FGR Series

FGRplus SEO Industrial 900 MHz Series

1880 S. Flatiron Court, Suite F
Boulder, CO 80301

tf 866.923.6168
p 303.381.9200
f 303.786.9948

www.freewave.com
sales@freewave.com

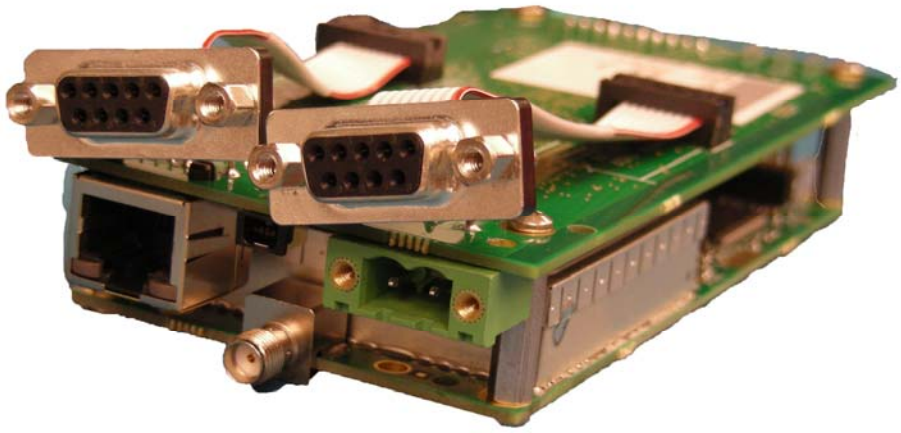
Overview:

The FreeWave Technologies FGRplus SEO is a board level product offered for customers who need an industrial grade high speed Ethernet radio that operates in harsh and challenging RF environments. Designed to the same high level of quality that FreeWave products are known for. The FGRplus SEO is a reliable solution that delivers communication without barriers.

The FGRplus SEO supports TCP, industrial grade wireless security and serial communications, all in one package. All radio are designed, manufactured and 100% tested at FreeWave's world class manufacturing facility in Boulder, Colorado.

Features:

- Wide input voltage range: 6.5 to 30 VDC.
- The lowest current draw of any radio: 12 Volts.
  - 140 mA in full time recieve
  - 550 mA transmit current
- Strong Signal Performance: Maintains high sensitivity even in marginal conditions.
- Versatile: A single radio can operate simultaneously as a Slave and or as a Repeater.
- High Noise Immunity: Superior performance in noise congested environments.
- Secure: Proprietary spread spectrum technology prevents detection and unauthorized access.
- High Speed: 154 Kbps over-the-air throughput.
- Point-to-Point Range: 60 miles with clear line of sight.
- Point-to-Multipoint Range: 60 miles with clear line of sight.
- Error Free Communications: 32 bit CRC with automatic retransmission.
- Industrial Grade Specifications: 100% tested for RF performance from –40° C to +75° C.



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FGRplus SEO Industrial 900 MHz Radio Specifications

Transmitter				
Frequency Range	902-928 MHz (FHSS)			
Output Power	5 mW to 1 Watt			
Range, Line of Sight	Point-to-point: 6o miles, Point-to-multipoint: 60miles			
Modulation	2 level GFSK			
Occupied Bandwidth	230.4 kHz			
Hopping Patterns	15 per Band, 105 total, user selectable			
Hopping Channels	112			
Hopping Bands	7, user selectable			
Frequency Zones	16 Zones, 7-8 channels per zone			
RF Connector	TNC			
Receiver				
Sensitivity	-110 dBm for BER $1x10^{-4}$ at 115Kbs, -106 dBm for BER $1x10^{-4}$ at 153.6 Kbs			
Selectivity	20 dB at fc +/- 230 kHz			
System Gain	140 dB			
Data Transmission				
Error Detection	32 bit CRC, Retransmit on error			
Data Encryption	AES 128 bit encryption and Proprietary Spread Spectrum Technology			
Authentication	RADIUS			
Data Interface	Ethernet			
Protocol	Ethernet: IEEE 802.3 TCP/IP, DHCP, ICMP, UDP, ARP multicast TFTP			
Data Connector	Ethernet 10/100 Base T Auto-crossover and 2x Serial DB9			
Data Interface				
Connector				
Power Requirements				
Operating Voltage	6.5 to 30VDC			
Current [mA]	**Mode**	**6.5 VDC**	**12 VDC**	**30 VDC**
	Transmit	1.1 A	550 mA	220 mA
	Receive	252 mA	150 mA	63 mA
	Idle	140 mA	71 mA	32 mA
General Information				
Operating Temperature Range	-40 °C to +75 °C (-40°F to +175°F)			
Dimensions	165 L x 74 W x 59 H (mm)			
Weight	g			
Humidity	0 to 95% non-condensing			

7.7.11

FreeWave Radios Require Professional Installation.

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