

**Longer Range | Higher Data Rates | Lowest SWaP**

The THPR1055, a Triad High Power Radio (THPR), contains a Silvus Streamcaster SC4410-235-O OEM form factor radio at its core and combines with our high-power RF subsystems in a low SWaP package. This 4 channel, S-Band amplified radio integrates the necessary Silvus radio, RF amplification, control circuitry, and interfaces to achieve higher RF output power, greater throughput, and longer link distances than the stand-alone radio. Offering +12 to +32 VDC Input Voltage, this THPR contains BDAs, and RF filtering, with link diagnostics.

**THPR1055**

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**THPR SERIES FEATURES**

- Fully Integrated High-Power RF Sub-System & Radio
- Extended Range/Data Rate over Stand-Alone Radio
- Wide Input Voltage, Single DC Supply

**THPR SERIES 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



## FEATURES

### LEDs

The THPR1055 features 3 LEDs, 1 for the internal BDA associated with channels 1 and 2, 1 for the internal BDA associated with channels 3 and 4, and 1 for the radio.

#### RF Channels

The two LEDs associated with each pair of RF channels operate identically.

*Red* - Error

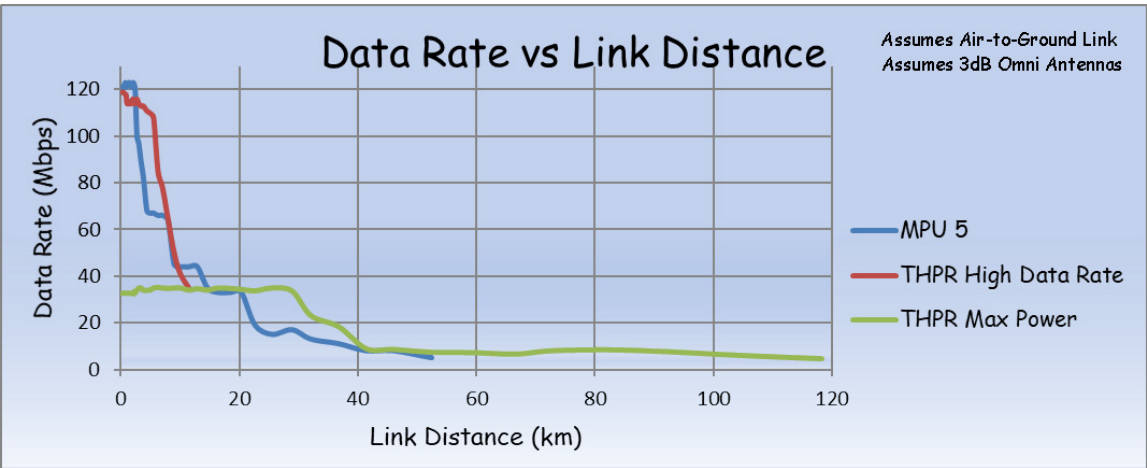
*Green* - Powered ON and operational

#### Radio

The radio LED operates as per the Silvus manual.

## LINK DISTANCE CAPABILITIES

The chart below provides estimates for our THPR series' achievable link distances, based on typical bandwidth needs and antenna configurations. [Contact Triad](#) for our expert ISR link team to assess your link requirements.



## CHARACTERISTICS/SPECIFICATIONS

### RF Performance Specifications

Parameter	Min.	Typ.	Max	Unit	Notes
Operating Frequency	2200	—	2500	MHz	Operating frequency of SC4410-235-O
Power output per Channel (Low Data Rate)	—	16	—	W	Typical RF output power per stream (4 total) achievable by the system when the SC4410 is operating at a low data rate MCS.
Power output per Channel (High Data Rate)	—	4	—	W	Typical RF output power per stream (4 total) achievable by the system when the SC4410 is operating at a high data rate MCS.

### Electrical Specifications

Parameter	Min.	Typ.	Max	Unit	Notes
Supply Voltage Range	+12	+28	+32	VDC	—
Average Operating Current Draw (Idle)	—	—	1	A	+28V supply voltage.
Average Operating Current Draw (Low Data Rate)	—	—	8	A	+28V supply voltage, RF power is set to maximum of 15W per Stream operating at a low data rate MCS.
Average Operating Current Draw (High Data Rate)	—	—	4	A	+28V supply voltage, RF power is set to maximum of 4W per Stream operating at a high data rate MCS.

### Environmental Specifications

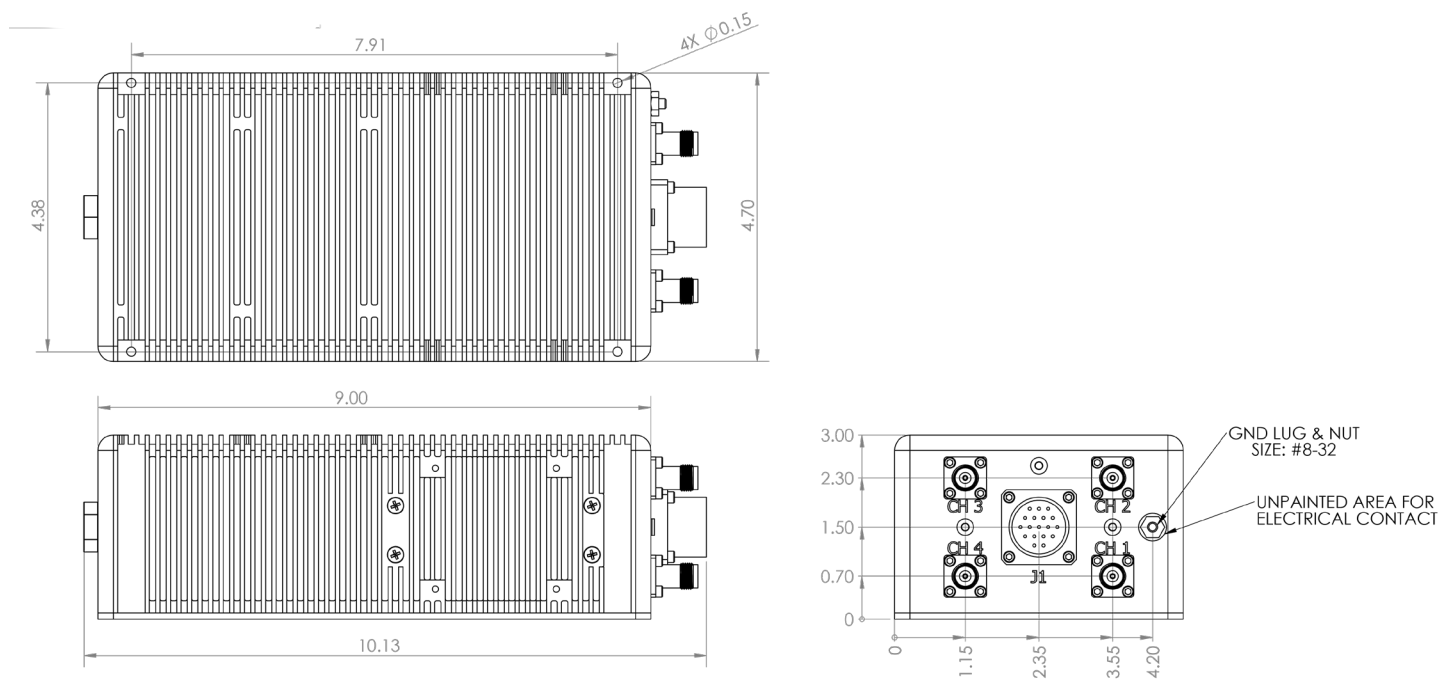
Parameter	Min.	Typ.	Max	Unit	Notes
Operating Temperature	-20	—	+65	°C	Ambient Temperature (Dependant on User Variables)
Cooling	Conduction/convection, Forced Air*			—	*Fan Option Required
Shock / Vibration	Designed to MIL-STD-810 and Equivalents			—	—
Ingress Protection Rating	IP66			—	—

### Mechanical Specifications

Parameter	Value	Unit	Notes
Dimensions	9 x 4.7 x 3 (228.6 x 119.38 x 76.2)	in (mm)	L x W x H
RF Connectors	TNC-F	Connector Type	Mating Connector Type: TNC-M
DC Connector	MS27466T15B18P	Part Number	Mating Connector PN: MS27467T15B18S
GND Lug	Ground Connection	—	#8 STUD screwed into front face, not anodized in threads
Mounting	#6 Through Holes	—	See Mechanical Drawing Below
Weight	65 (1842.72)	oz (g)	—
Finish	Anodized Matte Black	—	MIL-A-8625



MECHANICAL DRAWING



## DC/CONTROL CONNECTORS

**J1 Connector - DC Connector**  
(Amphenol Connex PN: MS27466T15B18P)

Pin	Description	Type	I/O	Notes
A	THPR DC Power	Power	Input	VDC +12 to +28 V (Into Unit)
B	THPR DC Power	Power	Input	VDC +12 to +28 V (Into Unit)
C	Fan Power	Power	Output	VDC +16 V (Out of the Unit)
D	THPR DC GND	Power	—	General Purpose Ground
E	THPR DC GND	Power	—	General Purpose Ground
F	Fan Ground	Power	—	Fan Ground
G	PTT	Power	Input	Push To Talk
H	MIC In	Signal	Input	Microphone Input
J	+5V	Power	Output	1A Max
K	Speaker Out	Signal	Output	Provides a PTT audio interface
L	Audio Ground	Signal	—	Isolated from GND
M	Ethernet RX-	Data	Input	10/100 Base T Receive Data Negative
N	Ethernet RX+	Data	Input	10/100 Base T Receive Data Positive
P	Ethernet TX+	Data	Output	10/100 Base T Transmit Data Positive
R	Ethernet TX-	Data	Output	10/100 Base T Transmit Data Negative
S	GND	Signal	—	General Purpose Ground
T	RS232 TX	Data	Output	RS232 Interface
U	RS232 RX	Data	Input	RS232 Interface

## CABLE OPTIONS

For available cable options, please [contact us](#) at inquiries and pricing.

