Laird TECHNOLOGIES®

Innovative **Technology** for a **Connected** World

# ConnexLink™

## Wireless Cable Replacement System

### 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 100mW 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. Every unit is backed by a full one-year warranty.

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 2.46 GHz

### MARKETS

- Weigh Scales
- Process Control
- Kiosks and POS
- Data Logging
- Electronic Signs


**global solutions: local support**™

USA: +1.800.492.2320
Europe: +44.1628.858.940
Asia: +852.2268.6567

wirelessinfo@lairdtech.com
**www.lairdtech.com/wireless**

Laird TECHNOLOGIES®

Innovative **Technology** for a **Connected** World

# ConnexLink™
## Wireless Cable Replacement System

## 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. RF232 supports simple cable-replacement up to complex peer-to-peer setups. Broadcast communication to all devices or address packets to a specific destination using unique MAC addresses embedded in each unit.

| Parameter | CL4424-100 | CL4790-1000 | CL4490-1000 |
|---|---|---|---|
| **Network architecture** | Server/client | Peer-to-peer | Server/client |
| **Standard interface** | RS232 (DB9 male) or RS485 | 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** | 100mW fixed | 1000mW variable | 1000mW variable |
| **Input power** | 7Vdc to 18Vdc | 7Vdc to 18Vdc | 7Vdc to 18Vdc |
| **Current Consumption** (@ 12Vdc) | 125mA Tx, 80mA Rx | 400mA Tx, 40mA Rx | 400mA Tx, 40mA Rx |
| **Power supply** (optional; | AC transformer to 7.5Vdc | AC transformer to 7.5Vdc | AC transformer to 7.5Vdc |
| provided with Starter Packs) | via 6-foot cable (183 cm) | via 6-foot cable (183 cm) | via 6-foot cable (183 cm) |
| **Electrical requirements** | Line voltage 100-120V | Line voltage 100-120V | Line voltage 100-120V |
| | (230V outside U.S.); | (230V outside U.S.); | (230V outside U.S.); |
| | Frequency 50-60 Hz | Frequency 50-60 Hz | Frequency 50-60 Hz |
| **Channels** | 64 in U.S., 32 in Europe | 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** | -90 dB @ full RF data rate | -99 dB @ full RF data rate | -99 dB @ full RF data rate |
| **Range** (line-of-sight) | Up to 2 miles (3.2 km) | Up to 20 miles (32 km) | Up to 20 miles (32 km) |
| **Temperature** | -40° to +80°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 inches | 4.75 x 2.75 x 1.17 inches | 4.75 x 2.75 x 1.17 inches |
| | (121 x 70 x 30 mm) | (121 x 70 x 30 mm) | (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 |

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

## PROTOCOL FEATURES

Features vary by product. Ask a Laird Technologies representative to explain why some features are particular to CL4424, CL4790 or CL4490.

## RF PROTOCOL MODES

a) Communication
- Unicast (one-to-one addressing)
- Broadcast (one-to-multiple addressing)

b) Acknowledgement mode (ACK)
- API with software ACK indication

c) Handshaking (only on CL4790, CL4490),
- CTS/RTS, modem mode

d) Variable baud rates

e) Long range mode
- (only on CL4790, CL4490)
- Enables sensitivity control

f) In-range/session indicator

g) DES encryption
- (only on CL4790, CL4490)

h) Raw data or transmit/receive API
- (only on CL4790, CL4490)

i) Radio Module configuration:
- Destination address
- RF transmit power
- RF channel
- Broadcast/addressed

j) 9-bit serial interface mode

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

CL4490, CL4790, and CL4424 FCC approved. CL4424 CE approved.

LWS-SPEC-CONNEXLINK 0209

Any information furnished by Laird Technologies and its agents is believed to be accurate and reliable. Responsibility for the use and application of Laird Technologies materials rests with the end user since Laird Technologies and its agents cannot be aware of all potential uses. Laird Technologies makes no warranties as to the fitness, merchantability, or suitability of any Laird Technologies materials or products for any specific or general uses. Laird Technologies shall not be liable for incidental or consequential damages of any kind. All Laird Technologies products are sold pursuant to the Laird Technologies terms and conditions of sale in effect from time to time, a copy of which will be furnished upon request. For further information please visit our website at www.lairdtech.com. Alternatively contact: wirelessinfo@lairdtech.com. Bluetooth® is a trademark owned by Bluetooth SIG, Inc., USA and licensed to Laird Technologies.

© 2009 All Rights Reserved. Laird Technologies is a registered trademark of Laird Technologies, Inc.