



F Series

*F50EX008-2 Military 225 to 400 MHz Radio



*F50EX008-2

OVERVIEW

The FreeWave Technologies military products are designed to meet the rigorous demands of military and government users world wide. This user-configurable 225-400 MHz product is available as OEM board level radio. It is used in applications ranging from UAV's to UGV's and more.

FreeWave military products share the same features as our other radios that assure data transmission such as 32 bit CRC error detection with automatic retransmission, 115.2 kbps throughput, high speed hopping and more.

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

APPLICATIONS



Government & Defense

KEY FEATURES

- Frequency Hopping Spread Spectrum
- **Long Range:** 60 mile line of sight, ability to extend through repeaters
- **Error Free Communications:** 32 bit CRC with automatic retransmission
- **Industrial Grade Specifications:** 100% tested for RF performance from -40° C to +75° C
- Repeater and simultaneous Slave and Repeater function all in a single radio
- RS232/RS485/RS422 interface
- +9.5 to +30 VDC
- **Noise Immunity:** Superior performance in noise congested environments.
- **Secure:** Proprietary spread spectrum technology prevents detection and unauthorized access
- TDMA Available

MODEL	DIMENSIONS	PRODUCT OPTIONS
F50EX008-2	128 L x 62 W x 20 H (mm)	Board Level

F50EX008-2 Military 225-400 MHz Radio Technical Specifications

TRANSMITTER

Frequency Range	225 to 400 MHz
Output Power	4 Watt (average)
Data Link Range	60 miles, Clear Line of Sight
Modulation	2 level GFSK
Occupied Bandwidth	230 kHz
RF Connector	SMA

RECEIVER

Sensitivity	-103 dBm @ BER 1x10 ⁻⁶
Selectivity	20 dB at fc +/- 230 kHz
System Gain	139 dB exclusion of antennas

DATA TRANSMISSION

Error Detection	32 bit CRC, Retransmit on error
Data Encryption	Proprietary Spread Spectrum Technology
Maximum Throughput	115.2 kbps
Data Interface	RS232/RS485/RS422

POWER REQUIREMENTS

Operating Voltage	+9.5 to +30 VDC			
Typical Current	Mode	+9.5 VDC	+12 VDC	+30 VDC
	Transmit	3.2 A	2.5 A	750 mA
	Receive	315 mA	250 mA	100 mA

GENERAL INFORMATION

Operating Temp. Range	-40° C to +75° C or -40° C +90° C (available)
Dimensions	128 L x 62 W x 20 H (mm)
Weight	200 g
Humidity	0 to 95 % non-condensing

* This device is regulated under the U.S. International Traffic in Arms Regulation (ITAR). These regulations control the Export and Import of the defense articles. The device 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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