

LONGER RANGE | HIGHER DATA RATES | LOWEST SWAP

Triad's THPR series breaks performance barriers for MIMO radios and enable first-run link success. They eliminate the need to integrate heavy, costly, and inefficient stand-alone components for long range wireless links. Triad combines our high power RF sub-systems with a Silvus SC4200 OEM core radio in a low SWAP package. THPR products contain BDAs, RF filtering, and innovative SoC-based monitoring and controls, with real-time power measurements and link diagnostics.



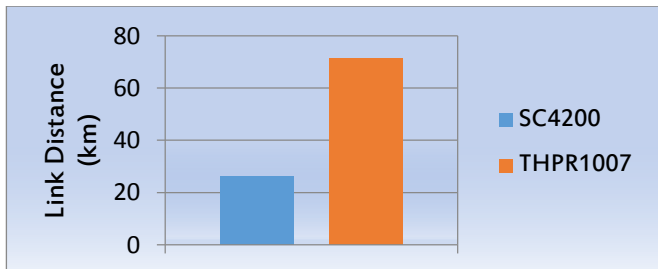
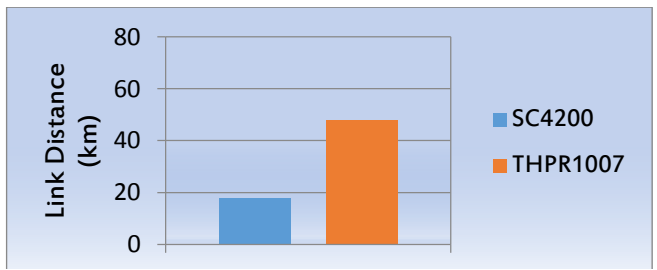
FEATURES

- Fully Integrated High Power RF Sub-System with Radio
- Range Extension and Data Rate Improvement
- Enhanced RF Link Control via USB & Serial
- Wide Vin, Single DC Supply

APPLICATIONS

- Long-Range Unmanned Aircraft Links
- High Data-Rate Mesh Networking
- Military MANET
- RF Power Equalization over Frequency - Temperature

RF SPECIFICATIONS	
Operating Frequency	2200 - 2500 MHz
Power Output (Max Power Setting Selected)	40 W total at 28 Mbps (20 W / Stream)
Power Output (Max Data Rate Setting Selected)	10 W total at 94 Mbps (5 W / Stream)
<i>The above table depicts only the end points of the THPR's variable power settings. The THPR series is modulation agnostic and supports all modulations, data rates, and channel bandwidths possible. The data rates listed are for a 20 MHz CH BW.</i>	

LINK PERFORMANCE IMPROVEMENT OVERVIEW	
<p>Below is test data for a stock SC4200 radio, along with the link distance and data rate improvements achieved with the THPR1007. Two use cases are illustrated and described in the graphs below.</p> <p>Tests below are performed in lab setting and assume 0 dBi antenna gain on either side of link.</p>	
 <p>Stock SC4200 vs. THPR performance, for a link configured to achieve maximum power, regardless of data rate.</p>	 <p>Stock SC4200 vs. THPR performance, for a link configured to achieve the maximum data rate the radio is capable of.</p>



THPR1007 | 20W | 2200 - 2500 MHz RANGE ENHANCED SC4200 RADIO SYSTEM

MECHANICAL		
PARAMETER	VALUE	UNIT
Dimensions (L x W x H)	7.8 x 4.0 x 1.75	in
RF Connectors (Input / Output)	TNC-F / TNC-F	--
DC / Control Connector	10 Pin Circular Locking	--
Cooling	Integrated Heatsink Fins	--
Mounting	6-32 Thru Hole	--
Weight	50	oz.

ENVIRONMENTAL / PROTECTIONS			
PARAMETER	MIN	MAX	UNIT
Operating Temperature (Housing Temp.)	-40	+85	°C
Storage Temperature	-60	+100	°C
Humidity Range	0-100		%
Altitude	0-30,000		ft.
Shock / Vibration	MIL-STD-810 and equivalents		--
PA Baseplate Shutoff Temperature	+85		°C

