

ENGINEERING SPECIFICATIONS

PLANTLINC™ PLR5000

PlantLinc™ PLR5000 902-928MHz

License-Free Frequency Hopping Spread Spectrum Radio Modem

Contact Data-Linc Group for the latest updates to Specifications

Scope

The work under this section includes the furnishing of all labor, materials, equipment and supervision for furnishing spread spectrum radio modems as indicated on the drawings and specifications.

Submittals

Submit shop drawings and product data for equipment furnished under this Section in accordance with the GENERAL CONDITIONS.

Furnish Operation and Maintenance Manuals in accordance with Section, OPERATION AND MAINTENANCE MANUALS.

Manufacturer

The radio modems shall be Spread Spectrum Frequency Hopping license-free wireless radio modems as supplied by the Data-Linc Group or pre-approved equal.

Unitary Responsibility

In order to unify responsibility for proper operation of the spread spectrum radio modems, it is the intent of these Specifications that all components shall be furnished by a single supplier (unitary source).

General

- All radio modems, supplied under this contract must be FCC approved under article 15. Each radio modem shall be capable of store and forward data routing and support the application protocol communication.
- All radio modems shall be license-free frequency hopping spread spectrum radio modems.
- All radio modems shall operate in the 902-928MHz Spread Spectrum band.
- All radio modems shall not require FCC site license. All radio modems shall have FCC equipment authorization as a FCC Part 15-Subclass C.
- All radio modems shall have the capability to transmit 4 miles (6.5 km) with line of site using omni directional antenna.
- All radio modems shall be factory configured or end user configured via personal computer using a terminal Emulation Software or Hyper Terminal without changing internal components. Opening the modem to change parameters is unacceptable.
- All radio modems shall be configurable to operate as a Master, Remote, Repeater or Repeater/Remote, and shall be capable of forwarding data packets in a prescribed route to an end destination. Each Master station and its assigned Remotes units shall operate on a unique transmit/receive frequency/code and on a non-interfering basis with other Master/Remote systems.
- Up to fifteen (15) separate radio systems shall operate simultaneously in the same location without interference.
- All radio internal PC boards including the RF section and the modem section must be enclosed in a single metal housing to eliminate interference with data/computer equipment. Radio modem housing shall be panel, or DIN rail mountable.

ENGINEERING SPECIFICATIONS PLR5000 (CONTINUED)

Communications Data Rate

All radio modems shall support RS232 based data communications. Transceiver shall accept 10 or 11 bit asynchronous serial data.

All radio modems shall be capable of operating at 1200 bps; 2400 bps; 4800 bps; 9600 bps; 19,200 bps; 38,400 bps. Actual data rate used shall be user selectable.

All radio modems shall transmit an Asynchronous full duplex, uncompressed data rate up to 38.4 Kbaud using 112 distinct channels in the 902 to 928 MHz band.

All modems shall have error checking utilizing a CRC 32 bit error checking.

All radio modems shall be capable of providing point-to-point, multi-point operation.

External antennas shall be capable of being mounted up to two hundred fifty (100') feet (30 meters) from radio modem.

Electrical

10.5 - 18.0 VDC; 12 VDC wall mounted transformer, optional 24 VDC.

Transmit power shall be 550 mA @ 12 VDC @ 200 mw. Receive current shall be 200 mA @ 12 VDC Idle current shall be 65 mA @ 12 VDC.

Radio modems shall have the following indicators visible on the Outside surface: P-Power (red), C-Carrier Detect (amber), I-Input Data (yellow), O-Output Data (green).

Radio modem shall have output power of 200 mw (+23 dBm) maximum (10 field programmable steps).

Radio modem shall be capable of a response time of 5 to 15 ms turnaround delay between modems typical.

Receiver

Sensitivity shall be -106 dBm @ 10^{-6} raw BER

Selectivity shall be 20 dB @ FC +/- 115 KHz; 60 dB @ FC +/- 145 KHz

System gain shall be 129 dB.

Operating Environment

Radio modems shall be rated for NEMA 1 environments.

Radio modems shall operate over a range of -4° to +167° F (-20° to +75°C).

Manufacturer

The Spread Spectrum Radio Modem shall be SRM6000 as supplied by Data-Linc Group.

ALLIANCE PARTNERS



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Specifications subject to change without notice

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