

IP Over Power Line (*Last Mile Network*) THE TRUE PLUG AND PLAY SOLUTION



IP over Power Line provides instant connectivity for simple computer networks, Internet access, telephone and video application in homes, business and last mile applications without rewiring. Each transceiver accepts a 10/100BaseT, RJ45 input for Ethernet network operating systems (NOS). The unit offers speeds up to 11 Mbps each direction and works within a home, building (office) or last mile application. IP over Power Line injects the signal from a Fiber Ethernet location into any low voltage 120 V outlet or mid voltage power network, making it available to all outlets in the entire area. All other nodes in the building are able to pick up the signals and communicate with other devices. This device works between any of the 3 phases of the power line without any repeater or without additional installations and without directly injecting signals into all 3 phases.

The unit is packaged with all of the components necessary to connect a computer to the 'AC' network. IP over Power Line will change the way homes and small businesses are networked for multimedia services. Web Cam cameras (Ethernet and networked-ready like Axis) can be used with this product to monitor multiple locations via video imaging and recording.

IP over Power Line communicates through any distribution transformers from the low voltage power line through the mid voltage power line to another low voltage power line. It can inject signals on one of the low voltage power lines and transmit the signal through a distribution transformer into the mid-voltage power line and through another distribution transformer to another low voltage power line without any installation or repeaters and without the involvement of the power utility company. Current distances are around 200 to 300 meters without any repeater or any installation on any of the power lines. Repeaters that do not need any installation –that just plug it into the 120V outlet- can extend the communication distance to last mile applications. The unit is capable of transmitting data at a rate in excess of 11 Mbps and it meets the new FCC rule requirements for low emission and to avoid any RF interference with licensed users.

IP over Power Line is a real Plug and Play device because all you need is to plug it into the 120V/240V power outlet anywhere on the premises to get last mile communication needs. IP over Power Line is an inexpensive unit, less expensive than any other BPL or wireless solutions

for these types of applications. Applications can include Internet access, voice communications, surveillance monitoring with video cameras, TV broadcasting, and/or low and mid-voltage applications to communicate through transformers, through electricity meters and between all 3 phase power lines without repeaters or MDU units.

IP over Power Line can be used as a CPE unit, a networking bridge, a repeater, or a broadcasting Networking.

System Product Functionality

The IP over Power Line (Last Mile Network) System plugs into an electrical outlet near the computer. The unit currently offers one physical interface for Ethernet Carrier Sense Multiple Access with Collision Detection (CSMA/CD): RJ45 10/100BaseT unshielded twisted pair (UTP) connector. The Ethernet data is converted into an 11 Mbps each direction digital processed signal, and injected into the power line through the power cord that also supplies the power to the equipment. This makes the node available to other IP over Power Line devices within the premises. To eliminate Ethernet NICs, the unit provides the consumer with Network Driver Interface Specifications and Open Data Link compatible driver software. IP over Power Line 11 Mbps based Ethernet network provides up to 8 Mbps throughput speed and around 70% efficiency for any last mile power line networks.

Primary Benefits

IP over Power Line provides instant connectivity for small businesses and home offices without the capital expenditure of wiring or rewiring and without any installations. The unit utilizes consumer-friendly desktop power centered packaging with integrated surge suppression to eliminate the need for a separate surge suppressor. Bundling IP over Power Line with the other necessary networking components allows consumers to connect computers with little or no previous computer knowledge. Over 90% of all small businesses with fewer than 24 people do not take advantage of networking, such as sharing peripherals, printers and data. IP over Power Line allows them to take advantage of these without making a large investment in rewiring.

Networking System:

- Create New or Extend Existing LANs
- Instant LAN-In-A-Box Connectivity
- Shared Printer Capabilities
- Homes and Small Businesses

PRODUCT SPECIFICATIONS

Performance

- PowerLine Configuration Single or three phase - within any building
- Input and Output Signal RJ45 baseband
- Dynamic Range: 120 dB
- SNR +35 dB
- Ethernet Connector Type RJ45
- PowerLine Transmission Frequencies above 200 Mhz

Environmental

- Temperature: -40 to +85 C
- Case Material ABS, UL 94 V0 R

- Power Supply: 120 VAC, 60 Hz or 220 VAC, 50 Hz
- Power Consumption: 20W
- UL Compliance UL 1409
- FCC Compliance FCC Part 15

Dimensions

- Length: 10.75"
- Width: 6.75"
- Height: 2.75"
- Unit Weight: 15 oz