



## Product Data Sheet

# Wireless Ethernet Extenders

### Overview

Wireless Ethernet extenders give you a quick way to extend an Ethernet link between one or more sites. Because it's wireless, you avoid the hassle and expense of trenching or hanging cable or fiber.

The LWE120A-KIT includes a plug-and-play pair of extenders and supports point to point topologies. The LWE121A can be used as an access point to support LWE120A subscriber radios in a point to multipoint topology. The LWE120/121 series support speeds up to 80 Mbps and ranges up to 6 miles (10 km).

The extenders are waterproof, weatherproof, and compact—about the size of a bottle of water. They blend unobtrusively into building architecture without large, unsightly antennas. What's more, the kit's extender units don't require a nearby power outlet because they receive their power through the Ethernet cable via a 24-VDC power injector included with each extender unit. The extender units also offer easy setup. An LED indicator shows when the extenders are properly aligned and receiving a strong signal.

Use the Wireless Point-to-Point Ethernet Extender Kit in any number of wireless extension applications, including last-mile access for broadband networks. Quickly and economically extend your network's reach to areas such as guard stations or utility buildings, or any site where it's not cost effective to run cable for just one or two workstations. And, for data security, the extender kit uses WPA2 security.



LWE120A *NOTE: LWE120A includes (2) 2.4-GHz internal 9-dBi directional antennas.*



LWE121A *NOTE: LWE121A includes (2) 2.4-GHz external detachable 5-dBi omnidirectional antennas.*

# Wireless Ethernet Extenders Data Sheet

## LWE120A and LWE121A General Specifications

Approvals	RoHS
Configuration on File	Backup and restore, Reset to factory default, Reboot device injector via PoE
Environmental	Operating temperature: -4 to +158° F (-20 to +70° C); Storage temperature: -40 to +158° F (-40 to +70° C); Humidity: 10-95% noncondensing
Management	Operating Modes: Virtual Access Controller (VAC), Thin AP, FAT AP (AP, Wireless Client, Bridge, AP Repeater); Access Method: Web User Interface (HTTP/S), Telnet, SSH, FTP, SNMP V1, V2c, V3; Restore Factory Default: Web, Push button
Interfaces	(1) 10/100BASE-T RJ-45
Connectors	LWE120A: (1) RJ-45; (1) Grounding screw; LWE121A: (1) RJ-45; (1) Grounding screw; (2) connectors for detachable external 2.4 GHz 5 dBi Omni-directional Antennas
Indicators	(4) LEDs: Power, WLAN, LAN, Signal
Environmental	Operating temperature: -4 to +158° F (-20 to +70° C); Storage temperature: -40 to +158° F (-40 to +70° C); Humidity: 10-95% noncondensing
Power	24 V
Dimensions	LWE120A: Each unit: 8.1"H x 2.4"W x 2.5"D (20.5 x 6.4 x 6.1 cm); LWE121A: Each unit: 10.06"H x 4.37"W x 1.88"D (25.56 x 11.10 x 4.77 cm)
Weight	Each unit: 1.1 lb (0.5 kg)

## LWE120A Wireless Specifications

Antennas	LWE120A: (2) internal 2.4 GHz 9-dBi directional Antennas; LWE121A: (2) external 2.4 GHz 5 dBi Omni-directional Antennas
Data Rates	802.11b: 1, 2, 5.5, 11; 802.11g: 6, 9, 12, 18, 24, 36, 48, 54; 802.11n: MCS0 to MCS15 (6.5 Mbps to 300 Mbps per radio)
Radio Chains	2x2 MIMO with two spatial streams
Standards	IEEE 802.11b/g/n, 2.4 GHz
Frequency	802.11 b/g/n: 2.4 – 2.484 GHz
Operating Channels	2.4 GHz – FCC 1-11; ETSI 1-13
RF Output Power	2.4 GHz: 30dBm (2 TX) (The maximum power setting will vary by channel and according to individual country regulations.)
Receive Sensitivity	IEEE 802.11b: 85 dBm @ 11 Mbps; IEEE 802.11g: 89 dBm @ 6 Mbps; IEEE 802.11n: 86 dBm @ HT20, 83 dBm @ HT40
Security	Open, Share key (64/128/152-bits WEP;,, Legacy 802.1X; WPA WAP2, WPA-PSK(TKIP), WPA2-PSK(AES), WPA-PSK + WPA2-PSK

### Dimensional diagram of the LWE120A.



Pole mounting ring



PoE injector and power cord



### What's Included

The LWE120A and LWE120AE packages contain the following items:

- (1) IEEE 802.11n Wireless Ethernet Extender
- (1) pole-mounting ring
- (1) 24-VDC PoE injector and power cord
- (1) ferrite suppression core
- (1) grounding wire
- A printed quick installation guide

The LWE120A-KIT package contains two each of the items listed above for LWE120A and LWE120AE.

# Wireless Ethernet Extenders Data Sheet

---

## Dimensional diagram of the LWE121A.



Pole mounting ring



PoE injector and power cord



## What's Included

The LWE121A and LWE121AE packages contain:

- (1) IEEE 802.11n Wireless Ethernet Extender
- (2) detachable 5-dBi antennas
- (2) pole-mounting rings
- (1) 24-VDC PoE injector and power cord
- (1) ferrite suppression core
- (1) grounding wire
- A printed quick installation guide

The LWE121A-KIT package contains:

- (2) IEEE 802.11n Wireless Ethernet Extenders
- (4) detachable 5-dBi antennas
- (4) pole-mounting rings
- (2) 24-VDC PoE injectors and power cords
- (2) ferrite suppression cores
- (2) grounding wires
- A printed quick installation guide

## Comparison chart: Wireless Ethernet Extenders

	LWE120 models	LWE121 models
Antenna	(2) internal 2.4 GHz 9-dBi directional Antennas	(2) external 2.4 GHz 5 dBi Omni-directional Antennas
Connectors	(1) RJ-45; (1) Grounding screw	(1) RJ-45; (1) Grounding screw; (2) connectors for detachable external 2.4 GHz 5 dBi Omni-directional Antennas
Indicators	(4) LEDs: Power, WLAN, LAN, Signal	(4) LEDs: Power, WLAN, LAN, Signal

## Ordering Information

Item	Code
Wireless Ethernet Extenders, 2.4 GHz	
Wireless Point-to-Multipoint Ethernet Extender Subscriber, Yagi Directional	
US power cord	<b>LWE120A</b>
EU power cord	<b>LWE120AE</b>
Wireless Point-to-Point Ethernet Extender Kit—2.4 GHz	
US power cords	<b>LWE120A-KIT</b>
EU power cords	<b>LWE120AE-KIT</b>
Wireless Point-to-Multipoint Ethernet Extender Access Point, Omnidirectional	
US power cord	<b>LWE121A</b>
EU power cord	<b>LWE121AE</b>
Wireless Point-to-Point Ethernet Extender Kit—2.4 GHz	
US power cords	<b>LWE121A-KIT</b>
EU power cords	<b>LWE121AE-KIT</b>

## Disclaimer:

Black Box Network Services shall not be liable for damages of any kind, including, but not limited to, punitive, consequential or cost of cover damages, resulting from any errors in the product information or specifications set forth in this document and Black Box Network Services may revise this document at any time without notice.

## About Black Box:

Black Box is a leading technology product solutions provider that helps customers build, manage, optimize, and secure their networks. The Black Box quality management system is ISO 9001:2008 certified, and the company has received numerous industry recognitions. Black Box provides its customers with free, 24/7 pre- and post-sales technical support. The Black Box catalog and Web site offer an extensive range of infrastructure products including Cabling, Cabinets & Racks, Data Center Cooling Solutions, Power & Surge Protection, and Environmental Monitoring.