ETHERMAGIC™

MultiPoint Gigabit Powerline System with PoE+ Capability

Models: EM-S, EM-EP, EM-EP-5, EM-KIT

One Switch Connects up to 32 EndPoints

High-Bandwidth Up to 1200 Mbps

48V 802.3af/at or 24V Passive PoE

UBIQUITI®
N E T W O R K S

ETHERMAGIC™

Connectivity Now Possible Everywhere

Introducing EtherMagic™, an innovative Powerline Communication (PLC) System featuring Gigabit multipoint connectivity and PoE capabilities. EtherMagic instantly transforms your electrical circuit into a 1200 Mbps Ethernet network without the need to install Ethernet cabling.

In the EtherMagic system, an intelligently designed multipoint Switch pairs with up to 32 EndPoints. Each EndPoint features built-in PoE, for much simpler installation than systems that require separate PoE adapters.

Setup is quick and easy using the EtherMagic mobile app. EtherMagic is the ideal solution for networking wired devices in buildings where Ethernet cabling is unavailable or difficult to install.

Significant Cost Savings

EtherMagic instantly transforms existing electrical wiring inside buildings into an EtherMagic network. EtherMagic creates a new range of possibilities by providing a cost-effective, wired network solution for older buildings where Ethernet cabling is unavailable or impractical to install. EtherMagic potentially saves tens of thousands of dollars in installation and cabling costs.

Switch
Up to 10 Switches per Electrical Circuit

EndPoint
Up to 32 EndPoints per Switch
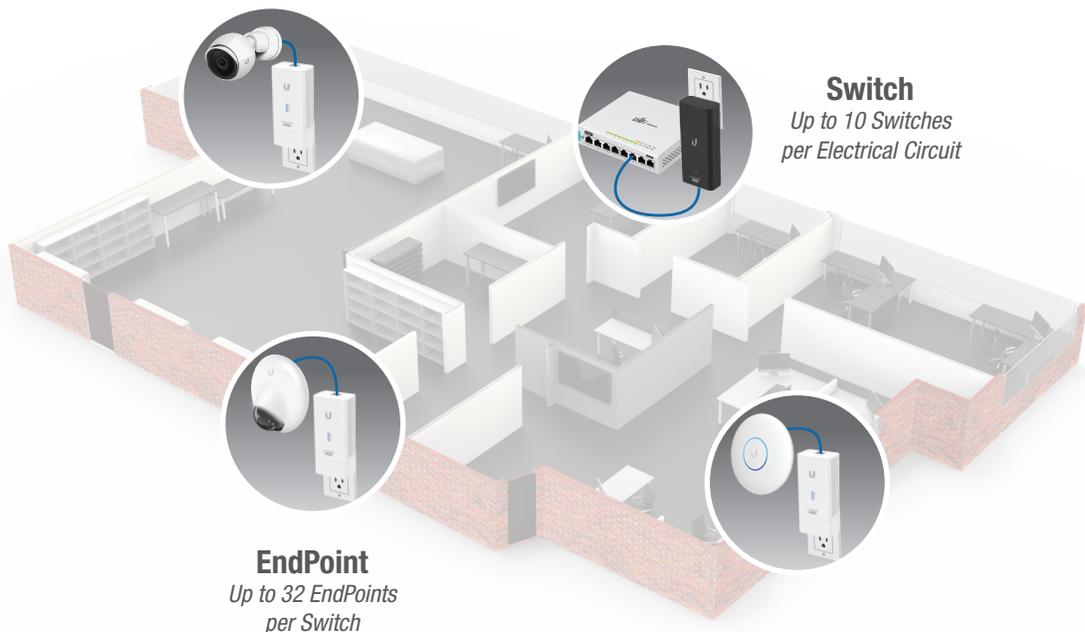
Point-to-MultiPoint Gigabit Network

Unlike PLC systems that are typically point-to-point bridges, EtherMagic systems are point-to-multipoint networks. The EtherMagic Switch works the magic by networking up to 32 EndPoints, and essentially operates and performs like a 32-port Gigabit Ethernet switch.
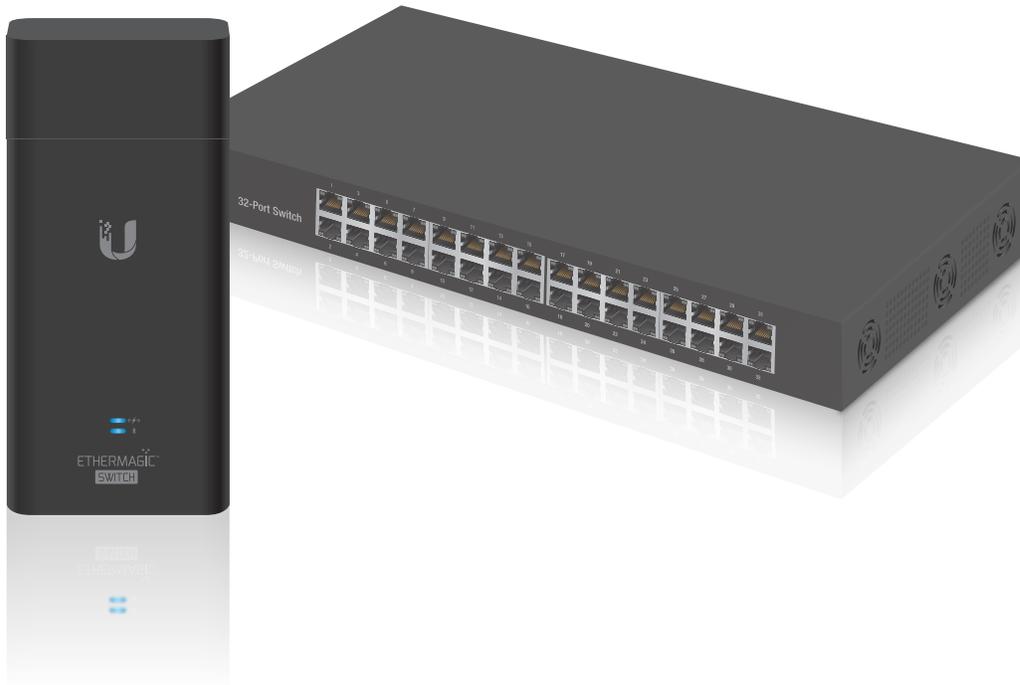
Amazing Scalability

The EtherMagic system offers amazing network scalability – perhaps only limited by the number of available outlets in the building. An EtherMagic network can support up to 320 EndPoints: up to 10 Switches on the same electrical circuit, and up to 32 EndPoints paired to each Switch.

Advantage over Wireless

EtherMagic leverages HomePlug AV2* MIMO technology for robust PLC networking with speeds of up to 1200 Mbps. Rivaling wireless, EtherMagic significantly increases the reliability of high-bandwidth connections to all areas of the building.

Video applications especially benefit from the advantages of EtherMagic by being physically connected to the network, and free from radio interference or Wi-Fi connectivity issues.

Built-In PoE+ Capability

Each EndPoint features a Gigabit Ethernet port with PoE output capability. EndPoints provide the flexibility to set PoE output to support a variety of PoE devices:

- 802.3af/at Auto-Sensing (48V)
- 24V Passive PoE
- PoE Off

By default, non-PoE devices can be safely connected to the EndPoints with auto-sensing 802.3af/at. For added assurance, PoE output can be disabled entirely.
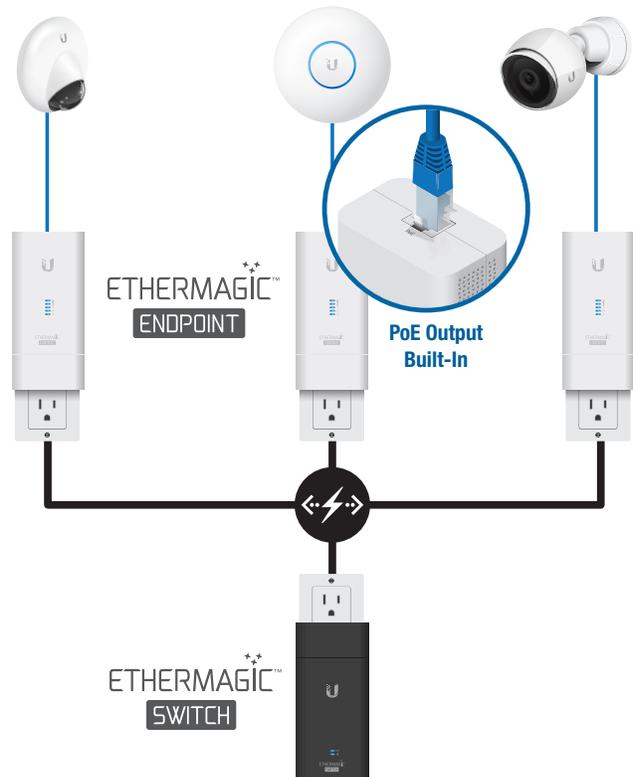
* Third-party HomePlug devices are not supported.

EtherMagic App

Designed for easy setup and convenient management, the EtherMagic app allows you to quickly create an EtherMagic network and connect your PoE devices to your LAN. During setup, the EtherMagic app provides instant status of the connection quality at each outlet and EndPoint. The EtherMagic app is available free from the Google Play™ store and is compatible with Android™ devices that support Bluetooth LE.

Network Management

The EtherMagic app provides an intuitive interface for monitoring and managing your EtherMagic network. Simply select an EndPoint to see which Ubiquiti® device is connected and view its Link Quality (with actual PLC throughput speeds), SNR, Ethernet (RJ45) Speed, and PoE status.

The app also provides PoE configuration, firmware update, remote reset, and restart options.
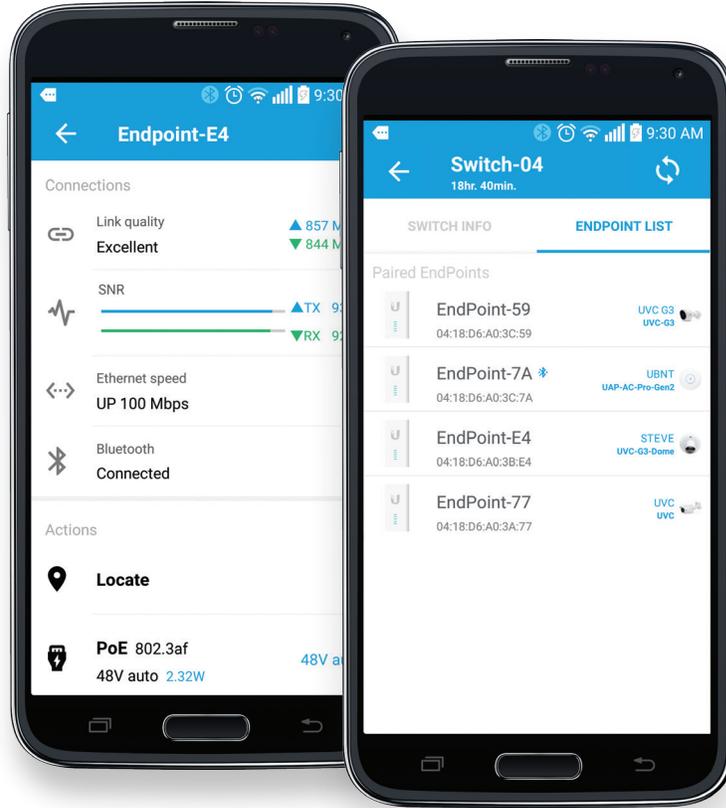
Available Packs

For flexible customization, EtherMagic is sold in a variety of packages:

- EM-KIT: (1) EtherMagic Switch (3) EtherMagic EndPoints
- EM-S: (1) EtherMagic Switch
- EM-EP: (1) EtherMagic EndPoint
- EM-EP-5: (5) EtherMagic EndPoints

EM-KIT   *EM-S*   *EM-EP*   *EM-EP-5*

Hardware Specifications

EtherMagic Switch: EM-S	
Dimensions	107 x 62.4 x 31.7 mm (4.21 x 2.46 x 1.25")
Weight	135 g (4.76 oz)
Networking Interfaces	(1) PLC, 1200 Mbps (1) RJ45, 10/100/1000 Mbps
Management Interface	EtherMagic App
PLC Standard	HomePlug AV2 MIMO
Power Method	AC Utility Power
Max. Power Consumption	6W
Network Expandability	Up to (10) EM-S per Electrical Circuit
Supported Voltage Range	100 to 240V
Operating Temperature	-10 to 45° C (14 to 113° F)
Operating Humidity	10 to 90% Noncondensing
Certifications	CE, FCC, IC

EtherMagic EndPoint: EM-EP	
Dimensions	107 x 62.4 x 40.7 mm (4.21 x 2.46 x 1.60")
Weight	190 g (6.70 oz)
Networking Interfaces	(1) PLC, 1200 Mbps (1) RJ45, PoE+, 10/100/1000 Mbps
Management Interface	EtherMagic App

PoE Out
  Modes
  PoE+ Voltage Range
  Max. PoE+ Wattage
  Passive PoE Voltage Range
  Max. Passive PoE Wattage
	
	802.3af/at (PoE+), 24V Passive, Off
	48VDC Nominal
	32W
	24VDC
	16W

PLC Standard	HomePlug AV2 MIMO
Power Method	AC Utility Power
Max. Power Consumption	8W (PoE Excluded)
Network Expandability	Up to (32) EM-EP per (1) EM-S
Supported Voltage Range	100 to 240V
Operating Temperature	-10 to 45° C (14 to 113° F)
Operating Humidity	10 to 90% Noncondensing
Certifications	CE, FCC, IC

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