

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 SC4400 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.



40W (Small)



100W (Medium)



400W (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

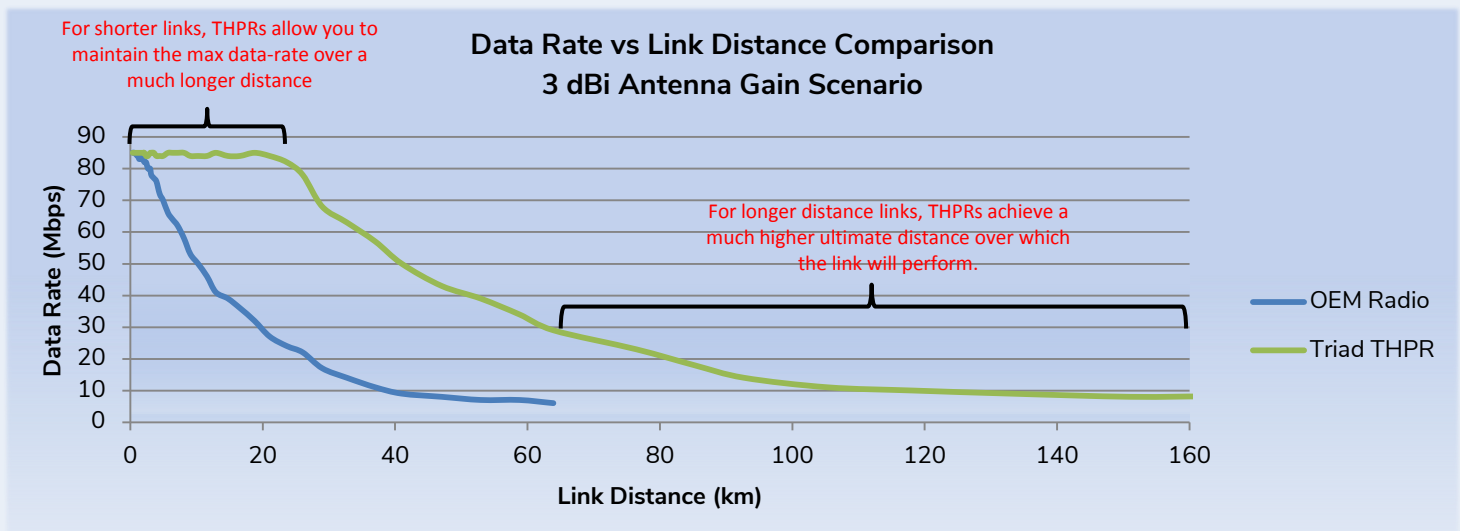
SPECIFICATIONS

Fully Integrated Silvus Core Radios

| Model | Frequency |
|-------------|---------------|
| SC4410E-455 | 4400-4700 MHz |
| SC4410E-467 | 4400-4940 MHz |
| SC4410E-485 | 4700-5000 MHz |
| SC4410E-520 | 5150-5250 MHz |
| SC4410E-580 | 5725-5875 MHz |

RF Power Levels Available

- Small:** 40W total (10W / Stream)
- Medium:** 60-110W total (15-25W / Stream)
- Mega:** 100-400W 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: 9 dBi 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 | 60 km | 95 km | 190 km |
| Mid data rate application 4-8 Mbps for high BW video, single EO/IR Stream + C2/Telemetry | 27 km | 43 km | 85 km |
| High data rate application 30+ Mbps multiple high BW video streams. Data with high throughput requirements. | 5 km | 8 km | 17 km |

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

Ground Station Antenna: 24 dBi 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 | 151 km | 200+ km | 200+ km |
| High data rate application 30+ Mbps multiple high BW video streams. Data with high throughput requirements | 30 km | 48 km | 95 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](#)