

F SERIES

*F50EX008-2 MILITARY 225 TO 400 MHZ RADIO

FREEWAVE



KEY FEATURES

Frequency Hopping Spread Spectrum

Long Range: 60 mile line of sight,
ability to extend through Repeaters

Error free communication: 32 bit
CRC with automatic retransmission

Industrial Grade Specifications:
100% tested for RF performance from
-40° C to +75° C

Repeater and simultaneous
Endpoint and Repeater function all
in a single radio

RS232/RS422/RS485 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

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 UAVs to UGVs 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.

* 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.

TECHNICAL SPECIFICATIONS

SPECIFICATIONS

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

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 1x 10 ⁻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/RS422/RS485

POWER REQUIREMENTS

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

GENERAL INFORMATION

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

APPLICATIONS



OIL & GAS AGRICULTURE UTILITIES DEFENSE SCADA MINING FLEET MANAGEMENT MUNICIPAL ENTERPRISE

CONTACT US

5395 Pearl Parkway, Boulder, CO 80301
 TF 866.923.6168 T 303.381.9200
 For more information, visit www.freewave.com