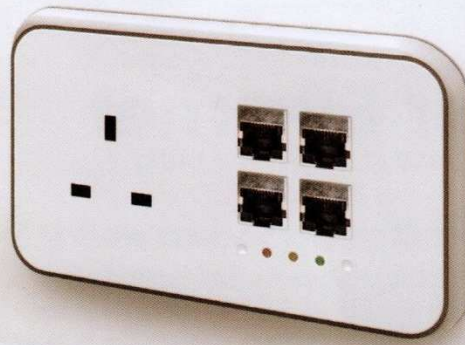


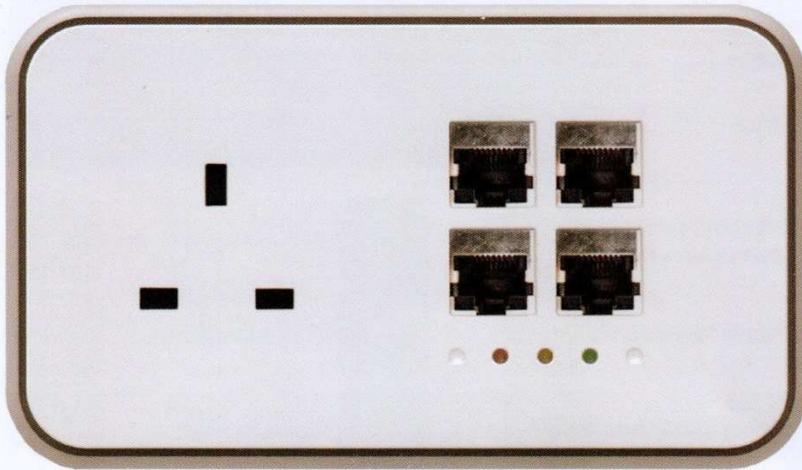
# Power Ethernet



In today's lifestyle, with families owning so many Internet enabled devices, such as PCs, set-top boxes, game consoles, Blu-ray players and even the latest TVs, the need to have Internet access throughout the home has become a requirement. The high speed and reliable network capable of delivering High Definition digital entertainment and environmental content around the home has come of age.

The Power Ethernet socket requires no new wiring and is an elegant, simple and cost-effective way to create a home network without the need for expensive cabling or unsightly plug-in adapters.

Installing two or more Power Ethernet sockets instantly creates a high speed secure network using the existing mains wiring available throughout the building. Its unique design incorporates all of the electronics inside the wall socket.



The Power Ethernet socket is British Standard, two-gang in size and easy for any electrician to install.

Simply replace a power socket with a Power Ethernet socket and a fast, reliable Internet network will be available everywhere needed without any rewiring.

Now connecting Internet devices to the home network is as simple and easy as plugging them into the mains.

## Benefits

- Simple cost effective networking solution
- No new wiring needed — use existing mains cables
- Easy to install without clutter or disruption
- Fast, reliable Internet access everywhere in the building
- Eliminates the cost of “making good”
- Reduce hardware costs as all Power Ethernet sockets mesh together to form a single switched network
- Helps eliminate coverage black spots
- Network is easily expanded by adding additional Power Ethernet sockets

## Supported Standards

- Ethernet across a meshed network at up to 200Mbps (gross)
- Range up to 300m between Power Ethernet sockets over the mains cables
- Connect the broadband router to share Internet access
- Fast enough to stream High Definition (HD) video
- Compatible with the HomePlug AV standard and supports Windows, Mac, Linux and all operating systems with a Ethernet port (RJ45)
- Built in managed switch supports tagged VLANs, TOS Bits and QoS
- Built-in AES 128 bit security
- Support for TV over IP (IPTV), Voice Over IP (VoIP) and Ethernet CCTV cameras
- Fits a standard UK two-gang 35 mm deep metal back box
- And of course power

Two or more Power Ethernet sockets (or HomePlug AV compatible devices) are required to create a network. The power outlets must be electrically connected sharing the same power rail in order for Powerline devices to provide a network connection between them.



## How do the Power Ethernet Sockets work?

The Power Ethernet sockets incorporate the Atheros INT6400 Powerline chipset (which is compatible with HomePlug Alliance AV standard) along with other complementary technologies to create a high speed secure network by utilising the existing mains cables available throughout any building.

The Power Ethernet socket unique design incorporates all the electronics inside the wall socket. The electronics have been built using the latest Powerline designs in order to maximise the available bandwidth and robustness of the device.

The Power Ethernet sockets have an integrated mains filter which improves the data transmission speeds. The units automatically go into power save mode for reduced power consumption when the network ports are not being used and the units can optional be put into hibernation mode which reduces the consumption down to 0.5W for further savings.

The network backbone is automatically encrypted with 128bit AES security and as the Power Ethernet sockets are simple to install by any electrician, it benefits from a tamper and theft proof installation.

The Power Ethernet socket incorporates a high speed managed switch with 4 Ethernet ports which eliminates the need for adding additional network switches. This removes the clutter and hassle of additional cables under desks or behind televisions and provides a solution with all the advantages of reliability, Health & Safety compliance and aesthetic appeal.

Multiple applications can be run across the Power Ethernet network throughout the building including:

- |   |  |   |                                      |   |                          |
|---|--|---|--------------------------------------|---|--------------------------|
|  | High speed Ethernet networking                     |  | Network backbone for Home Automation |  | IPTV and Video on Demand |
|  | Connect to the Internet everywhere in the building |  | Triple Play services                 |  | CCTV Surveillance        |
|  | Smart Metering and Smart Home applications         |  | Voice over IP telephony              |  | Digital Signage          |

## Technical Specifications

Standards	Ethernet specifications IEEE 802.3, IEEE 802.3x, IEEE 802.3u, Auto MDI / X, HomePlug AV compatible
Protocols	TDMA, CSMA/CA over power supply grid
Transmission speed	200 Mbps (gross)
Transmission method	Asynchronous
Modulation	OFDM - 1155 carriers, 1024/256/64-QAM, QPSK, BPSK
Data path	Ethernet <--> power supply grid
Range	Up to 300m over power supply grid
Security	128-bit AES encryption over power supply grid (enabled at the touch of a button)
LED indicators	Power Powerline Connection (Link/Activity/quality) Network Activity (Link/Activity)
Buttons	Security Join / Leave button Reset / Force Hibernation button (long press)
Socket	UK: Type G (BS 1363)
Power output to socket	230 V / 13 A maximum
Device port	Managed switch with 4 Ethernet RJ45 ports
Power consumption	5 W (max.), 1.5 W in standby 0.5W in hibernation
Power supply	AC 240V 50/60Hz
Damping filter	2 - 30 MHz
Filter characteristics	30 dB
Temperature Storage:	0°C - 35°C
Operation:	5°C - 40°C
Product Weight	260 g
Dimensions	Designed to fit a standard 35mm deep UK double gang metal wall box
Ambient conditions	10-90% humidity (non-condensing)
System requirements	Ethernet interface
Works with	Supports all operating systems Windows, Mac, Linux and all operating systems with Ethernet ports (RJ45)

