries, and includes Defence air, land and maritime domains, as well as providing specialist Advisory Services. QinetiQ holds a unique status as the only Defence Industry Part 21 J Design Organisation that is approved to develop design changes and repairs for ADF aircraft.

### **Unmanned Aerial Systems Flight Test Range Services**



### Service Information

QinetiQ provides commercial Test, Trial and Evaluation services for Unmanned Aerial Systems (UAS) at the Queensland UAS Flight Test Range (FTR).

The FTR facilitates:

- operational flying of all weight classes of UAS for routine flying operations, flight test and demonstration ranging from simple test manoeuvres and payload testing through to full trials requiring complex mission control support
- the safe conduct of trials through the integration of test and evaluation instrumentation with proven range control equipment and processes
- BVLOS approvals through the provision of ground based surveillance systems
- complex approvals within the existing regulatory framework.

Availability <3 months. Designed and manufactured to order.

### **RAIDER Targetry**

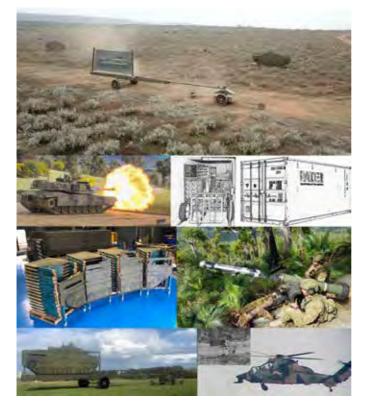


Artificial Intelligence | Autonomous Systems | Design | Engineering | Field Equipment | Manufacturing Research & Development | Robotics | Test Equipment | Through-Life Support | Training & Education Vehicles & Accessories | UAV and Counter UAV

### **Company Brief**

RAIDER Targetry is an Australian innovation company that develops and supplies novel technology solutions to support the Defence sector in all aspects of testing, evaluation and combined-arms live fire training. RAIDER Targetry's Australian headquarters is home to a highly experienced team that employs cutting-edge processes and methodologies to deliver across the full TRL spectrum, and expertise that spans ideation and new concept development, to the enhancement of existing capabilities. RAIDER Targetry values integrity, creativity and perseverance, and collaborates closely with industry experts, defence SMEs, research institutions and a comprehensive supply chain, to deliver world-class outcomes for our partners.

### Mobile Moving Target System (MMTS)



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### **Product Information**

The RAIDER Mobile Moving Target System enables a low-drag approach to live fire training, through an adaptable, high-fidelity moving target that can operate practically anywhere. The MMTS is configurable to mimic visual appearance, thermal-IR signature and behaviour of military and non-military vehicles, and provides instructors the target availability and scenario flexibility to maximise the value of every round fired. The MMTS has field-proven compatibility with a full spectrum of HE and practice munitions commonly used by dismounted, mounted and helicopter units. A 1C ISO container provides on-site storage and protection that is readily deployable to wherever it is needed.

Availability 3–6 months. Designed and manufactured to order.

### **Seeing Machines**



Artificial Intelligence | Autonomous Systems | Design | Engineering | Intelligence, Surveillance & Reconnaissance Manufacturing | Optical | Research & Development | Test Equipment | Training & Education | Vehicles & Accessories Operator Monitoring (Performance, Wellbeing)

### **Company Brief**

Seeing Machines, a global company headquartered in Australia, is an industry leader in computer vision technologies, which enable machines to see, understand, and assist people. Seeing Machines image-processing technology is designed to enhance the performance and safety of human operators, by tracking the movement of a person's eye, face, and head. This technology is incorporated into training, safety, and performance optimisation applications, products, and services for a range of global industries, including automotive, commercial fleet, aviation, rail, and mining and off-road markets.

### **Crew Training System**



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

### **Product Information**

Crew Training System supports qualified flying instructors with intelligent data to assist in the selection, training, and assessment of pilot candidates, and the ongoing training of qualified aircrew. The precision eye-tracking technology provides valuable insights into pilot scanning techniques, supplying instructors with an objective assessment of where pilots are focusing attention, and helps optimise their scanning performance during key flight phases. Instructors can observe scanning behaviour in real-time in the Full Mission Simulator environment, as well as during brief and debrief. Aircrew benefit from objective feedback through their performance replay, enabling them to achieve improved performance through evidence-based training.

Availability 3–6 months. Designed and manufactured to order.



### Sentient Vision Systems



Artificial Intelligence | Autonomous Systems | Intelligence, Surveillance & Reconnaissance | Optical | UAV and Counter UAV

### **Company Brief**

Sentient is a leading developer of Computer Vision and Artificial Intelligence software solutions for defence and commercial markets, based in Australia. Since 1999 Sentient has specialised in imagery analysis, building practical software solutions that automatically detect, fix, track and classify small objects. Actively used in the field of Intelligence, Surveillance and Reconnaissance (ISR), Sentient's solutions enhance situational awareness and support strategic decisions. Nearly 3000 solutions have been deployed by Army, Navy, Air Force, Marines, Coast Guards and law enforcement in over 34 countries.

### ViDAR - Visual Detection and Ranging



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

### **Product Information**

ViDAR is an airborne persistent wide area maritime search system that autonomously detects objects on the ocean surface and provides the operator with a detailed image of objects that traditional ISR methods often miss. It consists of a series of small EO/IR sensors and on-board software designed to autonomously detect hard to locate objects in real time. ViDAR operates akin to an airborne passive radar, in the visual domain, sending detections to the operator for further analysis by the aircraft's primary sensor. ViDAR is deployed by the Royal Australian Navy, US Coast Guard, Mexican Navy, AMSA and many others world-wide.

Availability <3 months. Designed and manufactured to order.

### Supashock



Artificial Intelligence | Autonomous Systems | Design | Engineering | Intelligence, Surveillance & Reconnaissance | Logistics Manufacturing | Research & Development | Robotics | Ship Building | Space Capabilities | Through-Life Support Vehicles & Accessories | UAV and Counter UAV | Test Equipment

### **Company Brief**

Supashock is a world-class producer of advanced mobility and autonomous systems that control, monitor and improve mobility of Defence, autonomous, commercial, automotive and other transport vehicles. Supashock has built a highly skilled team to design, manufacture and test its systems for global mobility applications. Supashock's products share a number of characteristics: the ability to provide exceptional performance within a unique tailored solution, utilising our advanced simulation, design, analysis and validation techniques. The quality assurance system ensures the highest design and manufacturing standards, coupled with a testing centre that provides valuable verification data, validating the lifecycle of each product.

#### Advanced Motion and Logistics Handling Technology



Spares and support equipment available?	Yes	
Australian Export Control approval required?	Yes	

### **Product Information**

Supashock's Automated Load Handling System (ALHS) is a pioneering technical solution that enables automated loading and unloading of containers, modules and flat racks onto military trucks. The ALHS is operated safely and efficiently from the safe confines of a fully protected truck cabin in a combat environment. It is the world's fastest and safest load handling system for logistics trucks, our innovative design improved flexibility for varying loads and a higher payload margin.

The ALHS has several integral mechanical degrees of freedom that combine with a computer-assisted user interface, making the loading and unloading of a container easy in all conditions.

Availability 3–6 months. Designed and manufactured to order.



### **Textron Systems Australia**



**AUSTRALIA** 

Autonomous Systems | Design | Engineering | Intelligence, Surveillance & Reconnaissance | Manufacturing Through-Life Support | Training & Education

#### **Company Brief**

Textron Systems Australia designs, manufactures and services a range of unmanned aircraft systems (UAS). Based in Australia, the company's employees are experienced in all facets of unmanned aviation — providing a single resource for customers seeking either systems or operational services.

#### Aerosonde Tactical Unmanned Aircraft System



#### **Product Information**

The Aerosonde Tactical Unmanned Aircraft System (TUAS) offers superior reliability and multi-mission performance in its class. Designed to be runwayindependent is expeditionary for land- and sea-based operations and equipped for simultaneous day-and-night full-motion video, communications relay, electronic warfare, signals intelligence and a customer selected payload in a single flight. The Aerosonde TUAS delivers reliable, multimission performance in a class by itself. Aerosonde TUAS is field-proven with more than 450,000 flight hours, including desert heat and Arctic cold.

The Aerosonde is flexible even further with the Aerosonde HQ, which uses Hybrid Quadrotor technology to achieve vertical take-off and landing (VTOL).

Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### Trellis Data

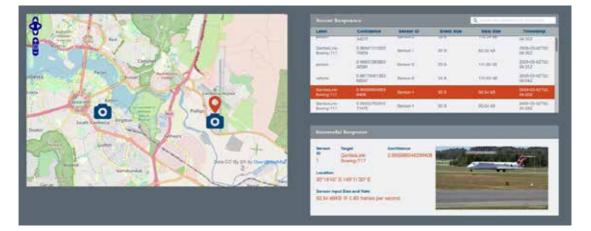


Artificial Intelligence | Autonomous Systems | Electronic Warfare | ICT & Cyber | Intelligence, Surveillance & Reconnaissance Logistics | Manufacturing | Medical | Research & Development | Robotics | Space Capabilities

#### **Company Brief**

Trellis Data is a fully Australian owned company that exists to provide world leading machine learning capability as an Australian sovereign asset, to further Australia's capability and to provide leading machine learning technology to Australia and its allies. Trellis Data sells the world's most advanced machine learning platform, called the Trellis Intelligence Platform (TIP). The TIP includes global leading machine learning technology, as well as the first fully explainable deep neural networks, enabling customers to trust every decision the TIP makes.

#### Trellis Intelligence Platform (TIP)



#### **Product Information**

Trellis Data has created a world leading advanced machine-learning platform - the Trellis Intelligence Platform (TIP). The TIP can deliver trusted 'decision making at the sensor' (DMATS) for intelligence, surveillance and reconnaissance at land, sea, air and space. The TIP learns from unstructured data (such as documents and social media), video, sound, and any other data source. It has the world's most advanced deep learning methods for optimal results and can be deployed on devices as small as a smartwatch. Finally, it has the world's first deep learning explainer that provides trusted explanations of every decision it makes. Spares and support Yes equipment available? Australian Export Control No approval required?

Availability <3 months

Section 4.01

### Zone Products Australia



Artificial Intelligence | Autonomous Systems | Communications | Counter-UAV

#### **Company Brief**

Zone Advanced Protection Systems is a developer of IP based, high security interoperability software with a focus on counter drone technology and large scale command and control C2 deployments. The company is also a distributor of mission-critical electronic security and surveillance solutions from some of the world's leading manufacturers.

Complimenting Zone's software developed solutions, the company supplies and supports products from world leading manufacturers of electronic security devices into defence, critical infrastructure, power and utilities and border patrol as well as remote unmanned monitoring of stand-alone sites and Counter Drone technologies.

#### Arbitor™



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

#### **Product Information**

Arbitor<sup>™</sup> Physical Security Information Management System (PSIM) is a scalable security solution management platform which combines the visual and functional outputs of the sub-systems it integrates into one common operating picture. Arbitor<sup>™</sup> gives operators complete control of multiple security systems through one portal, providing enhanced situational awareness and the capability to respond faster and more effectively.

ArbitorShield<sup>™</sup> can be integrated into Arbitor<sup>™</sup>, it is a complete turnkey web based CUAV platform for the detection and countermeasure of all hobby and sports drones/UAV's. ArbitorShield<sup>™</sup> uses innovative RF techniques in an intelligent series of mitigation operations.

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# Section Four

### 2. Communications

ICT & Cyber

Intelligence, Surveillance & Reconnaissance

- Advanced Navigation archTIS AUCloud AVI Barrett Communications Blacktree Technology Cablex **CISTECH Solutions Clearbox Systems** Cobham Aviation Service Australia Codan Communications Cogito Group CyberMetrix Daronmont Technologies Datapod Australia Defence Communications Industry **EM** Solutions Fivecast Fugro Australia Marine
- Future Fibre Technologies (Ava Risk Group) General Dynamics Mediaware Janusnet Jet Aviation Australia Kellogg, Brown & Root (KBR) Leidos Australia Microsecure Corporation north Security Digital Ocean Software **Operational Systems** Penten Prophecy International Radio Frequency Systems Red Piranha Solutions from Silicon Sonartech Atlas Tectonica Australia Ultra Electronics Avalon Systems ZCG Scalar Antennas



### **Advanced Navigation**



Autonomous Systems | Research & Development | Robotics | Space Capabilities | Weapons & Ammunition

#### **Company Brief**

Advanced Navigation builds high quality navigation solutions for both defence and commercial markets. Our products are developed and manufactured in Australia and are designed to deliver critical navigation information across sea, land and air platforms including surface, subsea assets, ground vehicles, and unmanned aerial vehicle applications.

Our team has world class expertise in the fields of inertial navigation; global navigation satellite systems, sensors and acoustics; artificial intelligence; and RF technologies.

#### **Spatial FOG Dual**



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

#### **Product Information**

Spatial FOG Dual is a ruggedised dual-antenna GPS aided inertial navigation system that provides accurate position, velocity, acceleration and orientation under the most demanding conditions. The inbuilt Fibre Optic Gyroscope allows Spatial FOG to provide extremely precise orientation and positioning information in the sustained GPS-denial environments often encountered in the battlefield.





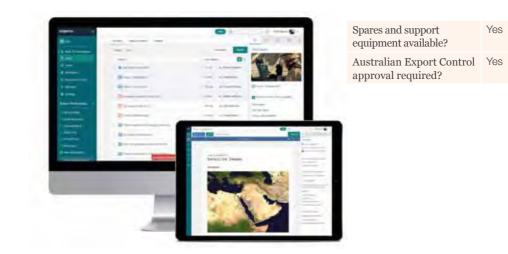
Communications | Electronic Warfare | Engineering | Field Equipment | ICT & Cyber | Intelligence, Surveillance & Reconnaissance | Ship Building | Space Capabilities

#### **Company Brief**

archTIS is an Australian software and professional services company that specialises in the design and development of products, solutions and services for classified and sensitive information sharing across files, data, ERP and collaboration platforms.

Established in 2006, archTIS has worked within Defence delivering specialised security architectural services across metadata and master data management, International Intelligence, Surveillance & Reconnaissance and the security architecture for the Defence Single Information Environment.

#### Kojensi: Multi-Level Security Classified Information Sharing Platform



#### **Product Information**

Kojensi is a Multi-Level Security (MLS) Classified Information Sharing Platform built to comply with the compartmentalised information sharing and collaboration needs of Defence, Defence industry and government.

Kojensi enables organisations to granularly share, grant or revoke access to information based on attributes, including security clearance, nationality, data classification, organisation, and more using the industry leading Attribute Based Access Control security model. The platform includes an integrated enterprise content management and web based office suite.

Kojensi is available as an on premise solution for information sharing up to top level government classifications, or as a federal government accredited classified cloud service.

Availability

< 3 months. Designed and manufactured to order.



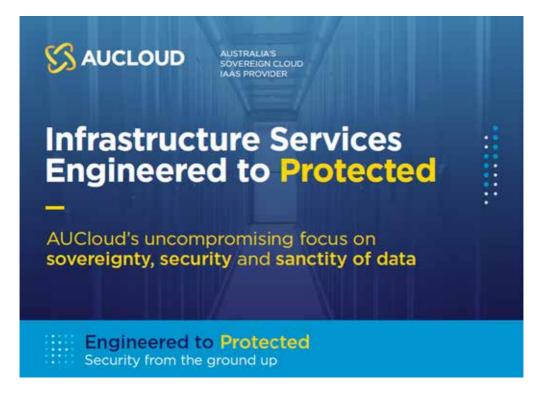


ICT & Cyber

#### **Company Brief**

AUCloud is Australia's sovereign cloud Infrastructure as a Service (IaaS) provider exclusively focused on all levels of Government and Critical National Infrastructure Industry communities. AUCloud is independently certified to a classified level of the Australian Signals Directorate (ASD) Information Security Manual (ISM).

#### Cloud Compute as a Service (CaaS)



#### Service Information

CaaS allows the customer to provision Virtual Machines (VMs) within a sovereign Infrastructure-as-a-Service (IaaS) environment. CaaS offers a range of VM sizes, storage and connectivity options which enable the customer to provision operational IT systems in minutes.

AUCloud CaaS offers the scalability, automation and convenience associated with global cloud offerings, but requires no additional controls to operate in classified environments, enabling customers to comply without extra customisation effort or cost. The service can be tailored to meet local security requirements.





Autonomous Systems | Communications | Design | Engineering | ICT & Cyber | Intelligence, Surveillance & Reconnaissance Manufacturing | Research & Development | Through-Life Support

#### **Company Brief**

AVI manufactures mission critical hardware and software for military, government and mining clients, which are specifically designed for operation in hostile environments.

AVI is an Australian-owned Sovereign Defence Capability provider with over 30 years' experience in both mining and military industries. AVI is led by a team of high-calibre specialists who are committed to providing trusted and scalable communication solutions to clients.

AVI boasts end-to-end supply chain traceability, with complete in-house manufacturing in AVI's state-of-the-art facilities, located in Australia. AVI provides specialised training along with through-life support and maintenance ensuring that systems are optimised for challenging conditions.

#### Trusted Battlefield Interoperability Technology Solutions

#### Service Information

AVI provides specialised hardware and software networking solutions to critical industries internationally. AVI's specifically designed communication systems provide centralised data tracking for personnel, vehicles, aircraft, and maritime applications.

AVI's products deliver highly secure communications capabilities to stationary and mobile network nodes across public and private networks. The AVI Operating System (AVIOS) provides a platform with simple configuration, empowering the end user and providing the right data, to the right place at the right time.

AVI's agile product development ensures our routers, switches and software defined networks have the capability to integrate with existing network architecture, fusing new and legacy technology.

### **Barrett Communications**

 $\bigcirc$  BARRE

Communications | Field Equipment | Manufacturing

#### **Company Brief**

Established in 1976, with the Head Office and factory in Western Australia, Barrett Communications design and manufacture HF and Low Band VHF radio equipment for supply to military, government, critical infrastructure, Non-Governmental Organisations and peacekeeping organisations.

Barrett's business model allows the agility to provide customised solutions to our end users whilst also providing large scale communications solutions to support the modernisation programs of military forces.

Barrett has customers in over 150 countries globally, in key markets including Asia, the Middle East, Africa, South America and North America.

#### Barrett PRC-4090 Tactical HF SDR



Yes

#### Australian Export Control Yes approval required?

#### **Product Information**

The Barrett PRC-4090 tactical HF Software Defined Radio (SDR), is the lightest military grade HF transceiver on the market. At only 2.95kg, multiple battery options offer a gross operational weight from 3.95kg to 5.0kg.

The PRC-4090 is a multi-configured system offering man-pack, mobile and base station configurations with selectable power outputs of 10, 30, 125 and 150 Watts. With a current consumption of only 250mA, the operation time is significantly extended to up to 64 hrs in RX and up to 21 hours RX/TX at 90/10 duty cycle.

In addition to offering multiple languages and IP network connectivity, the Software Defined architecture provides complete software control of RF modulation and bandwidths, providing unprecedented flexibility and reliability with ease of upgrade. While being the most advanced fully software-defined transceiver, the PRC-4090 remains true to the Barrett ethos of designing transceivers that provide intuitive ease of use. Also offered is the Barrett PRC-2080+, a tactical low band VHF transceiver which is designed for multi-role military and security applications. Please refer to the company website for further information.

### **Blacktree Technology**



Communications | Design | Engineering | Manufacturing | Space Capabilities | Test Equipment Through-Life Support | Training & Education | Research & Development

#### **Company Brief**

Blacktree Technology is a highly adaptable and innovative communication systems specialist focusing on satellite and terrestrial systems, with a global reach from headquarters based in Australia. A Blacktree solution can encompass some or all aspects of the product life cycle, including innovative design, product acquisition and/ or manufacture, systems integration and supporting systems through life. Blacktree has expertise across the RF spectrum from HF, VHF, commercial and defence UHF, satellite and microwave systems. With the integration of products from Spirit River and Cidaal, Blacktree can provide an end to end turnkey solution.

#### SRR-01 UHF Helical Antenna



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

#### **Product Information**

The SRR-01 UHF Helical antennas have been designed to withstand, and currently are proven in, the harshest environmental conditions – used by various entities around the world in extreme conditions. The ruggedised construction of the antenna has been optimised to support full-duplex systems therefore minimising the potential for noise.

The SRR-01 is a right hand circularly polarised 11½-turn helical antenna. Coupled with the DSE-01 diplexer and PED-03 (manual) or PED-04 (remote control) pedestals, the system forms a complete ground station antenna system.

The single helical antenna provides an overall gain of 14dBi. The Dual Antenna Array consists of two SRR-01 antennas phased together to form one system. The dual phased array helical antenna will provide an overall gain of 17dBi.

### Cablex



Autonomous Systems | Communications | Design | Engineering | Intelligence, Surveillance & Reconnaissance Manufacturing | Optical | Research & Development | Robotics | Space Capabilities | Test Equipment Through-Life Support | Vehicles & Accessories

#### **Company Brief**

Cablex is an Australian owned company with local and global supply chains to support each customer's requirements.

**Capabilities.** Design assistance, prototyping, product qualification and validation; harness manufacturing and box builds (simple leads to complex avionics harnesses); build to print and build to specification; integration of wiring and harnesses into cabinets and enclosures; test, design and development; installation services; and through-life support, maintenance, repair/overhaul, spares and repairs.

**Customer benefits.** Experience integrating hardware solutions across multiple platforms/domains; specialist skills and professional knowledge to solve challenging issues; and small enough to be agile and flexible to deliver solutions without competing with defence primes.

#### Solutions for Electrical Systems, Products, Manufacturing, Integration and Services



#### Service Information

Cablex provides state of the art solutions for electrical systems, products, manufacturing, integration and services, for harsh environments. It supports some of the world's largest defence and aerospace companies as well as transportation, telecommunications and electronic. Cablex is one of Australia's leading globally recognised manufacturers of build to print and build to specification of electromagnetic hardened and emission controlled wire harness, electrical enclosures, box builds and consoles for harsh electrical noise environments. Cablex specialises in C4ISR equipment integration across land, air, sea and transport platforms.Cablex provides competitive solutions for complex systems where there is a high mix of products and low volumes.

### **CISTECH** Solutions



Communications | Field Equipment | ICT & Cyber | Intelligence, Surveillance & Reconnaissance

#### **Company Brief**

CISTECH Solutions' core business is Radio-over-IP (RoIP). Our products include rugged radio gateways which provide the integration point between conventional radios and RoIP networks, allowing voice communications between radio users and PC based users on a network.

The hardware is compatible with the Motorola WAVE and Cisco Instant Connect (Previously IPICS) software RoIP consoles. Additionally, CISTECH also creates console software that integrates with our hardware, as well as Persistent Systems Wave Relay Mobile Ad-Hoc Networking (MANET) radio solutions. Our consoles provides a single pane-of-glass for RoIP voice, video situational awareness and system management within the MANET system.

#### Rugged 1 Port Radio Gateway



Yes Spares and support equipment available?

Australian Export Control No approval required?

#### **Product Information**

The CISTECH Solutions radio voice gateway (GV1-2010) is a ruggedised portable radio gateway that provides a single Land Mobile Radio (LMR) port to connect voice radios to IP networks. The compact form factor of the GV1 is ideally suited for mission-critical voice communications over IP networks in fixed and mobile roles. The gateway features connections for one radio, as well as military H-250 handsets.

Network connectivity is through one of two Ethernet ports configured as a 2 port switch. The rugged construction of the GV1 enables the gateway to act as a communications hub in harsh environments and the device has been environmentally tested against MIL-STD-810G for temperature, humidity, altitude, shock and vibration. Using high-grade components, conduction cooling and extended operating temperature range, the GV1 is optimised for operation in harsh environments that require TCP/IP, VoiP and analogue Voice integration.

Also offered is the MANET Command Environment (MaCE) application, designed to operate with the Wave Relay® MANET radio solution from Persistent Systems. Please refer to the company website for further information.

Availability < 3 months.

### **Clearbox Systems**



Artificial Intelligence | Autonomous Systems | Communications | Design | Electronic Warfare | Engineering | ICT & Cyber Intelligence, Surveillance & Reconnaissance | Manufacturing | Research & Development | Space Capabilities Test Equipment | Through-Life Support | UAV and Counter UAV

#### **Company Brief**

Clearbox Systems uses technology to develop new and better techniques for the operations and management of communications networks and the Electromagnetic Spectrum to successfully achieve a warfighting effect. Clearbox Systems deploys military software and hardware solutions across SATCOM, Space Domain Awareness, ISREW and Secure Communications (including cryptographic solutions), specialising in:

- Equipment and Sensor Monitoring and Control
- Spectrum Monitoring and Management
- Network Management and Operational Support Systems
- Heterogeneous Signal Processing Systems

#### Spectre



Spares and support<br/>equipment available?YesAustralian Export Control<br/>approval required?Yes

#### **Product Information**

Spectre is Clearbox Systems' range of RF Electronics products. Enabling Heterogeneous Signal Processing Systems, Clearbox Systems' RF products are design to digitise RF and provide the stream in the most efficient manner possible to the customer's target compute environment for processing. This provides an open, non-proprietary method for RF signal processing. The products include various levels of RF TX and RX capability as well as on board timing, wireless communications, CPU and battery back power. Deployments are typically SIGINT or ELINT, distributed and/or mobile ISREW and high data rate communications, including implementation of various military protocols.

Availability <3 months.

### Cobham Aviation Services Australia – Special Mission



Engineering | Humanitarian | Intelligence, Surveillance & Reconnaissance | Through-Life Support | Training & Education

#### **Company Brief**

Cobham Aviation Services Australia – Special Mission combines state-of-the-art surveillance technology with aerial platforms to deliver customised airborne surveillance and search and rescue services.

Their end-to-end capabilities benefit government and military customers with responsive and cost-effective 'turn-key' solutions for optimal mission performance. With in-house engineering capability, crew training, mission system component workshops and logistics systems to support their fleet, Cobham is able to deliver customised special mission solutions.

#### **Custom Electronic Design and Manufacturing**



#### Service Information

Cobham delivers fixed wing airborne surveillance, search and rescue support to governments and militaries for national security, law enforcement, environmental protection and emergency response. Providing operations for Australian Border Force, Cobham deploys highly-modified aircraft flying 3,000 missions each year. The aircraft are integrated with the latest surveillance and communication technology, including electro optic/infrared turrets, search radars, mission management systems, network real time data systems, secure communications and satellite video links.

Cobham utilises highly-modified Challenger jets to provide a turn-key search and rescue capability to the Australian Maritime Safety Authority (AMSA). The jets contain sophisticated, state-of-the-art technology integrated onto a civil search and rescue platform. This technology enables AMSA's Search and Rescue officers to be virtual crew members with eyes and ears at the scene as events unfold. The modification, integration and through life support of these aircraft and systems is undertaken in house by Cobham in Australia using numerous local small businesses.

Availability

Designed and manufactured to order.

### **Codan Communications**



Communications | Design | Engineering | Humanitarian | Manufacturing | Through-Life Support

#### **Company Brief**

Codan Communications has over 60 years' experience delivering outstanding technical solutions for defence, safety, and security markets in some of the harshest environments on earth. Headquartered in Australia, Codan is uniquely positioned to solve complex electronic challenges through agile engineering, advanced manufacturing and comprehensive through-life support.

Our pedigree is built on our track record in supplying products to a variety of defence customers, such as land mine and IED detectors (to the Australian Army, Canadian Army, US Military and many more), as well as radio systems to numerous global Defence forces.

#### Sentry-H 6110-MP



#### **Product Information**

Codan's Sentry-H 6110-MP delivers a powerful 30W RF power output and up to 79 hours of battery life in less than 4.7kg of weight. The 6110-MP forms an integral part of the Sentry-H product family that meets the demands of the modern battlefield whilst offering full backwards compatibility with legacy products. The 6110-MP is one of the smallest, lightest form factor manpack HF radios available, without compromise on capabilities. It delivers a rugged Software Defined Radio (SDR) solution for military organisations that demand uncompromised, secure voice and data communications, while on the move.

Availability <3 months. Designed and manufactured to order.

Spares and support Yes equipment available?

Australian Export Control Yes approval required?

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### Cogito Group



ICT & Cyber

#### **Company Brief**

Cogito Group is an award-winning Australian owned and operated cyber security company, with a reputation for producing innovative ICT security solutions on time and on budget. Cogito Group is committed to innovation and agile delivery methods, and provides military-grade cyber security solutions and support, including specialised software, hardware, as a service, and professional services to the Australian Defence Force and New Zealand Defence Force

#### Jellyfish



#### **Product Information**

Jellyfish is an award winning, innovative cyber security command and control platform designed to:

- enhance Cyber-Situational awareness
- protect data, networks and mission-critical tasks
- intelligently combine data from multiple sensors and applications, enabling sensor fusion
- actively counter and respond to threats, as well as dynamically adapt to new threats
- automate security functions by linking security data derived from both physical and logical domains
- manage identities and authentication mechanisms such as single sign on as well as credential managment such as PKI Digital Certificates, Smartcards, Encryption Keys and One Time Passwords
- work with legacy, current and future systems
- solve more than one pain point
- provide a holistic and fully integrated view of your security platforms for enterprise, MSSPs and SMEs alike.

Availability < 3 months. Designed and manufactured to order.

Spares and support Yes equipment available? No approval required?





ICT & Cyber | Training & Education

#### **Company Brief**

CyberMetrix helps organisations and governments build cyber resilience that extends "beyond their own walls". As cyber threats grow deep within supply chains due to insecure, under prepared partners, organisations are needing to move fast to contain this rapidly emerging risk. CyberMetrix's innovative approach to 3rd party cyber risk management provides the visibility and assurance that our clients are needing and regulators are increasingly demanding.

#### 3rd Party / Supply Chain Cyber Risk Management

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#### Service Information

CyberMetrix's cyber security consultants are a unique blend of seasoned career experts with skillsets that span human cyber risk as well as processes and technology controls to enable organisations to meet their cyber resilience objectives and compliance and regulatory obligations.

CyberMetrix utilises innovative technology solutions to quickly take in clients 3rd, 4th and 5th party risks and controls, and enable them to build a measurable, metrics based cyber program to manage the cyber risks appropriately.

Availability >12 months

### **Daronmont Technologies**



Communications | Electronic Warfare | Engineering | Intelligence, Surveillance & Reconnaissance | Manufacturing Through-Life Support

#### **Company Brief**

Daronmont Technologies is a full service systems integrator specialising in fixed and deployable communications, surveillance, C4 and electronics. Capabilities include Passive and HF radars, ESM, C2 integration and deployable C4I. The company designs, manufactures, installs and supports both hardware and software systems and system upgrades. Daronmont maintains DSA certified facilities in Adelaide and Melbourne and an experienced team of over 80 engineers. Our engineering capability encompasses a mix of systems, software, hardware, mechanical and ILS disciplines. Customers include the Australian Department of Defence's Capability, Acquisition and Sustainment Group, Science and Technology Group and primes. Daronmont is an established exporter.

#### CommSECA 2020



#### **Product Information**

Daronmont's CommSECA RF Communications Search and Direction Finding System has been specifically designed for military applications where low cost, high performance, unattended operations are required. Daronmont has developed leading-edge calibration expertise and algorithms to ensure the installed systems achieve high accuracy, especially in challenging Radio Frequency environments.

CommSECA detects and intercepts transmissions of interest. Searching the communication bands, CommSECA can passively track multiple transmissions, increasing awareness and the ability to respond quickly to illegal or life-threatening situations. CommSECA features low size, weight and power, an Open Architecture and an adaptable antenna interface. CommSECA comprises a single 3 or 5 RU 19 inch unit, a marine ruggedised 3-band, 5-channel antenna and antenna interface unit. CommSECA operates across the frequency range of 1 MHz to 3.6 GHz, with typical accuracy better than 2 degrees. Whilst having the advantages of an off-the-shelf system, CommSECA also offers a high degree of customisation.

### Datapod Australia



Artificial Intelligence | Communications | Electronic Warfare | ICT & Cyber | Intelligence, Surveillance & Reconnaissance Through-Life Support

#### **Company Brief**

Datapod manufacture scalable modular datacentre facilities, including all site infrastructure and site preparation, with capacity from several to hundreds of computer racks in a facility that can be deployed anywhere. The Datapod System achieves the highest physical security ratings and can accommodate government top level security classifications. Datapod is multi award-winning, and has been deployed and supported in locations around the globe. For permanent C4ISREW mission systems requiring massive storage and processing, or temporary FOB applications, the Datapod System enables world-class data storage and processing in an EMSEC-optimised environment.

#### The Datapod System



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

#### **Product Information**

Australian designed and built, Datapod Systems are constructed from standardised factory built modules and have been deployed around the world since 2009. Typically they are deployed as a permanent structure to provide a timely, scalable and fit-for-purpose alternative to accommodating IT systems in brick and mortar facilities. Datapod Systems have a usable life expectancy of many decades, but can be moved or repatriated after their initial requirement expires. Datapod's design, build and deployment capability extends to the full site construction, power, cooling, racks, communications cabling, fire systems and security fitout, as well as ICT systems deployment. The fully standardised modules can be assembled to the customer's requirement for full Factory Acceptance Testing within 6 months and then shipped to site for deployment.

### Defence Communications Industry



Communications | Through-Life Support

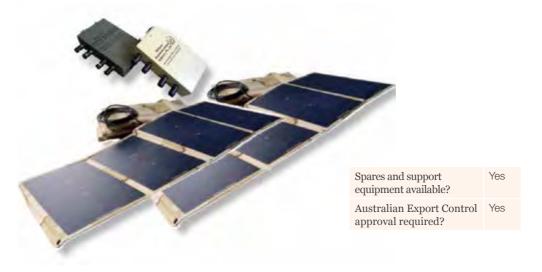
#### **Company Brief**

Defence Communications Industry (DCI) is a niche capabilities company, designing and manufacturing specialist data communications products, with an outstanding 20 year track record with Australian and other defence organisations.

DCI is a Defence Recognised Supplier (LORS), with numerous industry award including the AFCEA 'Golden Links' for outstanding collaboration with Defence, and the 'Trevor Pearce Award' for outstanding product innovation and industry contribution.

DCI is a 100% Australian owned and operated small business with full product and related IP ownership. Core Capability: data links (network extensions) over copper, reducing infrastructure costs and logistics load to 90%.

#### P4 / P2 – Data Links (Network Extensions) over copper 'D10' to 60Mbs/10kms



#### **Product Information**

DCI's transparent and secure network extensions over 'D10' to 60/10km feature:

- simple and effective alternative to fibre-optics, reducing infrastructure costs and logistics load to 90%
- exceptional effectiveness in harsh terrain or areas with poor 'line-of-sight' that inhibit radio and wireless signals
- can be used to extend any IP (Ethernet) network data to/from HQ, remote operating bases, Combat Support Elements, coalition and agencies, video and data sensors
- two interchangeable product variants: P4 and P2 with 24Hr battery operation and miniature version for portable application, respectively
- power redundancy with DCI designed, high efficiency, portable solar panels: 50, 75 and 100W variants.

### **EM Solutions**



Communications | Manufacturing | Optical | Space Capabilities | Through-Life Support

#### **Company Brief**

EM Solutions is a trusted technology developer of innovative microwave and on-the-move radio and satellite products that help to deliver high speed telecommunications anywhere in the world. The company's principal activity is the design, assembly, test, and support of high end, broadband satellite transceivers and communications-on-the-move terminals for defence and government customers. EM Solution's customers typically serve the national interest and require resilient and assured systems operable in high threat environments.

#### Cobra X/Ka Triband Maritime Satellite Communications Terminal



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

#### **Product Information**

The Cobra terminal is a 1m class mobile satellite terminal that is certified to operate on the commercial Inmarsat GX service in addition to government and military satellites operating at both X and Ka Band - simultaneously in these two frequency bands if needed. The terminal is WGS certified having been sponsored by Australian Navy and uses a proprietary monopulse based tracking system providing exceptional tracking accuracy. With multi-frequency band and multi-satellite operation the Cobra fulfils the requirements of military and government users in the provision of "assured communications" and unbreakable links.

### **Fivecast**



Artificial Intelligence | ICT & Cyber | Intelligence, Surveillance & Reconnaissance

#### **Company Brief**

Fivecast is enabling a safer world. As a world-leading provider of cutting-edge digital intelligence solutions, Fivecast delivers the world's most important public and private organisations with the capability to explore masses of digital data, gaining critical insights that are used to protect communities. Fivecast was born out of a unique Australian five-year collaboration between government, researchers, national security and law enforcement to tackle big data challenges facing these sectors. Fivecast is headquartered in Australia and has also established an office in the USA to further develop their USA Federal Government and Law Enforcement customer base.

#### Fivecast ONYX

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Spares and support equipment available? Australian Export Control No approval required?

Yes

Fivecast ONYX is the force multiplier your agency needs, providing advanced targeted data

**Product Information** 

collection across open source platforms and Al-enabled risk analytics. The unique power of the solution is in its capacity to not only explore unprecedented amounts of digital data, but to also provide actionable insights. Powered by deep learning, and with a sophisticated and configurable set of risk detectors, Fivecast ONYX shines a light into the darkest of places.

Fivecast ONYX is currently being used around the world for:

- Counter Terrorism
- National Security
- POI Monitoring
- extremist threats
- cross-border crime
- gang violence
- trafficking
- fraud detection
- event security

Availability

< 3 months. Designed and manufactured to order.

### Fugro Australia Marine

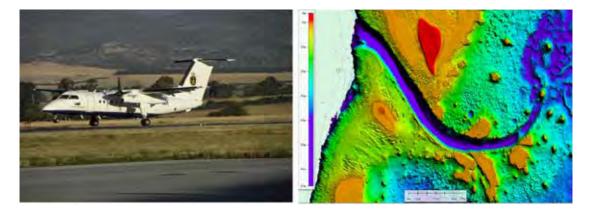


Intelligence, Surveillance & Reconnaissance | Through-Life Support

#### **Company Brief**

Fugro is a world leading geo-data specialist, collecting and analysing comprehensive information about the Earth and the structures built upon it. Fugro provides the specialist people, equipment, expertise and technology to safely map marine and land environments. Fugro has a significant Research and Development capability within Australia to provide hydrographic survey solutions that enable efficient operations, improved data quality, and expedited product delivery for clients and end users. Fugro has also engaged in the design and build of dedicated MetOcean buoys and Autonomous Surface Vessels (ASVs) for Hydrographic Survey operations.

#### Fugro LADS (Laser Airborne Depth Sounder)



#### Service Information

The Fugro LADS HD+ is the most recent version of the Fugro Airborne LiDAR Bathymetry system which accurately collects data over both marine and coastal zone environments. The HD+ has doubled the laser rate, allowing for increased data density over the coastline, for an increased level of detail in mapping this environment.

First developed by the DSTO for safe and efficient data collection in the near shore environments that could not be efficiently surveyed by conventional vessels, the system has evolved to remain the safest and most efficient method to collect data in the marine environment.

## Future Fibre Technologies (Ava Risk Group)



Design | ICT & Cyber | Manufacturing | Optical | Research & Development | Through-Life Support

#### **Company Brief**

Ava Group is a market leader of risk management services and technologies, trusted by some of the most security conscious commercial, industrial, military and government clients in the world. With solutions for the most complex and demanding environments, customers are supported by a skilled international team.

Ava Group's Future Fibre Technologies (FFT) company provides fibre optic intrusion detection solutions for perimeters, data networks and pipelines. BQT offers biometric and card access control. Committed to the highest levels of product performance and support, Ava Group products are used to protect thousands of sites worldwide.

#### Aura Ai-2



### **Product Information**

Aura Ai-2 offers advanced and versatile perimeter intrusion detection for both fence and covert buried applications. This latest generation technology can also detect and locate unauthorised interference and illegal tapping of sensitive fibre optic data networks before data loss or damage can occur.

With industry leading real time discrimination and classification techniques, Aura Ai-2 delivers market leading nuisance alarm handling while maintaining maximum sensitivity to intrusion events. Monitoring distances of up to 110km, the two-channel controller offers full cut resilience and redundancy. Aura Ai-2 has been cyber penetration tested to NIST cybersecurity framework and UL 2900 cybersecurity standards.

Availability <3 months

Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### General Dynamics Mediaware

**GENERAL DYNAMICS** Mediaware

Intelligence, Surveillance & Reconnaissance

#### **Company Brief**

General Dynamics Mediaware develops best of breed software for the processing, exploitation and dissemination (PED) of ISR video collected by airborne and ground-based motion imagery sensors. Mediaware's award-winning mission intelligence and data management products support commanders' decision making, manoeuvre forces, and the targeting cycle. Our STANAG 4609/NGA MISP compliant products can be accredited and installed across any military, law enforcement or commercial organisation with a need to exploit motion imagery from ISR platforms, and to manage massive amounts of ISR data.

Mediaware's professional team are experienced in supporting ISR systems deployed operationally around the world.

## D-VEX: Motion Imagery Processing and Exploitation Software

Spares and support equipment available?	Yes
Australian Export Control approval required?	No

#### **Product Information**

Mediaware's PED software (D-VEX) provides operators of ISR platforms with easy to use tools to derive, manage and distribute critical information from full motion video (FMV). It enables on-the-ground analysis, reporting, cataloguing and archiving. In addition to facilitating real-time exploitation of ISR FMV for immediate tactical advantage, D-VEX accelerates in-mission and post-mission reporting by efficiently condensing hours of flight time to minutes of focused and actionable information using highlight videos, snapshots, map chips and annotations. D-VEX's catalogue and archive capability allows users to store and link video clips with intelligence reports and summaries. The archive can be searched by geo-location, time, keyword, user tags or intelligence products.

D-VEX software is both platform and payload agnostic. This allows payloads to be upgraded or added throughout the life of type of the ISR platform in response to technological developments and changing user needs, while maintaining a single, common PED solution.

Availability <3 months





ICT & Cyber

#### **Company Brief**

Statistically around 30% of information breaches are as a result of human error. Janusnet develops software that enables governments and their suppliers to protect national intellectual property and government information through the application of rigorous and comprehensive marking methodology. Janusnet's founders co-authored the original email protective marking standard used by the Australian Government. Now Janusnet software is used globally to enforce information handling policies and thus help prevent information breaches, spills or mismanagement.

#### Janusseal

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Spares and support equipment available?	Yes
Australian Export Control approval required?	No

#### **Product Information**

Janusseal is dual use software that enforces classification labels (protective markings) in documents, email and files. It ensures that human visible markings are accurately and effortlessly applied and that metadata is embedded. Accurate labelling and embedded metadata facilitates both the sharing of information with the right people and prevents distribution to the wrong people.

Capabilities include:

- email, document, file classification
- supports global information classification schemas:
  - > CUI/NIST SP 800-171, CI
  - > HMG
  - NATO
  - > DSPF, EPMS2018.4
  - commercial applications
- easy integration with numerous DLP, gateway and EDRMS technologies
- configured for military and intelligence use.

### Jet Aviation Australia



Communications | Design | Electronic Warfare | Engineering | Intelligence, Surveillance & Reconnaissance Logistics | Manufacturing | Through-Life Support | UAV and Counter UAV

#### **Company Brief**

Jet Aviation's specialty is the delivery and integration of modified COTS aircraft into ADF military service, including their transition from National Aviation Authority (NAA) to Defence Aviation Safety Authority (DASA) Continuing Airworthiness Management Regulations. Jet Aviation brings extensive expertise with Stewardship of ADF ISR systems, airworthiness and DASA regulations, maintenance, and supply chain management to support aviation capability. Jet Aviation are established in key locations around Australia with fixed base operations (FBO) and significant maintenance, repair and overhaul (MRO) facilities in capital cities and Defence bases.

#### Intelligence, Surveillance & Reconnaissance



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

#### Service Information

Jet Aviation's special mission solutions are world class, developed from decades of providing customised aircraft modifications to government and civilian customers throughout Australia, New Zealand, and the Asia Pacific region. The Integrated project management expertise delivers turnkey aviation solutions on time, and within budget to meet capability needs.

Custom installations include:

- surveillance radars
- EO/IR systems
- laser illuminators
- Mission Systems
- Data downlinks & Satellite communications
- Video Management and Mapping Systems
- operator consoles
- mission radios
- cabin intercom systems
- avionics equipment upgrades
- cargo restraint system
- cargo doors (fixed wing)
- camera holes
- purpose built equipment stowage cabinets.

### Kellogg Brown & Root



Artificial Intelligence | Communications | Electronic Warfare | Engineering | ICT & Cyber | Intelligence, Surveillance & Reconnaissance | Logistics | Research & Development | Space Capabilities | Through-Life Support

#### **Company Brief**

Kellogg Brown & Root (KBR) is a global engineering, construction and services company providing professional services and technologies to government (Defence, Aerospace, Space and Aeronautics), and several other major sectors.

Services offered to Government include:

- program management
- asset management
- integrated logistic support
- training and simulation
- Base Operations Support
- Missile Defence
- Force Protection
- Satellite Operations

• Medical Mission Support

- Flight Operations
- physical security
- Quality of Life
- Contingency and Remote Base Life Support
- Utilities Operations and Management
- emergency response and firefighting
- system engineering

#### IFF Mode 5 Ground Based Interrogator System



Spares and support Yes equipment available? Australian Export Control Yes approval required?

#### **Product Information**

A range of specialist Mode 5 IFF AIMS, STANAG and ICAO certification services including provision of the IFF Mode 5 Ground Based Interrogator System, production of engineering plans and procedures, certification test and evaluation assistance, post test data analysis and reporting, discrepancy remediation, IFF cryptography applique management, and specialist IFF training.

A transportable AIMS-certified All-Mode (Mode 1, 2, 3/A, C, 5 L1/2, Mode S ELS/EHS) IFF test capability designed to support 1103A-B testing, replicating the design and equipment configuration of test systems currently in service with the ADF and other global militaries as well as multiple Air Force/Navy Bases in USA.

### Leidos Australia



Artificial Intelligence | Autonomous Systems | Design | Electronic Warfare | Engineering | ICT & Cyber Intelligence, Surveillance & Reconnaissance | Logistics | Medical | Research & Development | Robotics Through-Life Support

#### **Company Brief**

Leidos Australia works within government, defence, intelligence, border protection and health markets. With over 1400 local experts, backed by our global experience and network of partners, Leidos Australia delivers solutions that help secure Australia. With global reach-back into the US and UK, Leidos Australia is led by a local leadership team across four lines of business – IT Projects, Intelligence (C4ISR), Defence Mission Systems and IT Services. At Leidos Australia we are looking beyond the platform to deliver solutions to the Australian Defence Force and are a trusted partner of the Australian Government.

#### FASK Fly Away Survey Kit



Spares and support equipment available?	Yes
Australian Export Control Approval required?	Yes

#### **Product Information**

The FASK is a deployable Rapid Environmental Assessment (REA) hydrographic system able to be attached to the gunwale or pontoon of a craft of opportunity (RHIB, LUB, etc) and provide an IHO Order 1A quality survey in water depths from 1-30m, operating in Sea States up to SS3.

A Norbit Multibeam Echo Sounder is attached to a rigid pole, which is attached to a cross beam supporting differential GPS antenna. The topside processor, powerful laptop and battery power for up to 12hrs of operation are contained in modified Pelican cases – allowing transportability and environmental protection. When disassembled, the kit is man-portable by a 2 person team, and air / sea transportable for rapid deployment. Leidos Australia can configure the system for different hydrographic missions; including alternate sensors, and also hydrographic processing software (including our own US products), to meet specific user needs.

### **Microsecure Corporation**



Communications | Design | Electronic Warfare | Engineering | ICT & Cyber | Intelligence, Surveillance & Reconnaissance Research & Development | Through-Life Support | Training & Education | Security Services, Mission Systems Software Field Equipment

#### **Company Brief**

Microsecure Corporation an Australian cyber, security and system integration company providing a core team of specialist employees, contractors and consultants who bring decades of knowledge, experience, and capability. Microsecure is highly trusted with access to Australian Government, Defence industry, and security vetted subjects. Microsecure was founded and incorporated by the principal Frank Lazzarotti in October 1998, and is based in Australia. Microsecure has attained Australian Defence contracts, panels, and programs. Microsecure has successfully completed hundreds of projects worldwide. Microsecure's client base includes Australian and United States Department of Defence, multinationals, critical infrastructure service providers, intelligence and federal organisations.

#### Microsecure Secret Stealth Systems [MS4]



#### Service Information

Microsecure Corporation Capability

- MS4, 4C's and SP4 ™© (technologies and Intellectual Property)
- MicroSecure Secret Stealth Systems (MS4) ©
- commercial, contractor and Government Furnished Systems
- The 4C's of Security: code | cyber | cryptographic | COMSEC © training programs | framework and methodologies
- The SP4 of Security: protocols | testing | verification | Accreditation © IP Protection | R&D programs | commercialisation and collaboration

#### Certification

- professional and personnel Security Management Services
- technical, Regulatory and Statutory frameworks
- product and program certification and accreditation

#### Compliance

- standards and Legislation
- Risk and Governance

Availability

- Export Controls and ITAR licenses and agreements
- technical assistance and warehouse agreements

< 3 months. Designed and manufactured to order.

### north Security Digital



ICT & Cyber

#### **Company Brief**

north is a leading Australian owned cyber security company, supported by a Digital Consulting Practice. north supports public and private sector clients to understand the why and how of existing security operation and management, to the more advanced, innovative and technology-orientated methods, resulting in secure and positive changes in people, process and capability. north's high performing team of skilled consultants and technology experts are experienced in providing end-to-end security services, and are experts across all aspects of cyber security and digital consulting with experience in bridging business and technology to achieve outcomes in challenging ICT environments.

#### **Cyber Security**



#### Service Information

Backed by one of Australia's largest cyber security providers, Tesserent, north provides clients with a full suite of cyber security services. Tesserent is now the home of 4 of Australia's leading IT and Security Service Providers:

- north: cyber security advisory, governance, risk and compliance, system security plans, policy, frameworks, operational security and project management and digital transformation
- Seer: penetration testing, vulnerability assessments, code review, bespoke secure code development attack simulation
- Rivium: specialise in Splunk enterprise security solution in consulting, implementation and managed services
- Pure.Security: expertise in penetration testing, secure application development and security advisory services.

Availability <3 months

### Ocean Software



Communications | Training & Education

#### **Company Brief**

Ocean Software's products form the core systems behind highly complex operating environments including Command and Control & Situational Awareness. The flagship product, FlightPro® is a comprehensive off the shelf software solution, designed to meet the exacting operations and training management needs of military and commercial aviation organisations. Ocean Software is actively developing the first complete solution for in-house cyber security teams from recruitment, training and assessment to operational readiness with CyberPro<sup>™</sup>.

#### **FlightPro**®



#### **Product Information**

FlightPro® operations and training management software provides a comprehensive COTS-based system solution to military and commercial aviation. Trusted by 14 militaries worldwide, FlightPro® not only simplifies complex operating environments, but embodies the very principles of modern, connected and integrated air operations.

Modules include Operations Management (Resource Scheduling and Tasking), and skills and training management. Additional modules include Long Range Planning (LRP), rostering, Joint Ops, Exchange Integration (FACT), and LMS integration.

Availability	<3 months. Designed and manufactured to	order.

Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### **Operational Systems**



ICT & Cyber | Training & Education

#### **Company Brief**

Operational Systems (OpSys) is a multidisciplinary cyber security and ICT Managed Services company. With a passion for providing future-focused strategy, consultancy and advice on cyber security, the company has rapidly grown to become a genuine defence industry leader. Providing cyber security services and cyber security training to Defence and Defence supply chain, OpSys has been able to build a sovereign cyber security capability.

#### Cyber Security Training and Managed Services



#### Service Information

OpSys provides and delivers world-class cyber security training programs. With partners such as Circadence, CyberMerc, FireEye, Mandiant and other global leading companies, OpSys can provide training based on actionable intelligence pre deployment, in-class or ongoing 24x7x365

### Penten



Artificial Intelligence | Communications | Design | Electronic Warfare | Engineering | Field Equipment | ICT & Cyber Intelligence, Surveillance & Reconnaissance | Manufacturing | Research & Development | Test Equipment Through-Life Support

#### **Company Brief**

Penten is an Australian cyber security company, delivering specialist security technologies and applied AI for Defence and Government, focussed on true innovation and pushing the boundaries of technology. Penten is a proven and award-winning innovator with a track record of bringing world-class ideas to Defence to solve difficult problems.

Penten has a long history of building accreditable designs and solutions for classified information exchange, including full stack ICT engineering capability from rapid prototyping through to in-service operation. Penten has the necessary skills, experience and security cleared resources to deliver enterprise solutions which can be tailored and supported locally to deliver sovereign advantage.

#### AltoCrypt Stik | access without compromise



Spares and support Yes equipment available?

Australian Export Control Yes approval required?

#### **Product Information**

Approved for use by ASD, AltoCrypt Stik is a highly portable secure mobility solution which enables wireless access to classified computer networks both inside and outside the office. The AltoCrypt Stik simplifies access to classified networks by integrating crypto, router(s), and security appliances into one small USB device that plugs into a laptop, connecting it wirelessly to a classified network via the internet. AltoCrypt Stik integrates with existing access gateways and crypto infrastructure standards. The unique design enables Defence to roam cable free, collaborate with peers and have access to their data, when and where they need it.

### **Prophecy International**

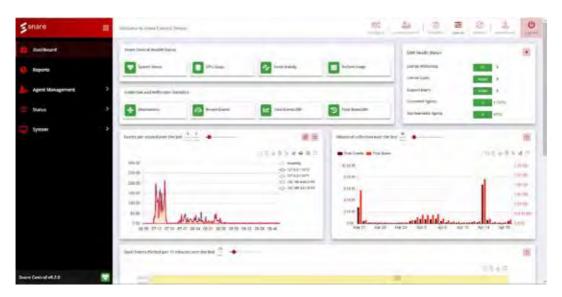


ICT & Cyber

#### **Company Brief**

Prophecy International is an ASX listed Australian software company with more than 40 years' experience and over 3000 customers worldwide. With offices in Australia, the UK and the US and global support capability, Prophecy deals with the largest companies, agencies and defence organisations in the world and is the developer of the Snare product suite of centralised log management tools.

#### Cyber Security Training and Managed Services



#### **Product Information**

Snare Central gives customers total control of log data, allowing the collection of any log from anywhere while managing what data goes where and to how many places. Snare Central archives logs, remotely manages agents, routes logs to multiple destinations including MSSPs, SOCs and other 3rd party solutions as well as Snare applications.

- >300 preset and customizable reports
- collect logs from anywhere and sends to anywhere
- filter out event & log noise
- ingest syslog feeds from any device
- >100 log adapters to parse common syslog data
- SNMP trap alerts from network devices
- powerful dashboards with drillthrough capabilities

Availability <3 months

Spares and support<br/>equipment available?Yes<br/>eAustralian Export Control<br/>approval required?No



# **Radio Frequency Systems**

RFS

Communications | Engineering | Intelligence, Surveillance & Reconnaissance Research & Development | Through-Life Support

# **Company Brief**

Operating from manufacturing facilities in Australia, Radio Frequency Systems (RFS) is recognised as a global leader for all broadcast and Defence Systems; providing an extensive range of filters, combiners and antenna systems. With a legacy of almost 50 years of successful involvement in high profile HF and defence projects globally, RFS has a wide range of products designed for large scale HF Networks. Broadband antennas, high power switching units and low loss cables all come together to make world class systems tailored to your specific requirements.

### High Frequency Antenna Systems - Rotatable Log Periodic 3.8 - 30MHz



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

# **Product Information**

The HLR430 is a high performance rotatable log periodic designed to provide reliable link establishment over short, medium and long distances, characterised by its high gain performance whilst maintaining excellent front to back ratios the HLR is capable of providing coverage in excess of 5000kms. The broadband feature enables transmission from 3.8-30MHz and reception from 2-30Mhz. The cleverly designed rotary joint enables continuous rotation with a complete 360 degree turn achieved in two minutes.

- Power ratings from 1kW to 10kW
- Gain 8.5-12dBi
- Azimuth beamwidth (deg) 72 typical
- VSWR 1.5:1 typical
- Wind rating (AS1170.2:2011) 285km/hr

# Red Piranha



CT & Cyber | Manufacturing | Research & Development | Training & Education

#### **Company Brief**

Red Piranha engineers and manufactures advanced security solutions and products for organisations of all sizes across the globe. Red Piranha's technology is 100% proprietary and all intellectual properties are internally owned. Our products and services protect against cyber-crime and intrusion attempts, securing data of organisations to meet modern security compliance requirements. We are committed to offering superior security solutions and services using automation, systems, and skilled people to provide a managed system more affordable than traditional approaches and this allows organisations of all sizes to enjoy the benefit of ironclad information protection.

#### **Crystal Eye**



Spares and support Yes equipment available? Yes Australian Export Control Yes approval required?

#### **Product Information**

Crystal Eye, a Unified Threat Management platform, is designed from the ground up to be simple enough for enterprises of all sizes. Crystal Eye, licensed as Australian made, delivers a comprehensive solution across a range of security areas, with the whole platform working together to offer automated protection, automated detection and automated response to security threats across organisations. Embedded within the Crystal Eye UTM Platform is Red Piranha Limited's Security Incident and Event Management (SIEM) solution. This solution utilises advanced anomaly detection to identify problems within environments, alerting Red Piranha Limited's Global Security Operation Centre of any suspicious activity.

# Solutions from Silicon



Autonomous Systems | ICT & Cyber | Research & Development | Software Engineering

### **Company Brief**

Solutions from Silicon (SfS) is a specialised Defence software engineering company based in Australia, established in 1994. SfS creates high quality custom software solutions for Defence customers. MINTACS is the world's leading Naval Mine Warfare Command Support System, customisable for use within mine warfare operations, and at maritime and joint forces headquarters.

#### MINTACS - Mine Warfare Tactical Command Software



### **Product Information**

MINTACS provides the Mine Warfare Force Commander with the latest technology to conduct both mining and mine counter-measures in today's complex maritime environment.

The key MINTACS modules are:

- MINTACS A comprehensive Tactical Command software suite used to plan missions, monitor tasking and conduct detailed assessment of mission progress and outcomes.
- MINTACS MWDC Mine Warfare Data Centre capability provides a master database of all tactical and environmental data relevant to the Mine Warfare command.
- MINTACS PMA Incorporates leading edge Sonar Image Processing and automated Mine Target Recognition based on research conducted by DST Group.

Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

# Sonartech ATLAS



Autonomous Systems | Design | Engineering | Research & Development | Sonar & Acoustic Analysis Systems

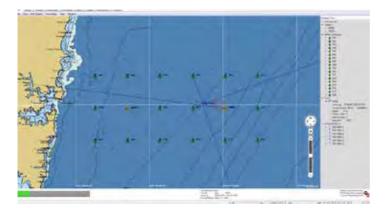
#### **Company Brief**

With over 30 years of experience and a world-wide customer base, Sonartech ATLAS is a world leader in the design and development of acoustic processors, recording and analysis systems for submarines, surface vessels, aircraft, and shore and support facilities.

The product lines include Active Intercept and Ranging Sonars, Passive Sonars, Sonar Data Recorders, Sonobuoy Processors, Acoustic Analysis and Mission Replay Systems, and Digital Voice Recorders.

The leading export items include SOBIC—Sonar Analysis & Classification Support System, MRT—Mission Replay Tool for secondary acoustic analysis, Submarine self-noise monitoring systems, and Sonix—sonobuoy processors.

#### Sonix Sonobuoy Processing System



Spares and supportYesequipment available?Australian Export ControlYesapproval required?

# **Product Information**

Sonix supports the simultaneous collection, recording, analysis, and display of the signals from sonobuoys to allow detection, localisation and classification of underwater threats by ASW units. The system has an airborne variant (Sonix-A) and a shipborne variant (Sonix-M).

The system receives, processes, displays passive and active acoustic data, and can support multi-static active search operations using coherent and incoherent sound sources.

Sonix can receive and process up to 64 channels of either analogue or digital sonobuoy data, from a range of buoy types. The processed data is displayed on appropriate displays including LOFAR, DEMON, Bearing Time History (BTH) and Frequency Azimuth (FRAZ). The operator is provided suitable analysis tools, which include:

- Frequency/range/bearing/time measurement cursors
- Multi-point dividers
- Closest Point of Approach (CPA) tools
- Lloyds Mirror calculators.

A graphical representation of the current tactical situation including own platform location, sonobuoy position and bathymetric seafloor data is incorporated.



# Tectonica Australia



Design | Manufacturing

### **Company Brief**

Tectonica is a leading supplier of portable power and data solutions for a wide range of military applications and has over 15 years of experience in developing integrated power and data management and distribution systems for the dismounted soldier. Tectonica has specialist expertise in the development of highly efficient power conversion, protection, management and distribution electronics, and the integration of legacy equipment, on the soldier and in military vehicles.

#### **BANTAM Power Scavenger**



Spares and support Yes equipment available? Australian Export Control Yes

approval required?

#### **Product Information**

The BANTAM Power Scavenger lets the modern soldier simultaneously recharge a central battery and power connected devices. Soldiers can connect any power source and recharge their battery. A Maximum Power Point Tracker allows power from sources such as solar mat, vehicle, batteries, mains power and virtually any power source available on the battlefield. Its unique, 'Z' shape design arranges three ports in a way that cleverly cradles bulky cable connectors and gets rid of uncomfortable protrusions. The BANTAM has been designed specifically for soldiers that need a power distribution capability.

# Ultra Electronics Avalon Systems



Communications | Electronic Warfare | Engineering | Intelligence, Surveillance & Reconnaissance | Manufacturing Research & Development | Through-Life Support

### **Company Brief**

Ultra Electronics Avalon Systems is an Australian specialist electrical and electronics engineering company focused on providing mission-specific, bespoke Electronic Warfare (EW) systems for land, sea and airborne applications. Ultra's capabilities include ELINT and COMINT collection and analysis systems and related operation requirements, as well as electronic self-protection systems and Counter-IED technologies. Ultra Electronics Avalon Systems operates with specialised staff and facilities with the full range of required security and accreditations to operate on sensitive military technologies, and supplies and supports products in-service in the Australian Defence Force.

#### Airborne Signature Measurement System (ASMS)



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

#### **Product Information**

The ASMS performs critical Electro-Optic (EO) or Radar Cross Sectional (RCS) signature measurements on maritime and land platforms. The high fidelity signature profile gathered by the ASMS enables optimal use of countermeasures against various types of missile seekers and other guided weapons, as well as facilitating suppression of ships signatures to counter the effectiveness of enemy sensors and weapons. The ASMS is currently the first to combine both EO and RCS units into one system for airborne signature measurement. The carry-on, carry-off helicopter based ASMS allows collection of signature data whilst the helicopter manoeuvres around the targets of interest.

# ZCG Scalar Antennas



Communications | Design | Engineering | Manufacturing | Research & Development

### **Company Brief**

ZCG is a radio frequency (RF) antenna manufacturer, supplying communications RF solutions to a wide-range of industries since 1970. ZCG is based in regional Australia with in-house RF engineers, CN controlled engineering, state-of-the-art testing facilities and multi-department manufacturing facilities. ZCG have successfully supplied solutions to Defence, space asset tracking, emergency services, and broadcasters, through to vehicle asset management clients. ZCG is proud to work directly with clients to ensure the highest quality RF solution for their requirements is achieved, for example; custom designed solutions for project REDWING and on-going R&D and prototype supply for a wide range of clientele.

#### **B46B** Dipole antenna



### **Product Information**

ZCG's range of sidemount folded dipoles are available in:

- VHF 30-300MHz
- Airband 118-137MHz
- FM Radio 87-108MHz
- UHF 400-520MHz
- Mobile Phone 800-960MHz
- or specify your frequency requirements

The range of sidemount dipoles are currently being utilised in broadcasting, wireless data transfer, UHF communication, ground asset monitoring as well as space asset tracking and passive radar. Available in aluminium or stainless steel to suit all environmental installations. All components can be customised to suit requirements.

Spares and support equipment available?	Yes
Australian Export Control approval required?	No

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Advanced Manufacturing Alliance - CDU Aerospace & Mechanical Consulting Engineers AML3D ANCA Australian Target Systems Axiom Precision Manufacturing **B&R** Enclosures **Bisalloy Steels BMP** Precision Engineering Coolon LED Lighting Direct Edge Manufacturing **DOEN** Pacific Elphinstone Exact Tech Australia Ferra Engineering Frontline Manufacturing Geng Glyde Metal Industries Griffin Marine Services Hofmann Engineering Hylec Controls Innovaero Integrated Design & Engineering Solutions IntelliDesign Kord Defence Marand Precision Engineering Matrix Composites & Engineering Memko Aviation Aerospace & Defence Metromatics

# Section Four

# 3. Development to Delivery

Design Research & Development Engineering Manufacturing

Milspec Manufacturing Neamco New Touch Industries NORSELD QPE Advanced Machining & VPG Redarc Electronics RUAG Australia SMETEC Services Spee3D Stahl Metall Thomas Global Systems Titomic Toolcraft Australia Varec Varley Group **VIPAC Engineers & Scientists** W & E Platt



# Advanced Manufacturing Alliance – CDU

Design | Engineering | Manufacturing | Research & Development | Training & Education

# **Company Brief**

The Advanced Manufacturing Alliance (AMA) was founded by Charles Darwin University (CDU) and SPEE3D to progress the research and advancement of advanced manufacturing technologies with strategic focus on the Australian invention of SP3D (supersonic 3D deposition). AMA provides training, design development, and customised part fabrication using the SP3D technology.

The SP3D technology has substantial scope to build on the following areas for defence:

- Self-sustainability
   – equipment repair, site repair and part replacement through on-site manufacturing.
- Mobility and efficiency- print parts on demand instead of stocking spares.
- Obsolescence management- printing of legacy parts or creation of a digital library.

#### Training, Design Development, and Part Fabrication



### Service Information

The Advanced Manufacturing Alliance installed the world's first LightSPEE3D machine and has rapidly gained extensive experience in operation and part production with the technology. AMA offers outside industry access to SPEE3D's potentially transformative technology through both training and part fabrication.

Flexible options are available for training on the technology, from a standard 3 day course to customised content. Rapid prototyping, digital designs, print blanks and customised part fabrication for one-off to mini production runs can be commissioned. Services such as design development, testing and research can also be arranged. AMA will work closely with the customer throughout the scoping, build and fabrication process to ensure quality and satisfaction in the products and services delivered.

# Aerospace & Mechanical **Consulting Engineers**



Communications | Design | Engineering | Manufacturing | Research & Development | Through-Life Support

# **Company Brief**

Aerospace & Mechanical Consulting Engineers, trading as AMCE, is a professional engineering consultancy in the defence and aerospace sectors, providing engineering design, analysis and certification services to the Australian Defence Forces for over 20 years. Using innovation and best practice, they deliver design solutions involving new capabilities, as well as running systems support, for fixed wing and rotary wing aircraft. AMCE also supplies products designed by the company, manufactured under subcontract, however, AMCE's core business is engineering design, analysis and certification.

# C-130 Paratroop Door Negator Spring Upgrade



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

# **Product Information**

The AMCE Negator Spring Upgrade reduces Loadmaster back injury incidents, by significantly reducing the physical effort involved in opening the paratroop door. The system provides greater assistance by incorporating a spring with increased stiffness. This enables one-man door operations. Three variants are available: standard lift assist, 50% additional lift assist and double lift assist. The Negator Spring Upgrade, combined with its specially designed removal/ installation tool, enables maintainers to carry out safe and easy installation and removal of the Negator Spring. It allows a single maintainer to wind or unwind the Negator Spring safely without assistance and reduces the time to change a Negator Spring. The Negator Spring Upgrade is certified to both FAR Part 25 and the aircraft certification baseline. In service with the RAAF C-130J aircraft since 2012, it is highly praised as a significant improvement in workplace safety, paratroop door operations and maintenance practice.

AMCE also design and build other platforms including C130 Underfloor Armour, MRH90 Pyrotechnics and Heliraft Stowage systems and C130 Observer Platform Assembly and Ventilation systems. Further information can be found on their website.

# AML3D Limited



Design | Engineering | Logistics | Manufacturing | Research & Development | Robotics Space Capabilities | Training & Education

### **Company Brief**

AML3D is an Australian company redefining productivity with the use of wire additive manufacturing WAM® to create certified, stronger products more efficiently. Incorporated in 2014, AML3D utilises 3D printing to solve complex challenges with metallurgy, proprietary WAM® process and software WAMSoft® more sustainably than traditional manufacturing methods.

AML3D provides manufacturing on demand services in contract manufacturing centres and is the original equipment manufacturer of Arcemy®, 'production-ready' industrial metal 3D printers that utilise locally sourced materials to create high performance products closer to the location of use.

#### Arcemy® Industrial Metal 3D printer



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

# **Product Information**

AML3D's manufacturing facility was the world's first Wire Arc Additive Manufacturing facility to receive Lloyd's Register certification in 2018. As the original equipment manufacturer of Arcemy® industrial metal 3D printers, AML3D's 'production ready' metal 3D printers are capable of printing mid to large metal structures that are stronger than castings and comparable to forged standards, AML3D can provide certification of customers' facilities upon installation of Arcemy® printers to ensure customers can manufacture certified commercial products that meet industry standards.





Autonomous Systems | Communications | Design | Engineering | Manufacturing | Medical | Research & Development Robotics | Space Capabilities | Through-Life Support | Weapons & Ammunition

#### **Company Brief**

ANCA (Australian Numerical Control and Automation) is a world leading supplier by volume of ultra-precision multi-axis grinding machines for the production of turbine blades, end mills, drills, taps, profile tools, broaches, punches and reamers. Established in 1973 and with 19 global branches, ANCA services and locally supports the defence, aerospace, medical, automotive, computer and communications markets globally.

ANCA has a wide range of product offerings including multi-axis machining centres, automated robotic cells, production line automation systems, servo control and PLC systems, PCB design and assembly, precision part manufacture and assembly and contractual design, manufacture and assembly services.

#### **ANCA TX7 Linear**



Spares and support Yes equipment available? Australian Export Control No

approval required?

#### **Product Information**

ANCA'S TX7 Linear is the global benchmark for production machining of precision cutting tools and components. With its large working envelope and powerful 37kW grinding spindle, TX7 Linear delivers ultra-precision and productivity across the widest range of applications. TX7 Linear balances proven designs combined with ANCA's newest technologies including: ToolRoom and simulation software, contact-less linear motors, AMD5x multi-axis Control System, ACNA-crete Polymer concrete base and many customisable options.

With the ability to marry the TX7 Linear to a single or dual robotic cell, TX7 Linear sets the global benchmark for scalable, modular, high volume precision component manufacture.

Availability <3 months

# Australian Target Systems



Design | Engineering | Research & Development | Robotics | Through-Life Support | Training & Education

#### **Company Brief**

Australian Target Systems (ATS) is one of Australia's most experienced live fire target systems business, with a history that dates back to the 1950's. Today ATS is a dominant provider of live fire target systems to the Australian Defence Force. In the past five years they have expanded significantly to deliver their proven expertise to a wider international customer base. This includes military, police and other government organisations that seek to evolve their capabilities to meet the demands of an increasingly lethal and complex threat environment.

#### Live Fire Capability Systems Integrator



#### Service Information

The Capability Systems Integrator (CSI) supports the client in the analysis, development, and implementation of plans, policies, and procedures associated with live fire training ranges. The CSI facilitates the development and management of the training facility sustainment plans; and provides integration of training facility operations and maintenance, and development tools for facility scheduling, qualification and logistics management.

The CSI provides program management services, focusing on operations, maintenance and management as part of a holistic, outcome-based solutions; and provides training systems integration, necessary to ensure the client achieves a fully integrated outcome. The CSI integrates delivery of sub-contracted services for the delivery of live fire, dry fire, explosive, simulation training and support facilities for the client.

# **Axiom Precision Manufacturing**



Design | Engineering | Manufacturing | Medical | Research & Development | Space Capabilities

### **Company Brief**

Established in 1979 Axiom is a high quality manufacturing company. This family-owned Australian business services customers in the Aerospace, Space, Defence, Medical Devices and Electronic Hardware industries. Known for high quality, reliability and affordability, companies around the world rely on Axiom to deliver products and projects on time.

The purpose-built manufacturing facilities in Australia deliver precision machined components and assemblies, electronic hardware and assemblies, precision tooling and mouldings plus a range of surface treatments. The high quality Coordinate Measurement Machines (CMM) inspection and assembly departments allow Axiom to provide assemblies and sub-assemblies to the exacting standards customers require.

#### **Precision Machining & Inspection Capability**



### **Product Information**

To produce the most accurate, precisely engineered parts to the tightest tolerances is essential in a variety of applications. Axiom possesses advanced capabilities in CNC machining with 5 axis and temperature controlled ability; putting Axiom at the forefront of Australian manufacturing.

Inspection is paramount to many customers' requirements. Projects are measured and reported and these reports can be accompanied by certificates for non-destructive testing, materials, surface and heat treatment and an all-inclusive certificate of conformity. Axiom has 3 Coordinate Measurement Machines which measure up to 3m. Our portable FARO Arm measures as a CMM and also possesses 3D scanning capability

# **B&R** Enclosures



Communications | Design | Engineering | ICT & Cyber | Manufacturing | Research & Development Through-Life Support | Vehicles & Accessories | Platform systems and consoles Electrical switchboards, junction boxes and control panels

### **Company Brief**

B&R Enclosures is an independent, Australian owned and operated business specialising in the design, manufacture and integration of enclosures, racks and cabinet solutions for Defence and other key markets and industries. With manufacturing and warehousing facilities in strategic locations across Australia, B&R is the experienced choice for all enclosure, rack and cabinet needs. A wide range of COTS products are available along with purpose built and customised solutions including, consoles, data and ICT secure racks and data cages, combat and communication consoles, junction boxes, power distribution, and control panels.



#### Marine 19" Rack Cabinets - Lightweight and Rugged

Spares and support equipment available?	Yes
Australian Export Control approval required?	No

# **Product Information**

#### B&R Enclosures products are:

- designed and purpose built specifically for Naval Maritime applications
- tested and certified to MIL-STD's for vibration and EMC
- fully welded, rugged and lightweight construction using marine grade aluminium and 316 stainless steel
- designed, manufactured and assembled in Australia
- configurable sizes (14RU 39RU) supplied with or without isolator mounts
- custom sizes and variations available on request
- ability to bay cabinets together in multi-rack configurations
- includes thermal management fans with running life of over 37,000 hours at 40°C
- equipment integration service available: electrical design, equipment schedules, rack configuration and management of components.

Availability <3 months. Designed and manufactured to order.

**22** 4.03

# **Bisalloy Steels**



Manufacturing | Armour Steel

#### **Company Brief**

Bisalloy Steels is Australia's only manufacturer of high strength and high hardness quenched and tempered steel plate used for armour, structural and protection applications. Biaslloy supplies armour and protection grade steels to numerous Australian and international defence forces and their prime contractors.

Supplying manufacturers and end-users in a vast array of industries including mining, construction, general fabrication, pressure vessel and defence, Bisalloy distributes its products via a network across Australia, directly to end users, through its businesses in Indonesia, Thailand, South Africa, United Arab Emirates and the People's Republic of China.

#### **BISALLOY®** Armour Steel



#### **Product Information**

Offering quality that is second to none, BISALLOY® Armour steel has applications in Australia and abroad and is specified for hulls in Armoured Personnel Carriers (APC), Light Armoured Vehicles (LAV), Combat Reconnaissance Vehicles (CRV) and Infantry Fighting Vehicles (IFV), including the Bushmaster Infantry Mobility Vehicles in Australia, along with many APCs and LAVs worldwide.

The BISALLOY® Protection steel range runs the complete range of vital performance characteristics including strength, toughness and shock loading resistance, along with the ability to be readily formed, fabricated and welded as required. This makes it eminently suited to government and civilian applications including light armoured vehicles, land and sea patrol vehicles, cash-in-transit vehicles, safes and strongboxes, security booths, public and private facilities, safe rooms and many more protective applications.

Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

# **BMP** Precision Engineering



Design | Manufacturing | Through-Life Support

#### **Company Brief**

BMP Precision Engineering is an Australian sovereign precision manufacturer with over 27 years' experience in the manufacture and supply of complex mechanical parts and components, sub-assemblies, jigs, fixtures and bespoke tooling for Defence, aerospace, medical and commercial industries. BMP has a proven track record supplying into Australia's major land and air Defence programs, ranging from small component manufacture through to sub-assemblies. Our customers range from the end user (ADF), Primes and their first tier suppliers. Our vision is to be one of Australia's leading manufactures.

#### Manufacturing



### Service Information

BMP is a build to print and repair company, we ensure all parts and assemblies are manufactured to customer specifications.

- CNC Machines Multi-tasking, Milling (5axis), Turning, Grinding, Wire Cutting, EDM, Press Brake
- Defence- Munitions tooling small calibre to large artillery, part manufacture, product handling, part testing and assembly stations
- Aerospace Part manufacture, airframe repairs in situ, skins, bespoke tooling, reverse engineering, repair development and jigs & fixtures
- CAD/CAM Design and Innovative machine strategies
- CMM Part and component verification
- QA under the governance of our ERP

Compliant to ITAR / EAR regulations

Availability <3 months. Designed and manufactured to order.

**24**<sup>4.03</sup>

# **Coolon LED Lighting**



Manufacturing | Research & Development | Lighting

#### **Company Brief**

With over 20 years of experience in electronics manufacturing, Coolon makes robust, reliable, and high-performing luminaires that deliver ultimate quality and years of reliable performance in the harshest environments. Specialising in products for Defence, mining, industrial, commercial and architectural applications, Coolon luminaires have been trialled in the field and proven to be the epitome of reliability and efficiency. A 100% Australian owned and based company, Coolon provides support and reliable lighting solutions.

#### Reliable lighting solutions



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

### **Product Information**

Designed specifically for heavy-duty applications and extreme environments, Coolon luminaires provide reliable performance under the harshest conditions. The wide range of fittings covers a variety of applications with each purpose-built luminaire engineered to excel in that particular function. Coolon is a proud Australian manufacturer, and all Coolon LED products are exclusively developed and manufactured in Australia to meet local and international standards. Every single luminaire undergoes rigorous testing during the development, manufacturing, and pre-departure phases, ensuring premium quality and reliable performance for years at a time.

Availability

< 3 months. Designed and manufactured to order.

# **Direct Edge Manufacturing**



Design | Engineering | Manufacturing

# **Company Brief**

Direct Edge Manufacturing provide an innovative one stop shop for all sheetmetal manufacturing and associated components. Direct Edge Manufacturing is able to focus on continuous improvement, WH&S risk, minimising environmental footprint and welder qualification and inspections to a variety of Australian and International standards.

Direct Edge Manufacturing has been able to maintain D.I.F.O.T and quality over the past 4 years into the global market. Modern technology and adaptable production capabilities allows us to add value and drive competitive advantage into any supply chain.

#### Sheetmetal manufacturing & associated components



#### Service Information

Direct Edge Manufacturing offer a range of services from design and drafting, prototype assembly, varied production quantities, CNC laser, CNC punch, CNC router, brake pressing, jobbing operations including but not limited to drill and tapping, bevelling, green trim removal, material de-burring, welding of mild steel, stainless steel, aluminium and associated materials, quality assurance testing, final assembly, electro-polishing, powder coating and wet painting.

Facilitation by an International Welding Specialist onsite offers a range of welder qualifications and inspections to a variety of Australian and International standards. They utilise a fully integrated ERP system to control quality, workflow, product identification, delivery and resource allocation. They will work with customers to determine the most efficient process for submitting orders and other lines of communication.

# **Doen Pacific**



Design | Engineering | Manufacturing

#### **Company Brief**

Doen Pacific (Doen WaterJets) is a leading designer and manufacturer of waterjet propulsion systems focused on offering best of class waterjet products that excel in the harsh operating conditions of the commercial and military marine markets.

The extensive range of waterjets ensures that Doen WaterJets has a product offering to suit your vessel no matter big or small.

Our key value proposition promise is superior performance, excellent reliability and sheer simplicity of installation, operation and maintenance across our entire product range.

#### Waterjet Propulsion Systems



Spares and support Yes equipment available? Yes australian Export Control Australian Export Control Yes approval required?

#### **Product Information**

Currently there are 16 models in Doen WaterJets range suiting engine powers from 100 to 5000hp. There are also a variety of Doen's own control systems available for each model to suit different application and budget requirements.

# Elphinstone



Design | Engineering | Manufacturing | Through-Life Support | Vehicles & Accessories

### **Company Brief**

Elphinstone is a leading manufacturer of quality products for the global underground, surface mining and rail maintenance industries. Elphinstone has been designing, manufacturing and exporting heavy mining vehicles for over 45 years.

#### Heavy Vehicle Manufacturer



#### **Service Information**

Services include:

- design and engineering
- plate cutting and processing
- fabrication and robotic welding
- machining
- blasting and painting
- assembly
- live testing and inspection

Spares and support Yes equipment available? Yes Australian Export Control Yes approval required?

# **Exact Tech Australia**



Design | Engineering | Manufacturing | Research & Development | Space Capabilities

### **Company Brief**

Exact Tech Australia, through its heritage with Metal Tech Engineering, has 62 years of design and manufacturing experience. Starting in industrial tooling, the business has evolved to include precision machining for guaranteed fit, at competitive pricing delivered to schedule. Clients benefit from affordable, certified, risk reduced innovation enabled by development of load bearing structures that do their job. Exact Tech has substantial tooling in aviation engine workshops, aircraft, satellites, launch vehicles and rocket motors. Building upon that base Exact Tech is now collaborating with Schneider Electric Solar to deliver resilient, deployable, enterprise managed power systems.

#### Precision Design and Manufacturing



### Service Information

Exact Tech Australia offers space and aviation compliant design, production engineering, and manufacturing of complex load bearing structures to meet demanding structural and weight constraints at competitive prices. Specialising in composite, titanium and alloy materials Exact Tech also offers integration of high temperature materials such as Inconel. Underlying this manufacturing is production rate delivery of sub-micron precision finishing which enables confident and reliable integration with associated systems. Having supplied services and manufactured products for satellites, launch vehicles, rocket motors, aircraft and weapons Exact Tech offers the advantage of competitive support to de-risked innovation programs.



# Ferra Engineering



Manufacturing

### **Company Brief**

Ferra specialises in the manufacture and assembly of complex aerospace structures and subsystems for commercial and military aviation, and other defence industries. As a trusted supplier to some of the largest aeronautical corporations in the world, Ferra accurately manufactures, assembles, and tests a comprehensive range of aerospace structures and subsystems.

#### Complex machining and assembly



#### Service Information

Ferra provides electro-mechanical sub-assemblies and sub-systems that support major aerospace and defence platforms like the F-35, F-18, MH-60, and Loyal Wingman. Ferra's complex machining capabilities includes CNC precision machining. Ferra continues to invest in top-of-the-line, innovative technology including high-end 5 axis machining capability that provides assurance to Ferra's customers

# Frontline Manufacturing



Engineering | Manufacturing

### **Company Brief**

Frontline Manufacturing is a small business specialising in complete in house (5 – 5000kg) Steel component subassembly and assembly manufacturing specialising in high tensile.

Services offered are; Laser Cutting (Laser to 20mm plate), Plasma Cutting (High Def Cutting to 80mm) Brake Press Folding (Folding to 1000 Tonne), CNC Machining, SP Welding and Robotics as well as painting. All departments are driven by a very highly skilled and innovative team with a "quality first" culture for all manufacturing processes.

#### Metal Structure Manufacturing including Armour Plate



#### Service Information

Frontline has been historcially successful in supplying to Defence Primes largely because of a unique ability to offer a turnkey solution, combining the disciplines of CNC machining and fabrication in one facility for the highest quality result at the lowest cost. Frontline's processing equipment allows it to focus on the 'heavier' metal structures.

When combined with a deep welding skill base and commitment to quality, this allows us the manufacture of complex, highly critical structures. Frontline has developed a specialisation in fabricating Armour Plate, working closely with the Australia's excellent domestic Armour Plate Manufacturer, and tested by the DMTC.

# Geng



Design | Engineering | Manufacturing | Research & Development | Targets & Live Fire Training Equipment

#### **Company Brief**

Geng are consulting engineers in product design, development, and test and manufacturing, specialising in targets, items and materials for live fire training.

### Popper Target



	d sup t avai	port lable?		Yes
	 			24

Australian Export Control Yes approval required?

### **Product Information**

The Popper Target is one of a range of targets and equipment that Geng can provide for live fire training. It is incredibly simple, durable and safe. The Popper Target provides a visual and audible reaction to a hit. It is spring supported to rock backwards and forwards when hit. The target plate is reversible for durability and is mounted on a plastic frame to minimise the chance of secondary splash being returned to the firer. It is supplied flat pack for easy transport and storage. It is in intensive use in Australia and has international sales enquiries.

# **Glyde Metal Industries**



Engineering | Logistics | Manufacturing | Through-Life Support

#### **Company Brief**

Glyde Metal Industries (GMI) was founded in 1965 in Australia and has been under the stewardship of the current owners since 1993. GMI has 35 engineers, tradespeople and staff, and under one 3,200m2 roof provides turn-key solutions including: engineering services, fibre laser steel cutting, CNC Oxy profile cutting, steel press forming, metal fabrication and robotic welding. GMI's capabilities enable fabrication of 1mm to 200 mm mild and high tensile steel plate. GMI recently commissioned a start of the art 10kW Steel Laser Cutter that brought Industry 4.0 into the production line and increased efficiency, productivity and lowered costs.

#### State-of-the-art Laser Cutting and Metal Fabrication



### Service Information

GMI has 3 laser cutters, 5 press brakes, robotic MIG welding, plus 10 boilermakers and welders - the workshop capacity offers production flexibility. For your supply chain, we use and recommend Bluescope Australian steel that is made in Australia from Australian raw materials. This means not only are you getting an excellent first-rate product but your supply chain is protected from pandemics, transport embargoes, shipping delays and currency movements. GMI offers supply consistency as well as the flexibility to respond quickly to design revisions, scheduling, or demand volume changes.

# **Griffin Marine Services**



Engineering | Manufacturing | Ship Building

#### **Company Brief**

Griffin Marine Services have been providing a quality and professional marine engineering service with experienced, qualified and certified personnel Australia wide, with over 60 years of shipbuilding, ship repairs, marine maintenance and management experience and the knowledgeable qualified resources.

Griffin Marine is a Defence recognised supplier with Management Certification accreditation, and the winner of the AIDN-NT 2019 Chief Minster's Award for Excellence in the Defence Industry.

#### Land and Sea, 24/7



# Service Information

Services that Griffin Marine provide include, but are not limited to:

- welding/fabrication (Lloyd DNV GL Rina Class Approved)
- mechanical works
- piping System (repair & renew all systems)
- door & hatches
- insulation / Cladding (to class approval)
- painting (PCCP Accredited).

Our welding services include stainless, copper nickel, aluminium, high tensile, DH36, DH35 to DNV-GL and Lloyds class certification. Griffin Marine have facilities in locations across and carryout works in docks all over Australia and can also work remotely on vessels on voyage.



# Hofmann Engineering



Design | Engineering | Manufacturing | Robotics | Test Equipment

### **Company Brief**

Since 1969 Hofmann Engineering has provided specialist engineering services to Australia's Defence and industry sectors. Hofmann Engineering is a globally recognised engineering solutions provider to the Defence industry. It offers a range of specialised tooling to support the manufacture of major components and sub-assemblies for the air force army and naval assets.

Our full turnkey tooling services incorporates:

- engineering design
- manufacture
- fabrication
- assembly
- accredited testing and installation
- electro/mechanical site service
- MRO and through life support capabilities

#### Maintenance and Sustainment



# Service Information

Hofmann offers:

- precision and heavy machining
- heat treatment
- specialist transmission repairs
- gear and gearbox manufacture and refurbishment
- onsite in situ machining
- onsite mechanical services
- mechanical servicing for Maritime sector

- reverse manufacture of componentry
- repair and maintenance
- specialist tools and equipment
- Defence projects
- fabrication and welding
- metrology services

# Hylec Controls



Design | Engineering | Field Equipment | Research & Development | Test Equipment Training & Education | Vehicles & Accessories

### **Company Brief**

Hylec Controls are test equipment suppliers and test system integrators. Hylec Controls expertise enables us to provide high-tech testing equipment for a wide range of applications including; Defence, construction materials, packaging, civil engineering, automotive, aerospace, roads, runways, soil testing, and R&D.

Products include; materials and dynamic test machines, vibration and fatigue test systems, packaging testing, environmental and corrosion chambers, mechanical and hydraulic components, electronic controls, sensors, precision and fatigue-rated transducers, servo-actuators, rotary telemetry systems and servo valves.

Hylec Controls is the exclusive distributor in Australia for Haenchen, Form+Test, S.Himmelstein, Caemax, TLS, Marui Co, Singleton Corp, Buehler, Xcalibur, CSZ, etc.

#### Supply and Repair of Servo Actuators



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

# **Product Information**

Hylec Controls provides servo actuators, with design features and expert advice, such as:

- long-life actuators with low friction seal, independent of load and suitable for low-amplitude high-frequency operation
- much cheaper than a hydrostatic bearing actuator and without leakage problems
- the CFRP component and the special plastic stabilises the seal geometry, giving a narrow contact surface between seal, rod and barrel
- reduced weight of the piston assembly and barrel, using carbon-fibre reinforced plastic for these components, reducing the effect of oil compressibility
- + transducers, environmental test chambers, vibration systems and servo valves.

# InnovAero



Autonomous Systems | Design | Engineering | Intelligence, Surveillance & Reconnaissance | Optical Research & Development

### **Company Brief**

Innovaero is a multi-disciplinary aeronautical product design and manufacturing organisation with particular specialisation in airbourne camera systems for both manned and unmanned platforms. Over the past decade Innovaero has developed world-class camera systems for ultra-high resolution wide area image capture and data storage. The technologies applied by the company are absolutely world-class and stretch the bounds of what is considered possible in terms of acquisition coverage rates, accuracy and resolution. Innovaero holds a broad portfolio of CASA approvals for design, manufacture and systems overhaul, ensuring that all product and system development activity is aligned to a certification outcome.

#### Airborne Systems Development & Manufacture



#### Service Information

Innovaero performs both complex product design and product certification which require distinctly different technical expertise. Product Design requires a broad range of engineering disciplines encompassing mechanical, electrical, electronic, systems, optics, materials and manufacturing. However this technical expertise alone is not sufficient; the ability to design outstanding new product requires that rare and ephemeral creative element – a characteristic that makes Innovaero's design team stand out from the crowd.

Certification activities are intricately woven through the design process to assure compliance through analysis, systems testing, structural testing, environmental testing, flight testing and operational testing. All this is performed by the Innovaero team using a combination of internal resources supported by global partners. Innovaero has an extremely broad range of manufacturing approvals covering pre-preg and filament wound composites, PCB assemblies, optics, control cables, vacuum-forming and metallic component manufacture. Innovaero applies these capabilities to electro-optic systems development, replacement part manufacture and UAS programmes.



# Integrated Design & Engineering Solutions



Autonomous Systems | Design | Electronic Warfare | Intelligence, Surveillance & Reconnaissance | Manufacturing Research & Development | Test Equipment | Through-Life Support | Training & Education | Vehicles & Accessories

### **Company Brief**

Integrated Design and Engineering Solutions (IDES) is a Melbourne based, wholly Australian owned, engineering product development and systems integration company. Key Capabilities include, but not limited to: specialised vehicles; advanced design and high-end engineering; weapon systems; FP-ECM; and C4ISR & Land-EW Integration. Since 2009, IDES has delivered over 1600 bespoke Land System solutions. Focused on the complete life-cycle, IDES provides capability definition and evaluation, concept generation, detailed design, prototype development, integration, manufacturing and through-life-support. Their professional, multi-disciplinary staff specialise in outcome focused solutions – where on-time, deployable and supportable solutions save lives and provide unmatched capabilities.

#### **Engineering Product Development and Systems Integration**



### Service Information

Key Activities include, but not limited to:

- Project Management and Systems Engineering
- 3D Laser Scanning and Reverse Engineering.
- Detailed Design (CAD, Ergonomics, etc.) and Engineering Analysis (CAE / FEA).
- Prototyping, Testing (Virtual & Physical Firing) and Evaluation.
- Complete Technical, Operator & ILS Documentation.
- Operator & Maintainer Training.

IDES designed, delivered, commissioned, and is providing in-service support of Mobile Proof Gun Mounts (MPGM) used by the Australian Defence Force (ADF). The MPGM provides a high speed road mobile capability for the proof-firing and testing of the Royal Australian Navy's (RAN) 5"/54 munitions.

The MPGM system includes:

- Integration of Naval 5" (127mm) 54 calibre Gun (supplied as GFE).
- High-strength mobility platform.
- Weather proof and powered round lifting system.
- · High recoil capable ground engagement system.
- Compliance with road transport regulations.

This product can be customised to suit a variety of munition proofing gun requirements.

Availability 3-6 months. Designed and manufactured to order.

138<sup>4.03</sup>

# IntelliDesign



Design | Engineering | Manufacturing

### **Company Brief**

IntelliDesign is an Australian electronic design and manufacturing company that develops and manufactures high quality, robust, electronic devices for mission-critical applications across a variety of markets, including Defence.

IntelliDesign has a highly skilled team of engineers, designers and production technicians, and a well-equipped production area that includes Automatic Optical Inspection, X-ray analysis and Flying Probe Testing. Global clients include Boeing Defence, Cook Medical, GE Mining, Northrop Grumman, Rio Tinto and Siemens Rail.

#### **Custom Electronic Design and Manufacturing**



#### Service Information

IntelliDesign provides a "one-stop" service, with design and manufacturing undertaken in a modern, purpose-built 1500 sq metre facility in Brisbane. IntelliDesign has a highly skilled team of designers (including electronics and firmware engineers and industrial designers) and production technicians (including SMT assembly line operators, IPC inspectors, and test technicians) and a well-equipped production area that includes two Automatic Printed Circuit Assembly (PCA) lines with Automatic Optical Inspection (AOI), X-ray analysis and Flying Probe Testing.

IntelliDesign is certified to ISO9001:2015 and has a unique enterprise resource planning software system that provides full component traceability and version-controlled, on-screen assembly and test instructions, allowing a well-managed paperless production area.

Recent Defence projects include a (1) Secure Communications System (SCS200) for Northrop Grumman and (2) Power Supply Module (PSM) for Boeing Defence Australia, part of LAND 2072.

# Kord Defence

# korddefence

Communications | Design | Engineering | Manufacturing | Research & Development | Weapons & Ammunition

### **Company Brief**

Kord Defence is a small private technology company in Australia. It is a world leader in the provision of mobile interface control solutions for operators in the defence, homeland security and law enforcement markets. Kord designs and develops prototype and production push-button control systems, provides a range of custom training software and hardware products and has extensive experience in the integration of soldier accessories and systems. Kord and its sister company, KordUSA Inc, which is based in the USA, are owned by KordTech Pty Ltd. Together they comprise the Kord Group, which was formed in 2007.

#### Rifle Input Control (RIC) System (generic)



Spares and supportYesequipment available?Australian Export ControlYesapproval required?

#### **Product Information**

Kord has developed a patented push button control technology, called Rifle Input Control (RIC) Technology, which in the Defence context, provides soldiers with a fast, reliable and safe way of remotely operating their multiple electronic devices from one central location on their weapon.

This is a cutting-edge capability that is easily attached to a weapon, light (160g), exceptionally power efficient, simple to learn and operate, ergonomic and rugged, and fully programmable to meet different user requirements. It is being developed primarily for use in close combat operations where fast, simple, instinctive control of weapon-mounted and body-worn accessories is essential for the conduct of successful engagements.



# **Marand Precision Engineering**



Engineering | Manufacturing | Robotics | Through-Life Support | Vehicles & Accessories

### **Company Brief**

Marand's advanced engineering and manufacturing capability supports government and Prime contractors via the delivery of facility automation solutions, series production of assembled equipment, and high precision machined components. Building on a history of helping global primes to deliver Australian Industrial Capability commitments for local acquisition programs, Marand also wins manufacturing and tooling contracts on international projects by showing advanced capabilities and best value for money. The company is ready to support Defence customers globally across the Land, Sea and Air domains.

#### Aerospace



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

#### Service Information

Marand designed and builds the F-35 engine trailer for Lockheed Martin. It is used by all services globally for the handling and fitment of the engine to the aircraft. It is a demanding piece of equipment, comprising over 12,000 parts, and has been designed to meet over 700 specification requirements.

Marand also builds the F-35 Vertical Tail for BAE Systems in the UK. It is a high precision assembly produced using advanced manufacturing technologies, which were transfered to Australia and implemented for the project in partnership with the customer. The project has won global awards for excellence.

# Matrix Composites & Engineering



Autonomous Systems | Design | Engineering | Manufacturing | Research & Development | Ship Building | Test Equipment

#### **Company Brief**

Matrix is a global leader in the manufacture and supply of composite syntactic buoyancy systems. With the world's largest, most technically advanced composites syntactic plant in Australia, Matrix leads the field in quality construction and faster turnaround times. An increased capacity has allowed Matrix to deliver a full systems in under 10 weeks.

#### Syntactic Buoyancy Systems



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### **Product Information**

Composite syntactic foams provide stable buoyancy in deepwater environments, supporting subsea architecture and systems within the water column.

Using the in-house hyperbaric testing capability, all Matrix foam systems are type approved to API 16 F and/or API 17L1 by BV (Bureau Veritas) and, to current available knowledge, Matrix is the only manufacturer in the world that offers this level of assurance.

When combined with advanced composite laminate technologies, the composite systems are the lightest subsea systems in the marketplace.

# MEMKO Aviation Aerospace & Defence



Autonomous Systems | Design | Engineering | ICT & Cyber | Manufacturing | Research & Development | Test Equipment Through-Life Support | Training & Education

### **Company Brief**

MEMKO specialises in Aviation, Aerospace and Defence with comprehensive design engineering and technical services focused on continued airworthiness support of fixed and rotary wing aircraft. Additionally, as part of Fleet Technical Management (FTM) services, MEMKO offers industry leading engineering systems as turnkey SaaS solutions. MEMKO is a CASA Part 21 Approved Design Organisation with an accredited AS9100 Rev D and ISO 9001:2008 Quality Management System.

### Military Airworthiness Regulatory Compliance and Training



Aviation, Aerospace & Defence



✓ Consulting and Regulatory Support
 ✓ Design, Analysis, Test and Certification
 ✓ CAMO Services
 ✓ Part 21.M Engineering
 ✓ Aircraft CoA



✓ Aviation & Aerospace
 ✓ Product Life Cycle Management (PLM)

### Service Information

MEMKO offers engineering support services for Military Aviation Airworthiness Regulations. Recently the Australian Defence Force has adopted the framework of the European Military Airworthiness Requirements which has been harmonised with the European Civil Aviation requirements.

As a current holder of a civil Part 21 airworthiness authority and with a participation in the industry implementation of the new Australian Defence Aviation Safety Regulations, MEMKO is well placed to provide support services to Military Aviation in initial design, acquisition, production, sustainability and asset management.

MEMKO service is based on the key attributes of competency, agility and flexibility and embraces functional expertise in Engineering, Regulatory Compliance, Quality and Training. MEMKO also offers short courses and certified trainers to provide continuing education of Defence technical and management staff. The training courses cover material taking into account the increasing need for skills in regulatory compliance, design, manufacturing and sustaining of aircraft.

# Metromatics



Design | Engineering | Field Equipment | ICT & Cyber | Manufacturing | Research & Development Through-Life Support

#### **Company Brief**

Established in 1989, Metromatics specialises in the design, manufacture and integration of Customised Rugged Lightweight 19" Equipment Racks, bespoke enclosures and consoles for the Naval and sea going platforms (surface and subsurface). Our products are qualified to shock, vibration, environmental Military Standards, along with many other applicable certifications. Our skilled staff are experienced with wiring electrical sub-assemblies, cables, harnesses and PCB sub-assemblies using IPC-610 and IPC-620 certified techniques.

We provide all aspects of verification, validation, configuration and project management along with full supporting documentation to our deliveries.

#### Lightweight, Rugged 19" Equipment Racks, Bespoke Enclosures and Consoles



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

#### **Product Information**

Network Racks, Encryption Racks, Entertainment System Racks, Radio Operator Console Bayed Racks, High Power DC Supply Cabinets and Inverter Cabinet Assemblies, and safely house the necessary electrical and electronic equipment required on-board for Defence Personnel.

Our racks are lightweight with a stainless steel internal frame and aluminium skin, and weigh up to 1/3 less than similar products on the market but with the same or better strength, and yet still have a payload of 250+kgs. With the rack weight significantly reduced, it enables the Defence Forces to carry other essential equipment without overloading the vessel and therefore ensuring the safety of our Defence Personnel.

# Milspec Manufacturing



Design | Engineering | Manufacturing | Through-Life Support | Vehicles & Accessories

### **Company Brief**

Milspec Manufacturing is an Australian owned designer and manufacturer of alternators and power systems. Our unique offering uses permanent magnet alternators for vehicle power, delivering 100% of alternator output at vehicle idle. These same alternators are used in the following applications:

- vehicle primary electrical power delivery
- vehicle auxiliary power delivery
- portable DC to Dc power delivery
- field power generation.

Milspec's full product range features auxiliary power units, exportable power modules, exportable power modules, power distribution units, vehicle C4i installation kits, enclosures and racking, and cable systems.

#### Alternators



Spares and support equipment available?	Yes	
Australian Export Control approval required?	No	

### **Product Information**

The Milspec alternator range has seen use in both Australian and international defence forces. Milspec alternators are manufactured and tested in-house to meet standards Mil STD 461, 810, and 1275, and are smaller and lighter than competitors.

Milspec's permanent magnet alternators:

- 200-900Amps
- Military standards Mil-461, Mil-810, and Mil-1275
- Mechanical/electrical efficiency of 83%
- IP rating IP67.





Engineering | Manufacturing

#### **Company Brief**

NEAMCO service numerous customers in the Defence, engineering, manufacturing and marine industry sectors. NEAMCO specialises in the manufacture of engineering components, overhauling and repairing of engine and transmission systems, and the re-manufacturing of obsolescent components. NEAMCO operates from an industryleading engineering and manufacturing facility in Australia and utilises over 1 acre of manufacturing floor space.

#### **CNC** component Manufacturing



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

### **Product Information**

NEAMCO's extensive engineering and manufacturing workshop can design and machine complex components with batch sizes from 1 - 1000(s). The certified fitters, turners, fabricators, boilermakers, toolmakers and engineers provide machining, fabrication and specialist welding services to produce: pins, bushes, fittings, rollers, sleeves, bosses, flanges, bearings, custom designs, shafts, specialised fastenings and obsolete component re-manufacture.

# New Touch Industries



Manufacturing

#### **Company Brief**

New Touch Industries' (NTi) laser cutting services include 2D laser cutting, rotary laser cutting and laser marking, and the quality system ensures immaculate high-end finishes. NTi's state of the art press brakes are capable of meeting all bending and folding needs. From complex, intricate sheet metal components to large plate 10mm thick and beyond. Equipped with the capabilities to MIG & TIG weld, rivet, sand and polish products whether mild steel, stainless steel or aluminium.

NTi also offers finishing services from powder coating to zinc plating, electro polishing to assembly to help guide projects from concept to completion. NTi accepts work within Australia from overseas clients.

#### Welding & Fabrication



### Service Information

With the technologies available, the need for highly skilled tradesmen is still critical to the completion of quality custom components. If customer's parts require MIG or TIG welding, riveting, sanding or polishing, NTi has the capability to fabricate products, regardless of mild steel, stainless steel or aluminium.

NTi offers welding to AS1554, plate rolling up to 10mm thick, robot MIG welding cell up to 400amps and stud welding. NTi also project manage all machining, coating and plating requirements, and from concept to completion, can provide customers with a total project management solution.







Manufacturing | Optical | Space Capabilities

#### **Company Brief**

Norseld has a world leading specialty coating capability referred to as Diamond Like Carbon (DLC). The specialised capability can be applied across all four Defence domains. The Norseld process is unique in its superior quality and speed. Norseld is currently in discussion with a number of Defence Primes to undertake specialised coatings, and is an ISO900I:2008 holder and ISOI3485:2003 holder (medical devices).

#### CoolDiamond DLC®



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

### **Product Information**

Norseld has developed a new Diamond-Like Carbon (DLC) coating technology called CoolDiamond DLC®. The process provides the ability to coat at room temperature compared to other Diamond-Like Carbon coaters who cannot, giving Norseld a world leading capability. This means it is possible to coat composite material that would normally degrade under extreme heat. DLC is the hardest material known to humankind and has been in development for over 30 years. CoolDiamond DLC® has properties that exceed current conventional DLC and these include superior hardness, extreme smoothness and the ability to coat in a room temperature environment.



# QPE Advanced Machining & VPG



Engineering | Manufacturing | Space Capabilities | Through-Life Support | Weapons & Ammunition Machining & Fabrication | Assembly

### **Company Brief**

QPE specialises in precision machined components, fabricated assemblies, manufacturing, service and repair for Defence, mining, medical, electronics, Aerospace, and renewable energy verticals.

QPE and VPG Innovation are part of the Starke Advanced Manufacturing Group (SAMG) who use their manufacturing capabilities of the group to produce their own products, such as the ABS Approved Rapid Response Clamp for emergency pipe repair, and the Rivet Hole Alignment Tool for aircraft maintenance.

#### Machining and Fabrication for Defence Maritime



#### Service Information

QPE's core competencies include CNC Mill Turn Lathes, CNC Boring, CNC Milling, CMM, EDM, Wire Cut, Wire EDM, precision grinding, assembly services, project management, installation, through-life support, service and repair. QPE employs Faro Laser tracking for real time CMM during large component machining.

VPG manufacture Rapid Response Clamps used for Emergency Damage Control / Combat Survivability by the United States and Canadian Navies. The clamps are designed for a single operator and are six times faster than Jubilee or Banding type patches with less leakage.

The Rivet Hole Alignment Tool by VPG offers faster precision rivet rework while reducing the demands on the technician by elimination errors related to drill or reamer alignment and centring. Please visit the websites for further details.



# **REDARC Electronics**



Design | Engineering | ICT & Cyber | Test Equipment | Through-Life Support | Training & Education | Vehicle Accessories

### **Company Brief**

REDARC Electronics is a technology-based company that designs, manufactures and provides patented, reliable and fully-integrated, portable, vehicular power solutions and customer centric after sales service. REDARC is based in South Australia. Being a technology focused, advanced manufacturer Redarc's entire business model is based upon innovation.

#### Dual Power Supply (DPS) In-Vehicle DC Power Supply



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

#### **Product Information**

The DPS is a DC-DC power supply designed to run electrical loads. The input voltage of the DPS can be above, below or equal to the output voltage making it ideal for running equipment where specific load voltages or extreme voltage drop are an issue.

The DPS is also designed to isolate the main battery from the load when the vehicle is turned off to avoid flattening the vehicle's starter battery.

# **RUAG** Australia



Design | Engineering | Manufacturing | Research & Development | Through-Life Support

#### **Company Brief**

RUAG Australia brings together precision and innovation in engineering to make it a highly reliable and preferred partner for Defence and aerospace customers worldwide. Competencies in design, development and manufacturing, enhanced by a robust focus on research and development in additive material technologies, ensure sustainable expertise. Primary business includes maintenance, repair and overhaul (MRO) for aerospace components and sub-systems, aircraft Landing Gear Hydraulic Actuator manufacture, metal surface finishing, engineering, additive repair technology and supply chain management. Fuelled by a highly skilled, dedicated and experienced team, RUAG ensures fully-accredited capabilities, reduced life-cycle costs and maximised platform operational readiness.

#### Additive Technology (AT) - Metal Repair Methods: Supersonic Particle Deposition (SPD) and Laser Additive Deposition (LAD)



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### **Product Information**

AT enables improved sustainability and cost-effectiveness in operations over traditional repairs or replacement parts. Used for the rapid repair and restoration of corroded/damaged metallic components/structures to acceptable levels of structural integrity and functionality, AT saves time and supply-chain costs.

SPD, also known as Cold Spray, sprays a metallic powder onto an inert gas stream at high velocity to form a deposit on the substrate. RUAG Australia maintains and operates a fixed SPD capability as well as mobile support for 'in theatre' application. RUAG's fixed LAD capability uses a laser beam to apply metal powder onto a substrate.

# **SMETEC Services**



Engineering | Manufacturing | Research & Development | Through-Life Support | Vehicles & Accessories

#### **Company Brief**

SMETEC Services is a specialist steel processing small business, able to provide a complete processing service from design to material finishing. The Australian based facility has capacity currently to process up to 25t of steel per month for local and international Defence engineering companies, production plants and capability integrators.

SMETEC Services is a highly innovative company, holding international certifications for specialised cutting and finishing processes. SMETEC are world leaders in the provision of waterjet and fibre laser cutting, used in all areas of manufacturing, from Defence to local industry.

#### **Specialised Material Processing**



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### **Product Information**

SMETEC services provides specialised armour processing capabilities in Australia. SMETEC's service ensures armour plate technologies are processed in accordance with their stringent requirements to maximise the materials capabilities ensuring the materials properties are maintained through its service life. SMETEC provides its clients a range of services from initial R&D requirements right through to mass production needs.

# SPEE3D



Autonomous Systems | Design | Engineering | Field Equipment | Humanitarian | Logistics | Manufacturing Research & Development | Robotics | Ship Building | Space Capabilities | Through-Life Support Training & Education | Vehicles & Accessories

### **Company Brief**

SPEE3D enables Defence to build metal parts in minutes or hours on the front line with the WarpSPEE3D Tactical metal 3D printer. The printers have been proven in an expeditionary environment, are robust and can be installed in under 1 hour. This results in improved logistics, reduced downtime, customisation and the ability to grow a sovereign manufacturing capability.

#### WarpSPEE3D Tactical 3D Metal Printer



### **Product Information**

WarpSPEE3D is a world first large format metal based 3D printer utilising cold spray. The technology manufactures fast, low-cost, near net shape parts up to one meter in diameter, suitable for Defence repair and replacement applications. Rather than using heat to melt metal powders, SPEE3D's patented technology uses supersonic deposition in which a rocket nozzle accelerates air up to three times the speed of sound. Injected powders are deposited onto a substrate that is attached to a six-axis robotic arm.

Spares and support equipment available?	Yes
Australian Export Control approval required?	No

# Stahl Metall



Autonomous Systems | Communications | Design | Electronic Warfare | Engineering | Field Equipment | Manufacturing | Optical | Robotics | Ship Building | Space Capabilities | Through-Life Support | Vehicles & Accessories | UAV and Counter UAV

### **Company Brief**

Stahl Metall specialises in design and manufacture of custom cable and harness assemblies, complete communication, power and electrical enclosures and box assemblies, complete 19" rack assemblies, custom metalwork and distributing of high performance interconnect components, earth bond products and IP68 stainless steel enclosures.

Stahl Metall maintains LEAN Six Sigma continuous improvement processes and lean manufacturing. Stahl Metall products are known for their reliability, precision and resistance to demanding and harsh environments. Proven track record in complex defence platforms, and robust solutions.

Design and Manufacture of Defence Cable & Harness Assemblies and Complete Comms/Power Control Box/Rack Assemblies



### Service Information

Stahl Metall products are commonly used in fields requiring faultless quality, such as: aerospace and defence, marine, medical equipment, industrial instrumentation, measuring and testing devices, broadcast, telecommunication, oil and gas, and subsea applications.

- design and manufacture of custom cable and harness assemblies (IPC-620 certified)
- complete communication & power control systems and electrical enclosures/box assemblies
- HV/LV Electrical systems and 19" rack assemblies.
- custom enclosures (IP68 Stainless Steel Enclosure)
- design engineering and manufacturing support (Prototype, ECN, PPAP/FAI and engineering drawing capability)
- flexibility and customised solutions
- competitive pricing & lead time, quality and on-time delivery

# **Thomas Global Systems**



Communications / Design / Engineering / Field Equipment / ICT & Cyber / Intelligence, Surveillance & Reconnaissance Manufacturing / Optical / Research & Development / Test Equipment / Through-Life Support / Training & Education Vehicles & Accessories

### **Company Brief**

Thomas Global Systems is an industry leader in the design, production and support of innovative electronic systems solutions for aerospace and Defence applications. Since 1956, the company has gained global recognition for practical innovation and dependability. Thomas Global delivers expertise in advanced cockpit displays, armoured vehicle electronics and mission system solutions supported by dedicated service and support teams operating around the world. The company's key facilities are located in Australia and the USA.

#### Digital Biocular Image Control Unit



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### **Product Information**

Thomas Global's Biocular Image Control Unit utilises the latest technologies including:

- flexible free-form single element (F2SE Optics)
- CRT, LCD and Micro projection technologies
- applications for M1A1, M1A2, M113, ASLAV, AAV, LAV, LRAS, M2Bradley and TOW.

These 2nd and 3rd Gen FLIR compatible display provide superior image quality combining very high pixel densities, HD resolution AMLCD, an RGB light source for a rich colour gamut, relaxed eye infinity focused optics and high ambient light readability.

Incorporating Thomas Global's Adaptive Display ArchitectureTM, the display solution is fully configurable to handle legacy (RS-170) and current video (HDMI, SDI) standards.

Availability <3 months

# Titomic



Design | Engineering | Manufacturing | Research & Development | Ship Building | Through-Life Support Personal Protection | UAV and Counter UAV

#### **Company Brief**

Titomic is an Australian company offering the world's first and only industrial scale additive manufacturing capability. With its patented technology, Titomic Kinetic Fusion®, Titomic enables new, unique manufacturing capabilities while utilising a full spectrum of high-performance metals, including titanium. With this, combined with specialist knowledge in engineering and material science, Titomic unlocks the ability to additively manufacture a high-volume of parts in a commercially feasible way.

Servicing broad industries, Titomic works closely with its clients to overcome modern manufacturing limitations and challenges. Titomic achieves this through OEM production, certified R&D, and bespoke and off-the-shelf TKF Manufacturing Systems.

#### Titomic Kinetic Fusion ®



#### **Product Information**

Titomic Kinetic Fusion® is the world's largest and fastest metal additive manufacturing process. With this, Titomic is redefining what's possible for metal manufacturing. Based on the supersonic deposition of metal particles, the no-melt metal manufacturing process is uniquely capable of building without size limitations at industry-leading pace.

Titomic Kinetic Fusion® is competing directly with traditional manufacturing methods, but unlocks new capabilities, including the fusion of dissimilar metals to create composite parts which are lighter and stronger - faster than ever before. What's more, Kinetic Fusion® simplifies supply chains, reduces lead times, and cuts waste and cost.

Availability 3–6 months. Designed and manufactured to order.

Spares and support Yes equipment available? Australian Export Control Yes approval required?

# **Toolcraft Australia**

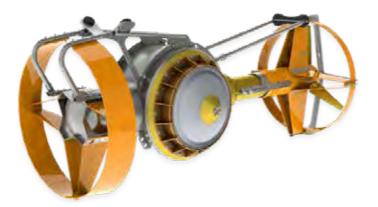


Engineering | Manufacturing | Research & Development | Ship Building | Space Capabilities Through-Life Support | Weapons & Ammunition | UAV and Counter UAV | Machining, Fabrication & Integration

#### **Company Brief**

Toolcraft Australia (established in 1979) is an aerospace manufacturing and technology development company, and is 100% Australian owned. Specialising in precision components and assemblies, Toolcraft provides advanced manufacturing services to the defence, aviation, space, hypersonics, electronics, medical and renewable energy industries.

#### Advanced Aerospace Manufacturing



### Service Information

Toolcraft provides advanced aerospace manufacturing services in the following areas:

- CNC machining and grinding
- CNC laser cutting, turret punching and folding
- EDM cutting and eroding
- CMM metrology
- fabrication
- assembly
- integration
- 3D printing

Core expertise enabling service delivery includes:

- mechanical design and engineering
- turnkey product development
- project management
- rapid prototyping
- painting and plating
- packaging and logistics

Toolcraft is an approved supplier for many Defence primes, including BAE Systems, Raytheon, Lockheed Martin, Thales, Boeing and Rheinmetall. Our manufacturing capabilities extend from bespoke parts to mass production assemblies.



# Varec



Engineering | Logistics | Fuels Management/Control Solutions

### **Company Brief**

Varec, a wholly owned subsidiary of Leidos, is a worldwide leader in fuels and other bulk liquid management systems for total asset visibility and control by supplying integrated hardware and software solutions to the oil and gas, defence and aviation markets. The company services the entire Asia-Pacific region from its corporate office based in Australia.

#### Fuel Management Solution Design, Products and Services



#### Service Information

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Instrumentation – Advanced tank gauges, transmitters, communication devices and field instruments that automates the management of inventory in bulk storage tanks. FuelsManager® Platform Suite of integrated software applications utilised to track, manage and control distribution and delivery of fuel products.

Accounting Application. Enables accurate tracking, management, reconciliation, and monitoring book vs. physical inventories.

**Inventory Management Application.** Provides users with a view of all measured and calculated inventory variables, alarms, and status for one or multiple tanks.

Leak Detection Application. Enhances safety monitoring for leaks and sending alerts when potential environmental hazards.

Load Rack Automation Application. Controls facility access, and facilitates, safe, and secure loading operations by integrating automation and safety equipment.

Into Plane Mobile Application. Displays arrival/departure-time, aircraft tail number, fuel load in real-time.

Systems Engineering and Integration – deep domain terminal expertise to help develop seamless integrations that bring multiple systems together.

# Varley Group



Design | Engineering | Manufacturing | Research & Development | Vehicles & Accessories

#### **Company Brief**

Varley Group was established in 1886 and is one of Australia's oldest and most advanced engineering and manufacturing companies.

Varley's current customer base is wide-ranging across an international stage, from individuals to governments and global corporations. Similarly, the products and services offered by Varley are vastly diverse.

Current manufacturing projects include defence ambulances, stores and maintenance vehicle modules, deployable secure facilities, aircraft support equipment, custom emergency service, health, education and rescue vehicles and recreational electric vehicles, power plant restorations and rail maintenance works.

#### Deployable Double Sided Expandable Secure Facility



### **Product Information**

The Deployable Double Sided Expandable Secure Facility has been designed to provide a secure and environmentally protected workspace for mission planning, crew briefing, intelligence officers and ICT system administrators. It has a logistic footprint of an ISO 1C container (20 ft. long, 8 ft. wide and 8 ft. high) and has been designed to withstand military transport and handling conditions.

The Deployable Double Sided Expandable Secure Facility is made of laminated panel construction to achieve acoustic dampening and thermal insulation and it can be fitted with heating, ventilation and air conditioning, dimmable LED lighting, 415VAC 3 phase power input, 240/110 VAC internal power distribution and Type 1A security and electronic access controlled system for operation as a transportable SCIF.

Spares and support equipment available?	Yes
Australian Export Control	Yes



# Vipac Engineers & Scientists



Engineering | Research & Development

### **Company Brief**

Vipac Engineers & Scientists provides a broad range of testing and qualification services to the Air, Land and Sea sectors of the Defence industry. Core capabilities include:

- Environmental Testing vibration, thermal, shock, ingress protection
- Electrical Safety Testing cables, components
- Noise occupational, environmental, habitability, sound insulation, speech privacy
- Vibration structural, machine, component
- Thermal & Fluid Dynamics
- Design & Systems Engineering.

Proud contributors to projects including the Attack-class submarine, Collins-class submarine, ANZAC-class frigates, F-35A Joint Strike Fighter, F/A-18 Super Hornet, C-130J Hercules, P-3C Orion, Bushmaster PMV, and Defence infrastructure around Australia.

#### **Environmental Testing & Qualification Services**



### Service Information

Vipac has offered environmental and electrical safety qualification testing of products and components for the past 46 years. Vipac's clients include the Australian Defence Force and global Defence primes.

The NATA-accredited Test Laboratories provide state-of-the-art climatic, mechanical and electrical testing services to Australian, Military and International standards.

Vipac engineers provide expert knowledge in the fields of shock and vibration, structural integrity, structural dynamics, modeling, simulation, weaponry integration, radiated noise, speech privacy, noise mitigation, airflow, fatigue and failure analysis.

# W&E Platt



Design | Engineering | Manufacturing | Research & Development | Vehicles & Accessories

#### **Company Brief**

W&E Platt specialises in the design, manufacture, installation and ILS of weapon mounts for the military vehicles and naval vessels. Incorporated in 1980, W&E Platt remains in business by listening to and understanding customers' needs. With over 35 years of combat focused design and manufacturing experience, W&E Platt weapon mounts constantly deliver performance and reliability when it matters most and that is on the battle front.

Platt weapon mounts are designed using in-house Solid Edge 3D CAD and FEMAP, which enables the company to offer innovative and broader solutions including rapid prototyping and testing.

#### **Platt Weapon Mounts**



### **Product Information**

W&E Platt weapon mounts are combat proven products which have been tested in the battle fields.

We supply Swing Mounts, Skate Mounts, Rail Mounts, 40-50 Soft Mounts, Ring Mounts, Pedestal Mounts and Marine Mounts.

The Platt Ring Mount is a one-man lightweight, low profile and versatile weapon station designed to suit variety of military vehicles. The system is fully scalable to meet the needs of modern warfare and has proven to be a reliable and highly functional system in the most demanding and diverse operational conditions. The portfolio includes MR, FW and TD series capable of mounting various weapon platforms.

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# Section Four

## 4. Testing & Sustainment

Test Equipment Through-Life Support Logistics

Asia Pacific Aircraft Storage Ballistic & Mechanical Testing Birdon ECLIPS Green Eco Technologies Pelican-Trimcast Products TAE Aerospace Tufwrap Australia Verseng Group



# Asia Pacific Aircraft Storage



Autonomous Systems | Communications | Design | Engineering | Manufacturing | Engineering Aircraft maintenance and storage

#### **Company Brief**

Asia Pacific Aircraft Storage (APAS) provides dedicated aircraft storage and part-out services for the Asia Pacific market. All maintenance activities are carried out pursuant to Part 145 approvals, held under EASA, FAA, BCAA, CASA and CAAS. APAS has stored and maintained B737, B767, B777, A320 and A330 aircraft on behalf of major international airlines and lessors.

APAS also provides end-of-life parting-out of aircraft and disposal. The APAS Group has developed a cloud based SaaS maintenance management solution for organisations undertaking aircraft maintenance.

#### Aircraft Storage, Maintenance and Part-Out



#### Service Information

The APAS Group provides specialised aircraft storage, maintenance and part-out services to the Asia Pacific aviation industry. The APAS Facility is located in Alice Springs, Northern Territory, in a low humidity environment essential to the preservation of aircraft asset value and continued operational capability.

Aircraft are maintained by experienced licenced aircraft engineers, in programmes enabling aircraft to be rapidly returned to service and operation. In the event of the asset reaching end-of-life, APAS undertakes the removal of high value components for re-use on cross compatible aircraft type.



# **Ballistic & Mechanical Testing**

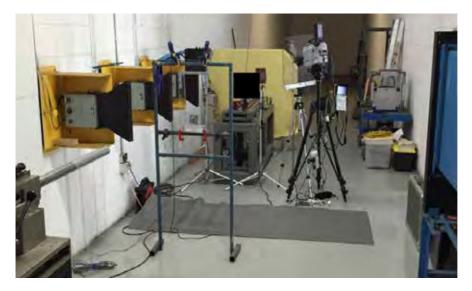


Design | Engineering | Manufacturing | Research & Development | Test Equipment | Through-Life Support Vehicles & Accessories | Weapons & Ammunition | Product Testing | Environmental Testing | Ship Building

### **Company Brief**

Ballistic & Mechanical Testing (BMT) is a 100% Australian owned and operated company specialising in ballistic testing and certification of bullet resistant materials, non-destructive (X-Ray) testing of body armour plates and compliance for manufacturers and end-users. BMT is NATA accredited to ISO17025:2018 and a Defence Recognised Supplier.

#### Independent Ballistic Testing of Armour



### Service Information

BMT offers test, evaluation and certification services of armour and armour systems used in land combat vehicles, combat clothing, body armour, air and sea.

# Birdon



Autonomous Systems | Design | Engineering | Humanitarian | Logistics | Manufacturing Ship Building | Through-Life Support

### **Company Brief**

The 100% Australian-owned Birdon Group is a diversified global group of companies providing whole of life solutions to the maritime, military, and resource sectors operating across six business divisions: engineering, marine, marine propulsion, dredging, disposals, and shipping. Since 1977, Birdon has successfully delivered a wide range of complex programs across government, defence, and commercial marine markets and overseas from our head office in Australia. Birdon employs approximately 400 full-time personnel worldwide, at our primary facilities in Australia, the United States, and the United Kingdom, along with partner sites in Indonesia and Singapore.

### Bridge Erection Propulsion Boat (BEPB)



### **Product Information**

Transportable by road, air, and sea, BEPBs are used worldwide to provide propulsion and manoeuvring capability for the assembly, operation, and dismantling of wet gap crossings. The BEPBs' secondary mission is to provide diving support, troop transport, and personnel and equipment recovery.

The BEPBs were designed by Birdon for the Australian Defence Force in 2004, a modernised variant is operated by the Brazilian Army, and Birdon is currently in full rate production to build 447 M30 variants for the US Army. These boats feature Birdon's NAMJet waterjet propulsion for unparalleled thrust and speed, with optional armour systems and weapons mounts.

Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

# ECLIPS



Design | Engineering | Logistics | Manufacturing | Research & Development | Vehicles & Accessories

### **Company Brief**

ECLIPS is an Australian systems engineering company that designs and fabricates purpose-built deployable capabilities using shipping containers and derivatives.

ECLIPS are specialists in purpose-built logistics platforms, container-based modular buildings for the military and mining sectors, emergency accommodation, training facilities, and correctional services facilities and specialised off-the-shelf equipment. ECLIPS also create custom modules, designed by professional engineers and delivered to meet customer requirements.

#### Joint Modular Intermodal Logistics System (JMILS)



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

#### **Product Information**

JMILS is a modular, scalable and intermodal logistics system that enables packaging and supply chain optimisation. Suitable for commercial and military use, JMILS consists of the Container Roll Out Platform (CROP), the Joint Modular Intermodal Container (JMIC) and the Stackable Plastic Case (SPC). The system is designed for loading and carriage of a wide range of goods and equipment using a standard 20ft ISO container.

JMILS digitalisation involves the integration of prognostics sensors and tracking systems to loads, enabling point-of-effect logistics support within a digitally integrated end-to-end supply chain. The system allows for efficient use of container space and safe loading and unloading using PLS equipped trucks, without the need for additional material handling equipment. The CROP can also be loaded onto the current ADF HX77 trucks without additional attachments.



# Green Eco Technologies



Field Equipment | Logistics | Manufacturing | Waste Management

### **Company Brief**

Australian Green Eco Technologies is a green technology company focused on combating food waste around the globe. It has developed patented technology to reduce food waste by 80% in size and weight with the ease of pressing a button keeping high amounts of calorific and nutritional values to be used for a variety of different industries. Green Eco Technologies has numerous international clients and has won innovation awards.

#### Wastemaster



### **Product Information**

Wastemaster is an Australian made and owned onsite food waste processor that reduces waste by 80% in a 24 hour period. Different from alternate systems that require high heat (dehydrators), drinkable water or additional bacteria. The system uses oxygen in the air with our patented technology to break down cell walls of the food in a much gentler process. Retaining high amounts nutritional and calorific values while allowed residual to be stored indefinitely. It is perfect for marine-time uses to manage waste and manage food waste on all sites including garrison and tactical bases due to portability of the system.

Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes



# **Pelican-Trimcast Products**



Logistics | Manufacturing | Through-Life Support

### **Company Brief**

With over 40 years' experience in the design and manufacture of engineered military-spec protective case solutions, Pelican-Trimcast produces a range of bespoke solutions to house and protect specialised high-tech equipment for the military in Australia and other NATO-aligned military customers around the world, including weapons, weapons systems, deployable IT and medical equipment, rotable components and critical spares for a wide range of platforms across Air, Land, Sea and Joint Systems domains.

#### **Engineered Protective Packaging Solutions**

Spares and support Yes equipment available?

Australian Export Control No approval required?



### **Product Information**

Pelican-Trimcast is an Australian designer and manufacturer of standard and bespoke high-performance engineered packaging solutions to provide maximum protection of the inner payload throughout any deployment or storage cycle, including shock-mitigating and vibration-attenuating internal systems to fit within the weatherproof protective outer cases, with the ability to produce single unique case solutions through to high volume LRIP and FRP.

Containerised Solutions for:

- Weapons and weapons systems
- Rack Mount Cases for deployment of IT and Sensitive electronic equipment
- Missile launch systems and missiles
- C4I assets
- Trunklockers and Food Storage
- Deployable Health assets
- CBRNE assets

Availability

- Modular container systems
- Rotable platform and system components / critical spares in the AIR/LAND/SEA domains
- Engineering Equipment and Combat support systems
- Radar and sensor assets.

< 3 months. Designed and manufactured to order.

# **TAE** Aerospace



Design | Engineering | Logistics | Manufacturing | Test Equipment | Through-Life Support

### **Company Brief**

TAE Aerospace is the largest 100% Australian-owned aerospace company providing a broad range of Defence and commercial products and services. As a leading provider of turn-key Maintenance, Repair, Overhaul and Update (MRO&U) services for turbine engines in Australasia. TAE Aerospace's extensive experience in turbine engine MRO&U, engine test cell design and upgrade, health and usage monitoring systems, advanced aerospace manufacturing (including aluminium vacuum brazing), platform total logistic support and other quality products and services are available to military, commercial and industrial sectors globally. From fast jets and regional transports to Army tanks, TAE Aerospace is Australia's aerospace company. TAE Aerospace also offer aerospace engineering, manufacturing, repairs and maintenance services as well as advanced aluminium vacuum brazing (AVB) manufacturing capability. Please refer to the company website for further information.

#### Turn-key MRO&U Services



### Service Information

For turbine engines including P&W F135; GE-F404, F414 and H80 /M601; Honeywell AGT1500 and TPE331family; PWC PT6A-family. TAE Aerospace has established full overhaul capability for a range of aero-derivative engines, providing cradle-to-grave Total Logistic Support services comprising:

- Program management;
- Engine fleet planning and life optimisation;
- Engine module heavy MRO&U and test services;
- Intermediate maintenance and engine testing at customer's operating base;
- Design and reliability engineering;
- Training;
- Condition monitoring services; and
- Material procurement, warehousing and distribution.

Delivered under an AS9100 and ISO9001 approved management system. Test Cell Design and Upgrade: As an OEM licensed supplier TAE Aerospace develops solutions that are tailored to the customer's needs, as well as providing existing test cell upgrade or new solutions for a single or multiple OEM products. These can be modular to suit multiple engine types and are purpose designed for each location. The test cell design and project organisation employs registered professional engineers and project managers and has a wealth of experience catering to Turbofan, Turboprop, and Turboshaft engines and Auxiliary Power Units.

Availability Designed and manufactured to order.



# Tufwrap Australia



Design | Logistics | Manufacturing | Through-Life Support | Storage, Preservation and Logistics

### **Company Brief**

Tufwrap is an Australian owned and operated company providing service, supplies and training in environmental containment and asset preservation with complete logistical monitoring and transport protection. The comprehensive knowledge and networks within industries allows the provision of turnkey, end-to-end tailored solutions that can be implemented across a broad scope of sectors and asset life-cycles. The capability to develop, manufacture and innovate leads Tufwrap to achieving efficient results cost effectively. Tufwrap is growing through South-East Asia and have a network of global partners.

#### Containment, Logistics and Preservation Systems



### Service Information

Tufwrap manufactures materials and provides services, supply and training in:

- LDPE, HDPE and Geo membranes
- Tufwrap<sup>™</sup> containment sheeting
- on-site containment services
- containment supplies, accessories and tools
- full preservation and long term storage solutions consulting and supply
- preservation bags, films, foams and fabrics
- covers/bags standard and bespoke asset protection

On-site Services include:

- implementation of non-volatile preservation systems
- manufacture implementation of humidity control products and systems
- barrier systems and environmental control
- rust removal and pre-preservation asset rejuvenation
- turnkey project logistic services
- cloud based environmental monitoring and real-time digital tracking.

# Verseng Group



Design | Engineering | Field Equipment | Logistics | Manufacturing | Through-Life Support | Vehicles & Accessories

#### **Company Brief**

Verseng Group is a wholly Australian owned and operated company with a focus on Ground Support Equipment (GSE), engineering and precision manufacturing. Operating from a facility located in Australia we are comprehensively equipped with the latest machining and technology operated by fully trained and experienced operators. Verseng Group has the expertise and resources to deliver high-quality products and manufacturing processes such as CNC machining fabrication and of components and complex assembly for the defence, mining, industrial, marine and agricultural equipment markets.

#### Cargo Loaders



### **Product Information**

Our Cargo Loaders known as Truck Aircraft Load Unload (TALU) and Truck Aircraft Side Load Unload (TASLU) are renowned around the world, and had been exported to around 20 Air Forces around the world. Between them they can serve most military transport aircraft including C130, C17, C295, A400M, C27J, C390, CN235, C160, C5 Galaxy, C141, Kawasaki C2, IL76T, KC-30B MRTT, and main deck of wide-bodied aircraft such as B747 and similar.

Availability 6–12 months. Designed and manufactured to order.

Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

**72** 4.04

# Section Four

## 5. Field

Field Equipment Personal Protection Vehicles & Accessories

Aspire Australian Defence Apparel Australian Patrol Vehicles Australian Performance Vehicles **BAC Systems** Bale Defence Engineering Systems Black Carbon Blueye Eyewear **CBG** Systems CGear Australia Chiron Global Technologies Craig International Ballistics Delta Hydraulics Envirofluid Heuch H | Fraser

Holmwood Highgate Ideation Product Solutions Life H20 Minecorp Australia Minelab Electronics MoTeC Nobles Norcoast Refrigeration Company **OPEC** Systems Performance Lubricants Australia Quartz Internationale Stealth Electric Bikes Storemasta Trakka Systems Universal Site Monitoring XTEK







Combat Clothing

### **Company Brief**

ASPIRE is an Australian technical apparel company specialising in the design and development of garments to improve athlete and soldier performance, endurance, spinal health and recovery. ASPIRE garments are designed to deliver physiological benefits to soldiers and to be worn as a base layer under soldiers uniforms while they train, perform or recover. The technical fabrics used to create the garments are Australian made and have technology designed to increase blood flow and improve muscle performance.

#### SpineSuit



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

### **Product Information**

The SpineSuit is our core product and specifically designed to improve the posture of soldiers and reduce back injury rates related to poor posture and carrying heavy backpacks over long distances.

The technical fabrics used to create the SpineSuit have been approved by Australian Department of Defence's Capability Acquisition and Sustainment Group.

SpineSuit features include:

- spine support straps that help create optimal spinal curves, reducing wear and tear on the vertebrae joints as well as reducing rates of injury and improving overall performance
- compression technology to increase blood flow to improve muscle performance and endurance, helping to reduce fatigue and injury rates
- high wicking rates that help keep soldiers dry and cool, and can also help to reduce heat signatures
- antimicrobial technical fibres that help to reduce odour and the spread of potential infections

# Australian Defence Apparel



Design | Engineering | Logistics | Manufacturing | Through-Life Support

### **Company Brief**

Australian Defence Apparel (ADA) is a leading provider of high grade bespoke uniforms, tactical body armour systems and ceremonial dress to Australian Defence and Law Enforcement agencies. ADA is a prime vendor to the Australian Department of Defence's Capability Acquisition and Sustainment Group and are committed to continuously innovating reliable, quality products that perform to world class standards.

ADA prides itself on delivering complete system solutions through engineering, manufacturing and integrated logistics support enabling their partners to enhance, optimise and sustain their operational capability.

#### Tiered Body Armour System (TBAS) Version 5



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

### **Product Information**

The Tiered Body Armour System (TBAS) has now entered its fifth version since its introduction into service in 2010. TBAS was first developed by ADA and Diggerworks, in response to the operational transition from Iraq to Afghanistan forcing the body armour system to evolve - reducing weight and increasing user mobility.

TBAS V5 was rolled out to Special Operations Command early 2018 and has already received extremely positive reviews from the Special Forces community. A survey concluded the TBAS V5 system was preferred over any off-the-shelf solution in the marketplace. The TBAS V5 was designed in consultation with representatives from the Australian Special Forces and further developed after a limited user trial.

The TBAS system is designed to be ultralight, low profile, modular, scalable, ergonomic and versatile.

# Australian Patrol Vehicles



Design | Engineering | Logistics | Manufacturing | Research & Development | Vehicles & Accessories

### **Company Brief**

Australian Patrol Vehicles (APV) is an automotive engineering company that offers high mobility, increased gross vehicle mass Toyota Landcruiser 70 Series and 200 Series platforms for commercial or military applications.

APV are an innovative mechanical engineering company that can provide certification and support to any platform or project. APV are 100% Australian owned and operated in Northern Queensland.

#### Militarised Patrol Vehicle



Spares and support equipment available? Yes Australian Export Control approval required?

### **Product Information**

The Militarised Patrol Vehicle is a true 6x6 variant designed and developed by APV for use in environments where high mobility and extended lines of communication are the key capability requirements.

The systems are designed around the Toyota 70 Series family of vehicles and offer a significant Gross Vehicle Mass increase from the factory option (Factory GVM = 3300kg, APV GVM = 6000kg).

The vehicles are capable of multi-role applications and can be modified to accommodate user requirements. The platforms are fitted with weapon mount systems supplied by W&E Platt and are capable up to 50 CAL and 40mm.



# Australian Performance Vehicles



Engineering | Manufacturing | Vehicles & Accessories

#### **Company Brief**

Australian Performance Vehicles (APV) operates Australia's most advanced R&D test laboratory of its type in Australia, specialising in survivability, safety and dynamic crash test capabilities. AVP's military restraints are designed for MRAP vehicles and require the highest levels of engineering excellence and ability to work with defence primes and seating manufactures in blast attenuating and energy absorbing seating. APV has provided services to Defence Science and Technology Group, Australian scientific organisations and industry including assessment of injury levels associated with operational crash scenarios and survivability testing of helicopter seating to Mil Std 85510.

Our specialist industrial seatbelt range encourages seatbelt usage on mobile plant and ground support equipment.

#### Easy-Grip



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

### **Product Information**

Easy-Grip is designed to encourage seatbelt usage by occupants in mobile plant, forklifts, ground support equipment or other operational equipment. The patented solution, presents the seatbelt to the occupant, allowing the seatbelt to be easily grabbed and latched, including whilst wearing gloves.

EasyGrip can be configured in a variety of colours to allow supervisors to visually check seatbelt usage and/or with electric buckles for seatbelt monitoring, alarms or ignition isolation solutions.



# **BAC Systems**



Manufacturing | Industrial storage for Defence assets | Industrial workshop benches

### **Company Brief**

BAC Systems is an Australian manufacturer of industrial drawer storage cabinets for Defence asset storage, used in nearly all Australian Defence Force (ADF) facilities. BAC also manufactures industrial modular workbenches, which are also used by the ADF.

#### **BAC Flightline Toolboard**



Spares and support equipment available?	Yes	
Australian Export Control approval required?	No	

#### **Product Information**

The BAC Flightline Toolboard is a mobile tool display storage system, with up to 7.4 square metres of perforated steel pegboard, complete with accessories. The unit comes with heavy-duty transparent roller doors for security that allows full vision of the toolboard behind. Designed in consultation with the Royal Australian Air Force, but now used widely across the ADF, the BAC Flightline Toolboard range is unrivalled for strength or storage capacity.



# **Bale Defence Engineering Systems**

Vehicles & Accessories

### **Company Brief**

Bale Defence specialises in the design, manufacture and sustainment of military equipment and Defence-related products. The company also serves as a repairer and supply chain manager; locating, supplying and maintaining a comprehensive range of vital spares and equipment.

Bale Defence has a diverse range of products and services including a range of special operations vehicles and watercraft, various urban and maritime assault systems, weapon storage systems, 20-foot equivalent unit containerised armouries and EO magazines, naval shock and vibration certified ready use lockers, watertight doors and hatches. These products and services are backed up with extensive logistical support.

### Rough Terrain Vehicle - Second Generation (RTV2)



### **Product Information**

The RTV2 is a light, tactical, off-road vehicle provided as a reconfigurable platform capable of securely carrying up to three crew, their individual weapons and equipment. The vehicle includes two large adaptable payload areas capable of safely and securely transporting weapons and explosive ordnance as additional payload.

Spares and support Yes equipment available? Australian Export Control Yes

BALE

approval required?

Availability

< 3 months. Designed and manufactured to order.



### **Black Carbon**



Design | Engineering | Field Equipment | Manufacturing | Research & Development | Through-Life Support Training & Education

### **Company Brief**

BLACK CARBON is an Australian-based SME that specialises in small arms target systems. As one of Australia's largest manufacturers of steel target systems for the civilian market, BLACK CARBON has expanded the range and technology to include moving and remote systems that are customisable, adaptable and innovative. The target systems are designed to improve the key fundamentals of combat engagement/shooting such as, situational awareness, reaction, accuracy and hit recognition.

BLACK CARBON's primary aim is to accelerate learning curves and up-skill through effective training experiences with a capability to design and tailor training systems to the needs of end users.

#### ARP-RT (Auto Reset Popper Remote/Timer system)





### **Product Information**

BLACK CARBON'S ARP-RT is a wireless automated reactive steel target system with an operational range of over 2km. The ARP-RT systems are modular and can be coupled with BLACK CARBON's moving Modular Travel Track System (MTTS), gunfire/flash effect simulator and can be efficiently deployed and recovered via specific trailer system.

The ARP-RT system features:

- diverse training solution
- 2km remote control range
- high ROI, simple, reliable, turnkey training
- minimum operator training required, very minimal servicing
- suited to marksmanship, fire support/squad automatic weapons, general range and CQB training use

Availability 3–6 months. Designed and manufactured to order.

Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

180<sup>4.05</sup>

### Blueye Eyewear



Field Equipment | Optical | Research & Development

### **Company Brief**

Blueye Tactical Eyewear is a division of Blueye Eyewear, who have been designing, developing and manufacturing specific purpose eyewear for over 21 years, with the emphasis on supplying elite performance eyewear products.

In 2013, Blueye Eyewear proudly released the first ever specific purpose ballistic eyewear range for international military and tactical markets. Blueye Tactical Eyewear strongly believe that for personnel to be able to perform specific operational tasks, they must wear the correct piece of eye protection.

Whether it is Water Operations, Land, Air or Special Operations tasks, Blueye Tactical has developed an elite performance eye protection system.

### Jager Eye Protection System



Spares and support Yes equipment available? No approval required?

### **Product Information**

The Jager Eye Protection System exceeds the US Military ballistic impact requirements for spectacles (MIL-PRF-31013, clause 3.5.1.1), and certified ANSI Z87.1-2010 ballistic impact and optical requirements EN166, AS/NZS 1337.1, CE.

Jager Tactical Sunglasses feature:

- 2.1mm precision optics lenses provide 100% UVA and UVB protection
- a 2 lens interchangeable system, in clear or smoke colour
- high impact Grilamid frame material in matt black colour
- adjustable nose pad for comfort, and low profile temples for ear muff compatibility
- retainer strap included, with RX adaptor available.

Discriminator: adjustable nose pad system that is compatible with various facial and nose shapes, hearing protection compatible including Peltor System.

### **CBG** Systems



Communications | Design | Electronic Warfare | Engineering | Field Equipment | Intelligence, Surveillance & Reconnaissance Logistics | Manufacturing | Optical | Research & Development | Test Equipment | Vehicles & Accessories

### **Company Brief**

CBG Systems is an Australian company specialising in the design and manufacture of Moonraker antenna systems and the supply and installation of fire, thermal and acoustic insulation, as well as signature management systems.

For more than 40 years CBG Systems has been a leading innovator, setting benchmarks in the marine insulation, communications and lightweight passive fire protection industry.

### Solar<sub>∑</sub>Shield



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

### **Product Information**

Solar∑Shield is a simple and affordable solution for mobile camouflage, solar heat load reduction and multispectral signature management. It can be designed for and installed on any system operating in harsh climate.

Solar∑Shield is a camouflage system for the 21st century to protect personnel and equipment from potential adversaries.

### CGear Australia



Manufacturing | Helicopter Landing Zones

### **Company Brief**

CGear Australia is a worldwide manufacturer of Extreme Lightweight Helicopter Landing Zones (LZ) used to eliminate "brown out". This reduces helicopter maintenance costs by over 90% when landing in desert conditions.

### **Helimat Landing Zone**



### **Product Information**

The Extreme Lightweight Helicopter Landing Zone eradicates 'brownout". It is configured in size to suit all military helicopters made worldwide.

Sizes: 18.3m x 18.3m [9 segments(S)], 24.4m x 24.4m (16S), 30.5m x 30.5m (25S), 36.6m x 36.6m (36S) constructed by joining 6.1m x 6.1m Helimat segments. Each segment weighs 21.5kg

Spares and support equipment available?	Yes
Australian Export Control approval required?	No



# **Chiron Global Technologies**



Manufacturing | Training & Education | Personal Protection

### **Company Brief**

Chiron Global Technologies is an innovative Australian technology company that has developed a unique, highly protective and agile body armour platform to increase survivability amongst defence, law enforcement, security and corrections personnel. Manufactured from advanced composite materials, Chiron's-X Series is the result of five years R&D and testing, culminating in a new paradigm in body armour offering unparalleled levels of protection and agility.

Chiron's flagship X1 product provides a solution to the problem personnel face of not being able to train realistically. It can also integrate a range of third party technologies such as biometrics and sensors.

### Chiron-X1<sup>™</sup> Training Body Armour



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

### **Product Information**

Chiron-X1TM body armour takes CQC training to new levels of realism. Combining superior agility with unparalleled protection, Chiron allows personnel to 'train as they fight' using realistic combat force and speed, enabling man-marking munitions training inside safety distances.

Chiron-X1TM armour is engineered for high-impact, high-speed strikes to vital CQC targets, including head/neck/throat, providing high levels of protection against compression and hyper-rotation to the neck/ skull/spine.

- Chiron-X1TM high-impact CQC training/riot armour trialled with defence/police
- Chiron-X2TM armour with embedded impact/ biometric sensor tech providing simulated injury data capture analytics
- Chiron-X3TM operational (ballistic) armour + optional impact sensors.

# **Craig International Ballistics**



Design | Engineering |Manufacturing | Research & Development | Test Equipment | Through–Life Support Vehicles and Accessories

### **Company Brief**

Over the last 20 years, Craig International Ballistics (CIB) has become the leading Australian manufacturer of combatproven armour systems. Craig International has now supplied more than 350,000 soft armour inserts, hard ballistic plates and training products to the Australian Defence Force, including to its Special Operations Command units.

CIB provides Australia with a sovereign capability in a key area of individual and force protection. For over twenty years the company has consistently delivered high-quality systems on time and on budget. Using these skills, the company has expanded beyond personal protection into developing armour for land vehicles, naval frigates, military aircraft and helicopters.

### Soldier Combat Ensemble Protection and Composite Armour



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### **Product Information**

The ballistic protection products are specifically designed to offer protection from a number of different ballistic and fragmentation threats. The Soldier Combat Ensemble system by example provides a number of protection elements from threats such as; fragmentation, edged blade and spike threats, low velocity threats, high velocity threats and armour piercing threats when used in harsh operating environments.

Our training aid products allow soldiers to train with products with the same fit and form resulting in an improved operating life of the operational body armour. Our newly designed composite ballistic protection panels manufactured from UHMWPE materials are pressed, cut and coated within our own facility. We recently completed deliveries of ballistic protection panels to the Australian Army for fitment to the CH47-F aircraft. The range of products have undergone extensive ballistic testing, durability, immersion and environmental conditioning.

Testing has been completed using NIJ 0101.06 and the DEF(AUST) 10946 test standard.

# **Delta Hydraulics**



Engineering | Manufacturing | Ship Building | Through-Life Support | Vehicles & Accessories | Hydraulic cylinders - telescopic and hydraulic rams and hydraulic manifolds

### **Company Brief**

Delta Hydraulics is a world leading manufacturer and innovator of multi-stage single and double acting telescopic cylinders, hydraulic rams, constant velocity telescopic cylinders, long stroke mast cylinders, annular and internally ported cylinders and hydraulic manifolds.

Established in 1975, Delta has a long history of product and manufacturing innovation and has supplied hydraulic cylinders and related products to over 2,000 customers in more than 30 countries, across numerous industry segments including Defence and ship building. Delta has supplied 9 hydraulic cylinder models and hydraulic manifolds to the Collins Class submarine fleet for 30 years.

### Hydraulic Trim Tab Control Cylinder



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

### **Product Information**

The Trim Tab Cylinder is fitted with a rod assembly made from 2205 Duplex Stainless steel with a marinised gland and velocity and position sensing transducers. The Cylinder controls the trim levels on a 118 metre high-speed trimaran ferry capable of transporting 1,100 passengers and 276 cars at a cruising speed of over 37 knots.

# Envirofluid



Engineering | Ship Building | Through-Life Support | Maintenance, Repair & Overhaul

### **Company Brief**

Envirofluid is an Australian owned company that provides maintenance chemistries to Defence industry, with exports to NATO countries. Envirofluid provides solutions within difficult maintenance environments, with positive environmental and WHS outcomes, by instigating a holistic approach to chemical management to improve sustainment outcomes and labour savings. This is achieved though the elimination of chemicals that erode surfaces, damage components, release harmful toxins, and result in expensive repairs and health concerns. Envirofluid has recently partnered with Unispace Health globally and now offers products in all NATO countries.

### Maintenance, Repair, Overhaul Chemicals



### Service Information

Envirofluid helps companies preserve and care for their workforce through smart chemical applications that eliminate workplace and environmental risk through high performance chemistries that streamline work-flow, increase efficiency and generates an outstanding ROI.

Envirofluid offers a breakthrough system that has been designed to provide advice, performance analysis, technical and implementation support for seamless product substitution and change-over. By conducting business in an environmentally responsible manner, we can all help protect personnel, the earth and its natural resources.



# Heuch



Field Equipment | Logistics | Manufacturing | Medical | Research & Development Test Equipment | Through-Life Support | Vehicles & Accessories

### **Company Brief**

Heuch has provided engineered refrigeration and environmental control since 1970.

### Heuch Support Master



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### **Product Information**

The Heuch Support Master is a simple to use mobile system, quickly attached to military land systems. It circulates dry air through the platform for the avoidance of corrosion and mould to metals, fabrics and electronics, as well as providing battery trickle charging and support charging to prolong lifetime of batteries and reduce engine run hours. It reduces corrosion, mould and engine run hours, and improves battery life and platform availability.

The Heuch Support Master reduces the effort and costs associated maintenance of land systems. Currently used on the Rheinmetall Boxer, the Support Master is estimated to save AUD\$25,000 p/a per unit.

### H.I. Fraser



Design | Engineering | Manufacturing | Through-Life Support

### **Company Brief**

H.I. Fraser specialises in gas, liquid and waste system design, build, maintenance and certifications. With a primary focus on solving difficult gas and fluid problems, their engineering capabilities provide expert solutions for a number of industries throughout the Asia-Pacific region. Their extensive technical team consists of qualified mechanical, electrical and control engineering and fitting technicians qualified in electrical, mechanical, chilled water, hydraulic, pneumatic, instrument and waste treatment fields.

### Special Forces Custom Designed Charging Panel



### **Product Information**

H.I. Fraser have customised gas and fluid systems to meet Defence customer requirements. An example of this is the Special Forces charging panels designed as a single portable solution to charge multiple gases and multiple applications including SCUBA, mixed gas diving, HAFO, HAPO and HUET.

The gases able to be concurrently charged are:

- a. HP oxygen (200 Bar)
- b. HP 60/40 Nitrox (300 Bar)
- c. HP air (ranging from 207-250 Bar and 300 Bar).

Availability <3 months. Designed and manufactured to order.

Spares and support Yes equipment available? No approval required?

# Holmwood Highgate



Design | Field Equipment | Humanitarian | Logistics | Manufacturing | Vehicles & Accessories

### **Company Brief**

Holmwood Highgate is a recognised world leader in the design and manufacture of bulk liquid storage and transportation systems for fuel and water. They manufacture deployable, ruggedised bulk tanker modules built within an ISO container footprint. Applications include forward deployment, critical missions, peacekeeping, disaster relief and humanitarian purposes.

We are one of Australia's leading manufacturers of road tankers and aviation refuelling, with a proven 100% in-house capability – design, validation, manufacture and sustainment. We are committed to improving performance-based logistics and service acquisitions, reducing total cost of ownership, and focusing on innovative support and sustainment.

### Deployable Bulk Liquid Fuel and Water Modules



Spares and support equipment available? Yes Australian Export Control approval required?

### **Product Information**

Holmwood Highgate has designed and manufactured a highly deployable "Tank Container Module" range. There are four variations – two multi-fuel and two water solutions; a storage tank plus pump or larger capacity tank only. Each are a versatile, deployable, module system for the transport, storage and discharge of both bulk fuel and water within a joint theatre environment.

The Module range fits within the internationally recognised 20-foot ISO shipping container footprint, is transportable by both commercial and military platforms and is able to interface with Coalition ABCA Bulk Liquid Equipment. Multiple "tank only" versions can be linked to a single tank and pump "base station" creating an even larger storage facility. The pump output is between 40 litres and 1000 litres a minute.



# **Ideation Product Solutions**



Design | Engineering | Manufacturing | Research & Development | Through-Life Support

### **Company Brief**

Ideation Product Solutions is an Australian product design and manufacturing company. We work closely with the Defence Science and Technology Group to bring innovative defence oriented ideas from concept to product. Application areas range from Human Performance through CBRN detection.

### ESIM2.0 Environmental Stress Index Monitor



Spares and support Yes equipment available? No approval required?

### **Product Information**

The ESIM2.0 is an OHS tool used as part of a Heat Stress Management policy, to avoid injury and/or fatalities to personnel operating in hot and humid environments.

# Life H20



Field Equipment | Medical | Vehicles & Accessories

### **Company Brief**

Life H20 specialises in the design and manufacture of high-grade portable water purification equipment. The current product range has both fresh and saltwater units that are capable of producing between 30 litres and 300 litres per hour.

### LH90



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

### **Product Information**

The LH90 unit can be supplied as a salt water desalination unit producing 90 liters of clean fresh drinking water per hour. Power options are 12 or 24 volt DC with solar or alternator recharge capability.

### Minecorp Australia



Autonomous Systems | Field Equipment | Research & Development | Design | Engineering Manufacturing Through-life Support | Vehicles & Accessories

### **Company Brief**

Minecorp is the Australian industry leader in safe, sturdy, compliant fleet vehicle modifications. We design, manufacture and install fleet fit-out solutions for all commercial fleets, working with stakeholders to ensure a customised solution with quality automotive accessories, components and a complete vehicle conversion that is fit for purpose.

### Military Working Dog Module



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

### **Product Information**

The Military Working Dog Module has been designed to integrate with the Mercedes Benz G-Wagon platform vehicles, however can also be designed to suit other applications. It is designed to safely house 2 dogs during transit and offers slide out trays for easy cleaning. The design incorporates tactical led lighting, ammunition and cargo storage, whilst offering excellent air flow.

Backed by extensive research and development, our innovative products and services are designed to comply with workplace and operational regulations, ensuring functional and quality for operators.

# **Minelab Electronics**



Design | Field Equipment | Humanitarian | Manufacturing | Research & Development

### **Company Brief**

Minelab provides metal detecting technologies for consumer, humanitarian de-mining and military applications. Through our dedication to research and development and innovative design, Minelab is a leading manufacturer of hand held metal detector products. Since 1998, Minelab has supplied metal detectors throughout the world including UN de-mining programs. Minelab was selected to develop and supply its metal detection technology and hardware for inclusion in the US Handheld Standoff Mine Detection System – the world's first military dual sensor (MD and GPR) detector.

### MDS-10 Dual Sensor Detector



Spares and support equipment available?	Yes	
Australian Export Control approval required?	Yes	

### **Product Information**

The MDS-10 combines unique Metal Detection and Ground Penetrating Radar technologies to provide superior results in the detection of metal and non-metal targets.

- Features include:
- selectable or combined use of sensors, detection, interrogation and pinpointing modes;
- continuous real-time display;
- tactical mode for use with NVG, selectable audio, haptic and visual alerts and an operational weight of 2.8 kg.

# MoTeC



Design | Engineering | Manufacturing | Research & Development | Training & Education | Vehicles & Accessories

### **Company Brief**

MoTeC designs and manufactures specialist automotive electronics for applications which include Engine and Vehicle Control, Power Distribution Management, Vehicle Colour Displays, and Data Logging/Telemetry and Data Analysis. MoTeC's products and associated IP covers hardware, firmware and software. MoTeC's 30 plus years of successful products in the motorsports market globally has established a reputation for adaptable and reliable products, which are being successfully leveraged into military applications and solutions.

### Vehicle Electronic Control Unit (VCU) and Engine Control Unit (ECU)



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

#### **Product Information**

MoTeC's M1 range of VCUs / ECUs provide highly software programmable and adaptable solutions to a very wide range of applications. Our VCUs are applied as 'chassis control modules' enabling very high degree of platform systems integration, covering CAN Bus communications management (including J1939 compliance) and logic based monitoring and control of platform sub-systems. MoTeC VCUs are now also being applied to Electric and Hybrid Vehicle solutions, in particular in the 'supervisory controller' role.

MoTeC has long standing experience in application of our ECUs to a wide range of engine types, including petrol and diesel. MoTeC's 'Build' applications development software environment provides an effective tool for programming unlimited application types for our VCUs/ECUs. The combination of our hardware and Build and Tune software enables fast and efficient solutions development and production implementation. MoTeC now also offers a Model Based (MatLab) function with our Build software.



# Nobles



Design | Engineering | Field Equipment | Manufacturing | Test Equipment | Through-Life Support | Vehicles & Accessories

### **Company Brief**

Nobles is a leading specialist provider of lifting and rigging equipment and components, technical services and engineering design and fabrication for complete solutions to the heaviest and most complex Defence lifting, rigging and lashing requirements on land, air or sea.

Nobles supplies lifting and rigging products and services across the full Defence procurement and operating value chain, including shipyard and manufacturing facility construction, vessel and vehicle build, as part of the equipment and vessel itself and during sustainment.

Nobles is a 100+ year old Australian owned and operated company with locations Australia-wide.



### Medium & Heavy Vehicle Lifting & Recovery Blocks (plus Other Custom-Engineered Defence Lifting Devices)

Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### **Product Information**

Nobles develop an innovative series of recovery and lifting blocks for heavy to medium vehicle recovery, supplied into the Australian Defence Force's Land 121 project during 2018-2019.

Beating global competition using specialist in-house lifting and rigging expertise in metallurgy, mechanical engineering design and product testing to meet stringent ADF specifications and Australian Standards, Nobles have custom-engineered a new series of super-strong, light-weight and easy to assemble and disassemble lifting and recovery blocks from scratch.

Due to the strong performance of these blocks in the field, Nobles is now working with Defence primes on supplying similar blocks into additional domestic and export defence projects.

Availability 3–6 months. Designed and manufactured to order.

106 4.05

# Norcoast Refrigeration Company



Field Equipment | Humanitarian | Manufacturing | Medical | Vehicles & Accessories

### **Company Brief**

Norcoast Refrigeration is a specialist manufacturer of Trailblaza portable 12/24 volt DC refrigerator-freezers. All products are highly energy efficient, battery operated and suitable for solar applications.

The late Robert Albiez and wife Margaret started the company in 1983 producing the Trailblaza Range of portable refrigeration units. All units are individually handmade and individually tested at their factory, and can be customised to provide specific refrigeration solutions. There are well over 23,000 units in the field. Many of these units are being utilised by Defence, government agencies, mining corporations and health centres overseas in remote locations.

#### Trailblaza Portable 12/24 volt DC fridge-freezer



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

### **Product Information**

The Trailblaza portable fridge-freezers have a proven record for robustness, reliability and the ability to work in high ambient conditions with high energy efficiency, serviceability and durability. There are over 23,000 units in the field in Australia and overseas. Trailblaza Units are available from 20 litres to 200 litres with 60 models available. All units can be customised to provide specific refrigeration solutions for individual specific applications.

The Trailblaza portable refrigerators-freezers are manufactured with 2mm marine grade aluminium inside and out with a riveted construction on the outside shell while the inside box is fully Tig welded. Only the highest quality components are utilised with each unit individually handmade and individually tested in their test ovens at 43 degrees Celsius.

Norcoast has the ability to test to specific outside ambient temperatures and criteria as required. Our in-house quality control has been a key factor to ensure every Trailblaza meets our high standard for over 36 years.

# **OPEC** Systems



Engineering | Field Equipment | Humanitarian | Logistics | Manufacturing | Medical | Research & Development Space Capabilities | Training & Education | Personal Protection | Site remediation - UXO, TRW, PFAS

### **Company Brief**

OPEC Systems is a privately owned Australian environmental engineering company established in 1992. With strong values and focus on best business principles OPEC has forged a reputation for honesty, flexibility, ingenuity and teamwork. Consistently operating the most hazardous environments, OPEC has an unwavering commitment to safety and professionalism in specialist industry sectors of Defence, energy, marine, environment, health and college.

### PFAS Commercial Scale Foam Fractionation Site Treatment and Remediation



### Service Information

OPEC Systems is on the Defence Infrastructure Panel (DIP), and the product and service delivery includes OPEC's PFAS treatment. The patented foam fractionation technology relies on the natural physio-chemistry of target PFAS compounds to collect on the bubble interface and concentrate on the surface as a harvestable foam. OPEC has developed a number of unique applications for the foam fractionation technology to allow it to be utilised to remove PFAS compounds from soil and water in both in-situ and ex-situ applications.



# Performance Lubricants Australia



Engineering | Vehicles & Accessories | Weapons & Ammunition | Reliability, wear reduction and extension of equipment life

### **Company Brief**

Performance Lubricants Australia (PLA) is a Darwin-based company specialising in high performance lubricants and metal treatments. PLA is the appointed Sole Distributor for the Uniglide technology for Australasia and collaborates closely with the principal and owner of the Intellectual Property Uniglide Lubricants Australia.

### Uniglide Gun Gard



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### **Product Information**

Uniglide Gun Gard is a highly effective weapons lubricant proven to enhance reliability in automatic weapons. The versatility of this technology ensures that Gun Gard can be used in all weapons requiring lubrication. It also has excellent rust and corrosion protection capabilities.

Packed in aerosol cans, it has an inert propellant for safer use in confined spaces (tanks, fighting vehicles, holds of vessels etc). Being highly concentrated, Gun Gard is used sparingly making it very economical to apply.

Availability

< 3 months. Designed and manufactured to order.

# Quartz Internationale



Design | Engineering | Field Equipment | Manufacturing | Research & Development | Through-Life Support Vehicles & Accessories

### **Company Brief**

Quartz Internationale has expertise in industrial fabrics, composite and ceramics materials and processes, fire retardant flexible foams for seating and sleeping arrangements, integral skin foams, fire retardant coatings for rigid and flexible materials, seating design and refurbishment. Quartz also design and manufacture fire retardant impactabsorbing elastomers.

### **Fire Retardant Polyurethanes**



Spares and support	Yes
equipment available?	
Australian Export Control	No
approval required?	

### **Product Information**

Quartz's fire retardant polyurethane products can be designed and formulated to suit customer-specific requirements, and can be used for increasing comfort and survivability. Moulded parts can incorporate inserts, covers, reinforcements and sensors. Quartz offers a full service from design, manufacturing and through-life support.

### **Stealth Electric Bikes**



Design | Intelligence, Surveillance & Reconnaissance | Manufacturing | Vehicles & Accessories

### **Company Brief**

Stealth Electric Bikes offer a range of solutions for combat personnel recovery, reconnaissance and rapid deployment when speed, stealth, endurance, and flexibility of ground operator movement is required. As the turnkey solution for tactical short to mid-range land mobility, they provide an energy efficient, negligible sound and heat signatures, low profile, all-terrain system for individual soldiers.

In today's non-linear and non-contiguous field environment, lightning fast tactical ground movement is vital. With over 2,000 in circulation globally, Stealth Electric Bikes have proven to be a reliable, safe, silent and tactical solution.

#### Lightweight Expeditionary Electric Personal Platforms (LEEPP)



Spares and support equipment available?	Yes
Australian Export Control	No

approval required?

#### **Product Information**

The Stealth Electric Bikes "Light Expeditionary" B-52 combines the world's most powerful and silent hybridelectric power train with a reinforced, aircraft grade chassis to produce a peerless riding experience. Its pedal operated nine speed sequential gearbox can be used to assist its brushless DC hub motor in situations where high torque and fast acceleration are required, or as a range extender for long distance missions.

Capable of over 80 kmph with a range of up to 80 kilometres, the B-52's tuneable, long travel suspension and high performance hydraulic disc brakes excel at rapidly traversing the roughest terrain while carrying heavy payloads and maintaining an ultra-low signature.

There are an additional 3 different light expeditionary user models available, (with or without pedals) providing mission specific capabilities. Please refer to the company's website for more information.

### Storemasta



Manufacturing

### **Company Brief**

STOREMASTA is an Australian family owned and operated company, founded by David Urquhart in 1991, providing innovative safe storage solutions for a wide range of applications in many industries within Australia, New Zealand and South-East Asia.

With an established and stable history, STOREMASTA is now servicing every industry sector and Government department within Australia and setting the standard in customer satisfaction by innovation and flexibility in design, coupled with high quality manufacturing and an efficient distribution service.

#### **Dangerous Goods Storage Cabinets**



### **Product Information**

STOREMASTA manufactures a range of indoor and outdoor chemical storage cabinets for storing flammable liquids, flammable solids, spontaneously combustible substances, dangerous when wet substances, oxidising agent, organic peroxides, toxic substances, corrosive substances and pesticides. Indoor cabinets sizes ranges from 15L to 850L and outdoor from 80L to 32000L. All cabinets are manufactured in our Australian manufacturing unit and in full conformance to the relevant Australian Standard

Spares and support equipment available?	Yes
Australian Export Control approval required?	No



### Trakka Systems



Manufacturing | Optical

### **Company Brief**

Trakka Systems is renowned for its leading innovation in Critical Vision Technology. The Trakka Optics division has been launched to provide more of the very best in optical advantage, to help the individual military, law enforcement and other first-responder professionals better "to see, to save and protect".

Born out of the integration of our sister company Byfield Optics into the Trakka Systems Group, Trakka has spent a number of years investing in the development of a unique range of patented optical products resulting in our world first embedded polarised binoculars.

#### TB-200 (Recon) 10x42 and TB-300 (Trakka) 8x56 Polarised Binoculars



approval required?

### **Product Information**

Trakka's patented polarised binoculars offer the same advantage as polarised sun glasses; they block out reflected light from surfaces such as water, windows and land allowing the user to see a more defined, and clearer image with returned depth perception, providing a greater tactical advantage to a user no matter what environment they are operating in.

Trakka's ground-breaking technology is incorporated within the binocular optical train, eliminating image distortion issues that have been encountered in the past when using filter caps. This technology can be transferred to other types and designs of optical visual enhancement apparatus so as not to restrict the type of equipment utilised by varying agencies.



# **Universal Site Monitoring**



Communications | Field Equipment | Humanitarian | Intelligence, Surveillance & Reconnaissance | Medical Ship Building | Training & Education | Vehicles & Accessories | Personal Protection

### **Company Brief**

Universal Site Monitoring (USM), an Australian company who design and develop an advanced Personal Safety Monitoring System, are committed to continuous improvement developing new personal safety technology.

USM put personnel first - monitoring location, health and safety, and the well-being of people, creating a safer work environment globally. With an Australian based team of technological experts, USM are perfectly situated to service Australia's Defence industry, resources, oil and gas industries and the global industrial safety market. USM's safety system is custom configured to suit any operation and environment, ensuring an organisations most valuable assets return home.

### Satellite Mesh Access Point (Sat MAP)





### **Product Information**

The Sat MAP is proprietary wireless access point developed specifically for use with USM's Personal Safety Monitoring System (PSMS), is based on satellite technology, enabling connection and transmission of data for PSM devices working in remote locations.

The SAT MAP can be rapidly deployed into vehicles, plant and equipment, enabling and organisation to extend the range of their Personal Safety Monitoring (PSM) capabilities. The PSM is designed to make use of the USM mesh network and satellite technology, providing real time location sensing and personnel safety metrics, via the Universal Data Interface (UDI).

Availability

6–12 months. Designed and manufactured to order.

2**04** 4.05





Autonomous Systems | Design | Engineering | Intelligence, Surveillance & Reconnaissance Manufacturing | Research & Development | Robotics | Space Capabilities | Through-Life Support Vehicles & Accessories | Weapons & Ammunition

### **Company Brief**

XTEK is committed to providing the latest technology and innovative products to protect those who protect us. From Defence, Law Enforcement, First Responders to emergency services, XTEK delivers state of the art solutions to protect and sustain personnel, equipment and assets at the frontline.

XTEK designs, integrates, manufactures, services and supports armour, tactical equipment, tactical robots and small unmanned aerial systems for its customers. Established in 1978 and listed on the ASX, XTEK has been supporting service men and women for over 40 years from its headquarters in Canberra, Australia and dedicated development and manufacturing site in Adelaide, Australia.

### **XTarmour**



Spares and support equipment available?	Yes
Australian Export Control	Yes

approval required?

### **Product Information**

XTarmour is XTEK's armour product line, including:

- Ballistic Rifle Helmet
- Ballistic Hard Armour Plates (HAPs)
- Ballistic and stab Soft Armour.

XTarmour, uses the latest materials and process technologies to offer the lightest Level 3 through Level 4 (NIJ) body protection. XTarmour can be made in custom sizes, shapes and ordered in niche to large volumes. Also offered is the XTatlas. Please refer to the company website for further information.

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# Section Four

### 6. Humanitarian Aid & Disaster Relief

Medical Humanitarian

Aeromedical Engineering KIAH Health M4 Medical Medical Rescue Med Rescue Training Sure Aqua Corporation



# Aeromedical Engineering



Design | Engineering | Logistics | Manufacturing | Medical | Through-Life Support

### **Company Brief**

Aeromedical Engineering has grown from the vision of creating a seamless transfer from military vehicles with standard stretcher mounts, through to both military and civilian aircraft using a stretcher and universal adapter system. The system includes "load and go" stretcher loading systems suitable for any aircraft type. With inhouse experience in aviation, engineering, and aeromedical services, Aeromedical Engineering has taken on the challenge of delivering an engineering, manufacturing and support capability that leads the industry with minimal weight, maximum strength and adaptable to military and civilian use.

### **Aeromedical Evacuation Systems**



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

### **Product Information**

The Aeromedical Evacuation Systems are designed to enable rapid and seamless transport through forward, tactical and strategic AME.

The system consists of:

- the stretcher which is designed to meet contemporary FAR structural performance and be very light
- a clinical equipment bridge/arch, designed to readily integrate changing clinical equipment in support of high dependency patients
- · medical base including oxygen, suction and power
- and military aircraft racking and adapters, designed to enable easy integration with any aircraft and most vehicles and ships that carry traditional NATO stretcher styles.

The system also includes "Load and Go" portable loading systems to suit all fixed wing aircraft types.



# KIAH Health



Design | Field Equipment | Humanitarian | Medical

### **Company Brief**

KIAH Health is an organisation that draws upon the skills, knowledge and the commitment of our subject-matter expert team members to provide essential clinical skills to the wider military, pre-hospital, health care and medical communities. KIAH Health is an Australian innovator in the provision of health care in the FIFO resources sector and in developing communities.

### The Heskett



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

### **Product Information**

KIAH Health has developed a unique piece of life saving kit to support Defence personnel. The Heskett has been meticulously designed and developed as a mobile safety platform for vital field, medical and first-aid equipment. It can be parachuted directly to front-line responders and its many features include a silent GPS beacon to allow for its quick location. It is a 'safe house' under difficult conditions and it has two entry points and three escape portals.

# M4 Medical

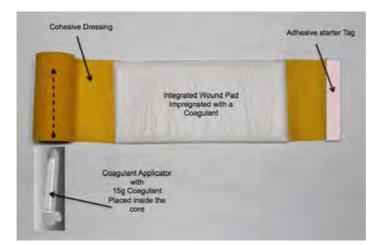


Humanitarian | Medical

### **Company Brief**

M4 Medical specialises in combat survivability in saving lives with faster, easier wound care management. The CoFAD Coagulate Combat Dressing was developed to provide a more efficient form of wound care that is easier and quicker to apply, with the high likelihood of improved health outcomes for the battlefield casualty.

### CoFAD Coagulate Combat Dressing



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

### **Product Information**

The CoFAD Coagulate Combat Dressing is packaged and sterilised as one component and consists of a flexible cohesive material with a non-adherent pad. The pad is impregnated with the coagulant Chitosan, with additional Chitosan applied into the wound with an integral coagulant applicator. The bandage is easy to apply by a first responder, or self-applied by an injured combatant.

The dressing will prevent blood loss through coagulation and correct application of haemostatic pressure (by pictograph). It will require no additional clips to hold it in place, adhere more efficiently to the body, have improved all weather capability including application to wet skin, and in rain and even underwater. It has improved protection against external contaminants entering the wound, and the provision of a panel for accurate recording of health knowledge management data. These features all contributing to a vastly improved response to wound management.

Available in Sizes 5 - (150 mm x 2000 mm) and Size 4 - (100 mm x 1000 mm). Also offered is the Cohesive First Aid Dressing, available in five different Sizes - 25 mm, 50 mm, 75 mm, 100 mm, 150 mm. Please refer to the company website for further information.



### **Medical Rescue**



Medical

### **Company Brief**

Medical Rescue provide turnkey aeromedical evacuation services worldwide using fixed and rotary wing aircraft to support military exercises or deployments. Medical Rescue can develop, implement and coordinate forward, tactical, or strategic AME requirements. The company provides emergency medical care to thousands of patients every year and are one of Australia's busiest pre-hospital medical services.

Services include:

- Remote medical resources
- Rescue helicopter
- Air ambulance.

Medical Rescue can embed with pre-existing health support or operate as a stand alone resource.

#### Support Services



#### Service Information

Medical Rescue can supply forward, tactical or strategic AME capability worldwide. We can provide turnkey rotary or fixed wing aeromedical evacuation resources or we can supply the medical crew and equipment to work on existing aircraft.

Medical Rescue's fixed wing air ambulance is one of the busiest international aeromedical retrieval services in Australia. Based in South East Queensland with full ICU capability, it is crewed by emergency doctors and flight nurses and supported by a dedicated 24/7 operations team that manages:

- International airports
- Forward base of operations
- Fuel agencies
- Customs and Border Protection
- Immigration and emergency visas
- Ground ambulance services
- Foreign and receiving hospitals.

# Med Rescue Training



Training & Education | Medical

### **Company Brief**

Med Rescue Training (MRT), is a privately held, Australian-owned company. MRT develops and delivers specialist driver training courses for the Australian Defence Force, emergency services and private sectors.

MRT provides personalised education via nationally accredited training as a Registered Training Organisation and non-accredited, bespoke training. Programs can be developed to meet an organisations' requirements including stand-alone training and assessing, train the trainer courses or implementation of a training model.

MRT's expertise and resources facilitate tailored delivery of driver training for Defence programs. Resource digitalisation, e-learning platforms and readily deployable teams mean MRT can deliver training domestically and internationally.

### Specialist Driver Training | Aeromedical Evacuation Services



### Service Information

MRT provides intensive training programs to achieve timely and cost-effective solutions for clients. Training programs include: light/medium/heavy vehicles; military vehicles (weaponised and non-weaponised); 4-wheel drive operations and recovery; snowfield, ice, sand, beach and water safe driving behaviours; tactical and defensive driving; and light and heavy machinery. MRT's delivery of training and short courses are aimed at practical, workplace skills development. Programs are delivered by a team of highly experienced, certified trainers drawn from Defence, Police and Emergency services backgrounds.

Further capabilities include: training analysis, design, development and delivery; practical assessments and mentorship; development of leading-edge digital resources; integration via e-learning platforms; and technical documentation production. MRT's approach is guided by best practice. Recent Defence projects include the Introduction to Service and defensive driver courses to ADF Land 121 and G-Wagon training for Australian emergency services.

# Sure Aqua Corporation



Field Equipment | Humanitarian | Manufacturing

### **Company Brief**

Sure Aqua Corporation is an Australian owned and based company that manufactures quality products that consistently exceed international standards, as verified by independent laboratories. Sure Aqua has been registered by the United Nations for the supply of water filtration products (UNGM).

### Survival Jerrycan



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

### **Product Information**

The Survival Jerrycan utilises world class ultra filtration membrane technology, providing instant access to safe water.

- removes bacteria and viruses
- requires no energy or fuel
- portable
- holds approximately 18.5 litres
- carbon filter for improved taste
- built-in backwash
- very easy to use
- filters 40,000 litres
- 5 year shelf life
- military grade

Availability

< 3 months. Designed and manufactured to order.

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# Section Four

### 7. Professional / Training

Professional Services Training

AeroPM Australian Aerospace Corporation Collins Aerospace Eggler Technology Training ERGT Australia FLAIM Systems Geospatial Intelligence Molico Nexus Training Solutions Nova Systems Omni Executive Pacific Aerospace Consulting Pivot Maritime International Real Response SiNAB Universal Motion Simulation







Communications | Electronic Warfare | Engineering | Intelligence, Surveillance & Reconnaissance | Logistics Through-Life Support | Test & Evaluation, Certification & Airworthiness, Program Management

#### **Company Brief**

AeroPM is a 100% Veteran owned and led professional services consulting firm that engages across the private, government and Defence sectors. Based in Canberra, AeroPM works with clients Australia-wide to deliver a range of complex technical projects, products and outcomes. AeroPM personnel are highly qualified and customer focused authentic leaders, trained to perform in complex strategic environments. Through its people, AeroPM aspires to offer your program inter-disciplinary and cross-functional teams or individuals.

With a significant portion of personnel having a Defence background, AeroPM has a deep understanding of Defence sector clients and the environment in which they operate.

#### **Professional Services**



#### Service Information

AeroPM places high performing talent into your key roles across the Air, Land, Joint and Maritime Domains/ Environments. AeroPM provides the strategic and tactical skills to ensure project success. AeroPM has significant experience supporting major capital acquisition projects and complex sustainment products within Defence.

AeroPM's personnel are experienced across the entire Capability Life Cycle stages and boasts a full range of capabilities across:

- Program & Project Managers: Certified Chartered Professional Project Managers use contemporary methodologies to introduce and integrate new capabilities into service.
- Project Engineering Managers: Certified Chartered Professional Engineers provide Aerospace, Avionics, Systems,
- and Software Engineering, as well as Engineering Management within complex and dynamic programs.
- Test & Evaluation Managers: Long course qualified T&E managers provide the full suite of independent verification and validation services across multifaceted programs.

Other Services include Certification Managers, Commercial Managers, Capability Definition, FIC and Stakeholder Coordination and Integrated Logistics Support.

### Australian Aerospace Corporation



Autonomous Systems | Design | Electronic Warfare | ICT & Cyber | Intelligence, Surveillance & Reconnaissance | Research & Development | Training & Education | UAV and Counter UAV

#### **Company Brief**

Established in 2016, Australian Aerospace Corporation provides goods and services to Commercial and Defence industries across Australia and internationally. The company's specialty is the analysis and design of hardware and procedural support throughout the entire ILS life cycle to support the creation, implementation or operation of highly bespoke and unique payloads, processes and platforms. Australian Aerospace Corporation often succeeds where others have failed, thanks to extensive experience, ingenuity and ability to start any program of work, with the end in mind. The company's vision is to consistently drive innovation, create efficiencies and deliver lasting value through relationships with customers, partners and employees.

#### Technical Solutions, Operation and Training



#### Service Information

Australian Aerospace Corporation's aviation services ensure maximum platform and human interactive capability is operationally reached and maintained by applying thorough analysis, testing, training and procedural rigor throughout the acquisition, implementation, and maintenance stages of the ILS life cycle.

Services include:

- technical studies & analysis
- capability requirement analysis
- capability analysis & development
- tactical information exchange system design
- training implementation plans
- training design and delivery
- unmanned systems capability, performance & HMI analysis and assessment.

### **Collins Aerospace**



Communications | Engineering | Intelligence, Surveillance & Reconnaissance | Manufacturing | Optical | Through-Life Support | Training & Education

#### **Company Brief**

Collins Aerospace Systems, a unit of Raytheon Technologies Corp. (NYSE: RTX), is a leader in technologically advanced and intelligent solutions for the global aerospace and Defence industry. Created in 2018 by bringing together UTC Aerospace Systems and Rockwell Collins, Collins Aerospace has the capabilities, comprehensive portfolio and expertise to solve customers' toughest challenges and to meet the demands of a rapidly evolving global market. For more information visit the company website.

#### **RealFires Joint Fires Simulator**



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

#### **Product Information**

The RealFires Joint Fires Simulator enables Joint Fires Observer and Joint Terminal Attack Controllers training to the highest level of proficiency. Through the use of state-of-the-art technology, the simulator represents a cost effective, lower environmental impact alternative to "live" indirect fires and Close Air Support (CAS) training.

The simulator enables personnel to maintain their US approved JTAC accreditation to operate effectively in coalition environments. This approach significantly reduces the costs associated with JFO and JTAC recurrent training, resulting in rapid return on investment, typically in the order of one to two years.



## Eggler Technology Training



Engineering | Training & Education

#### **Company Brief**

Eggler Technology is a leading Australian Defence education and training services company specialising in capability design, systems engineering and military technology.

Eggler works in close partnership with governments, private sector companies and academia to develop of essential knowledge and skills of professional staff working in capability development, acquisition and through-life support roles.

Class-based, e-learning and live-online education and training programs, short courses and diplomas are delivered worldwide, and focus on developing practical knowledge and skills needed in the workplace. Programs and courses can be individually tailored to meet an organisation's specific professional development requirements.

#### **Professional Technical Education & Training**



#### Service Information

Eggler's specialist capability design, systems engineering and military technology professional education and training programs are designed to develop essential knowledge and practical skills needed by capability developers, systems engineers, project managers and other technical staff working on high technology Defence projects. Education and training programs are delivered in the following key areas: capability systems design; systems engineering; operational analysis; requirements development; military vehicle technology and mobility; weapons, firepower and survivability technology; tactical mobile communications technology; introduction to defence technology; project management; human systems integration; reliability engineering and integrated logistic support.

### **ERGT** Australia



Training & Education

#### **Company Brief**

ERGT Australia (RTO 2534) is Australia's leading safety, survival and emergency response training provider, utilising simulation and immersive environments to develop skills and behaviours that address safety-critical industry needs. Since 1994, ERGT has been servicing the oil and gas, resources, aviation, Government services and Defence through its six ERGT training centres and two managed Defence facilities located across Australia. ERGT is a quality assured company delivering 85 nationally recognised courses to 10,000 - 12,000 trainees annually.

#### Helicopter Underwater Escape Training (HUET)



#### Service Information

ERGT deliver military Helicopter Underwater Escape Training (HUET) through managed ADF facilities and ERGT facilities in key Australian locations.

This provides realistic, high fidelity, state of the art training with the same equipment that they will be exposed to in their normal flight operations. The training consists of HUET without Emergency Breathing Systems (EBS) or HUET with EBS, using specific and hybrid aircraft configurations to expose trainees to various exits and seating positions. This training instils the ability to react to and survive a potential aircraft ditching at sea.

Availability Designed and manufactured to order.

### FLAIM Systems



Training & Education

#### **Company Brief**

Flaim Systems develops and provides virtual immersive learning solutions and technology for training in hazardous and emergency situations.

#### **FLAIM Trainer**



#### **Product Information**

FLAIM Trainer<sup>™</sup> is a fully immersive virtual reality fire fighter training simulator with realistic environment scenarios, patented force feedback system, breathing apparatus, real branches and nozzles, and heated personal protective clothing. The system delivers a "feel real" training experience. The system is a safe, low cost, fully mobile solution that simulates a full range of fire events and conditions for training fire fighters. Spares and support Yes equipment available? No approval required?

Availability <3 months

### **Geospatial Intelligence**



Autonomous | Humanitarian | ICT & Cyber | Intelligence, Surveillance & Reconnaissance | Optical Research & Development | Space Capabilities | Through-life Support | Training & Education

#### **Company Brief**

Geospatial Intelligence is an Australian owned, privately held company based in Canberra. The company has been successfully delivering high quality geospatial solutions to the public and private sectors, with an emphasis on Defence and security, since 2002.

#### Comprehensive Geospatial and Imagery Analysis Training



#### Service Information

Geospatial Intelligence offers comprehensive geospatial and imagery analysis training. Training in the use and analysis of imagery for IMINT (Imagery Intelligence) and GEOINT (Geospatial Intelligence) from satellite, fixed wing and rotary aircraft with electro optical (EO) including infrared and radar (Synthetic Aperture Radar) sensors.

Training consists of theoretical courses including lectures, case study analysis, and practical work.

Module-based training offers the client flexibility to 'mix and match' training modules to suit their requirements.

Modules include:

- Remote sensing
- Imagery analysis
- Motion imagery
- Managing a geospatial capability
- Collection management
- Information management
- ISR concepts and management.



## Molico

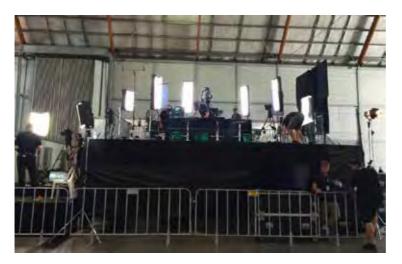


Communications | Design | ICT & Cyber | Logistics | Research & Development | Training & Education | HMI

#### **Company Brief**

With a heritage dating back to 1996, Molico Pty Ltd has been an active partner in the professional services business for more than 20 years. Since its inception, Molico has been proud to continually and successfully assist Government and industry partners deliver a range of projects, allowing Australian know-how and innovation to be highlighted nationally and exported around the world.

#### Professional Services across Procurement, Program Management, ILS Life Cycle and Training



#### Service Information

Specialist Professional Service areas include:

- program management
- program strategy development
- full program/project management
- ILS throughout the full capability life cycle
- technical study development & presentation
- capability requirement analysis
- operational intelligence capability analysis and development
- workforce planning
- workforce modelling
- performance needs analysis
- training implementation plans
- training design and delivery

### **Nexus Training Solutions**



Training & Education

#### **Company Brief**

Nexus Training Solutions (NTS) are an Australian, veteran owned company that provides training and learning management solutions to military, government and corporate clients around the globe. They work closely with clients to create unique training outcomes based around experience and understanding of operational and learning requirements.

The NTS team is made up of former defence, emergency service and medical sector personnel whose mission is to revolutionise the way in which organisations approach training and advisory services, and to train future generations to be better than the one that came before.

#### Training Creation, Integration & Support



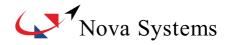
#### Service Information

NTS works closely with clients, partners and industry primes to create training solutions ranging from small-team equipment and tactics integration through to large scale, enduring, learning and development programs which include the creation, administration and delivery of multiple training courses using a range of delivery methods.

All NTS training events are tailored to the needs of the customer and created using our ISO 9001:2015 Quality Management accredited ADDDE process:

- Analyse: identify needs, requirements, gaps and shortfalls. Determine learning objectives
- Design: create the training event to meet the objectives
- Develop: create training aids to support the needs of the learner utilising a range of methods including theory, practical, simulation and augmented reality
- Deliver: face-to-face, online and blended delivery options are available
- Evaluate: ensure that training objectives have been met and that content is consistently refreshed to remain relevant.

### Nova Systems



Autonomous Systems | Communications | Design | Electronic Warfare | Engineering | ICT & Cyber | Intelligence, Surveillance & Reconnaissance | Logistics | Research & Development | Space Capabilities | Test Equipment | Training & Education | Weapons & Ammunition | UAV and Counter UAV

#### **Company Brief**

Nova Systems is the largest 100% Australian owned and controlled global engineering professional service provider, enabling technology to deliver independent, holistic solutions in support of complex and critical capabilities in Defence and aerospace, Government and critical infrastructure industries.

Nova Systems' foundation capabilities - test and evaluation, certification and systems assurance, systems engineering and capability requirements definition; underpinned by proprietary tools and approaches, allows us to offer end-to-end Capability Acquisition and Capability Assurance services for Air, Sea, Land, Space and Joint projects and programs, with offices across Australia, New Zealand, South-East Asia, UK and Europe.

#### Test and Evaluation and Complex Systems Engineering Services



#### Service Information

Nova Systems has 20 years' experience delivering professional services in complex technology domains. Services are focused on Capability Acquisition and Capability Assurance and include:

- needs, requirements, and operational concept definition
- test and evaluation throughout the capability lifecycle
- systems engineering
- certification and systems assurance
- project management
- operational and system safety
- logistics and asset management
- information, cyber, and geospatial and situational awareness

Nova Systems also has a world-class training capability, providing unique learning opportunities, employs over 850 professionals across the globe, and is committed to solving the problems that really matter

### **Omni Executive**



Communications | Design | Engineering | ICT & Cyber | Intelligence, Surveillance & Reconnaissance | Logistics Manufacturing | Research & Development | Through-Life Support | Training & Education | UAV and Counter UAV

#### **Company Brief**

Omni Executive is a 100% Australian, Veteran-owned enterprise which delivers end-to-end solutions across aerospace, security and vetting. Omni's Consulting Division provides subject matter expertise in engineering, logistics, ICT and project management.

Omni's breadth of expertise (230+ personnel) enables quality support to its clients; from designing and managing large-scale, multi-functional projects, to delivering tailored solutions for specific, one-dimensional challenges. Omni has offices, hangars and a maintenance company in key locations across Australia.

#### Integrated C4ISREW Mission Solution



#### Service Information

Omni Executive collaborates with clients and industry partners to deliver Integrated C4ISREW Mission Solutions. Omni offers expertise in complex design, development, integration, test and evaluation, verification and validation, and certification processes. Omni has successfully delivered a range of new and enhanced capabilities, now utilised across many organisations.

Omni's team of highly experienced electrical, mechanical and systems engineers, drawn from a wide range of military and commercial backgrounds, produce quality engineering and systems integration solutions. Omni's approach is guided by industry best practice and a commitment to provide agile, cost-effective support to clients.



### **Pacific Aerospace Consulting**



Autonomous Systems | Communications | Electronic Warfare | Engineering | Field Equipment | ICT & Cyber Intelligence, Surveillance & Reconnaissance | Test Equipment | Through-Life Support | Training & Education Mission Systems | Training Systems, Simulation & LVC

#### **Company Brief**

Pacific Aerospace Consulting (PAC) is an Australian owned, independent services company constituted to provide worldwide support capabilities for our Australian and International clients.

PAC's core capabilities span across Mission Systems, Tactical Information Exchange, Simulation, Aviation Software Engineering and Certification, Air/Land Integration, Electronic Warfare Systems, and operationally focused information assurance and accreditation.

Established in 2004, PAC's team are committed to providing exceptionally qualified individuals ready to go above and beyond the routine to assure operational effectiveness. PAC is ISO 9001:2015 certified and a Defence Recognised Supplier. PAC also has extensive expertise with export/import security regulations in the US and International markets.

#### **Innovative Independent Professional Solutions**



#### Service Information

PAC's capabilities and niche expertise includes:

- Aviation Mission Planning Systems Systems engineering, technical and operational certification and accreditation, and expert consultation in support of the acquisition, sustainment and operation of complex military aviation and weaponeering planning products.
   Military mission planning and Electronic Flight Bag (EFB) System expertise.
- Tactical Information Exchange Network design, system integration, accreditation/information assurance and product documentation for high-end, secure data communication systems.
- Certification, Airworthiness and Integration Software engineering in support of on-board aircraft flight systems. Systems engineering from requirements definition through functional and performance specification, design acceptance, and verification by test and evaluation.
- Flight Simulation Introductory and advanced training in FSTD Qualification Courses. Development Test and Evaluation support. Qualification Test Guide Development and device Qualification activities.
- Electronic Warfare Systems Mission Systems and the associated accreditation and Information security requirements. Mission data management, during and post mission.

### **Pivot Maritime International**



Artificial Intelligence | Autonomous Systems | Communications | Design | Engineering | Manufacturing Research & Development | Test Equipment | Training & Education | Simulation Technology

#### **Company Brief**

Pivot Maritime International manufactures shiphandling and navigation simulation systems, specialising in portable simulators designed for use on board ships or on land for mission rehearsals, vessel and port design, vessel and crew performance assessments, and shiphandling and navigation training.

Pivot also provides specialist maritime training and consultancy services, using its simulation expertise and technology to meet client requirements. Pivot simulators comply with international regulatory requirements for seafarer training and assessment.

Pivot has a strong record of providing innovative and cost-effective products and services to international maritime and defence industries including the Australian Defence Force.

#### **Container Simulator**



Spares and support Yes equipment available? No approval required?

#### **Product Information**

Integrated full mission navigation and shiphandling bridge simulator in a fully insulated 20 or 40 foot shipping container for ultimate security and transportability

- Real ship controls and navigation equipment, including Integrated Navigation System/Integrated Bridge System (INS/IBS) consoles
- 6 degrees of freedom (DOF) full motion, either with helm seating or with up to 8 navigators standing on bridge floor
- Olfactory (smell) effects integrated into visual, vibration floor and console instrumentation
- Integrated multiple containers for larger bridge systems with bridge wings and 360° visuals with dual consoles/work stations
- Large database of vessel/area models based on actual vessels, ports and sea areas
- Ship/port/sea area modelling can be customised to reflect a vessel's actual operating environment
- Drone technology used to quickly develop high quality 4k/8k resolution 3D new area models
- Easy to transport, for use on land or at sea to help personnel remain in peak performance.



### **Real Response**



Artificial Intelligence | Medical | Research & Development

#### **Company Brief**

Real Response mission is to prepare people for the realities of critical situations. This is done through simulation based training, live and virtual. Real Response is a Registered Training Organisation (RTO), and research and developer. Real Response has a Serious Games team who develop and innovate Extended Reality (XR) and AI projects for private and public industry.

#### Virtual Reality Design and Development



#### Service Information

Virtual reality training is immersive, enabling learners to enter into realistic scenarios in a safe environment. Real Response Serious Games design and development team work combined with operational soldiers, first responders and simulation educators to create world-leading VR, AR and MR products for defence, law-enforcement, emergency services and industry.

### SiNAB



Engineering | Intelligence, Surveillance & Reconnaissance | Manufacturing | Training & Education

#### **Company Brief**

SiNAB Pty Ltd is a wholly Australian owned and operated. SiNAB meets contemporary real-world Defence and aerospace challenges by turning contemporary and emerging technologies into deployable products. SiNAB has the vision, the people, the resources, and the network of talented partners to span the full product lifecycle.

SiNAB's team consists of individuals with years of engineering and management experience complemented by extensive knowledge of technologies relevant to the Defence industry. SiNAB's project team has a proven track-record of delivering high visibility, critical defence projects.

#### The Phoenix JTAC Training Solution (PJTS)



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

#### **Product Information**

Joint Terminal Attack Controllers (JTAC) direct combat aircraft engaged in close air support and other air operations. An international Memorandum of Agreement (MoA) specifies the minimum standards for JTAC training.

The Phoenix JTAC Training Solution (PJTS) enables training aircraft (e.g T-6B/C) to emulate the target locating and weapon aiming/employment systems of aircraft such as the F/A-18A/B without requiring aircraft modifications.

The PJTS includes:

- Phoenix-POD: EO/IR/Laser Sensor, mission computer and air to ground communications
- Phoenix-Cockpit: HMD based weapon aiming system and tablet HMI for sensor operations
- Phoenix-Stores: ordinance carriage/release system
- Phoenix-Ground: enables operation from the ground (UAS mode)



## **Universal Motion Simulation**



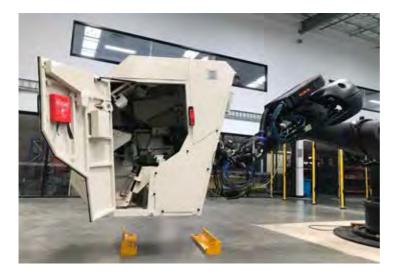
Design | Engineering | Manufacturing | Research & Development | Through-Life Support Training & Education | Training & Simulation

#### **Company Brief**

Universal Motion Simulation (UMS) is an innovative system integrator specialising in the development of vehicle motion simulators that are used where mission criticality requires a high degree of operator dexterity, and training for such operation is unsafe and uneconomical.

UMS is contracted to supply driver training simulators, and through-life-support, to the Australian Army for Project Land 400 Phase 2, Boxer Combat Reconnaissance Vehicle. UMS is recommended for Project's Land 400 Phase 3 (Infantry Fighting Vehicle), Land 907 (Main Battle Tank), Land 8160 (Armoured Engineering Vehicles) and Land 8116 (Self Propelled Howitzer).

#### **Reconfigurable Driver Simulator (RDS)**



Spares and support equipment available? Yes Australian Export Control approval required? Yes Australian Export Control approval required?

#### **Product Information**

UMS' core product is the Reconfigurable Driver Simulator (RDS), representing the next generation in vehicle training simulators. The RDS leverages proprietary motion cueing algorithms and industrial components to provide a level of fidelity that closely represents the behaviour at the edge of vehicle performance. An immersive environment is provided with a replica cabin and haptic controls, supported by detailed dynamics and terrain models, that more closely replicate the actual vehicle operating experience. The RDS has been designed to allow quick vehicle changeover, is supported by a robust and flexible architecture, and developed to minimise the effort of introducing new vehicles.

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# Section Four

### 8. Maritime

Ship Building Maritime Services

Allied Data Systems Australian Pump Industries Custom Works Fiomarine Industries IPACS Australia Liferaft Systems Australia Norship NT Port and Marine PFG Group Serco Australia Tropical Reef Shipyard Versalux Lighting Systems The Whiskey Project



### Allied Data Systems



Autonomous Systems | Design | Engineering | Manufacturing | Medical | Research & Development | Test Equipment

#### **Company Brief**

Allied Data Systems develops embedded computing systems for military, mining and industrial customers. Products include rugged Network Attached Storage, Doppler Velocity Logs, Underwater Telephones, MIL-STD-1553 data bus equipment, synchro and resolver conversion systems.

#### Model 3045 Doppler Velocity Log



Spares and support equipment available?	Yes	
Australian Export Control approval required?	Yes	

#### **Product Information**

The Model 3045 Doppler Velocity Log is the latest in the series of Doppler logs for measuring speed in both surface and underwater vehicles including ships, submarines and autonomous vehicles. The Model 3045 uses the proven phased array technology from earlier models that provides the highest accuracy for any Doppler system.

The Model 3045 is militarised and complies with MIL-STD-461 and MIL-STD-810. The Model 3045 and remote terminals provide large 12.1 inch graphical display of ships speed, bottom depth and heading along with data recording capabilities that allow it to be used as a data logger. Additionally, the Model 3045 is able to provide current profiling for hydrographic surveying requirements.



### Australian Pump Industries



Ship Building | Through-Life Support

#### **Company Brief**

Australian Pump Industries is a wholly Australian owned company operating from a 2 1/2 acre factory facility in Sydney's Northwest business region. We are both a commercial pump manufacturer and a major support for Defence, with particular emphasis on navy pumps, valves and other key mission critical equipment including power converters. The Sea Skipper is a wholly Australian initiative designed to provide lightweight portable fire and salvage capabilities on board Royal Australian Navy vessels.

#### Aussie Sea Skipper



Spares and support Yes equipment available?

Australian Export Control No approval required?

#### **Product Information**

Lightweight portable diesel engine-drive sea water pumps, suitable for firefighting and salvage at sea. Our products are unique and are an extension of the Aussie Seamaster range currently being used by Armidale, Huonclass Minehunter and ANZAC class navy vessels.

### **Custom Works**



Manufacturing

#### **Company Brief**

Custom Works is an aluminium design and fabrication company servicing the marine and transportation industries. Custom Works' trained professionals are the proud designers and builders of some of Australia's premier aluminium boats. These boats have been the number one choice of various maritime sectors including Water Police, Sea Ranger groups, SES, and for education and training. Custom Works is familiar with the demands associated with designing and producing aluminium vessels suited to the harsh Australian land, weather and sea conditions. Custom Works focusses on one outcome above all else – quality, which is evident in the finished product.

#### Taipan 560 Landing Craft (LC)



#### **Product Information**

The Taipan 560 LC has been developed to provide a universal vessel to be used for Emergency Response. The design provides excellent stability with the capability to perform in light coastal sea states. The vessel is compliant to AMSA NSCV Class 2E or 2D.

- LOA 5.6m
- Measured Length 5.6m
- Moulded Beam 2.425m
- Draft 0.3m
- Max Displacement 2t
- Vessel Speed 20Kn
- Pax/Crew 6+2

Spares and support equipment available?	Yes
Australian Export Control approval required?	No

### **Fiomarine Industries**

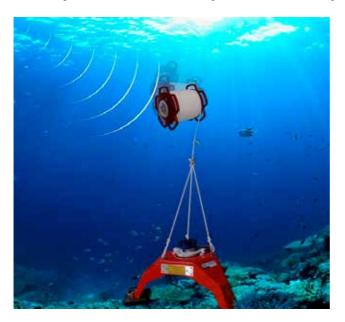


Communications | Design | Field Equipment | Manufacturing | Research & Development Through-Life Support

#### **Company Brief**

Fiomarine is a wholly Australian owned manufacturing company based in Tasmania, supplying to Defence for 20 years, including the Royal Australian Navy (RAN) and US Navy. Fiomarine has worked with RAN and Defence Science and Technology Group on various special projects modifying its technology to suit the application.

#### Fiobuoy Marine Marker Buoy and Retrieval System



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

#### **Product Information**

The Fiobuoy® is a robust submersible marine marker buoy and retrieval system, specifically designed for military and research applications with applications in fishing industries. It is security coded, computer programmable, deployable to depths up to 200m, and is designed for underwater deployments from 1 minute and exceeding 6 months.

Fiobuoy is triggered by a pre-programmed time and date setting, or via Fiomarine's 'Acoustic Command' signal. At this time, it releases itself from its underwater mooring and floats to the surface to fulfil its marking function. The Fiobouy has a lifting capacity up to 10 tonne.

### **IPACS** Australia



Artificial Intelligence | Autonomous Systems | Design | Engineering | ICT & Cyber Intelligence, Surveillance & Reconnaissance | Research & Development | Ship Building Test Equipment | Through-Life Support | Vehicles & Accessories

#### **Company Brief**

IPACS designs, develops and sells asset management sensors, technology and software and is at the forefront in the collection, monitoring and reporting of real-time ship performance. IPACS Marine Asset Management technology helps the Navy save millions of dollars by avoiding equipment failure and extending the life of machines. For the Navy, unplanned machine failure costs many days of lost operability. IPACS sensors and data acquisition units have been certified to confirm to the EN50155 railway electronic standards. IPACS technology has been accredited by Lolyd's Register and Det Norske Veritas for installation on-board many marine platforms in Europe.

#### **IPACS** Marine Asset Management Technology



Spares and support	Yes
equipment available?	

Australian Export Control No approval required?

#### **Product Information**

The IPACS technology collects real time data from sensors installed on machines. These sensors generate information such as vibration, speed and temperature. IPACS technology securely analyses and transmits data from anywhere in the world.

At the Defence Maintenance facility, Level 3 ISO certified vibration analysts use this data to determine the mechanical health of the asset in real-time. IPACS then provides reports in clear, easy to- understood formats, enabling Defence and contractors to make informed and timely decisions.



### Liferaft Systems Australia



Manufacturing | Ship Building | Through-Life Support

#### **Company Brief**

Liferaft Systems Australia (LSA) is a dynamic company formed specifically for the design and manufacture of high quality Marine Evacuation Systems (MES) and large capacity life rafts.

LSA has developed a product that is synonymous with quality and reliability, which is of paramount importance in the marine safety industry. The LSA range of MES provide rapid and safe evacuation for all types and sizes of personnel carrying ships.

#### Marine Evacuation Systems



Spares and support<br/>equipment available?YesAustralian Export Control<br/>approval required?No

#### **Product Information**

The unique LSA MES is installed on a wide range of military craft throughout the world. These include littoral combat ships, landing platform and dock ships, expeditionary fast transport (EPF) vessels, offshore patrol vessels, primary casualty receiving ships and aircraft carriers. The LSA MES has also shown to be adaptable to front line vessels including frigates, and the systems components can be installed with a reduced radar signature configuration.

LSA MES are compact and light-weight and provide for safe and rapid transfer of all personnel, including injured and stretcher cases, directly from the vessel into large capacity life rafts via an inclined evacuation slide.

The MES can be deployed in less than 60 seconds and are capable of evacuating 600 persons per MES station in under 30 minutes.

The LSA system does not require any winches or complicated hydraulics, thus providing for easy integration in to ship designs, and simple installation on-board.

## Norship



Engineering | Logistics | Through-Life Support | National and International In-Service Support of Patrol Vessels

#### **Company Brief**

With a 70 year heritage in the maritime industry, Norship has built a reputation for excellence in Patrol Boat Sustainment and in particular the provision of Through-Life Maintenance Support Services. Norship is Def Aust 5000 certified, holds an above benchmark CASG KDS (Defence) rating and utilises a highly skilled trade and engineering workforce based in Australia. With significant shipyard and marine engineering workshop facilities, Norship supports Defence and prime contractors in achieving their platform reliability and availability objectives.

#### Maritime "through life support"



#### Service Information

Norship provides the full spectrum of Shipyard Services, from concept, design, prototype, construction, and maintenance support through to docking, emergent repairs, complete refits, and disposals.

The Norship team consists of experienced architects and engineers providing design, drafting and certification services. The 2nd and 3rd generation ship builders and tradesmen ensure work is undertaken to a quality standard and efficiency. Norship has evolved servicing Australian Defence, paramilitary, law enforcement agencies and the mining industry across Northern Australia, PNG and the Pacific Island Nations.



### NT Port and Marine



Fuel Services | Logistics

#### **Company Brief**

NT Port and Marine is a marine services company based in the Northern Territory, Australia. Located at South Barlow Point, 63 nautical miles north of Darwin, Port Melville offers a premier facility.

Port Melville is a deep water, multi-user facility supporting naval forces, the oil and gas and general marine transport industries. Port Melville offers a 30 million litre capacity marine bunkering facility supported by a 220m floating wharf with 14 metres alongside water depth plus all required supporting equipment, services and personnel.

#### **Fuel Supply**



#### Service Information

Port Melville operates tank farm which is able to bunker vessels up to 50,000 DWT direct from a 220 metre floating wharf via pipe. A comprehensive selection of bunkering hoses and couplings is available able to support virtually any military or commercial vessel. The tank farm is able to offload fuel at a rate of 13,000 litres/minute and bunker at a rate of 3000 litres/minute.

The tank farm is fully supported by an integrated control room, variable speed dispensing pumps, metering, fire protection and oily water reclamation system. Port Melville operations are overseen by a qualified team of personnel with dedicated pilotage and Harbour Master. The Port Melville fuel facility is fully bonded/Australian Taxation Office compliant and is able to offer fuel both excise and GST exempt.

### PFG Group



Manufacturing | Vehicles & Accessories

#### **Company Brief**

PFG Group is an Australian manufacturing business that specialises in manufacture and distribution of marine, maritime and industrial equipment for domestic and global markets. PFG has manufactured boats for over 20 years and has won multiple Australian boatbuilding awards.

#### The Sentinel



Spares and support equipment available? Yes a value of the second second

#### **Product Information**

PFG designs and manufactures The Sentinel watercraft as search and rescue and high performance workboats able to safely transport people and equipment. The Sentinel is an award winning range of tactical watercraft from 3 to 12 metres in length which are specifically designed for operations in harsh environments and any type of water conditions.

Vessels are manufactured from a high density polyethylene engineered polymer which has advantages over traditional alloy and glass fibre construction materials, including high impact and ballistics resistance, 4-5 times longer service life, zero corrosion, greater stability, buoyancy, improved safety with a softer, quieter ride.

A softer ride is critical to minimising injury and fatigue-related problems for the vessel's occupants, and is especially important in long-range and high speed transits.



### Serco Australia



Design | Humanitarian | Logistics | Medical | Ship Building | Space Capabilities | Through-Life Support

#### **Company Brief**

Serco provides critical support services and platform solutions to Defence and Government agencies, operating in-country and embedded within deployed forces around the world. Serco has deep expertise operating across all military domains including sea, air, space and land.

As part of a global enterprise, Serco maximises the utility of Defence resources by delivering lower-cost, higher quality support services and dependable on-time delivery to military commands around the world. The highly qualified, specialist teams, often recruited from military backgrounds, thoroughly understand the unique demands of Defence, and are able to operate hand-in-glove with service personnel wherever they are needed.

#### **Shipbuilding Integration Services**



Image is courtesy of Damen Shipyards Gorinchem

#### Service Information

As the prime contractor for the design, build, operation and maintenance (DBOM) of the Australian Antarctic Division's icebreaker "Nuyina", Serco Australia has demonstrated the continued effectiveness of Australian managerial and engineering talent in the delivery of a complex shipbuilding projects. "Nuyina" follows on from Serco Australia's successful design, build and delivery of the MVs "Stoker", "Besant" and "Sycamore" into Commonwealth service, with the technically complex nature of the CSIRO's RV "Investigator" exemplifying the core design talents behind the Serco team. With our proven team of Australian partners and suppliers, Serco Australia is ready to face the challenges of tomorrow.

Availability > 12 months.

# **Tropical Reef Shipyard**



Engineering | Ship Building | Through-Life Support

#### **Company Brief**

Tropical Reef Shipyard (TRS), one of Australia's leading shipyards providing maintenance, repair, refit and lifecycle sustainment by highly skilled and experienced tradesmen. TRS is ideally located to service our clients that include Defence, government, military and paramilitary clients across Northern Australia and the West Pacific. TRS provides a long-term preferred docking yard for RAN Cairns homeported Hydrographic fleet. TRS has serviced international military assets including US Army vessels, Pacific Island PBs have been maintained, and recently Cape Class PBs. Staff are practiced in deploying to remote sites and Fly in Fly out activities.

#### Haul-out of 105m and up to 3000 ton vessel



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

#### Service Information

RS Slipway is capable to lift <3000 tonnes and <105 m OA. Supported by a deep-water channel, TRS has 220 lm of serviced wet berths. This is the highest capacity shipyard in Northern Australia. Employing Naval Architects and Dock Masters, TRS ensures lifts are completed professionally. TRS tradesmen are qualified in all aspects of ship repair and approved by classification societies including Lloyd's/ABS. The TRS yard is equipped for all work, including heavy equipment, hydro-blasting, scaffolding, machine shop, fabrication of carbon steel, SS, Cuni and aluminium, and replacement plate. TRS yard is secured and DEF (AUST) 5000 qualified.



# Versalux Lighting Systems



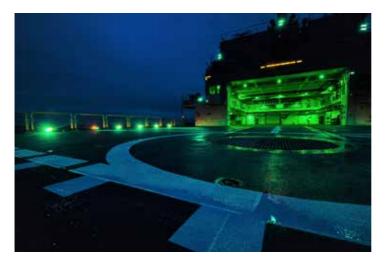
Design | Engineering | Manufacturing | Through-Life Support | Task Related Lighting Systems

#### **Company Brief**

Versalux, established 1979, is a service-oriented organisation that engineers, develops, manufactures and delivers quality lighting systems with innovative technology for demanding markets. Delivering lighting solutions to all major Navy platforms (OPV, LHD, AWD, ANZAC, AOR, HSV, Choules), Marine, Mining, Oil and Gas (on- and offshore), and Hospitals.

The portfolio includes, exterior, interior, underwater, explosion proof, medical, NVG-Lighting, Helideck (HVLAS) systems, BIOGEN-lighting Systems, and HCL-Systems.

#### Intelligent Lighting Systems



Spares and support equipment available?	Yes
Australian Export Control approval required?	No

#### **Product Information**

Versalux designs and supplies bespoke lighting systems for all application and tasks related to Navy vessels. General lighting for indoor and harsh outdoor environment, navigation and signalling light, night adaptive light for night missions or night vision goggle (NVG) for dark vessel operations.

The system is designed to support the latest health and safety standards, Human Focused Lighting and supports alertness and wellbeing of the crew. Integration into IPMS or ships' managements system is also available.

## The Whiskey Project



Autonomous Systems | Design | Engineering | Manufacturing | Research & Development | Ship Building | Through-Life Support

#### **Company Brief**

The Whiskey Project Group is an Australian veteran-owned business creating operator-focused watercraft that provide optimal performance and protection for those who risk their lives in the strategic maritime environment. The Whiskey Project Group companies include long-standing trusted suppliers to the ADF and Australian Government - the naval design firm NAIAD, aluminium boat manufacturer Yamba Welding & Engineering, and the next generation tactical watercraft of The Whiskey Project. The Whiskey Project Group's family of watercraft provide the advantage in contemporary maritime missions and are the product of collaboration between experienced military operators, world class maritime engineers, architects and innovators.

#### Whiskey Alpha



Spares and support Yes equipment available?

Australian Export Control Yes approval required?

#### **Product Information**

Whiskey Alpha is a safer, fit-for-purpose tactical vessel, improving the operating environment, performance and advantage of maritime personnel. Decades of Naval and Special Operations experience underpin this operator-focused design, which integrates world-leading innovations and technologies with unique capability-optimising design features.

Whiskey watercraft are totally modular and can be easily reconfigured to meet individual situational requirements. Versatile mission-centric design features, safety advancements, and new technologies optimise human performance, operational capability, efficiency and access. Whiskey Alpha and the optionally manned Whiskey Bravo have redefined the size:effect ratio with significantly increased functional deckspace and payload capacity.



# Section Four

### 9. Capability Needs

Weapons Ammunition

Black Sky Aerospace GC Precision Development Moog Australia Wedgetail Industries



### **Black Sky Aerospace**



Design | Engineering | Manufacturing | Research & Development | Space Capabilities | Test Equipment | Weapons & Ammunition

#### **Company Brief**

Black Sky Aerospace (BSA) is Australia's leading energetics manufacturer and launch service provider, operating a completely sovereign engineering design and manufacturing facility that is dedicated to the production of propellant, solid rocket motors, launch vehicles, and common tactical boosters.

Through BSA's extensive licensing in the manufacture, test, use, sale, storage, import and export of explosives, the company is uniquely equipped to serve the interests of the Australian Defence Force through the rapid and flexible design, manufacture, testing, qualification, and launch of high-speed, long-range, cost-effective munitions, at scale.

BSA is the 2020 Australian Defence Aerospace Business of the Year.

#### Solid Rocket Motor Propellant



Spares and support Yes equipment available? Australian Export Control Yes approval required?

#### **Product Information**

Black Sky Aerospace designs and manufactures a range of high-performance propellants and solid rocket motors for use in common tactical boosters and munitions. BSA products are 100% sovereign manufactured, completely ITAR free, and can be rapidly manufactured at scale. Through BSA's proprietary formulas and 20-year launch heritage, the products are highly efficient, reliable, and cost-effective. BSA propellants and motors come in a range of sizes and formulas to suit any mission performance requirements. Customisation is available upon request.



### **GC Precision Developments**



Design | Test Equipment | Manufacturing | Research & Development | Through-Life Support | Training & Education Weapons & Ammunition

#### **Company Brief**

GC Precision Developments (GCPD) designs and manufactures innovative, premium grade precision rifles for military and police use. 21st century designs and manufacturing technology, including GCPD's proprietary chassis system, result in lightweight and extremely accurate rifles that provide "Over Match without Over Burden".

GCPD also offers suppressor technology with a service life far exceeding other products. GCPD will design, prototype and manufacture tailored solutions to your requirements and is willing to facilitate in-country manufacture under licence. We can also provide a full capability package including training from basic weapon familiarisation and armourer training through to specialised long range marksmanship, advanced sniper and reconnaissance skills.

#### AMAP (Anti-Materiel Anti-Personnel) Sniper Rifle System



Spares and support equipment available?	Yes	
Australian Export Control approval required?	Yes	

#### **Product Information**

GCPD offers the AMAP (Anti-Materiel Anti-Personnel) rifle system – using 21st century advanced design, spaceage materials and superior ergonomics to produce a truly exceptional sniper rifle system. Chambered in the proven, ballistically effective .375/.408 Cheytac calibre, the AMAP delivers sub-0.25 MOA capability designed to deliver both anti-materiel and anti-personnel capabilities.

The AMAP offers extreme range lethality, light weight and superior adaptability for mission. Most maintenance tasks can be performed by the operator in the field – including switching barrel or calibre, due to our unique barrel retention system that allows switches to be made quickly with minimal impact on zero.

### Moog Australia



Autonomous Systems | Design | Engineering | Intelligence, Surveillance & Reconnaissance | Manufacturing Research & Development | Space Capabilities | Test Equipment | Through-Life Support | Vehicles & Accessories Weapons & Ammunition | UAV and Counter UAV

#### **Company Brief**

Moog Australia established in 1979, is a wholly owned subsidiary of Moog Inc. a leading global supplier, delivering motion control and electronic solutions to the military. As a Defence Recognised Supplier since 2003, Moog Australia has been actively supporting the efforts of Australian and New Zealand's operational and training forces.

Moog provides mission critical systems and components across land, air and sea platforms including the F/A-18 Hornet and Super Hornet, Black Hawk, AP-3C Orion, ASLAV, M113AS4, M1A1, LHD, AWD, Collins Class Submarine and future platforms including the F-35 Lighting II Joint Strike Fighter and the Boxer CRV.

#### **Turreted Weapon System Solutions**



#### **Product Information**

Moog Australia provides full life cycle design, build, assembly and test for remote weapon and gun turret weapon systems for Australia and the Asia-Pacific nations for land, air and sea platforms.

Moog Australia provides manned and unmanned turret solutions to vehicles and ships from concept level to after-market support. Moog Australia delivers solutions that are cost effective, local and free of US and European export regulations that can be supported both in Australia and throughout the Asia-Pacific region.



## Wedgetail Industries International



Weapons & Ammunition

#### **Company Brief**

Wedgetail Industries is an Australian based manufacturer of suppressors, small arms and accessories. Wedgetail Industries builds products for the real world, combining market data and customer feedback to define a set of performance based targets.

#### **Ninox Suppressors**



Spares and support Yes equipment available?

Australian Export Control Yes approval required?

#### **Product Information**

Wedgetail Industries' Ninox suppressors use advanced technology and innovation to provide best in class signature reduction. All suppressors are built for professional use and ensure maximum durability, lightweight and minimal POI shift. They are suitable for a wide range of small arms and long range precision applications.

Availability <3 months. Designed and manufactured to order.

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# Section Five

#### **Space Capabilities**

Rocketry Launch sites Support Technologies Research & Development

Amentum Aerospace Black Art Technologies Equatorial Launch Australia Gilmour Space Technologies Inovor Technologies Jarmyn Enterprise Space LatConnect 60 Saber Astronautics Southern Launch



### Amentum Aerospace



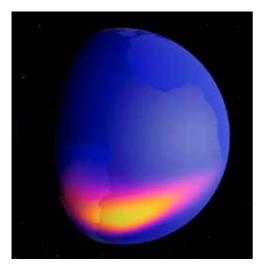
Cyber & ICT | Research & Development | Space Capabilities

#### **Company Brief**

Amentum Aerospace is an Australian owned business that enables access to scientific modelling software through easyto-use Application Programming Interfaces (APIs). Amentum's APIs help innovators across a range of industries, from space operations and research, terrestrial positioning and navigation, through to atmospheric and ocean sciences.

Amentum is a trusted supplier of modelling and simulation services to the Australian Department of Defence, with a focus on ionising radiation and optical phenomena.

#### Amentum web APIs



#### Service Information

Many industries rely on scientific models to predict important physical quantities, yet integration into modern software is challenging. Amentum's web APIs reduce integration times from days to minutes. Examples include:

- gravity API: gravity anomaly data for inertial navigation systems, geoid heights for large scale water-flow projects.
- atmosphere API: thermospheric density and composition models for orbital decay calculations.
- space radiation API: models of trapped radiation, galactic cosmic rays, and solar energetic particles.

Amentum offers bespoke web API development to organisations, helping them unlock the latent value in their legacy scientific software and data streams. Amentum utilises advanced anomaly detection to identify problems within environments, alerting Red Piranha Limited's Global Security Operation Centre of any suspicious activity.

Availability <3 months. Designed and manufactured to order.



# **Black Art Technologies**



Communications | Intelligence, Surveillance & Reconnaissance | Research & Development | Space Capabilities

#### **Company Brief**

Black Art Technologies (BAT) offers design and integration of custom and concealed antennas and radio frequency (RF) systems.

Using CST Design Studio and proven "old school" RF design principals, the team of passionate RF engineers are able to present specialist solutions for any application.

The core research focus is planar antennas and arrays using modern meta material inspired design principals to reduce antenna size or improve overall antenna bandwidth and performance, offering customers a compact, integrated and often concealed antenna solution.

#### Custom antenna design and integration



#### Service Information

Black Art Technologies offers design and integration of custom and concealed antennas and RF systems.

BAT have experts in antenna design and simulation, RF circuit design and system integration. Combined the BAT engineering team can design, integrate and validate a wide range of complex antenna and RF system requirements.

Availability 3–6 months. Designed and manufactured to order.

## **Equatorial Launch Australia**



Research & Development | Space Capabilities

#### **Company Brief**

Equatorial Launch Australia (ELA) is a veteran owned company providing responsive sovereign launch capabilities from northern Australia, approximately 12 degrees south of the Equator. ELA presents rare efficiencies and opportunities with efficient regulatory settings, delta v efficiencies, land and water ranges and the ability to support all orbits, and all reliable technologies in providing enhanced space capabilities, including sub-orbital and orbital access to space. For spacecraft manufacturers, government, and research groups, ELA has an active site and ability to build additional facilities for prioritised use, addressing the global challenge of timely and reliable access to launch.

ELA works closely with the traditional owners of the land through contracting and supporting local indigenous businesses.

#### **Space Launch Services**



#### Service Information

ELA provides a sustainable gateway to space. Services include:

- platforms for scalable multi-user launch and recovery for current and future technologies
  - infrastructure to support vertical sub-orbital and orbital launch of solid, liquid, hybrid and hypersonic vehicles
- access to airport and deep-sea port infrastructure to facilitate horizontal and sea launches and recoveries
- plan to scale storage microgrids to support electromagnetic launches
- Australian and international space industry ecosystem integration
- space training, research, development, test and evaluation
- STEM promotion through educational outreach programs with local communities
- tourism linking ancient indigenous space culture with modern science

Availability <3 months. Designed and manufactured to order.



# **Gilmour Space Technologies**



Engineering | Space Capabilities | Test Equipment | UAV and Counter-UAV

#### **Company Brief**

Gilmour Space is one of Australia's leading sovereign rocket companies, and a world leader in hybrid rocket technologies. From 2022 Gilmour Space will be launching satellites to Low Earth Orbit.

#### Space Launch



#### Service Information

Gilmour Space provides Launch services for small satellites weighing up to 250kgs. "Launch Services" encompasses everything from payload integration with the ERIS launch vehicle, to deployment. With a number of available launch sites, Gilmour Space will be able to launch to geostationary and sun-synchronous orbits to altitudes up to 500kms. Gilmour Space offers dedicated launches, as well as rideshare options.

Availability > 12 months

## **Inovor Technologies**



Artificial Intelligence | Autonomous Systems | Electronic Warfare | Intelligence, Surveillance & Reconnaissance Manufacturing | Space Capabilities

#### **Company Brief**

Inovor Technologies is a small satellite manufacturing company based in Australia, with a team of 40 engineers and scientists developing satellite hardware and software. Inovor provides a complete turn-key solution from mission design to spacecraft design, manufacture, test and integration. Inovor also commissions the spacecraft on orbit and can support operations if required. Inovor customers include the Commonwealth Scientific and Industrial Research Organisation (CSIRO), and the Australian Department of Defence.

#### Apogee Bus



Spares and support equipment available?

Yes

Australian Export Control Yes approval required?

#### **Product Information**

The Apogee bus is a modular satellite architecture that can be adapted to meet a variety of mission needs. It comprises of a suite of in-house developed modular subsystems, including a power system, altitude control system, structure, mission computer, communication system payload interface module and all mission control software. Inovor also offers ground station modems and software to support mission operations. In addition to the Apogee bus, Inovor has two missions of its own: Skyris, in smart Earth imaging; and Hyperion, in Space Domain Awareness.

Availability 6–12 months. Designed and manufactured to order.



# Jarmyn Enterprise Space



Engineering | Manufacturing | Research & Development | Space Capabilities | UAV and Counter UAV

#### **Company Brief**

Jarmyn Enterprise Space offers the research and development of launch vehicles, space technology and additive manufacturing.

#### Hawk Jnr SSTO



Spares and support equipment available?	Yes
Australian Export Control approval required?	Yes

#### **Product Information**

Hawk Jnr is a single stage to orbit launch system, dedicated to carry smaller payloads up to 75kg into Lower Earth Orbit. A single stage delivery of payload to orbit reduces the risk of mission failures and damages.

Availability < 12 months. Designed and manufactured to order.

### LatConnect 60



Intelligence, Surveillance & Reconnaissance | Optical | Space Capabilities

#### **Company Brief**

LatConnect 60 is launching and operating a constellation of high resolution imaging satellites. Its first satellite is planned for manufacture and launch by Q4 2021 with capabilities in providing 1.5m native resolution RGB & NIR imagery (50cm post-processed) across 7 multispectral bands.

Each satellite will have a leading edge On-board Computer (OBC) payload, in addition to an optical imager payload that consists of leading edge FPGA processors and mass memory storage to perform data analytics and also post-processing on-orbit.

# High Resolution 7-band Multispectral Satellite Imagery & Direct Access Services



#### Service Information

LatConnect 60 provides High Resolution 1.5m GSD native Optical Satellite Imagery across seven R,G,B,NIR spectral bands. Post-processed resolution of 50cm to 75cm. the Imagery is collected by an Australian owned and operated satellite constellation, and data is available from Q4 2021 onwards. Pricing is based on a per sq.km basis at market competitive rates.

Direct Access Services are also available for Australian Defence end users for direct tasking, command and control, and will be priced separately depending on service level requirements.

Availability 6-12 months



### Saber Astronautics



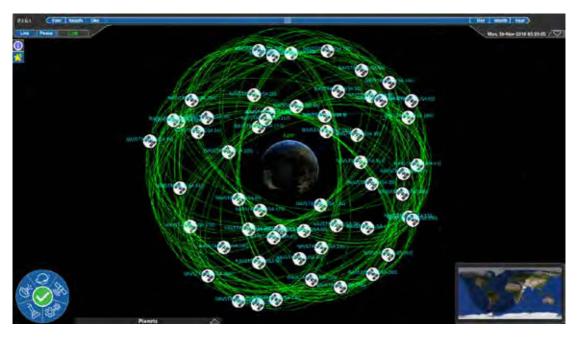
Artificial Intelligence | Autonomous Systems | Design | Electronic Warfare | Engineering | ICT & Cyber | Intelligence, Surveillance & Reconnaissance | Research & Development | Robotics | Space Capabilities | Training & Education

#### **Company Brief**

Saber Astronautics mission is the Democratisation of Space, reducing the barriers for emerging and high growth Australian space industry participants by making spaceflight as easy as driving a car. With a 12-year history as an Australian home-grown business, Saber Astronautics produces next-generation space operations services and software used in government and civil space missions both here in Australia and in the USA.

Capabilities include concurrent design, pre-flight testing, and launch support, as well as live operations during flight. Saber are a trusted supplier for ADF, US DoD, NASA, and the Australian Space Agency.

#### **Responsive Space Operations Centre (RSOC)**



#### **Product Information**

The Responsive Space Operations Centre (RSOC) provides full stack space mission support services for all phases of flight. The RSOC brings together secure services to include SATCOM and SDA data feeds for organisations to fly quickly and help satellites connect directly to operational needs on the ground. RSOCs are located in Sydney and Boulder Colorado, allowing "follow the sun" space operations with full safety of flight and pattern of life.

The Department of Industry, Science, Innovation, and Resources in conjunction with the Australian Space Agency has awarded Saber Astronautics \$6 Million to develop the Australian Mission Control Centre.

Availability < 3 months

### Southern Launch



Design | Engineering | Intelligence, Surveillance & Reconnaissance | Logistics | Space Capabilities

#### **Company Brief**

Southern Launch offers an end to end service encompassing all elements required to safely launch a small rocket lift into space. Launch missions are de-risked through Southern Launches' deep understanding of rocket technologies. The company's core offerings are:

- infrastructure needed to launch small lift rockets into useful high inclination orbits (polar, SSO) via the Walers Way Orbital Launch Complex
- sub-orbital launch text range at Koonibba for testing rockets in benign conditions, which is a key enabler to orbital launch
- rocket propulsion testing
- rocket design and avionics hardware consulting
- flight safety analysis, range operations
- rocket insurance facilitation

#### **Rocket Launch Capabilities**



#### Service Information

Southern Launch is an innovative space company providing the infrastructure and logistics support for orbital and suborbital launches of satellites and space payloads.

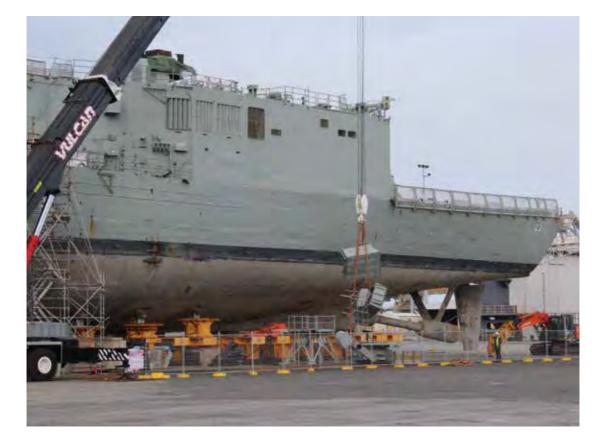
The company offers two multi-user launch sites, both located in South Australia. Both sites are close to established infrastructure, have good year-round weather conditions, and are unhindered by populated areas and aeronautical and maritime traffic lanes. The sites provide customers with greater launch window availability and launch schedule flexibility compared to any other location around the world.

Availability < 3 months. Designed and manufactured to order.



# Section Six

**Disposal Scrapping Services** 



# **Australian Scrapping Services**

The following companies are members of Department of Defence Disposal Scrapping Services Standing Offer Panel. They offer a range of disposal services to the Australian Department of Defence.

# **ASP Ship Management**

ASP is a leading global ship management company with over 100 vessels under management operating through 12 offices in 10 countries. ASP's subsidiary, ASP Defence Support Services provide full fleet operational and management services to defence force vessels. ASP has experience managing all classes of vessels. ASP provides a full cradle to grave service or individual vessel support services, including disposal services.

# Birdon

Birdon, a 100% Australian-owned diversified global group of companies, provides whole of life solutions to the maritime, military, infrastructure, and resource sectors including secure destruction, recycling, and scuttling of private, military and government assets. Birdon's capability ranges from simple scrap metal collections to secure deconstruction and recycling of key defence assets such as Naval Vessels, F111 Aircraft, and Armoured Vehicles.

# Dodd & Dodd Group (CD Dodd Scrap Metal Recylers)

CD Dodd Scrap Metal Recyclers (CDD) is a leading provider of demolition, hazardous materials management, resource recovery and scrap metal recycling. Located in various locations in Western Australia, our highly trained and qualified team are backed with the resources and technologies to deliver global best practice, innovation, and cost-effective solutions for every project regardless of complexity.

# Goal Group

Goal Professional Services have used our extensive contacts to assemble a world leading team of disposal experts to form the Goal Disposals Team. The organisations that we work with furnish us with the capability of offering complimentary and comprehensive services within the Defence, Government and Corporate sectors. In 2020 the team was appointed to the DEFENCE SCRAPPING AND DISPOSAL Panel.

# **Immix Integrated Metal Management**

Immix is proudly privately owned and operated. With a combined 55 years' experience in the metal recycling industry. Our professional and friendly team are able to offer the best solution to your metal recycling needs. Servicing Industry, Mining, Defence, Councils and Agri-Business using world class recycling equipment to collect, process and export Ferrous and Non-Ferrous metals Worldwide







WE MANAGE SHIPS SAFELY

SHIPS GROUP





# Liberty Industrial

Liberty Industrial is a leading provider of deconstruction Services that has established an enviable reputation based on integrity and capability. Liberty Industrial provide complete solutions for complex and hazardous deconstruction projects, offering a comprehensive range of integrated capabilities including demolition, dismantling, asbestos and hazardous materials removal, recycling and resource recovery services.

# Sell and Parker Secure Destruction

Sell and Parker Secure Destruction has developed a complete recycling solution for the destruction and recycling of all Defence Force assets, with removal of all embedded metal material. The destruction includes shredding, melting, shearing, cutting or burying. Established processes for environmental management; ISO 9001 Quality Management Systems Certification; Able to source licensed Hazardous disposal experts with appropriate resources and facilities.

## Thales Australia

Thales Australia has had significant involvement in the Key Defence Asset (KDA) disposal programs. Some examples of KDA disposal projects include Bushmaster Armoured Vehicles, F111 Strike Aircrafts, explosive ordnance, FFG Frigates, Oberon Class Submarines and end-to-end disposal services for explosive ordnance. Thales can be trusted to safely and securely manage risks and complexities when disposing of KDA.

# Veolia Environmental Services (Australia)

Veolia group is a global leader in optimised resource management. The group delivers operational solutions across water, waste and energy that drive bottomline savings and contribute to sustainable development. In Australia we have more than 40 years' experience in water, waste and energy management. We are the only integrated environmental solutions provider working across the Resource, Industrial, Commercial, Defence and Municipal sectors.

# VTG Waste and Recycling

VTG Waste & Recycling is a truly local, Territory business, with a multi-generational presence in the Territory. For decades we have demonstrated our local commitment, employing Territorians and proudly sourcing 92% of our business requirements locally. We are ideally placed to provide high quality, competitively priced Waste & Recycling services to Darwin and the Top End of the Northern Territory.







THALES

Building a future we can all trust



LIBERTY INDUSTRIAL



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# Section Seven

**Company Web Addresses** 



### Australian Primes and Large Businesses

Aspen Medical www.aspenmedical.com

Austal Australia www.austal.com

BAE Systems Australia www.baesystems.com

Boeing Defence Australia www.boeing.com.au

Electro Optic Systems www.eos-aus.com

L3Harris Technologies www.l3harris.com Luerssen Australia www.luerssen.com.au

Northrop Grumman www.northropgrumman.com

SAAB Australia www.saab.com/markets/australia

Supacat www.supacat.com

Thales Australia www.thalesgroup.com/en/countries/asia-pacific/ australia

### Australian Companies

Advanced Manufacturing Alliance – CDU https://advancedmanufacturing.cdu.edu.au/

Advanced Navigation www.advancednavigation.com

Aeromedical Engineering www.aeromedicalengineering.com

AeroPM www.aeropm.net

Aerospace & Mechanical Consulting Engineers www.amce.com.au

Air Affairs Australia www.airaffairs.com.au

Allied Data Systems www.allieddata.com.au

AMC Search www.amcsearch.com.au

Amentum Space www.amentum.space

AML3D www.aml3d.com

ANCA https://machines.anca.com/

archTIS www.archtis.com

Asia Pacific Aircraft Storage www.apas.com.au

Aspire Wellness www.spinesuit.com

AUCloud www.australiacloud.com.au Australian Aerospace Corporation www.ausaerocorp.com

Australian Defence Apparel www.ada.com.au

Australian Patrol Vehicles www.australianpatrolvehicles.com

Australian Performance Vehicles www.apvcorporation.com

Australian Pump Industries www.aussiepumps.com.au

Australian Target Systems www.atspl.com.au

AVI www.avi.com.au

AVT Australia (UAV Vision) www.ascentvision.com.au

Axiom Precision Manufacturing www.axiompm.com.au

B&R Enclosures https://defence.brenclosures.com.au/

BAC Systems www.bacsystems.com.au

Bale Defence Engineering Systems www.baledefence.com

Ballistic & Mechanical Testing www.armourtesting.com

Barrett Communications www.barrettcommunications.com.au

Birdon www.birdon.com.au



Bisalloy Steels www.bisalloy.com.au

Black Art Technologies www.blackarttechnologies.com

Black Carbon www.blackcarbon.com.au

Black Sky Aerospace https://bsaero.space/

Blacktree Technology www.blacktree.com.au

Blueye Eyewear www.blueyetactical.com

**BMP Precision Engineering** www.bmpengineering.com.au

Cablex www.cablex.com.au

Carbonix www.carbonix.com.au

CBG Systems www.cbgsystems.com

CGear Australia www.cgear.com.au

Chiron Global Tech https://chironglobal.tech

Chironix www.chironix.com

CISTECH Solutions www.cistechsolutions.com.au

Clearbox Systems www.clearboxsystems.com.au

Cobham Aviation Services www.cobhamaviationservices.com

Codan Communications www.codancomms.com

Cogito Group www.cogitogroup.net

Collins Aerospace www.collinsaerospace.com

Coolon LED Lighting www.coolon.com.au

Craig International Ballistics www.ballistics.com.au

Custom Works www.customworksnt.com.au

CyberMetrix www.cybermetrix.com.au Daronmont Technologies www.daronmont.com.au

Datapod Australia www.datapod.com.au

Defence Communications Industry www.defence-comms.org

DefendTex Military Products www.defendtex.com

Delta Hydraulics www.delhyd.com.au

#### **Direct Edge Manufacturing**

www.directedge.com.au

DOEN Pacific www.doen.com

DroneShield www.droneshield.com

Eclips https://eclips.engineering/

Eggler Technology www.egglertechnology.com

Elphinstone www.elphinstone.com

EM Solutions www.emsolutions.com.au

Envirofluid www.envirofluid.com

Equatorial Launch Australia www.ela.space

ERGT Australia www.ergt.edu.au

Exact Tech Australia www.xacttech.com.au

Ferra Engineering www.ferra-group.com

Fiomarine Industries www.fiomarine.com

Fivecast www.fivecast.com

FLAIM Systems www.flaimsystems.com

Frontline Manufacturing www.frontlinemanufacturing.com.au

Fugro Australia Marine www.fugro.com

Future Fibre Technologies (Ava Risk Group) www.fftsecurity.com

GaardTech www.gaardtech.com.au

GC Precision Developments www.gcpdarms.com

General Dynamics Mediaware www.mediaware.com.au

Geng www.geng.com

Geospatial Intelligence www.geoint.com.au

Gilmour Space Technologies www.gspacetech.com

Glyde Metal Industries www.glydemetal.com.au

Green Eco Technologies www.greenecotec.com

Griffin Marine Services www.griffinmarineservices.com.au

Heuch www.heuch.com.au

HIFraser www.hifraser.com

Hofmann Engineering www.hofmannengineering.com

Holmwood Highgate www.holmwoodhighgate.com.au

Hylec Controls www.hyleccontrols.com.au

Ideation Product Solutions www.ipsol.com.au

Innovaero www.innov.aero

Inovor Technologies www.inovor.com

Integrated Design & Engineering Solutions www.ides.com.au

IntelliDesign www.intellidesign.com.au

IPACS Australia www.ipacs.net.au

Janusnet www.janusnet.com

Jenkins Engineering Defence Systems www.jeds.com.au

Jet Aviation Australia www.jetaviation.com

Kellogg Brown & Root (KBR) www.kbr.com KIAH Health www.kiahhealth.com.au

Kord Defence www.kord.business

LatConnect 60 www.latconnect60.com/

Leidos Australia www.leidos.com

Life H20 www.lifeh20.com.au

Liferaft Systems Australia www.LSAMES.com

M4 Medical www.m4medical.com.au

Marand Precision Engineering www.marand.com.au

Marathon Targets www.marathon-targets.com

Matrix Composites & Engineering www.matrixengineered.com

Medical Rescue www.medicalrescue.com.au

Med Rescue Training www.medicalrescue.com.au/services

MEMKO Aviation Aerospace & Defence www.memko.com.au

Metromatics www.metromatics.com.au

Microsecure Corporation www.microsecure.com.au

Milspec Manufacturing www.milspecmanufacturing.com

Minecorp Australia www.minecorp.com.au

Minelab Electronics www.minelab.com

Molico www.molico.com.au

Moog Australia www.moog.com.au

MoTeC www.motec.com.au

Neamco www.neamco.com.au

New Touch Industries www.newtouchfab.com.au

Nexus Training Solutions https://nexustrain.com



Nobles (A Nobles & Son) www.nobles.com.au

Norcoast Refrigeration Company www.norcoast.com.au

Norseld www.cooldiamonddlc.com

Norship www.norship.com.au

**north Security Digital** www.northsd.com.au

Nova Systems www.novasystems.com

NT Port and Marine www.ntportandmarine.com

Ocean Software www.ocean.com.au

Ocius Technology www.ocius.com.au

Omni Executive www.omniexe.com

OPEC Systems www.opecsystems.com

**Operational Systems** www.opsys.com.au

Orbital UAV www.orbitaluav.com

Pacific Aerospace Consulting www.pacificaerospaceconsulting.com

Penten www.penten.com

Pelican-Trimcast Products www.pelicanaustralia.com

Performance Lubricants Australia www.performancelubricants.com.au

PFG Group www.pfg-group.com.au

**Pivot Maritime International** www.pivotmaritime.com

Point Trading Group www.pointtrading.com

Prism Defence www.prismdefence.com

Prophecy International www.snaresolutions.com

QinetiQ www.qinetiq.com.au

**QPE Advanced Machining** www.qpeadvancedmachining.com Quartz Internationale www.quartzinternationale.com

Radio Frequency Systems www.rfsworld.com

RAIDER Targetry www.raidertargetry.com

Real Response www.realresponse.com.au

**REDARC Electronics** www.redarc.com.au/defence

Red Piranha www.redpiranha.net

RUAG Australia www.ruag.com.au

Saber Astronautics www.saberastro.com

Seeing Machines www.seeingmachines.com

Sentient Vision Systems www.sentientvision.com

Serco Australia www.serco.com/aspac

SiNAB www.sinab.net

SMETEC Services www.smetecservices.com.au

Solutions From Silicon www.sfs.com.au

Sonartech Atlas www.sonartech.atlas-elektronik.com

Southern Launch www.southernlaunch.space

Spee3D www.spee3d.com

Stahl Metall www.stahlmetall.com

Stealth Electric Bikes www.stealthelectricbikes.com

Storemasta www.storemasta.com.au

Supashock www.supashock.com

Sure Aqua Corporation www.sureaqua.com

TAE Aerospace www.taeaerospace.com

Tectonica Australia www.tectonica.net Textron Systems Australia www.textronsystems.com.au

Thomas Global Systems www.thomas-global.com

Titomic www.titomic.com

Toolcraft www.toolcraft.com.au

Trakka Systems www.trakkasystems.com

Trellis Data www.trellisdata.com.au

Tropical Reef Shipyard www.trshipyard.com.au

Tufwrap Australia www.tufwrap.com.au

Ultra Electronics Avalon Systems www.ultra-electronics.com.au

Universal Motion Simulation www.unimotionsim.com

Universal Site Monitoring www.universalsitemonitoring.com.au Varec www.varec.com

Varley Group www.varleygroup.com

Versalux Lighting System www.versaluxmarine.com.au

Verseng Group www.verseng.com.au

VIPAC Engineers & Scientists www.vipac.com.au

W & E Platt www.plattmounts.com

Wedgetail Industries International www.wedgetailindustries.com

The Whiskey Project www.thewhiskeyprojectgroup.com.au

XTEK www.xtek.net

ZCG Scalar www.zcg.com.au

Zone Products Australia www.zoneaps.com.au

### **Australian Scrapping Services**

ASP Ship Management www.aspships.com

Birdon www.birdon.com.au

Dodd & Dodd Group (CD Dodd Scrap Metal Recyclers) www.recyclers.com.au

Goal Group www.goalgroup.com.au

Immix Integrated Metal Management www.immix.com.au Liberty Industrial www.libertyindustrial.com.au

Sell and Parker Secure Destruction www.sellparker.com.au

Thales Australia www.thalesgroup.com.au

Veolia Environmental Services (Australia) www.veolia.com/anz

VTG Waste and Recycling www.vtgwaste.com.au



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#### **Australian Military Sales**

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