



SMR-Series**

3400 SMR 3.4 GHz Military Radio

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Overview:

The FreeWave Technologies 3400 SMR radio provides outstanding performance and versatility in a small footprint that is ideal for OEM applications. The board level radio offers a cost effective solution that allows customers to incorporate wireless communications into a wide variety of applications. With more interface options available a surface mount design and no additional RF shielding, the 3400 SMR board level product has tremendous flexibility for use in applications around the world.

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

Features: *All specifications are tested and guaranteed.*

- Frequency Hopping Spread Spectrum.
- High Speed - Over the air data rate of 115.2 Kbps.
- Long Range - 20 mile range.
- Error Free Communications - 32 bit CRC with automatic retransmission.
- Industrial Grade Specifications – 100% tested for RF performance from (-40°C to +75°C).
- Improved supply voltage range and power consumption. Input voltage range is now 6-30 VDC at a full RF output power. Receive current is less than 80 mA @ 12 VDC.
- Separate diagnostic serial allows real-time local diagnostics and set up menu access.
- Master, slave, repeater functions in a single radio.
- Noise Immunity - Superior performance in noise congested environments.
- Secure - Proprietary spread spectrum technology prevents detection and unauthorized access.



Enclosed version available with optional mounting shoe and din rail mount.

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3400 SMR 3.4 GHz Military Radio Specifications

Transmitter				
Frequency Range	3.3-3.5 GHz (FHSS)			
Output Power	5 mW to 750 mW			
Range - Line of Sight	20 miles			
Modulation	2 level GFSK, 115.2 Kbps or 153.6 Kbps			
Occupied Bandwidth	350 kHz			
Hopping Patterns	25-200 MHz in 25 MHz steps, single channel 15 per Band, 105 total, user selectable			
Hopping Frequency	Up to 112			
Hopping Bandwidth	6, user selectable			
Frequency Zones	16 zones			
RF Connector	Board Level: SMA straight or reversed, or no RF connector Enclosed level: TNC (female connectors)			
Receiver				
Sensitivity	-102 dBm for BER 1x10 ⁻⁶ -107 dBm for BER 1x10 ⁻⁴			
Selectivity	20 dB at fc +/- 350 kHz			
System Gain	132 dB			
Data Transmission				
Error Detection	32 bit CRC, Retransmit on error			
Data Encryption	AES 128 bit encryption* and Proprietary Spread Spectrum Technology			
Link Throughput**	115.2 Kbps standard speed, 80 Kbps low speed <i>**Uncompressed, measured assuming 75% frequency available</i>			
Data Interface	Serial			
Protocol	RS232/RS485/RS422 or TTL			
Data Connector	Board Level: 10-pin header with locking ramp, 0.1 inch spacing, power/data connector Enclosed (ruggedized): DB9			
Data Transmission				
IF Selectivity	40 dB at fc +/- 1.5 MHz			
Power Requirements				
Operating Voltage	6 to 30 VDC			
Current [mA]	Mode	6 VDC	12 VDC	30 VDC
	Transmit	400 mA	325 mA	150 mA
	Receive	95 mA	80 mA	35 mA
	Idle	30 mA	25 mA	10 mA
	Sleep	8 mA	5 mA	2 mA
General Information				
Operating Temperature Range	-40°C to +75°C			
Dimensions	Board Level: 127mm L x 61mm W x 15mm H Enclosed: 173mm L x 107mm W x 35mm H			
Weight	Board Level: 60g Enclosed: 590g			
Humidity	0 to 95% non-condensing			

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****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 and implantation details*.**



FreeWave Radios Require Professional Installation. Specifications may change at any time without notice. ©2010 FreeWave

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