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# F - SERIES\*\*

## FGBR115RC Military 225 - 400 MHz Radio

### 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 in a ruggedized enclosure. 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, 115.2 Kbps throughput, high speed hopping and more.

### Features:

- Frequency Hopping Spread Spectrum.
- Long Range: 60 mile line of site range, 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 / 485 / 422 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.



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Technical Specifications

Transmitter													
Frequency range	225-400 MHz (FHSS)												
Output Power	4 W (average)												
Range, Line of Sight	60 miles												
Modulation	2 level GFSK												
Occupied Bandwidth	230 kHz												
RF Connector	N Type												
Receiver													
Sensitivity	-103 dBm @ BER 10 <sup>-6</sup>												
Selectivity	20 dB at fc ± 230 kHz												
System Gain	139 dB												
Data Transmission													
Error Detection	32 bit CRC, Retransmit on Error												
Data Encryption	Dynamic Key Substitution												
Maximum Throughput	115.2 kbps												
Data Interface	DB-9												
RF Connector	N Type Female												
Channel Spacing	230.4 kHz												
Power Requirement													
Operating Voltage	9.5-30 VDC												
Current Drain	<table border="1"> <thead> <tr> <th>Mode</th> <th>9.5 VDC</th> <th>12 VDC</th> <th>30 VDC</th> </tr> </thead> <tbody> <tr> <td>Transmit</td> <td>3.2 A</td> <td>2.5 A</td> <td>750 mA</td> </tr> <tr> <td>Receive</td> <td>315 mA</td> <td>250 mA</td> <td>100 mA</td> </tr> </tbody> </table>	Mode	9.5 VDC	12 VDC	30 VDC	Transmit	3.2 A	2.5 A	750 mA	Receive	315 mA	250 mA	100 mA
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 Temperature Range	-40°C to +75°C, (-40°C to +90°C available)												
Dimensions	165 L x 74 W x 59 H (mm)												
Weight	441 grams												
Humidity	0 to 95% non-condensing												

\*\*This device is regulated under the U.S. International Traffic in Arms Regulations (ITAR). These regulations control the Export and Import of defense articles. The device may only be sold or transferred to a non-U.S. person (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.

FreeWave Radios Require Professional Installation.

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