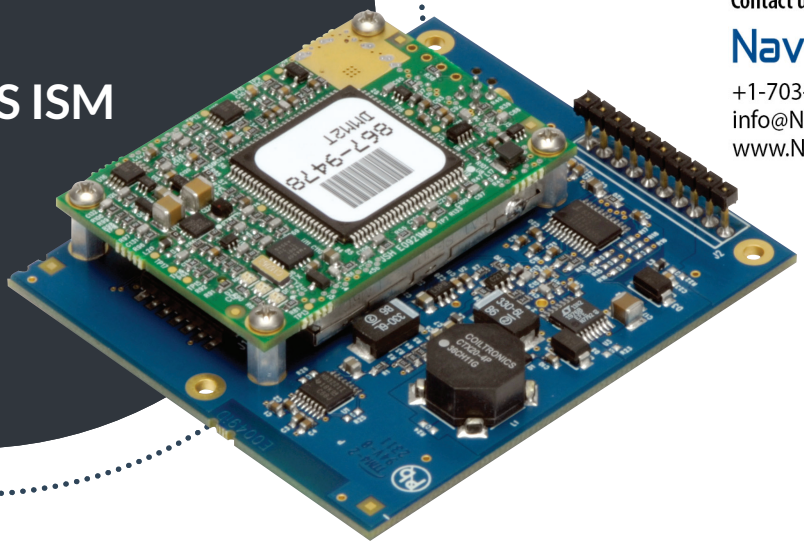
MM2 SERIES

MM2-MR,
900 MHZ SERIES ISM



FREEWAVE

Contact us for product details and pricing
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KEY FEATURES

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

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

Unparalleled Signal Performance: GaAs FET RF front end with multistage SAW filtering has unmatched combination of overload immunity and sensitivity

Selectable Speeds: 115.2 kbps - 153.6 kbps

Secure: Proprietary Spread Spectrum technology prevents detection and unauthorized access; 128-bit or 256-bit AES encryption available*

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

Noise Immunity: Superior performance in noise congested environments

Reliable: 100% tested for performance from -40°C to +85°C

OVERVIEW

The FreeWave MM2-MR radio has been designed to provide the performance, reliability, and quality that our customers have come to know and expect in our products in a MM2 “Mega Mini” form factor for applications where space is at a premium. The MM2-MR has all of the functionality of the larger footprint FGR2 Series of radios.

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

* FreeWave Technologies, Inc. manages technology subject to the U.S. Export Administration Regulations (EAR) and the Wassenaar Arrangement. All transactions must undergo a compliance check to ensure that none of the parties to an order are listed on the U.S. Bureau of Industry and Security’s Entity List.

TECHNICAL SPECIFICATIONS

SPECIFICATIONS

MM2-MR-R	2.75 L x 2.4 W x 0.4 H (in) MMCX Connector AES 128 or 256
MM2-MR-R-U	2.75 L x 2.4 W x 0.4 H (in) MMCX Connector, Class 1 Div 2 AES 128 or 256
MM2-MR-SR	2.75 L x 2.4 W x 0.4 H (in) SSMC Connector AES 128 or 256
MM2-MR-T	2.75 L x 2.4 W x 0.4 H (in) MMCX Connector, TTL AES 128 or 256
MM2-MR-T- U	2.75 L x 2.4 W x 0.4 H (in) MMCX Connector, TTL, Class 1 Div 2 AES 128 or 256

TRANSMITTER

Frequency Range	902 to 928 MHz (FHSS) (DTS)
RF Data Rate	115.2 kbps or 153.6 kbps, user-selectable
Output Power	10 mW to 1 W
Data Link Range	60 miles
Modulation	2 level GFSK
Occupied Bandwidth	230 kHz
Hopping Channels	50 to 112, user-selectable
Hopping Bands	7, user-selectable
Hopping Patterns	15 per band, 105 total, user-selectable
Frequency Zones	16 zones
RF Connector	MMCX (right-angle)

RECEIVER

Sensitivity -	107 dBm @ 115.2 kbps for BER 10^{-4} -102 dBm @ 153.6 kbps BER 10^{-4}
IF Selectivity	40 dB at fc +/- 230 kHz
RF Selectivity	50 dB at 896 MHz, 935 MHz
Dynamic Range	+10 dBm 3rd Order Intercept Point at Input Connector

DATA TRANSMISSION

Error Detection	32 bit CRC, retransmit on error
Data Throughput	115.2 kbps
Data Encryption	AES 128 or 256 Bit Encryption* and Proprietary Spread Spectrum Technology
Data Interface	1200 bps to 230.4 kbps

INTERFACE

Connector	10-pin header, 0.1 in. spacing, power/data connector

POWER REQUIREMENTS

Operating Voltage	+6.5 VDC to +30 VDC

+6.5 VDC Typical Current†
Transmit: 900 mA Receive: 100 mA Idle: 42 mA Sleep: 22 mA

+12 VDC Typical Current†
Transmit: 515 mA Receive: 60 mA Idle: 24 mA Sleep: 13 mA

+30 VDC Typical Current†
Transmit: 320 mA Receive: 32 mA Idle: 13 mA Sleep: 8 mA

†See Integration Manual for more detailed information

GENERAL INFORMATION

Operating Temperature	-40°C to +85°C
Humidity	0 to 95%, non-condensing
Dimensions	2.75 L x 2.4 W x 0.40 H (in)
Weight	38 g

APPLICATIONS

OIL & GAS | AGRICULTURE | UTILITIES | DEFENSE | SCADA | MINING | FLEET MANAGEMENT | MUNICIPAL | ENTERPRISE

CONTACT US

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