

# MM2 Series

## MM2-MU-LV 340-400 MHz Radio



MM2-MU-LV-T

### OVERVIEW

FreeWave Technologies' military products are designed to meet the rigorous demands of military and government users worldwide. This user-configurable 340-400 MHz product is available as an OEM board level radio. It is used in applications ranging from UAVs to UGVs, and more. FreeWave military products share the same features as our other radios that assure accurate data transmission, such as 32 bit CRC error detection with automatic retransmission and more.

The FreeWave MM2 Series of radios has been designed to provide the performance, reliability, and quality that our customers have come to know and expect in our products. The MM2 combines high performance with a small size making it ideal for applications where space is at a premium.

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

MODEL	DIMENSIONS	OPTIONS
MM2-MU-LV-C	2" L x 2" W x 0.38" H	RS232/RS485
MM2-MU-LV-T	2" L x 2" W x 0.38" H	TTL

### APPLICATIONS



Government & Defense

### KEY FEATURES

- **High Speed:** 115.2 kbps maximum throughput
- **Long Range:** Up to 60 miles with clear Line of Sight
- **Error-free Communications:** 32 bit CRC with automatic retransmission
- Input voltage range is +5 VDC at full RF output power. Receive current is less than 100 mA @ 12 VDC. Sleep mode only consumes 5 mA
- Diagnostics port connector allows real-time local diagnostics and setup menu access
- Diagnostics include signal level in dBm
- RS232/RS485 or TTL interface
- Superior performance in noise congested environments
- **Reliable:** 100% tested for performance from -40° C to +75° C

<b>TRANSMITTER</b>	Frequency Range	340 to 400 MHz	
	RF Data Rate	153 kbps or 115 kbps, User Selectable	
	Output Power	5 mW to 2 W	
	Data Link Range	60 miles	
	Modulation	2-level GFSK	
	Occupied Bandwidth	230.4 kHz	
	RF Connector	MMCX	
<b>RECEIVER</b>	Sensitivity	-107 dBm @ BER 10 <sup>-4</sup>	
	System Gain	140 dB	
<b>DATA TRANSMISSION</b>	Error Detection	32 bit CRC, Retransmit on error	
	Link Throughput	115.2 kbps maximum	
	Data Encryption	FHSS Technology	
	Data Interface	Serial	
	Protocol	RS232/RS485 or TTL	
<b>DIAGNOSTICS</b>	Connector	Diagnostic port part of 14 Pin connector. RSSI pin connection	
<b>POWER REQUIREMENTS</b>	Operating Voltage	(+/-) 5VDC	
	Typical Current	<b>Mode</b>	<b>+5 VDC</b>
		<b>Transmit</b>	1.3 A
		<b>Receive</b>	160 mA
		<b>Idle</b>	41 mA
	<b>Sleep</b>	10 mA	
<b>GENERAL INFORMATION</b>	Operating Temperature	-40° C to +75° C (-40° F to +167° F)	
	Humidity	0 to 95% non-condensing	
	Dimensions	2" L x 2" W x 0.38" H in (50.8 mm x 50.8 mm 9.7 mm)	
	Weight	0.74 oz (21 g)	

\* 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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