

MM2 Series

MM2-13X5W 5 Watt Radio



The MM2-13X5W 1.3 GHz 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 MM2-13X5W is ideal for applications where space is a premium.

The small form factor MM2-13X5W has all of the functionality of the M13 and P Series radios of radios including: TDMA, Super Epoch TDMA, and AES encryption.

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

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: Using Frequency Hopping Spread Spectrum (FHSS) technology; available with 128-, 192-, or 256-bit AES encryption

Size & Performance: Small data radio with high performance

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

Transmitter	
Frequency Range	1.35 to 1.39 GHz
RF Data Rate	153 kbps and 115 kbps, user-selectable
Output Power	5 W (37 dBm; -1/+2 dB)
Range	Up to 145 km (90 miles) with clear line of sight
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	-106 dBm @ 115.2 for BER 10 ⁻⁴ -102 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

Data Transmission	
Type	Frequency Hopping Spread Spectrum Options: TDMA, Super Epoch TDMA
Error Detection	32-bit CRC, retransmit on error
Data Throughput	115.2 kbps and 153.6 kbps
Data Encryption	Options: 128- / 192- / 256-bit AES encryption
Data Interface	1200 bps to 230.4 kbps

Power Requirements				
Operating Voltage	+5 VDC and +12 VDC			
Current Consumption	Voltage	Transmit	Receive	Idle
	+5 VDC	635 mA	135 mA	19 mA
	+12 VDC	1.6 A	4.5 mA	4.5 mA

General Information	
Operating Temperature	-40°C to +85°C (-40°F to +185°F)
Humidity	0 to 95%, non-condensing
Dimensions	2.06 L x 2 W x 1.05 H (in)
Weight	50 g

Information to Order	
Model Number	Description
MM2-13X5W	Board Level, 5W