



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

Licensed Band LRS455

Industrial 435-470 MHz Radio

Overview:

The FreeWave Technologies board level and enclosed LRS455 radios provide outstanding performance and versatility. The LRS455 offers a cost effective solution that allows customers to incorporate wireless communications into a wide variety of applications. The small footprint of the board level version is ideal for internally mounted applications. It also offers a surface mount design, and no additional RF shielding. All radios are designed and tested in Boulder, Colorado.

Features:

- User selectable: Across the 435-470 MHz spectrum.
- High Speed: 19200 bps throughput on a 12.5 kHz channel.
- Long Range: 70 mile range with clear line of sight with the ability to extend through a repeater.
- Error Free Communications: 32 bit CRC with automatic retransmission.
- Industrial Grade Specifications: 100% tested for RF performance from -30°C to +60°C.
- Input voltage range 6 to 27 VDC at full RF output power. Receive current is less than 100 mA @ 12 VDC.
- Separate diagnostic serial connector allows real-time local diagnostics and setup menu access.
- Diagnostics: Including signal level in dBm and Transmit Power.
- Interface: The LRS455 is available with a user-programmable RS-232/RS-485/RS-422 interface. TTL versions are also available.
- Noise Immunity - Superior performance in noise congested environments.
- Repeater with store and forward capability, also simultaneous slave & repeater function all in one radio.
- UL Class 1 Div 2



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LRS455 Industrial 435-470 MHz Radio Technical Specifications

Transmitter				
Frequency Range	435-470 MHz			
Output Power	Programmable to 2 W			
Range - Line of Sight (LOS)	70 miles with clear LOS			
Modulation	2 and 4 level GFSK			
Occupied Bandwidth	12.5 kHz			
Frequency Channels	5600 Channels @ 6.25 kHz			
Receiver				
Sensitivity	-112 dBm for 10 ⁶ (9600 bps)			
Data Transmission				
Error Detection	32 bit CRC, Retransmit on error			
Link Throughput	9.6 Kbps at 2 level GFSK 19.2 Kbps at 4 level GFSK			
Data Interface	RS232 / 485 / 422 or TTL			
Data Connector	Board Level: 10 pin header with locking ramp, 0.1 inch spacing power/data connector. Enclosed: DB9			
Diagnostics				
Connector	Board Level: Separate 20-pin connector Enclosed: 3-pin PCB header			
Power Requirement				
Operating Voltage	6 to 27 VDC			
Current Drain	Mode	+6 VDC	+12 VDC	+27 VDC
	Transmit	1.5 A	0.75 A	0.34 A
	Receive	200 mA	100 mA	45 mA
	Idle	50 mA	25 mA	12 mA
General Information				
Operating Temperature Range	-30 °C to +60 °C			
Dimensions	128 L x 61.8 W x 19.7 H (mm) Enclosed: 173 L x 112 W x 35 H (mm)			
Weight	74.4 g Enclosed: 605 g			
External Antenna Connector	SMA (board level), TNC (enclosure)			
Humidity	0 to 95% non-condensing			
Model Numbers				
Board Level	LRS455-C-U			
Enclosed	LRS455-CE-U			

FreeWave Radios Require Professional Installation. Specifications may change at any time without notice. ©2011 FreeWave Technologies, Inc.

