

M4.5730L/LX

Ethernet Bridge



The M4.5730L and M4.5730LX outdoor wireless Ethernet bridges offer superior performance, long range, dual band flexibility, and ease of installation at an affordable price.

Ideal for enterprise class point-to-point WAN extensions or ISP backhaul applications, the M4.5730L/LX is versatile, reliable, and robust. M4.5730L/LX operates at either 5.8 GHz or 5.3 GHz and provides network operators with an inexpensive, yet powerful outdoor-ready point-to-point Ethernet bridge. The system reliably delivers 10 Mbps up to 10 miles with integrated antennas and up to 40 miles with external antennas. M4.5730L/LX can be deployed as a backhaul system or as a wireless alternative to leased line and multiple T1 circuits.

Product Overview

- The M4.5730L/LX provides channels of operation in both the 5.8 GHz ISM band or the 5.3 GHz U-NII band.
- Direct sequence spread spectrum technology excellent range and immunity to interference.
- Proprietary MAC authentication coupled with transmission scrambling provides a high degree of over-the-air security.
- Configuration is simple and can be performed in a matter of minutes.
- Dual polarized antennas combined with 11 non-overlapping channels provide 22 channel/polarity combinations for maximum co-location ability. Polarity and channel selections are remotely switchable.
- Powerful remote management tools are available via Telnet and web-browser interfaces as well as SNMP.
- Power-over-Ethernet design ensures easy installation and quick deployment.
- Kit includes all necessary hardware for out-of-box installation.
- Rugged outdoor design.

Flexibility

The M4.5730L/LX provides channels of operation in both the license-exempt 5.8 GHz ISM and the 5.3 GHz U-NII bands. Dual polarized antennas, combined with 11 non-overlapping channels provide 22 channel/polarity combinations for maximum frequency agility. Antenna polarity and channel selections are remotely switchable, and selectable receiver threshold provides additional interference mitigation.

Long Range

The M4.5730L offers a range of 10 miles using internal antennas and up to 20 or 40 miles using optional external antennas on the M4.5730LX, please see Antenna/Range Chart on next page.

Speed

The M4.5730L/LX efficiently delivers 10 Mbps of real throughput for high-bandwidth backhaul applications.

Manageability

The M4.5730L/LX provides users with powerful remote management tools via telnet and web-browser interfaces as well as SNMP. The SmartSEEK. redundancy feature provides continuous search and reassociation functionality.

Security

The M4.5730L/LX utilizes direct sequence spread spectrum technology, providing excellent range and immunity to interference. MAC authentication, coupled with transmission scrambling provides a high degree of over-the-air security.

Durability, Ease of Installation

The M4.5730L/LX is designed for harsh outdoor environments and operates from -40° to +140° F. Additionally, the systems Power-over-Ethernet capability ensures easy installation and quick deployment.

Affordability

The M4.5730L/LX offers carrier-class features and performance at an attractive price.

M4.5730L/LX

ANTENNA/RANGE CHART

Antenna	5.8GHz Range	5.3GHz Range
Integrated / Internal Antenna (18 dBi)	10 Miles (10 dB fade margin)	3 Miles (10 dB fade margin)
15" Patch Antenna (24 dBi)	20 Miles (15 dB fade margin)	5 Miles (10 dB fade margin)
36" Dish Antenna (31 dBi)	40 Miles (21 dB fade margin)	10 Miles (10 dB fade margin)

SPECIFICATIONS

Radio Parameters

Frequency of Operation

High Band (ISM Band): 5725 MHz to 5850 MHz

Low Band (U-NII Band): 5250 MHz to 5350 MHz

Channels

High Band (ISM Band): 6 non-overlapping channels

Low Band (U-NII Band): 5 non-overlapping channels

Antennas:

Integrated/Internal Antenna

Antenna Gain: 18/17 dBi ISM U-NII band

Range (5.8 GHz ISM Band): 10 Miles

Range (5.3 GHz U-NII Band): 3 Miles

Beamwidth (azimuth/elevation): 18°/18°

Antenna Polarity: Horizontal/vertical (software selectable)

15" Patch Antenna

Antenna Gain: 24 dBi

Range (5.8 GHz ISM Band): 20 Miles

Range (5.3 GHz U-NII Band): 5 Miles

Beamwidth (azimuth/elevation): 9°/9°

Antenna Polarity: Horizontal/vertical (software selectable)

36" Dish Antenna

Antenna Gain: 31 dBi

Range (5.8 GHz ISM Band): 40 Miles

Range (5.3 GHz U-NII Band): 10 Miles

Beamwidth (azimuth/elevation): 4°/4°

Antenna Polarity: Horizontal/vertical (software selectable)

Power Parameters

Power Method

Power-over-Ethernet (PoE) via DC voltage injected at PoE J-box

Voltage Input Limits into Radio

10.5 VDC . 24 VDC

Standard Power Supply

120 VAC to 24 VDC adapter

PoE Cat-5 Max Cable Length

300 feet on 24 AWG STP Cat-5 cable

Power

13.4 W

Data & Operational Parameters

Modulation Format

Direct Sequence Spread Spectrum (DSSS) with RAKE

Certification/Compliance

FCC Part 15.247

Receiver Sensitivity

(1E10-6 BER) 1600 byte packets: -83 dBm, 64 byte packets: -87 dBm

User Data Throughout

Up to 10 Mbps

Latency

<2mSec (10 miles or less)

Network Protocols

All IEEE 802.3/802.3u compliant protocols

Configuration and Management

Telnet, SNMP, TFTP, HTTP, Serial

Up/Downstream Throughput

Dynamic, automatically adjusts to suit demand with upstream and downstream MIR

Ethernet Packet Size

Up to 1600 byte long packets (supports VLAN/VPN pass through)

Physical Interfaces

Ethernet (via shielded RJ45)

10/100 BaseT, auto-sense, auto-negotiate

Serial (via RJ11)

9600 baud 8-N-1

Physical and Environmental

Radio Enclosure

All-weather, powder coated, cast aluminum with polycarbonate radome

Temperature Range

-40° to 60° C (-40° to 140° F)

NEMA Rating

NEMA 4

Radio Dimensions

12.5" x 8" x 2.75"

Radio Weight

4 lbs.

Shipping Weight

20 lbs. (without external antennas)

User Interfaces

RJ45 (shielded) and RJ11

*** Please note- this product is not approved for use in the EU**