

Longer Range | Higher Data Rates | Lowest SWaP

Triad's THPR series break performance barriers for MIMO radios and enable first-run link success. They eliminate the need to integrate stand-alone components for long range wireless links. Triad combines our high-power RF sub-systems with a Silvus SC4200 StreamCaster 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 measurement and link diagnostics.



20W (Small)



50W (Medium)



200W (Mega)

FEATURES

- Fully Integrated High-Power RF Sub-System & Radio
- Extended Range / Data Rate over Stand-Alone Radio
- Enhanced RF Link Control via USB & Serial
- Wide Vin, Single DC Supply
- Power Equalization over Frequency and Temperature

APPLICATIONS

- Long Distance - High Data Rate ISR Links
- UAS, UGV and USV Video / Data Links
- Military MANET
- Maritime High-Throughput LOS/NLOS Systems
- Point-To-Point and Mesh Networking

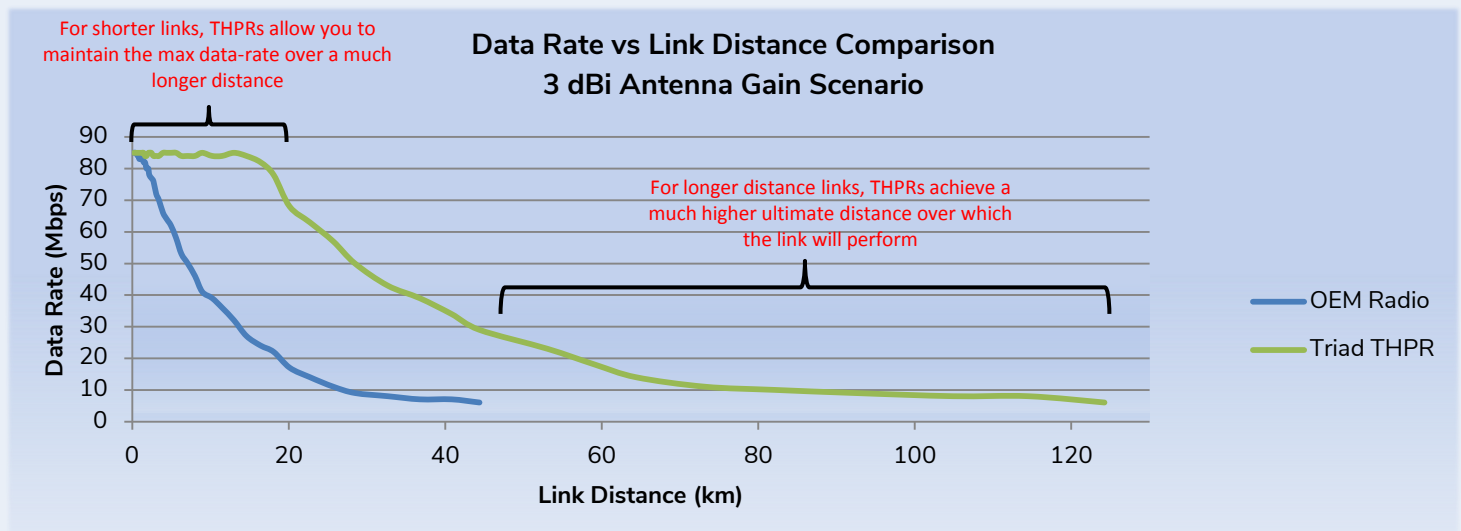
SPECIFICATIONS

Fully Integrated Silvus Core Radios

Model	Frequency
SC4210E-455	4400-4700 MHz
SC4210E-467	4400-4940 MHz
SC4210E-485	4700-5000 MHz
SC4210E-520	5150-5250 MHz
SC4210E-580	5725-5875 MHz

RF Power Levels Available

- Small:** 20W total (10W / Stream)
- Medium:** 30-50W total (15-25W / Stream)
- Mega:** 50-200W total (25-100W / Stream)



Link Distance Charts

These tables provide estimates for link distances achievable, based on typical bandwidth needs and antenna configurations. [Contact Triad](#) for our ISR link team to provide an expert assessment of your link requirements.

Typical Use Case 1: Short Range, Low Antenna Gain Link Configuration

Ground Station Antenna: 9dBi Fixed Omni

Air Vehicle Antenna: 2-5 dBi Blade

	Small THPR (10W / Ch)	Medium THPR (25W / Ch)	Mega THPR (100W / Ch)
Low data rate application 1-3 Mbps for telemetry and low BW video	54 km	85 km	169 km
Mid data rate application 4-8 Mbps for high BW video, single EO/IR Stream + C2/Telemetry	24 km	38 km	76 km
High data rate application 30+ Mbps multiple high BW video streams. Data with high throughput requirements.	5 km	8 km	15 km

Typical Use Case 2: Long Range, High Antenna Gain Link Configuration

Ground Station Antenna: 24dBi Tracking Dish

Air Vehicle Antenna: 2-5 dBi Blade

	Small THPR (10W / Ch)	Medium THPR (25W / Ch)	Mega THPR (100W / Ch)
Low data rate application 1-3 Mbps for telemetry and low BW video	200+ km	200+ km	200+ km
Mid data rate application 4-8 Mbps for high BW video, single EO/IR Stream + C2/Telemetry	135 km	200+ km	200+ km
High data rate application 30+ Mbps multiple high BW video streams. Data with high throughput requirements	27 km	43 km	85 km

Mechanical Specifications

Parameter	Value	Unit
RF Connectors	SMA-F, N-F, and TNC Standard, others available	--
DC / Control Connector	Circular Locking	--
Mounting	6-32 Through Holes	--

Environmental Specifications

Parameter	Min	Max	Unit
Ambient Operating Temperature	-40	60	°C
Ingress Protection Rating	IP67		--
Altitude	0-50,000		ft.
Shock / Vibration	MIL-STD-810 and Equivalents		--

For more information and to request a quote: [Triad RF Radio Systems](#)