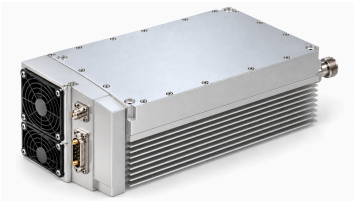
2000–6000 MHz RF Amplifier with Cooling Assembly, 100 W Typical Saturated Output

LCPAM-2000-6000-100H-485 is the independent amplifier configuration with a cooling assembly measuring 180×120×78 mm. Typical saturated output is 100 W, typical gain is 50 dB and typical current is 15 A at Pout = 100 W. The operating supply range is 24–32 V DC, with RS-485 A/B contacts. Refer to the mechanical drawing for the connector layout and cooling assembly.



Electrical specifications

+28.0 V DC; 25°C; 50Ω

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	BW	2000	-	6000	MHz
Saturated RF output power	Pout	-	100	-	W
Power gain	Gp	-	50	-	dB
Power-gain flatness	Gp	-	±2	-	dB
Harmonics @100 W	H	-	-10	-	dBc
Spurious signals	Spur	-	-60	-	dBc
Input/output impedance	Impedance	-	50	-	Ω
Operating voltage	VDC	24	28	32	V
Power-added efficiency	Eff	-	20	-	%
Current consumption @Pout = 100 W	IDD	-	15	-	A

Monitoring and protection requirements

Parameter	Value
Monitoring	Voltage, current, output power, reverse output power and temperature
Output VSWR protection [1]	VSWR 3–3.5
Overtemperature protection [1]	T > 85°C
Supply-voltage and reverse-polarity protection [1]	VDC > 32 V / VDC < 24 V
Overcurrent protection [1]	IDD > 20 A

[1] Amplifier shutdown.

Absolute maximum ratings

Parameter	Value	Unit
RF input drive without damage [1]	+10	dBm
Load VSWR tolerance @Pout = 100 W [2]	3:1	-
Thermal-overload shutdown [3]	85	°C

[1] Max

[2] All load phases; the source specifies continuous amplitude.

[3] Amplifier shutdown.

Environmental specifications — design to meet

Parameter	Minimum	Typical	Maximum	Unit
Operating temperature	-20	-	50	°C
Storage temperature	-25	-	65	°C

RF and power/control connectors

Interface	Specification
RF input connector	SMA, female
RF output connector	N, female
DC interface connector	Hybrid D-Sub, 7-contact, male

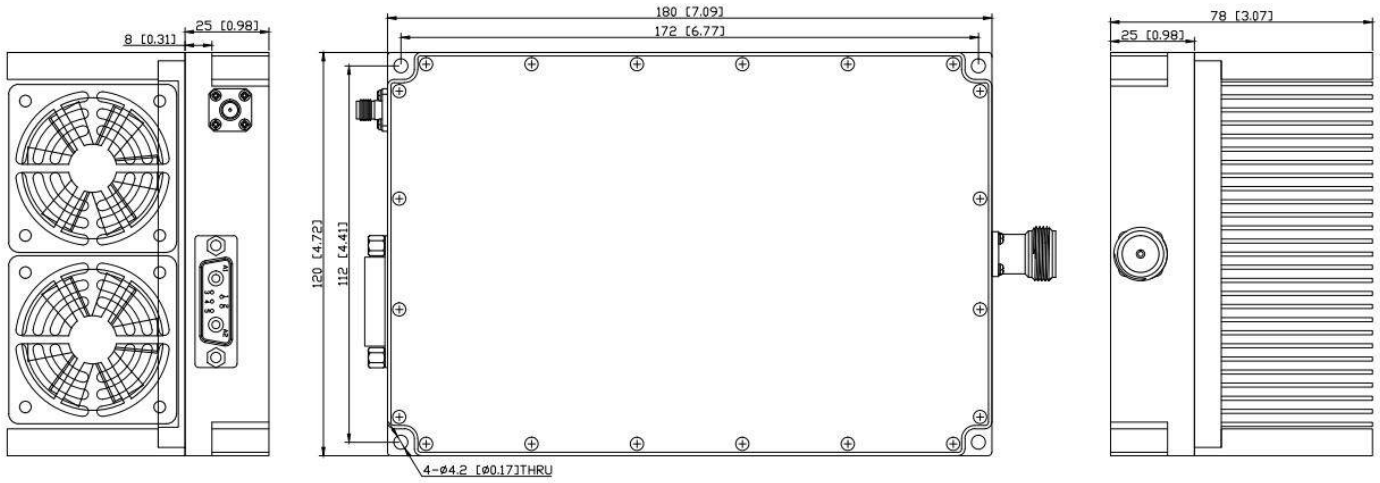
DC interface pinout

Pin #	Description	Specification
A1	GND	Ground
A2	VDD	+28 V
1	ENABLE	Amplifier enable: TTL high (3.3 V), internally pulled high.
2	GND	Ground
3	485A	RS-485 serial communication
4	485B	RS-485 serial communication
5	NC	Not connected

Mechanical specifications

Parameter	Value	Unit
Amplifier/cooling assembly dimensions	180 × 120 × 78 (Amplifier/cooling assembly dimensions from the drawing; excludes connector projections. The bare amplifier module is 25 mm high. The source table marks the assembly dimensions as Max.)	mm
Weight	3 (Maximum; the source also states 6.6 lb.)	kg
Mounting-hole centre spacing	172 × 112	mm
Mounting holes	4 × Ø4.2	mm

Mechanical Outline



Document notice

Specifications are subject to revision. Before design release, confirm the current document revision and product-specific requirements with LCRF. The approved quotation and order documentation define the supplied configuration.