

**DESCRIPTION**

This class AB LDMOS module is designed for both military and commercial applications. It is capable of supporting any signal type and modulation format, including but not limited to 3-4G telecom, WLAN, OFDM, DVB, and CW/AM/FM. The latest device technologies and design methods are employed to offer high power density, efficiency, and linearity in a small, lightweight package.



**FEATURES**

- Manual or Automatic Tx/Rx Switching Available
- Over-Temperature Protection
- Temp. Monitor Output
- Amplifier Status Output

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		2500	MHz
PSat Power Output		+44.0		dBm
Gain		25.0		dB
Gain Flatness		1.0		± dB
Input Return Loss	-15			dB
Operating Voltage	+12	+28	+30	VDC
Tx / Rx Switching Time		1.0	2.0	uS

RX SPECIFICATIONS (PER CHANNEL)				
PARAMETER	MIN	TYP.	MAX	UNIT
P1dB Power Output		+5.0		dBm
Gain		15.0		dB
Gain Flatness			1.0	± dB
Noise Figure		2.5		dB
OIP3		+15.0		dBm
Input Return Loss	-10			dB
Current Draw		100.0		mA

MECHANICAL		
PARAMETER	VALUE	UNIT
Dimensions (L x W x H)	3.25 x 3.75 x 1.9	in
RF Connectors (Input / Output)	TNC-F / TNC-F	--
DC / Control Connector	Circular Locking	--
Cooling	Baseplate Conduction - Optional Heatsink Available	--
Mounting	4-40 Thru Holes	--
Weight	35	oz.

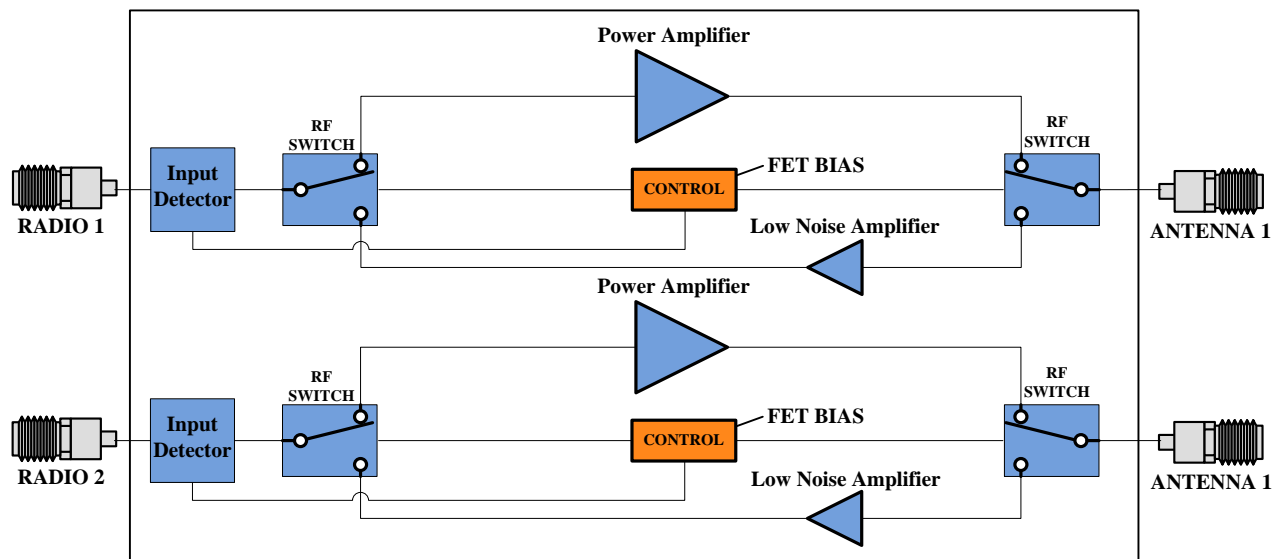
ENVIRONMENTAL / PROTECTIONS			
PARAMETER	MIN	MAX	UNIT
Operating Temp. (Housing Temp.)	-40	+85	°C
Humidity Range	0-95		%
Altitude	0-30,000		ft.
Shock / Vibration	MIL-STD-810 and equivalents		--
Max RF Input (Per Channel)	+33		dBm
PA Baseplate Shutoff Temperature	+85		°C

DC / CONTROL PINS		
AMPLIFIER CONNECTOR TYPE:		10 PIN CIRCULAR LOCKING
TRIAD CABLE PART NUMBER:		CBL83
PIN LABEL	NAME	DESCRIPTION
1	Status	STATUS
2	TEMP	TEMP
3	Tx/Rx	TTL High = Transmit Mode, TTL Low = Receive Mode
5,7,9	+VDC	Supply Voltage - Range Specified in Datasheet
6,8,10	GND	Ground

802-11G (20 MHz BW) DATA RATE VS. OUTPUT POWER (PER CHANNEL)			
OFDM MODULATION	DATA RATE	POUT (W) MIN.	EVM
64QAM	54 Mbps	4	≤ -27 dB
16QAM	36 Mbps	6	≤ -21 dB
QPSK	12 Mbps	10	≤ -15 dB
BPSK	9 Mbps	14	≤ -7 dB

See our [application note](#) that describes how this table was calculated and provides notes on in-system performance

### High-Level Block Diagram

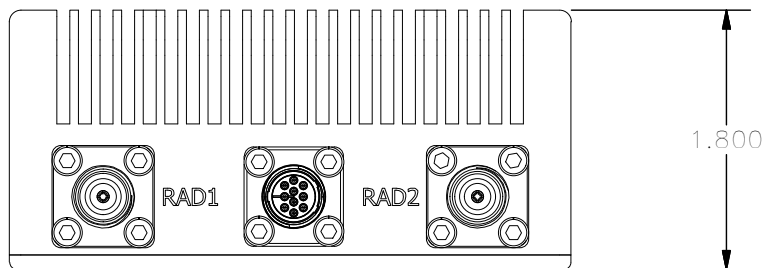
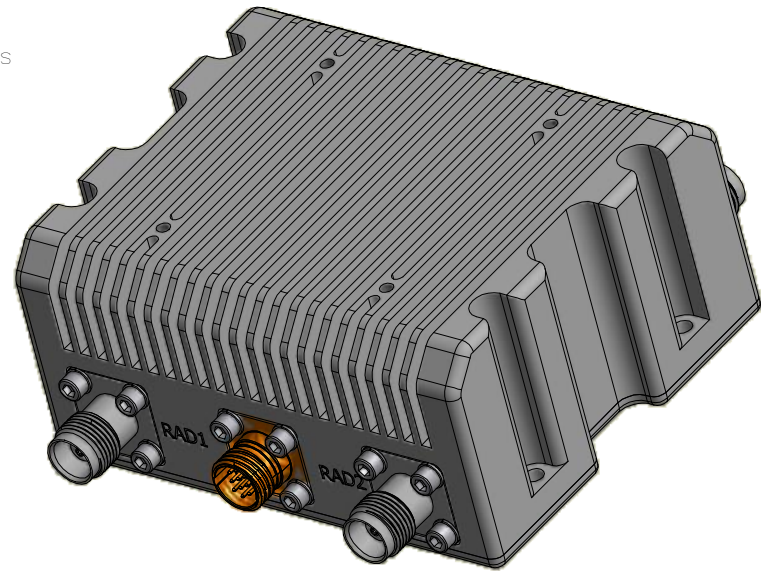
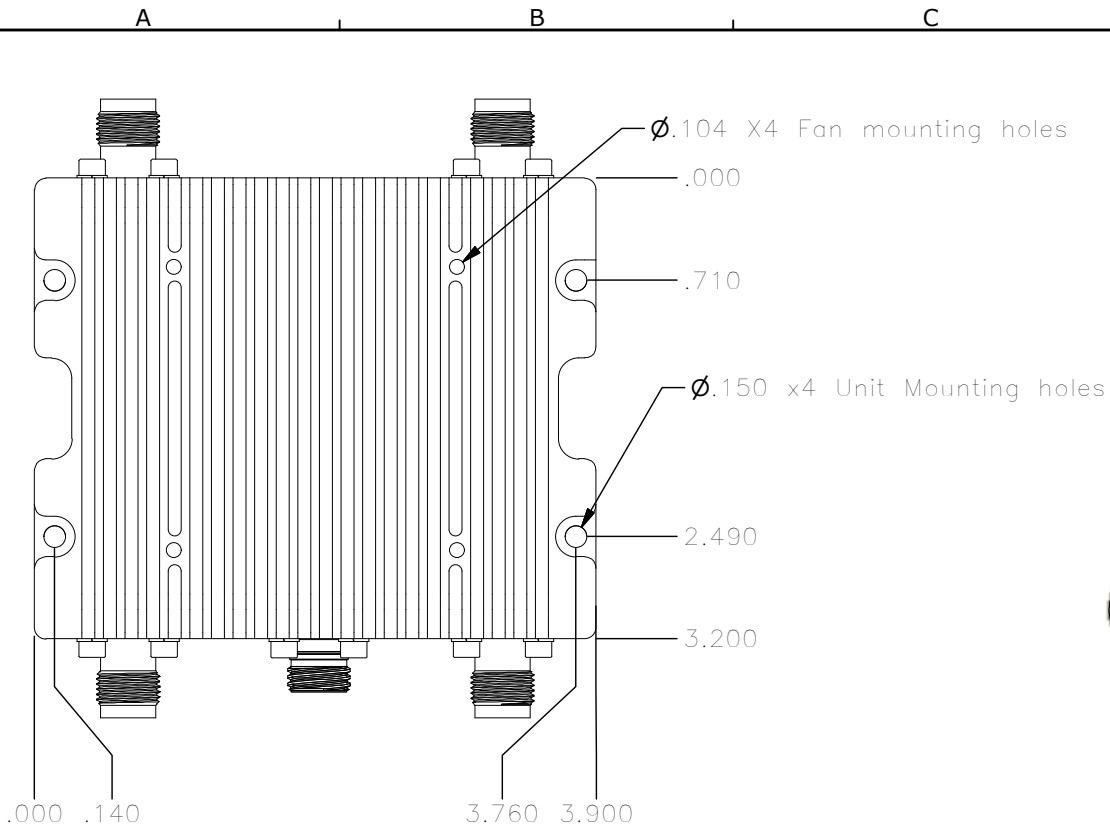


Ordering Guide – Configuration Information		
Model Number	Amplifier Option	Heat Sink Option
<b>TTRMXXXXD</b>	<b>- XXX</b>	<b>- XXX</b>

Amplifier Options	
Suffix	Description
D01	Automatic Tx/Rx Switching
D02	Manual Tx/Rx Switching
DXX	Custom Amplifier Configuration (issued by Triad upon customer request)

Heat Sink Options	
Suffix	Description
(none)	Integrated Heat Sink
F	Fan with Integrated Heat Sink

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
0	Initial Release	9/26/19	AC



DRAWN	ankur	9/10/2019
DESIGNED	ankur	9/9/2019
CHECKED		
ENG. APPROVED		
MFG. APPROVED		

**TRIAD**  
RF SYSTEMS

11 HARTS LANE SUITE I  
EAST BRUNSWICK, NJ 08816  
855-558-1001

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DIMENSIONS ARE IN INCHES  
UNLESS SPECIFIED OTHERWISE  
TOLERANCES  
DECIMALS FRACTIONS ANGLES  
.XX ± .01 ± 1/32 ± 2°  
.XXX ± .005

SIZE	DWG. NO.	REV
A	TTRM2005DR	
SCALE: NONE	CAGE CODE 67DZ3	SHEET 1 OF 2