

MM2 Series

MM2-9X5W 900 MHz Series



MM2-9X5W
900 MHz

OVERVIEW

FreeWave Technologies' MM2-9X5W 5 Watt radio has been designed to provide the performance, reliability, and quality that our customers have come to know and expect in our MM2 products in a MM2 small form factor for applications where space is at a premium. The MM2 has all of the functionality of the larger footprint FGR Series of radios

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

MODEL	DIMENSIONS	OPTIONS
MM2-9X5W	4" L x 2" W x 0.5" H	TTL

APPLICATIONS



Government & Defense

KEY FEATURES

- 5 Watt maximum output power
- **Improved Low Signal Performance:** RISC-based signal demodulation with matched filter.
- **Versatility:** A single radio can operate as a master, slave, repeater, or slave/repeater.
- **Unparalleled Signal Performance:** RF front end with multistage SAW filtering has unmatched combination of overload immunity and sensitivity
- **TDMA:** Time Divisible Multiple Access available
- **Selectable Speeds:** 115.2 kbps to 153.6 kbps
- **Secure:** Proprietary spread spectrum technology prevents detection and unauthorized access; 128 & 256 bit AES encryption available*
- **Size & Performance:** Smallest data radio with the highest performance available
- **Reliable:** 100% tested for performance from -40° C to +85° C
- Superior performance in noise congested environments

TRANSMITTER	Frequency Range	902 to 928 MHz (FHSS) (DTS)
	RF Data Rate	153 kbps or 115 kbps, User Selectable
	Output Power	5 Watt
	Data Link Range	90+ miles Limited by delay, EC Y LB
	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 (Straight)
RECEIVER	Sensitivity	-108 dBm @ 115.2 kbps 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
	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	FHSS Technology
	Data Interface	1200 bps to 230.4 kbps
DIAGNOSTICS	Connector	Straight 16-pin dual row header 2.0mm spacing
POWER REQUIREMENTS	Operating Voltage	Input 1: +12 to +15 VDC Input 2: +4.9 to +5.5 VDC
GENERAL INFORMATION	Operating Temperature	-40° C to +85° C (-40° F to +158° F) Need H/S for full DC
	Humidity	0 to 95% non-condensing
	Dimensions	101mm L x 51mm W x 13mm H (4" L x 2"W x 0.5" H)
	Weight	34 g (1.2 oz)

* These devices are regulated under the U.S. International Traffic in Arms Regulation (ITAR). These regulations control the Export and Import of the defense articles. These devices may only be sold or transferred to a non-U.S. party (in the U.S. or abroad) after authorization is obtained from the U.S. Department of State. Customer (a) agrees to comply with ITAR regulations and (b) shall be responsible for obtaining all necessary U.S. Government authorizations required to ensure compliance with these and other applicable U.S. Laws. Please contact FreeWave for export control information for specific products.

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