PRODUCT CATALOGUE

RF High-Power Amplifier & Laser Systems

Integrated · Verified · Commissioned Under Australian Technical Authority

Defence & Research Grade Systems | Design Authority: LaserAegis Australia

LEGAL ENTITY
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Additional power classes, broadband variants, and custom configurations available on request.

COMPANY OVERVIEW

LaserAegis Australia — Systems Engineering & Design Authority

LaserAegis Australia is a Special Purpose Entity (SPE) established to deliver high-assurance commercial and defence systems within the Australian market. Operating as the sovereign Design Authority and systems integrator, LaserAegis provides end-to-end engineering — from requirements definition and architecture through to verification, validation, commissioning, and lifecycle support. The company was purpose-built to address three critical sovereign capability gaps: the absence of locally controlled RF high-power amplification, the lack of specialist laser systems engineering, and no dedicated Australian technical authority to bridge international manufacturers into the Australian compliance framework.

Core Technical Capabilities

- RF system architecture & high-power amplification
- Laser systems integration — guidance and precision
- System-level verification & validation (V&V)
- Acceptance testing & performance characterisation
- Hardware and software enhancement and modification

Design Authority Responsibilities

- Requirements ownership and interface control
- Architecture selection and trade-off analysis
- Supplier technical control and change management
- Compliance, traceability and test documentation
- Lifecycle: warranty, spares & support coordination

LaserAegis Australia retains full technical accountability for all delivered systems. International manufacturers cannot bypass Australian sovereign requirements — engagement with LaserAegis enables compliant market entry while preserving technical integrity and IP protection.

PRODUCT RANGE — AT A GLANCE

RF HPA & Laser Systems Overview

Product	Class	Dimensions / Weight	Supply	Key Application
RF HPA — 10 W	20–7500 MHz	78–117 × 40–58 × 13–18.5 mm	28 V DC	Comms, EW, radar subsystems
RF HPA — 25 W	20–6100 MHz	117 × 58 × 18.5 mm	28 V DC	Ground-based RF systems
RF HPA — 50 W	20–6100 MHz	145 × 65 × 22 mm	28 V DC	Vehicle-mounted, defence
RF HPA — 100 W	20–4200 MHz	180 × 80 × 25 mm	28 V DC	High-power RF, RS-485 ctrl
LRF — WY-01A	905 nm	Ø19 × 37 mm / ≤10 g	3.3–5 V	Thermal scope, monocular
LRF — 1500 m	905 nm	26 × 25 × 13.5 mm / ≤10 g	3–5.5 V	Drones, night vision
LRF — WY-02B	905 nm	22.5 × 16 × 9.5 mm / ≤5 g	3.3–5 V	Payloads, EO systems
LRF — 3000 m	1535 nm	48 × 30.5 × 21 mm / ≤32 g	4.5–16 V	Defence, UAV, automation
LRF — 5000 m	1535 nm	62 × 43 × 32 mm / ≤85 g	10–14 V	Fire control, EO system
LRF — 7000 m UAV	1535 nm	80 × 58.5 × 45 mm / ≤125 g	6–14 V	UAV, defence, payloads
LRF — 15000 m	1535 nm	144 × 108 × 75 mm / ≤596 g	18–36 V	Border defence, EO system
Laser Illuminator	850/860 nm	Ø21.59 × 47.75 mm	5 V DC	UAV, night surveillance
Airborne EO Payload	Multi-sensor	Ø75 × 98 mm / ≤320 g	14–28 V	UAV ISR, target tracking

PART A

RF High-Power Amplifier Modules

Integrated & Verified Under Australian Technical Authority

LaserAegis Australia integrates, verifies, and commissions RF HPA modules from 10 W to 200 W across 20 MHz to 7.5 GHz. All units are sourced from qualified manufacturers, acceptance-tested against system requirements, and delivered under Australian Design Authority with full traceability documentation.

SECTION A1

10 W RF High-Power Amplifier Modules

Compact 10 W modules covering 20 MHz to 7.5 GHz. Available with or without integrated isolator depending on frequency band. Operating voltage 28 V DC.



RF Amplifier Module — LA-AMP-100-1000/1300
Integrated in Australia | RoHS Compliant

No.	Power	Freq. (MHz)	Dimensions (mm)	I (A)	V (V)	Configuration
A1-01	10 W	20 – 100	117 × 58 × 18.5	≤1.5	28	Standard — No Isolator
A1-02	10 W	100 – 300	117 × 40 × 18.5	≤1.5	28	Standard — No Isolator
A1-03	10 W	300 – 840	78 × 45 × 13	≤1.5	28	Standard — No Isolator
A1-04	10 W	840 – 2100	78 × 45 × 13	≤1.5	28	Standard — No Isolator
A1-05	10 W	2100 – 4200	78 × 45 × 13	≤1.5	28	Standard — No Isolator
A1-06	10 W	4200 – 6100	78 × 45 × 13	≤1.5	28	Standard — No Isolator
A1-07	10 W	400 – 1700	117 × 40 × 18.5	≤1.5	28	With Isolator
A1-08	10 W	1700 – 3600	117 × 40 × 18.5	≤1.5	28	With Isolator
A1-09	10 W	3600 – 7500	117 × 40 × 18.5	≤1.5	28	With Isolator

SECTION A2

25 W RF High-Power Amplifier Modules

25 W modules in ruggedised 117 × 58 × 18.5 mm form factor, 20 MHz – 6.1 GHz. Low-band variants without isolator; mid- and high-band with integrated isolator. 28 V DC.

No.	Power	Freq. (MHz)	Dimensions (mm)	I (A)	V (V)	Configuration
A2-01	25 W	20 – 300	117 × 58 × 18.5	≤2.5	28	Standard — No Isolator
A2-02	25 W	300 – 500	117 × 58 × 18.5	≤2.5	28	Standard — No Isolator
A2-03	25 W	500 – 1500	117 × 58 × 18.5	≤2.5	28	With Isolator
A2-04	25 W	1500 – 3300	117 × 58 × 18.5	≤2.5	28	With Isolator
A2-05	25 W	3300 – 5300	117 × 58 × 18.5	≤2.5	28	With Isolator
A2-06	25 W	5300 – 6100	117 × 58 × 18.5	≤2.5	28	With Isolator

SECTION A3

50 W RF High-Power Amplifier Modules

50 W modules, 20 MHz – 6.1 GHz. Suitable for ground-based and vehicle-mounted defence applications. All units at 28 V DC.

No.	Power	Freq. (MHz)	Dimensions (mm)	I (A)	V (V)	Configuration
A3-01	50 W	20 – 300	145 × 65 × 22	≤5	28	Standard — No Isolator
A3-02	50 W	300 – 840	145 × 65 × 22	≤5	28	With Isolator
A3-03	50 W	840 – 2400	145 × 65 × 22	≤5	28	With Isolator
A3-04	50 W	2400 – 4800	145 × 65 × 22	≤5	28	With Isolator
A3-05	50 W	4800 – 6100	145 × 65 × 22	≤5	28	With Isolator

SECTION A4

100 W RF High-Power Amplifier Modules

100 W modules for defence and research applications. RS-485 digital control interface available on selected variants. 28 V DC.

No.	Power	Freq. (MHz)	Dimensions (mm)	I (A)	V (V)	Configuration
A4-01	100 W	20 – 300	180 × 80 × 25	≤10	28	Standard — No Isolator
A4-02	100 W	300 – 840	180 × 80 × 25	≤10	28	With Isolator
A4-03	100 W	840 – 2400	180 × 80 × 25	≤10	28	With Isolator
A4-04	100 W	2400 – 4200	180 × 80 × 25	≤10	28	With Isolator + RS-485

Extended RF HPA Range — Available on Request

150 W & 200 W modules · Broadband multi-octave amplifiers · RS-485 remote-managed units · Rack-mounted system configurations · Custom power levels, frequency bands and connector configurations

PART B

Laser Ranging & Electro-Optical Systems

Precision Laser Modules Integrated Under Australian Technical Authority

LaserAegis Australia integrates and commissions laser rangefinder modules, illuminators, and airborne electro-optical payloads from 400 m to 15,000 m. All products are sourced from qualified manufacturers and delivered under Australian Design Authority with full compliance and traceability documentation.

SECTION B1

Laser Rangefinder (LRF) Modules

Eye-safe laser rangefinder modules spanning 400 m to 15,000 m operational range. 905 nm (Class 1) and 1535 nm Erbium Glass (Class I) wavelengths. TTL or RS-422 digital interfaces, extended military temperature rating.



Laser Ranging Module — Electro-Optical Payload 1535 nm Eye-Safe Erbium Glass

Part No.	Product	Wavelength	Max Range	Dimensions	Applications
B1-01	WY-01A Rangefinder Module	905 nm / Cl.1	≥400 m (wolf) ≥1000 m (bldg)	Ø19×37 mm / ≤10 g	Thermal scope, monocular, handheld
B1-02	1500 m Rangefinder Module	905 nm / Cl.1	≥1500 m large	26×25×13.5 mm / ≤10 g	Drone integration, night vision
B1-03	WY-02B Thumb-Size LRF	905 nm / Cl.1	≥2000 m night ≥1200 m day	22.5×16×9.5 mm / ≤5 g	EO payloads, UAVs, compact systems
B1-04	3000 m Erbium Glass Module	1535 nm / Cl.I	≥3000 m vehicle	48×30.5×21 mm / ≤32 g	Defence, UAV, automation
B1-05	5000 m Erbium Glass Module	1535 nm / Cl.I	≥5000 m veh. ≥7500 m large	62×43×32 mm / ≤85 g	Fire control, EO payloads
B1-06	7000 m UAV Rangefinder	1535 nm / Cl.I	≥7200 m veh. ≥4800 m human	80×58.5×45 mm / ≤125 g	UAV, defence, EO systems
B1-07	15000 m Long-Range Module	1535 nm / Cl.I	≥15000 m veh. ≥19000 m large	144×108×75 mm / ≤596 g	Border defence, EO, payloads

Selected Technical Specifications — LRF Modules

Parameter	WY-01A	1500 m	WY-02B	3000 m	7000 m UAV
Wavelength	905 nm	905 nm	905 nm	1535 nm	1535 nm
Eye Safety	Class 1	Class 1	Class 1	Class I	Class I
Accuracy	±1 m	±1 m	±0.25–2 m	±1 m	±2 m
Min. Range	≤5 m	5 m	≤3 m	≤15 m	20 m
Interface	TTL	TTL	TTL	TTL	RS422
Supply	3.3–5 V	3–5.5 V	3.3–5 V	4.5–16 V	6–14 V
Op. Temp.	-20/+60°C	-20/+60°C	-20/+60°C	-40/+70°C	-40/+60°C
Weight	≤10 g	≤10 g	≤5 g	≤32 g	≤125 g

SECTION B2

Laser Illuminator & Laser Pointer

Laser Illuminator	B2-01	Laser Pointer	B2-02
Wavelength	**850 / 860 nm (selectable)**	Wavelength	**830 nm**
Classification	**Class 3B**	Classification	**Class 3B**
Output Power	**470 mW – 1 W**	Output Power	**160 – 170 mW**
Beam Divergence	**9 – 26 mrad**	Beam Divergence	**< 0.4 mrad**
Dimensions	**Ø21.59 × 47.75 mm**	Dimensions	**Ø12 × 50 mm**
Supply Voltage	**5 V DC**	Supply Voltage	**5 V DC**
Control	**On/Off via supply power**	Interface	**Loose wire**
Operating Temp.	**-40 to +60 °C**	Operating Temp.	**Standard range**
Applications	**UAV, night surveillance, EO**	Applications	**PTZ cameras, EO platforms**

SECTION B3

Airborne Electro-Optical Payloads

Gyro-stabilised airborne EO payloads integrating infrared thermal imaging, visible-light camera, and laser rangefinder. Designed for UAV ISR, target tracking, and day/night surveillance missions.

Part	Product	Sensor Suite	Dimensions	Power	Temp.	Wt.
B3-01	Airborne EO Payload (Compact)	IR: 640×512 @ 50fps (25 mm lens) VIS: 1920×1080 @ 50fps (16 mm) LRF: 5–1200 m | ±2 m	Ø75×98 mm / ≤320 g	14–28V / ≤6W	-40/+55°C	320 g
B3-02	Photoelectric Payload (Dual-Light)	IR: 640×512 uncooled (18 mm lens) VIS: 1920×1080 CMOS (12 mm) Veh. ID range: 1–2 km	Ø64×85 mm / ≤260 g	14–28V / ≤6W	-40/+55°C	260 g

Extended Laser & EO Range — Available on Request

Additional LRF form factors · Custom wavelength configurations · Higher-power laser illuminators · Large-aperture long-range EO payloads · Integrated fire control and targeting systems · Custom V&V packages

PROCUREMENT & ENQUIRIES

Engage LaserAegis Australia

LaserAegis Australia welcomes enquiries from defence prime contractors, government procurement agencies, ADF project offices, and international manufacturers seeking compliant entry into the Australian defence and government market. All engagements are conducted directly with authorised customers, primes, and approved suppliers.

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Design Authority	Full technical accountability for all delivered systems against contractual requirements
Compliance Gatekeeper	Australian regulatory, defence safety & export control compliance management
Sovereign Integration	End-to-end V&V and acceptance testing under Australian technical authority
Lifecycle Support	Warranty management, spares recommendations, maintenance & support coordination

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