Laird TECHNOLOGIES

Innovative Technology for a Connected World

ConnexLink™

Wireless Cable Replacement System

v1.2



THE FASTEST WAY TO WIRELESS

ConnexLink™ stand-alone radio modules are set up in minutes to cut the cables between RS232 or RS485 devices. Their flexibility and economic price allow users to quickly upgrade wired terminals to cordless operation in industrial, commercial, and residential applications.

Powered by a 125mW 2.4GHz radio or a 1000mW 900MHz radio, each unit is small and easily portable for use in mobile and temporary settings, as well as fixed installations. Optional software enables custom configurations based on user needs.

ConnexLink implements a proprietary communication protocol to provide secure local data transmissions. Because it uses FHSS technology, the data remains reliable over distances of up to 20 miles (32 km) line-of sight (900MHz version). Use of license-free frequency bands ensures that units are ready to use with no further certification requirements. ConnexLink radio modules provide simple elimination of cables with a wireless link replacement. Every unit is backed by a full one-year warranty.

FEATURES

- Durable industrial-grade enclosure
- Transmits around corners, through walls
- Point-to-point and point-to-multipoint setups
- Extremely cost effective
- Up to 20 mile range
- Simple cable replacement
- Options for 910 MHz and 2.4 GHz

MARKETS

- Weigh scales
- Process control
- Kiosks and POS
- Data logging
- Electronic signs

global solutions: local support

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Flexible RF Protocol

Laird Technologies' embedded transparent protocol simplifies the integration process by allowing seamless plug-and-play installation. As each unit receives raw data, it manages over-the-air protocol to assure successful communication. Headers, data packet length, and CRCs are not required. Broadcast communication to all devices or address packets to a specific destination using unique MAC addresses embedded in each unit.

Parameter	CL024-100	CL4790-1000	CL4490-1000
Network architecture	Server/client	Peer-to-peer	Server/client
Standard interface	RS232 (DB9 male)	RS232 (DB9 male) or RS485	RS232 (DB9 male) or RS485
Frequency band	2.402-2.478 GHz	902-928 MHz	902-928 MHz
Modulation	FHSS FSK	FHSS FSK	FHSS FSK
Serial interface data rate	Up to 288 kbps	Up to 115.2 kbps	Up to 115.2 kbps
Output power	125mW variable	1000mW variable	1000mW variable
Input power	7Vdc to 26Vdc	7Vdc to 18Vdc	7Vdc to 18Vdc
Current Consumption (@ 12Vdc)	80mA Tx, 10mA Idle	400mA Tx, 40mA Rx	400mA Tx, 40mA Rx
Power supply (optional; provided with Starter Packs)	AC transformer to 7.5Vdc via 6-foot cable (183 cm)	AC transformer to 7.5Vdc via 6-foot cable (183 cm)	AC transformer to 7.5Vdc via 6-foot cable (183 cm)
Electrical requirements	Line voltage 100-120V (230V outside U.S.); Frequency 50-60 Hz	Line voltage 100-120V (230V outside U.S.); Frequency 50-60 Hz	Line voltage 100-120V (230V outside U.S.); Frequency 50-60 Hz
Channels	79 or 43 selectable	Up to 32 in U.S.	Up to 32 in U.S.
Security	1-byte system ID	1-byte system ID, DES	1-byte system ID, DES
Sensitivity	-95 dB @ full RF data rate	-99 dB @ full RF data rate	-99 dB @ full RF data rate
Range (line-of-sight)	Up to 4.0 miles (6.4 km)	Up to 20 miles (32 km)	Up to 20 miles (32 km)
Temperature	-40° to +85°C	-40° to +80°C	-40° to +80°C
Humidity (non-condensing)	10% to 90%	10% to 90%	10% to 90%
Dimensions	4.75 x 2.75 x 1.17 in. (121 x 70 x 30 mm)	4.75 x 2.75 x 1.17 in. (121 x 70 x 30 mm)	4.75 x 2.75 x 1.17 in. (121 x 70 x 30 mm)
Weight	< 6 oz (< 170 g)	< 6 oz (< 170 g)	< 6 oz (< 170 g)
Antenna; connector	Dipole; RPSMA jack (female)*	Dipole; RPSMA jack (female)*	Dipole; RPSMA jack (female)*
Configuration software	Optional, for Windows OS	Optional, for Windows OS	Optional, for Windows OS

Protocol Features

Features vary by product. Ask a Laird Technologies representative to explain why some features are particular to CL024, CL4790, or CL4490.

RF Protocol Modes

a) Communication Unicast (one-to-one addressing) Broadcast (one-to-multiple addressing)
b) b) Acknowledgement mode (ACK) API with software ACK indication
c) Handshaking CTS/RTS, modem mode
d) Variable baud rates
e) In-range/session indicator
f) DES encryption (only on CL4790, CL4490)
g) Raw data or transmit/receive API
h) Radio Module configuration: Destination address RF transmit power RF channel Broadcast/addressed
i) 9-bit serial interface mode
j) All transceivers FCC approved



*Higher-gain antenna options are available; contact Laird Technologies for more information.

The details contained within the document are subject to change. Download the product specification from http://www.lairdtech.com/wireless for the most current specification.

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Revision History

Version	Date	Changes	Approved By
1.0	3 Apr 2013	Initial	C. Downey
1.1	6 Jun 2013	Reformat	C. Downey
1.2	12 Aug 2013	Add Rev Hx	C. Downey