



Longer Range | Higher Data Rates | Lowest SWaP

The THPR1006, a Triad High Power Radio (THPR), contains a Microhard Picoradio 2.45 GHz pMDDL2450 radio at its core and is a 2x2 MIMO amplifier with a TTRM2005D within. This 2 channel, S-Band amplified radio integrates the necessary RF amplification, control circuitry, and interfaces to achieve higher RF output power, greater throughput, and longer link distances than the stand-alone radio. Offering +12 to +30 VDC Input Voltage, this THPR contains BDAs, and RF filtering, with link diagnostics.

THPR1006

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THPR SERIES FEATURES

- Fully Integrated High-Power RF Sub-System & Radio
- Extended Range/Data Rate over Stand-Alone Radio
- Wide Input Voltage, Single DC Supply

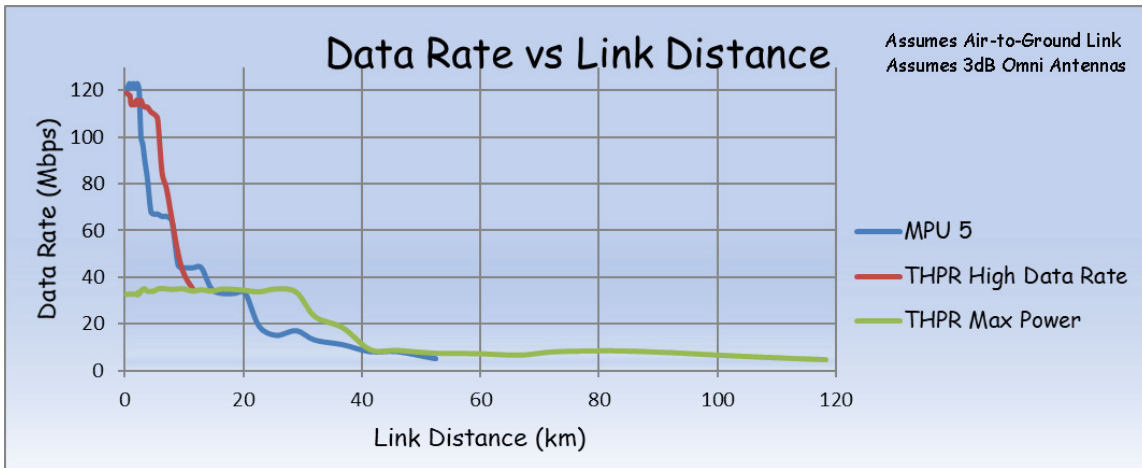
THPR SERIES APPLICATIONS

- Long Distance High Data Rate ISR Links
- UAS, UGV, and USV Video/Data Links
- Point-To-Point and Mesh Networking



LINK DISTANCE CAPABILITIES

The chart below provides estimates for our THPR series' achievable link distances, based on typical bandwidth needs and antenna configurations. [Contact Triad](#) for our expert ISR link team to assess your link requirements.



CHARACTERISTICS/SPECIFICATIONS

RF Performance Specifications

Parameter	Min.	Typ.	Max	Unit	Notes
Operating Frequency	2407	—	2477	MHz	Operating frequency of pMDDL2450
Power output per Channel (Low Data Rate)	12.5	—	—	W	Minimum RF output power per stream (2 total) achievable by the system when the pMDDL2450 is operating at a low data rate MCS.
Power output per Channel (High Data Rate)	5	—	—	W	Minimum RF output power per stream (2 total) achievable by the system when the pMDDL2450 is operating at a high data rate MCS.

Electrical Specifications

Parameter	Min.	Typ.	Max	Unit	Notes
Supply Voltage Range	+12	+28	+30	VDC	—
Average Operating Current Draw (Idle)	—	0.6	—	A	+28V supply voltage.
Average Operating Current Draw (Low Data Rate)	—	2.7	—	A	+28V supply voltage, RF power is set to minimum of 12.5W per Stream operating at a low data rate MCS.
Average Operating Current Draw (High Data Rate)	—	1.5	—	A	+28V supply voltage, RF power is set to minimum of 5W per Stream operating at a high data rate MCS.

Environmental Specifications

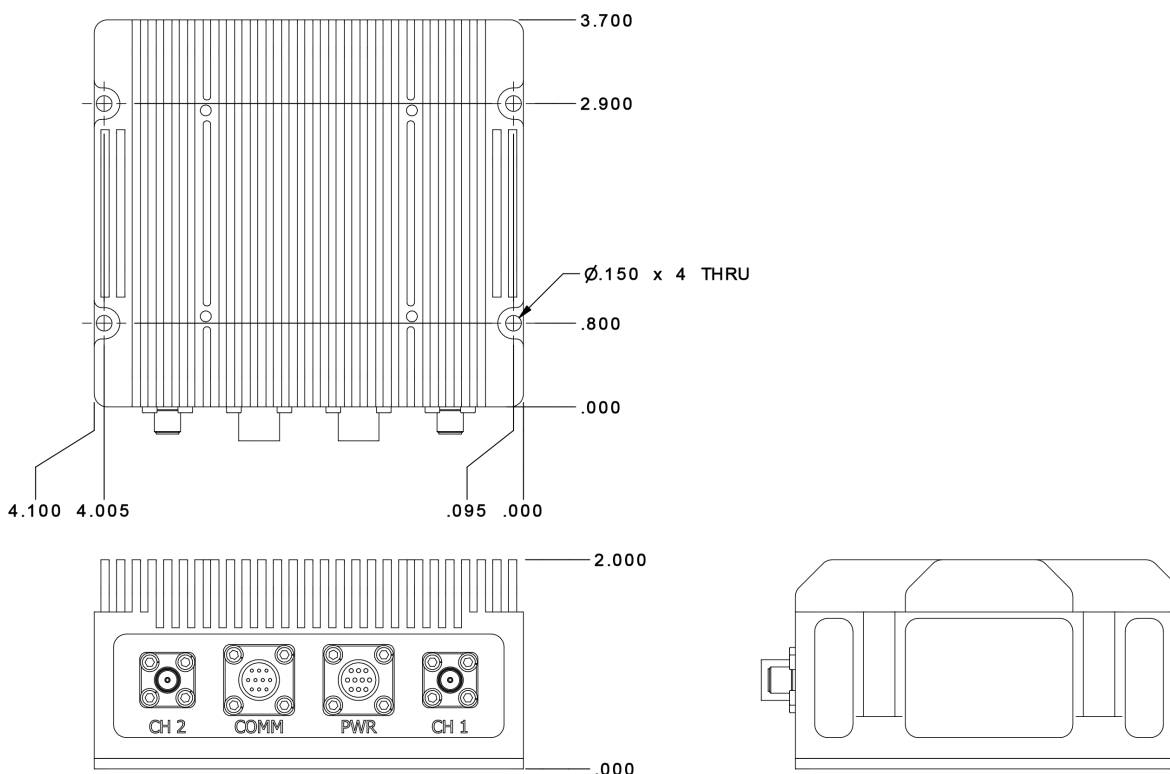
Parameter	Min.	Typ.	Max	Unit	Notes
Operating Temperature	-20	—	+65	°C	Ambient Temperature (Dependant on User Variables)
Cooling	Conduction/convection, Forced Air*			—	*Fan Option Required
Shock / Vibration	Designed to MIL-STD-810 and Equivalents			—	—
Ingress Protection Rating	IP66			—	—



Mechanical Specifications

Parameter	Value	Unit	Notes
Dimensions	4.1 x 3.7 x 2 (104.14 x 93.98 x 50.8)	in (mm)	L x W x H
RF Connectors	SMA-F	Connector Type	Mating Connector Type: SMA-M
DC Connector	2M801-009-02ZNU7-10PA	Part Number	Mating Connector PN: MKJ1A6F7-10SA
Signal Connector	2M801-009-02ZNU7-10SA	Part Number	Mating Connector PN: MKJ1A6F7-10PA
Mounting	#6 Through Holes	—	See Mechanical Drawing Below
Weight	20 (566.99)	oz (g)	—
Finish	MIL-DTL-5541	—	Material: Alloy 6061

MECHANICAL DRAWING



DC/CONTROL CONNECTORS

DC Power Connector

(Amphenol Connex PN: 2M801-009-02ZNU7-10PA)

Pin	Description	Type	I/O	Notes
1	VDC+	Power	Input	Power Supply In
2	VDC+	Power	Input	Power Supply In
3	VDC+	Power	Input	Power Supply In
4	GND	Power	—	Power Supply Return
5	GND	Power	—	Power Supply Return
6	GND	Power	—	Power Supply Return
7	VDC+	Power	Input	Power Supply In
8	VDC+	Power	Input	Power Supply In
9	GND	Power	—	Power Supply Return
10	GND	Power	—	Power Supply Return

Communication Connector

(Amphenol Connex PN: 2M801-009-02ZNU7-10SA)

Pin	Description	Type	I/O	Notes
1	Ethernet TX+	Data	Output	10/100 Base T Transmit Data Positive
2	Ethernet TX-	Data	Output	10/100 Base T Transmit Data Negative
3	Ethernet RX+	Data	Input	10/100 Base T Receive Data Positive
4	Ethernet RX-	Data	Input	10/100 Base T Receive Data Negative
5	GND	Signal	—	General Purpose Ground
6	GND	Signal	—	General Purpose Ground
7	RS232 RX	Data	Input	RS232 Into THPR
8	RS232 TX	Data	Output	RS232 From THPR
9	NC	None	—	—
10	NC	None	—	—

CABLE OPTIONS

For available cable options, please [contact us](#) at inquiries and pricing.

