

MM2 Series

900 MHz 5 Watt Radio



KEY FEATURES

Output: 5 Watt RF output power

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

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

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

Selectable Speeds: 115.2 kbps and 153.6 kbps

Secure: Proprietary Spread Spectrum Technology prevents detection and unauthorized access

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

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

Options: TDMA, Super Epoch TDMA, AES Encryption

OVERVIEW

The MM2-9X5W 900 MHz 5 Watt radio has been designed to provide the performance, reliability, and quality that our customers have come to know and expect. The small form factor MM2-9X5W is ideal for applications where space is a premium.

The small form factor MM2-9X5W has all of the functionality of the MM2 series of radios and larger form factor FGR and FGR2 series of radios including: TDMA, Super Epoch TDMA, and AES encryption.

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

TECHNICAL SPECIFICATIONS

TRANSMITTER

Frequency Range	902 to 928 MHz
RF Data Rate	153 kbps and 115 kbps, user-selectable
Output Power	5 W
Data Link Range	90 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

RECEIVER

Sensitivity	-108 dBm @ 115.2 for BER 10^{-4} -103 dBm @ 153.6 kbps BER 10^{-4}
IF Selectivity	20 dB at fc +/- 230 kHz 40 dB at fc +/- 460 kHz
Dynamic Range	+10 dBm 3rd order intercept point at input connector

GENERAL INFORMATION

Operating Temperature	-40°C to +85°C
Humidity	0 to 95%, non-condensing
Dimensions	2.3 L x 2 W x 0.79 H (in)
Weight	34 g

DATA TRANSMISSION

Error Detection	32 bit CRC, retransmit on error
Data Throughput	115.2 kbps and 153.6 kbps
Data Encryption	FHSS technology
Options	AES 128/192/256-bit encryption TDMA Super Epoch TDMA
Data Interface	1200 bps to 230.4 kbps

POWER REQUIREMENTS

Operating Voltage	+5 VDC (4.9 to 5.5VDC) Both voltages are required
+5 VDC Typical Current	Transmit: 590 mA Receive: 160 mA Idle: 90 mA
+12 VDC Typical Current	Transmit: 1410 mA Receive: 0 mA Idle: 0 mA

INFORMATION TO ORDER

Model Number	Description
MM2-9X5W	Board Level, 5W
MM2-9X5W-CC	Conformal Coated MM2-9X5W

SOLUTIONS



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