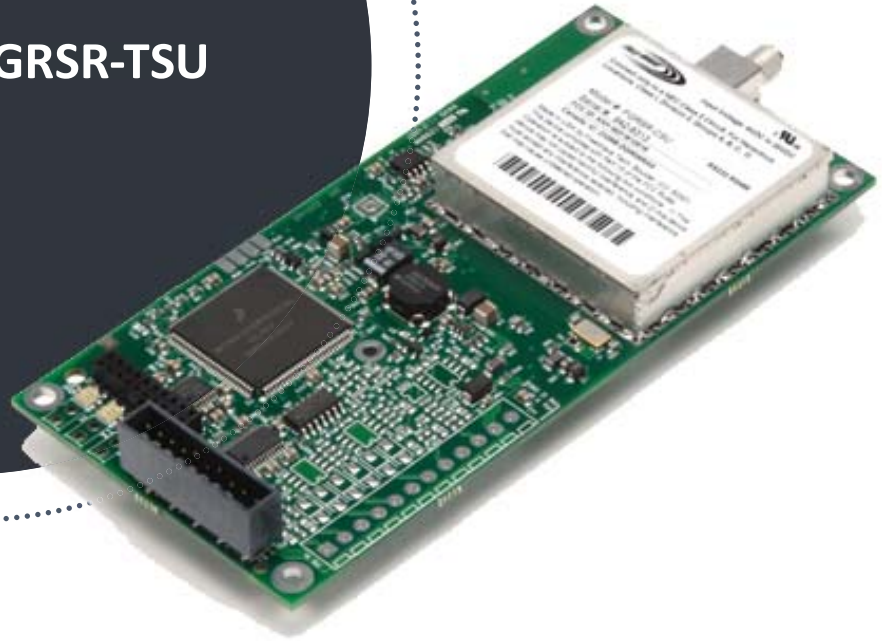


FGR Series

FGRSR-CSU & FGRSR-TSU



KEY FEATURES

Versatility: Gateway, Endpoint, Repeater or simultaneous Endpoint and Repeater function in a single radio.

Long Range: 2 miles with clear line of sight with the ability to extend through Repeaters.

Noise Immunity: Superior performance in noise congested environments.

Secure: Frequency Hopping Spread Spectrum technology prevents detection and unauthorized access.

Error Free Communications: 32-bit CRC with automatic retransmissions.

Low Power Consumption: Ideal for solar, battery, and DC applications.

Industrial Grade: Operating Temperature from -40°C to +75°C. C1D2

OVERVIEW

The FGRSR board level radios 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 +6 to +20 VDC operating voltage, a temperature range of -40° C to +75° C, surface mount design, no additional RF shielding, and a unit with Class 1 Div 2 classification, the OEM board level product has tremendous flexibility for use in applications around the world.

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

SOLUTIONS



DRONES & ROBOTICS



EARTH MONITORING



GOV & DEFENSE



IRRIGATION & PRECISION AGRICULTURE



ASSET TRACKING



OIL & GAS



WATER & WASTEWATER



SMART CITIES



UTILITIES

TECHNICAL SPECIFICATIONS

TRANSMITTER

Frequency Range	902 to 928 MHz
Output Power	Up to 100 mW
Range	Up to 3.2 km (2 mi.), clear line of sight
Channel Spacing	230 kHz
RF Data Rate	115.2 kbps

RECEIVER

Sensitivity	-98 dBm @ BER 10 ⁻⁶ -100 dBm @ BER 10 ⁻⁴
Selectivity	20 dB at fc +/- 230 kHz
System Gain	120 dB

DATA TRANSMISSION

Type	Frequency Hopping Spread Spectrum
Modulation	2 GFSK
Data Throughput	115.2 kbps
Error Detection	32-bit CRC, retransmit on error
Data Encryption	FHSS encryption
Hopping Zones	16 zones, user-selectable
Hopping Bands	7, user-selectable
Hopping Channels	50 to 112, user-selectable
Hopping Patterns	15 per band, 105 total, user-selectable
Protocol	RS232 / RS422 / RS485 or TTL

POWER REQUIREMENTS

Operating Voltage +6 TO +20VDC (+/- 5%)

Current Consumption

Voltage	Transmit	Receive	Idle
+6 VDC	120 mA	68 mA	22 mA
+12 VDC	68 mA	36 mA	13 mA
+20 VDC	46 mA	28 mA	10 mA

INTERFACES

Data Interface 10-pin header with locking ramp
for power and data
2mm pin spacing

Diagnostics Interface Separate 20-pin PCB header Ltd.

RF Connector SMA

GENERAL INFORMATION

Operating Temperature -40°C to +75°C (-40°F to +167°F)

Humidity 0 to 95%, non-condensing

Dimensions 127 L x 61 W x 16 H (mm)
5.0 L x 2.4 W x 0.63 H (in.)

Weight 50 g (0.11 lbs.)

CERTIFICATIONS

Safety Class 1 Div 2 Groups A-D

INFORMATION TO ORDER

Model Number	Description
FGRSR-CSU	Board Level, RS232, RS422, RS485
FGRSR-TSU	Board Level, TTL

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