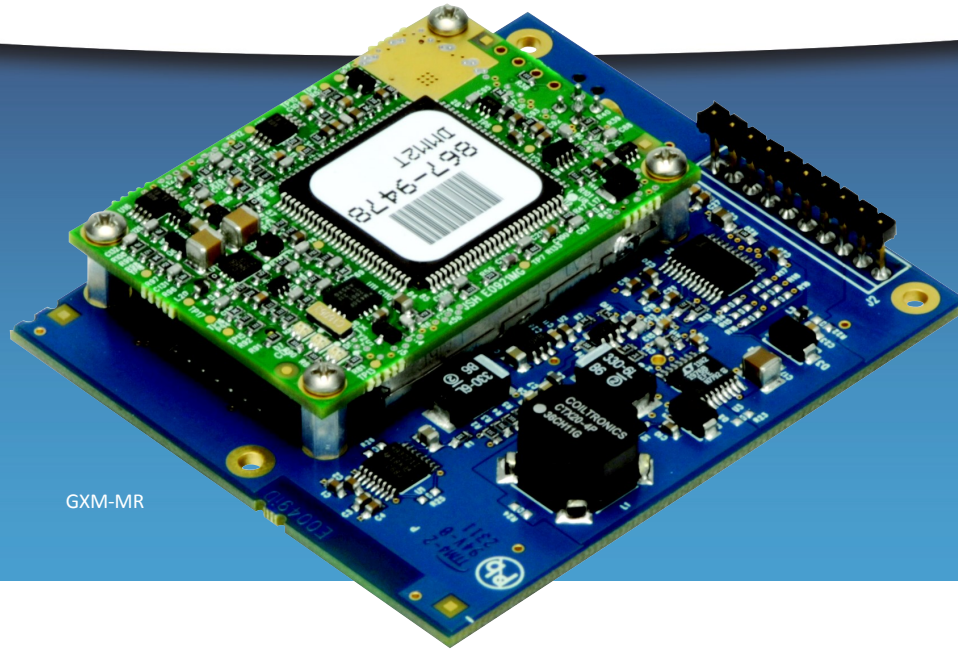


GX Series

GXM-MR 2.4 GHz Global Transceiver Module



GXM-MR

Key Features

Improved Low Signal Performance: RISC-based signal demodulation with matched filter

Versatile: A single radio can operate simultaneously as a Gateway, Endpoint, Repeater or as an Endpoint/Repeater

High Noise Immunity: Superior performance in noise congested environments

TDMA: Time Divisible Multiple Access available

Secure: FHSS technology prevents detection and unauthorized access; 128 bit or 256 bit AES encryption available

Industrial Grade Specifications: 100% tested for RF performance from -40°C to +85°C

Size & Performance: Smallest data radio with the highest performance available

UL Approved: Class 1 Division 2

Overview

Building on the success of our 900 MHz product family, the FreeWave 2.4 GHz GXM radio has been designed to provide OEMs the performance, reliability and quality they have come to know and expect in our products in a globally available spectrum and full ETSI, FCC, IC, RoHS and UL Class 1 Division 2 Certifications.

The GXM-MR has all of the functionality of our larger footprint GX family of products and is backward compatible with the I2 Series of radios.

All radios are designed, manufactured and tested in Boulder, CO.

Specifications

MODEL	FORM FACTOR	OPTIONS
GXM-MR-R	70 L x 62 W x 10 H (mm)	RS232
GXM-MR-T	70 L x 62 W x 10 H (mm)	TTL



GXM-MR 2.4 GHz Global Transceiver Module: **Technical Specifications**

TRANSMITTER

Frequency Range	2.4 to 2.483 GHz
Output Power	10 mW to 500 mW with option to limit to 100 mW
Data Link Range	20 miles with clear line of sight
Modulation	2 level GFSK
Occupied Bandwidth	230 kHz
Hopping Patterns	15 per band, 105 total, user-selectable
Hopping Channels	3 groups of 80
Hopping Bands	7, user-selectable
Frequency Zones	16 zones
RF Data Rate	Selectable 115.2 kbps to 153.6 kbps
RF Connector	MMCX

RECEIVER

Sensitivity	-104 dBm @ 115.2 kbps for BER 10 ⁻⁴ -101 dBm @ 153.6 kbps for BER 10 ⁻⁶
IF Selectivity	20 dB at fc +/- 345 kHz
Dynamic Range	+10 dBm 3 rd Order Intercept Point at Input Connector

DATA TRANSMISSION

Error Detection	32 bit CRC, retransmit on error
Data Encryption	AES 128/256 bit encryption available* and Proprietary Spread Spectrum Technology
Data Interface	1200 bps to 230.4 kbps

*Contact your FreeWave reseller or sales rep for implementation details.

Data Connector	10-pin header, 0.1 in. spacing, power/data connector
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Data Throughput	115.2 kbps
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POWER REQUIREMENTS

Operating Voltage	+6.5 VDC to +30 VDC
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+6.5 VDC Typical Current

Transmit: 375 mA	Receive: 120 mA	Sleep: 9 mA
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+12 VDC Typical Current

Transmit: 295 mA	Receive: 80 mA	Sleep: 5 mA
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+30 VDC Typical Current

Transmit: 140 mA	Receive: 51 mA	Sleep: 3 mA
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GENERAL INFORMATION

Operating Temperature	-40°C to +85°C
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Humidity	0 to 95% non-condensing
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Dimensions	70 L x 62 W x 10 H (mm)
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Weight	37 g
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GXM-MR 2.4 GHz Global Transceiver Module: **Applications**



Oil and Gas



Agriculture



Utilities



SCADA



Mining



Fleet Management



Municipal



Enterprise

FreeWave Technologies, Inc.

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For more information, visit www.freewave.com

Specifications are subject to change without notice.

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