



Enhance Your MPU5

Extend the range and throughput of your Persistent Systems MPU5 tactical radio network with the TTRM3000-D01 Bi-Directional Amplifier from Triad RF Systems. Engineered specifically to pair with the MPU5, this 3-Channel MIMO / MANET BDA offers a maximum output power of 16 Watts per channel, for a total of 48 Watts.

Its high output power and small size make it the perfect addition to vehicle-integrated radios and dismounted nodes where performance and portability are essential. Designed to maintain signal integrity and link reliability, the TTRM3000 is ideal for improving data link performance in high interference environments.

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Features

- Over-Temperature Protection
- Automatic Tx/Rx Switching

Applications

- Unmanned Systems
- Military or Commercial Radio Systems
- Aircraft Systems
- Vehicle Systems
- UAS, UGV, and USV Video/Data Links
- Point-to-Point and Mesh Networking

CHARACTERISTICS & SPECIFICATIONS

Specifications subject to change without notice. Typical performance at 28VDC at 25°C in a 50Ω system.

Tx Specifications (Per Channel)

Parameter	Min.	Typ.	Max	Unit
Operating Frequency	2200	—	2507	MHz
64QAM Power Output 20 MHz BW, -27 dB EVM Limit	37	—	—	dBm
BPSK Power Output 20 MHz BW, -7 dB EVM Limit	42	—	—	dBm
Saturated Power Output CW Sweep at Design Limit	—	43	—	dBm
Small Signal Gain	17	18	—	dB
Small Signal Gain Flatness	—	—	1	dB (peak to peak)
Input Return Loss	—	—	-13	dB
Tx / Rx Switching Time	—	1	2	μS

Rx Specifications (Per Channel)

Parameter	Min.	Typ.	Max	Unit
Small Signal Gain	3	4	—	dB
Small Signal Gain Flatness	—	—	1.5	dB (Peak to Peak)
Noise Figure	—	3	4	dB
Input Return Loss	—	—	-10	dB

Power Supply Specifications

Parameter	Min.	Typ.	Max	Unit	Notes
Supply Voltage Range	12	28	32	VDC	—
RMS Operating Current Draw (Idle)	—	0.7	—	A	28VDC Supply Voltage, Idle in Receive Mode
RMS Operating Current Draw (64QAM Power Output)	—	3.9	—	A	28VDC Supply Voltage, 802.11 WLAN Signal, 50% Duty Cycle
RMS Operating Current Draw (BPSK Power Output)	—	6.6	—	A	28VDC Supply Voltage, 802.11 WLAN Signal, 50% Duty Cycle

CHARACTERISTICS & SPECIFICATIONS (CONT.)

Specifications subject to change without notice.

Mechanical Specifications

Parameter	Value	Unit	Notes
Dimensions (L x W x H)	4 x 3.5 x 1.35 (101.6 x 88.9 x 34.3)	in (mm)	—
Cooling	Integrated Heatsink, Cooling Fan Kit Available	—	—
Weight	23.2 (658)	oz (g)	—

Interface Specifications

Parameter	Value	Notes
RF Connectors (Input / Output)	TNC-F / TNC-F	—
Power / Signal Connector	2M801-010-02ZNU7-10PA	Connector appearing on unit (Manufacturer P/N)
Mating Connector	2M801-007-16M7-10SA	Mating connector required for interfacing (Manufacturer P/N)
Test Integration Cable	CBL66	Triad P/N available for purchase separately

Environmental Specifications

Parameter	Min.	Max	Unit
Operating Temperature (Housing Temp.)	-40	95	°C
Storage Temperature	-55	85	°C
Altitude	0 (0)	20000 (6096)	ft. (m.)
Ingress Protection Rating	IP67		—
Shock / Vibration	Designed to comply with MIL-STD-810 Shock / Vibration Test Methods		—

Protections & Maximum Ratings

Parameter	Value	Unit	Notes
Maximum RF Input (Per Channel)	30	dBm	CW Power
Over Temp Protection Trip Level	85	°C	Internally Monitored System Temperature
RF Output Open Load Survivability	42	dBm	CW with Open Circuit at Antenna Port

DC / CONTROL CONNECTORS

Input / Output Pins

TTRM Connector Part Number			Mating Connector Part Number	
2M801-010-02ZNU7-10PA			2M801-007-16M7-10SA	
Pin	Label	Type	I/O	Notes
1	Vin	Power	N/A	Supply Voltage
2	Vin	Power	N/A	Supply Voltage
3	Vin	Power	N/A	Supply Voltage
4	Vin	Power	N/A	Supply Voltage
5	GND	Power	N/A	Power Supply Return
6	GND	Power	N/A	Power Supply Return
7	GND	Power	N/A	Power Supply Return
8	GND	Power	N/A	Power Supply Return
9	I/O	Signal	Input	Automatic Switching TTRM: Pin not required. Do not use.
10	SIG GND	Signal	N/A	Signal Ground

MECHANICAL DRAWING

