



EXOMUX 10Gbps E-Band Millimetre Wave Radio

Ultra Low Latency

EMClarity is committed to bringing radios to its customers that are a leap ahead of anything else in the market. We do this by challenging the usual operating assumptions used in radio design, using the brightest minds in the industry to stretch the boundaries of performance. The result is our new ExoMux radio which delivers higher data throughput, longer range and greater availability than the rest, by a factor of two.

EMClarity radios set the world benchmark for commercial E-Band in all areas important for wireless ultra-low latency networks. Key specifications include:

- highest throughput at 5Gbps and 10Gbps (full duplex).
- lowest packet latency at sub 350ns for a repeater site.
- highest transmit power at 27dBm.
- highest symbol rate with full LDPC error correction (allowing ultimate receiver sensitivity and noise rejection).
- first available with an option of a high-gain auto-steered 57dBi 4 foot antenna for long range at high availability.
- first with 4 x 10Gbps optical ports to support a massive 40Gbps firmware upgrade roadmap.

PRODUCT FEATURES

- 5 and 10 Gbps throughput options
- LDPC Error correction for benchmark receiver sensitivity
- <350ns packet latency
- 1, 2, 3, 4 foot antenna options
- 4 x 10GE optical ports
- Web and SNMP management
- Single ODU configuration

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EXOMUX Specifications

10Gbps E-Band Millimetre Wave Radio



GENERAL

Throughput	5Gbps in 2.1 GHz BW (16QAM), 10Gbps in 4.2 GHz BW (16QAM)
Weight	<5 kg (excluding antenna)
Size	270 x 270 x 125mm
Repair	Field replaceable (<30 min to swap units over)
Service Availability	1+1 link protect configuration - with auto-switchover
Antenna Options	300mm, 600mm, 900mm, 1200mm

MODEM

Latency	<350 nanoseconds - One-way packet delay at repeater
Jitter	One-way packet delay variation (jitter) <<1 micro-seconds
Packet Size	Up to 9216bytes
Payload Interface	4 Optical 10Gbps Interfaces through MPO (MMF or SMF)
Modulation	16QAM, QPSK
Error Correction	LDPC with Gaussian and non-Gaussian noise model options
TX Power Control	Manual and Automatic

RF

HPA TX Power	20dBm and 22dBm
Threshold	5Gbps -57dBm, 10Gbps -53dBm
BER at Threshold	1E-11 (Per link packet loss <0.000001%)

POWER

Voltage	-36 to -60 V DC
Power Consumption	<70W

ENVIRONMENTAL

Temperature	-40 degrees Celsius to +55 degrees Celsius
MTBF	>100,000 hours (calculated per DOD/ind standards)
IP Rating	IP65

MANAGEMENT

Interface	LC 100Mbps Optical
SNMP version:	v1, v2c and 3
QAM functions	Y.1731
Monitoring	802.3ah
Fault Management	802.1ag

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