

# MM2 SERIES

## 900 MHz ISM



MM2-T

### KEY FEATURES

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

**Versatile:** A single radio can operate as a Master, Slave, Repeater, or Slave/ Repeater

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

**TDMA:** Time Divisible Multiple Access available

**Selectable Speeds:** 115.2 kbps - 153.6 kbps

**Secure:** FHSS technology prevents detect on 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 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 compact form factor for applications where space is at a premium. The MM2 has all of the functionality of the larger footprint FGR2 Series of radios

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

### SPECIFICATIONS

MODEL	DESCRIPTION	DIMENSIONS	OPTIONS
MM2-T	Base Version	2 L x 1.4 W x 0.38 H (in)	AES 128 or 256*, TDMA
MM2-T-U	Class 1, Div	2 L x 1.4 W x 0.38 H (in)	AES 128 or 256*, TDMA
MM2-T-LF	RoHS	2 L x 1.4 W x 0.38 H (in)	AES 128 or 256*, TDMA

# MM2-TTL 900MHZ SERIES RADIO: TECHNICAL SPECIFICATIONS

## TRANSMITTER

Frequency Range	902 to 928 MHz (FHSS) (DTS)
RF Data Rates	115 kbps or 153 kbps, user selectable
Output Power	10mW to 1W
Data Link Range	60 miles
Modulation	2 level GFSK
Channel Spacing	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, user-selectable
RF Connector	MMCX (right-angle)

## RECEIVER

Sensitivity	-108 dBm @ 115.2 kbps for BER 10 <sup>-4</sup> -103 dBm @ 153.6 kbps BER 10 <sup>-4</sup>
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 Rate	115.2 kbps
Data Encryption	AES 128 or 256*
Data Interface	1200 bps to 230.4 kbps

## INTERFACES

Connector	Straight 14-pin dual row header 2.0 mm spacing
Type	TTL serial

## POWER REQUIREMENTS

Operating Voltage	+5 VDC (+/- 5%)
+5 VDC Typical Current †	
Transmit: 855 mA	Receive: 90 mA vVIdle: 21 mA

## GENERAL INFORMATION

Operating Temp	-40°C to +85°C
Humidity	0 to 95%, non-condensing
Dimensions	2 L x 1.4 W x 0.38 H (in)
Weight	14 g

### > MM2-TTL 900MHZ SERIES RADIO: Applications



## CONTACT US

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