

Longer Range | Higher Data Rates | Lowest SWaP

The THPR1019, a Triad High Power Radio (THPR), contains a Silvus Streamcaster SC4200-235-O OEM radio at its core and combines with our TTRM2005D in a low SWaP package. This "housing-less," 2 channel, S-Band, amplified radio integrates the necessary 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 +28 VDC Input Voltage, this THPR contains BDAs, and RF filtering, with link diagnostics.

THPR1019

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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

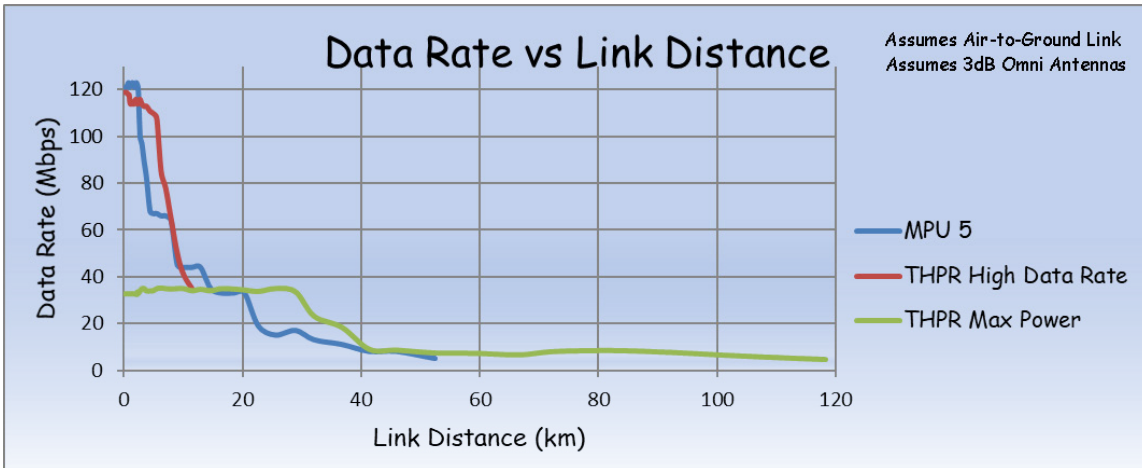
THPR SERIES APPLICATIONS

- 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



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 SC4200
Power output per Channel (Low Data Rate)	—	16	—	W	Typical RF output power per stream (2 total) achievable by the system when the SC4200 is operating at a low data rate MCS.
Power output per Channel (High Data Rate)	—	4	—	W	Typical RF output power per stream (2 total) achievable by the system when the SC4200 is operating at a high data rate MCS.

Electrical Specifications

Parameter	Min.	Typ.	Max	Unit	Notes
Supply Voltage Range	+12	+28	+28	VDC	—
Average Operating Current Draw (Idle)	—	0.58	—	A	+28V supply voltage.
Average Operating Current Draw (Low Data Rate)	—	3.38	4	A	+28V supply voltage, RF power is set to maximum of 16W per Stream operating at a low data rate MCS.
Average Operating Current Draw (High Data Rate)	—	1.7	—	A	+28V supply voltage, RF power is set to maximum of 4W per Stream operating at a high data rate MCS.

Environmental Specifications

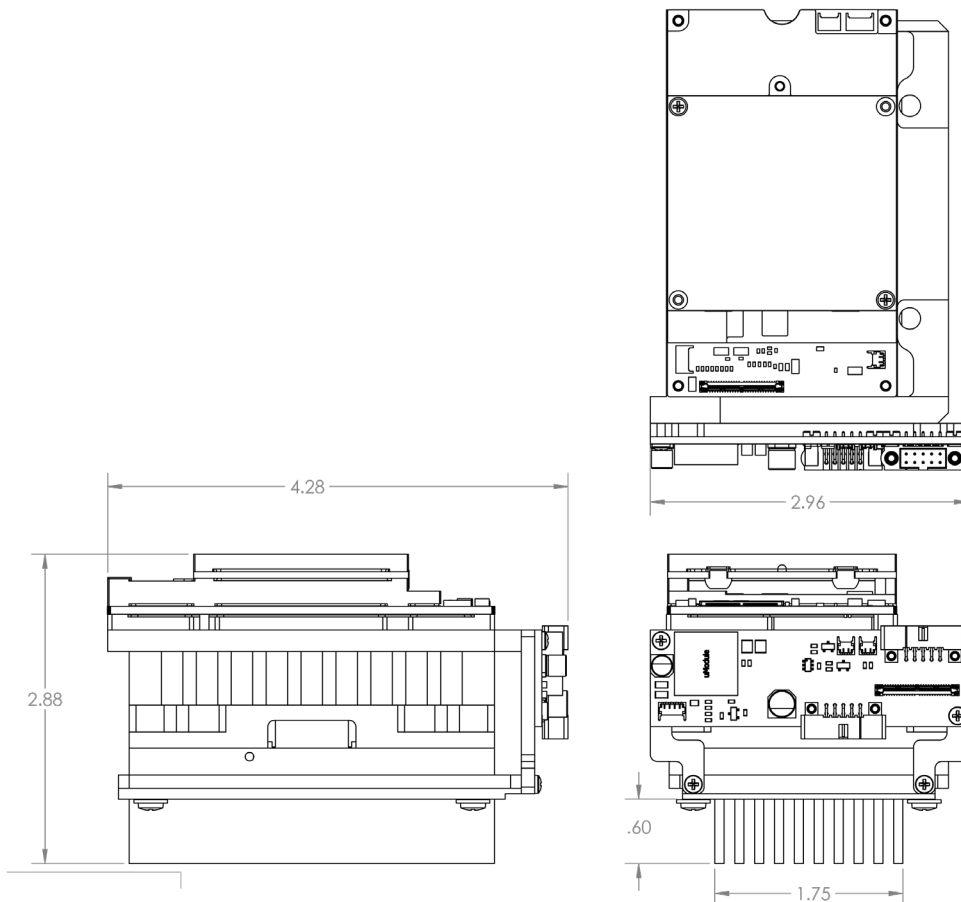
Parameter	Min.	Typ.	Max	Unit	Notes
Operating Temperature	-20	—	+65	°C	Ambient Temperature
Cooling	Conduction/convection			—	—
Shock / Vibration	Designed to MIL-STD-810 and Equivalents			—	—



Mechanical Specifications

Parameter	Value	Unit	Notes
Dimensions	4.28 x 2.96 x 2.88 (108.712 x 75.184 x 73.152)	in (mm)	L x W x H
RF Connectors	SMP-M	Connector Type	Mating Connector Type: SMP-F
DC Power Connector	GK0YBR-P10UC00-000L	Part Number	Mating Connector PN: S10YBR-P10XCD0-0000
Primary Connector	GK0YAR-P10UC00-000L	Part Number	Mating Connector PN: S10YAR-P10XCD0-0000
Auxiliary Connector	GK0YCR-P10UC00-000L	Part Number	Mating Connector PN: S10YCR-P10XCD0-0000
Mounting	#4 Through Holes	—	See Mechanical Drawing Below
Weight	22.4 (635.0293)	oz (g)	—
Finish	MIL-DTL-5541	—	Material: Alloy 6061

MECHANICAL DRAWING



DC/CONTROL CONNECTORS

J1 Connector - DC Connector (ODU PN: GK0YBR-P10UC00-000L)

Pin	Description	Type	I/O	Notes
1	GND	Power	—	Power Supply Return
2	GND	Power	—	Power Supply Return
3	Fan GND	Power	—	VDC +16V Return
4	Fan +VDC	Power	Output	VDC +16V Output
5	+VDC	Power	Input	Power Supply In
6	+VDC	Power	Input	Power Supply In
7	+VDC	Power	Input	Power Supply In
8	+VDC	Power	Input	Power Supply In
9	GND	Power	—	Power Supply Return
10	GND	Power	—	Power Supply Return

J2 Connector - Primary Connector (ODU PN: GK0YAR-P10UC00-000L)

Pin	Description	Type	I/O	Notes
1	+5V OUT	Output	Output	400 mA Max
2	GND	Power	—	Loopback Power, Not to Be Used
3	+VDC	Power	Input	Loopback Power, Not to Be Used
4	Ethernet RX-	Data	Input	10/100 Base T Receive Data Negative
5	Ethernet RX+	Data	Input	10/100 Base T Receive Data Positive
6	Ethernet TX+	Data	Output	10/100 Base T Transmit Data Positive
7	RS232_RXD	Data	Input	RS232 Into THPR
8	RS232_TXD	Data	Output	RS232 From THPR
9	GND	Signal	—	General Purpose Ground
10	Ethernet TX-	Power	Input	10/100 Base T Transmit Data Negative



DC/CONTROL CONNECTORS

J3 Connector - AUX Connector (ODU PN: GK0YCR-P10UC00-000L)

Pin	Description	Type	I/O	Notes
1	USB GND	Data	—	Ground Reference for USB
2	USB1_D-	Data	—	USB1_Data-
3	USB1_VBUS	Data	—	USB1_VBUS
4	USB0_VBUS	Data	—	USB0_VBUS
5	NC	None	—	—
6	USB0_D+	Data	—	USB0_Data+
7	USB0_D-	Data	—	USB0_Data-
8	GND	Signal	—	General Purpose Ground
9	USB1_ID	Data	—	USB OTG ID
10	USB1_D+	Data	—	USB1_Data+

CABLE OPTIONS

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

