



Multiply your Broadband Revenues by Serving Multi-Unit Locations

Motorola Broadband over Powerline MU



MOTOWI⁴

Motorola's Powerline MU BPL solution enables service providers to quickly and easily bring high-speed broadband access to business and residential customers in multi-unit buildings. By transforming a building's existing electrical system into a powerful broadband communications network, Powerline MU helps you transform your revenue streams by reaching profitable customers you could never reach before.



Bring Multi-Unit Business and Residential Customers up to Speed

Now there's Motorola's Powerline MU Broadband Over Powerline (BPL) solution. And it's about to change the multi-unit broadband market by making it fast, easy and cost-effective to bring new broadband-hungry business and residential users up to speed. Motorola's industry leading broadband technology is the key to allowing service providers to add profitable new customers and significant new revenue opportunities.

Integrated Wireless BPL System

Powerline MU is a low-cost, scalable, secure system that integrates wireless broadband, radio, Ethernet, networking, HomePlug® and modem technologies to deliver high-speed data over existing power lines. The Powerline MU solution works in even the hardest-to-reach building environments, and can use any type of Internet signal, including DSL, T1, E1, cable and satellite. MOTOwi4 solutions help school facility and district administrators successfully manage their most important challenges and make it easier to take advantage of their most important opportunities.

- **New customers, new revenues.** People who live and work in multi-unit locations want high-speed Internet access, and they're frustrated because, in too many cases, they haven't been able to get it. With Powerline MU, you can capture prospects quickly, easily and affordably... while bringing in important new revenues you've been missing out on.

- **Simple installation.** Unlike DSL or cable, Powerline MU is fast, simple and non-invasive. There's no cost-prohibitive drilling or cabling needed. You don't even have to enter the apartments, condominiums or offices themselves. You simply need a qualified electrician to assist when installing the Powerline MU equipment that injects the data into the building's electrical system. Users just plug the Powerline MU Modem into virtually any power outlet, then connect a computer or router into the Modem.
- **In-demand applications.** You can also add revenue by selling your new customers popular applications like Voice Over Internet (VoIP) service. Plus, you can add value and increase satisfaction by helping the location's owners or property managers use the system to streamline building operations through applications like centralized energy management, video surveillance, advanced alarming and more.

Motorola Confidence

As a Powerline MU provider, you also enjoy the confidence of knowing you're leveraging Motorola's more than 75 years of global leadership in wireless technology and networking, as well as industry leading support services to help you maximize returns for your customers and for yourself.

BENEFITS FOR PROPERTY OWNERS AND MANAGERS

- Low-cost, secure wireless broadband service
- Competitive advantage over properties not offering high-speed access
- More satisfied residents and tenants
- Creation of a new profit center
- Fast, easy, non-invasive installation
- Creation of a new profit center
- Leading-edge management applications such as video surveillance, energy management and more

How many high-potential high-speed customers are you missing out on because they live or work in high-rises and other multiple-unit locations? The truth is, bringing broadband access to multi-unit locations—such as apartments, condominiums, office buildings, dormitories, hotels, shopping malls and more has been difficult for virtually all providers. Until now.

Plug-and-Play Broadband Access Over Existing Electrical Systems

Powerline MU is part of the MOTOwi4™ portfolio of Motorola's next generation IP solutions for fixed and portable broadband access. The Powerline MU system offers true plug-and-play access; no additional software or special drivers are necessary, and in most cases, a user's computer settings do not have to be changed.

Powerline MU system components include:

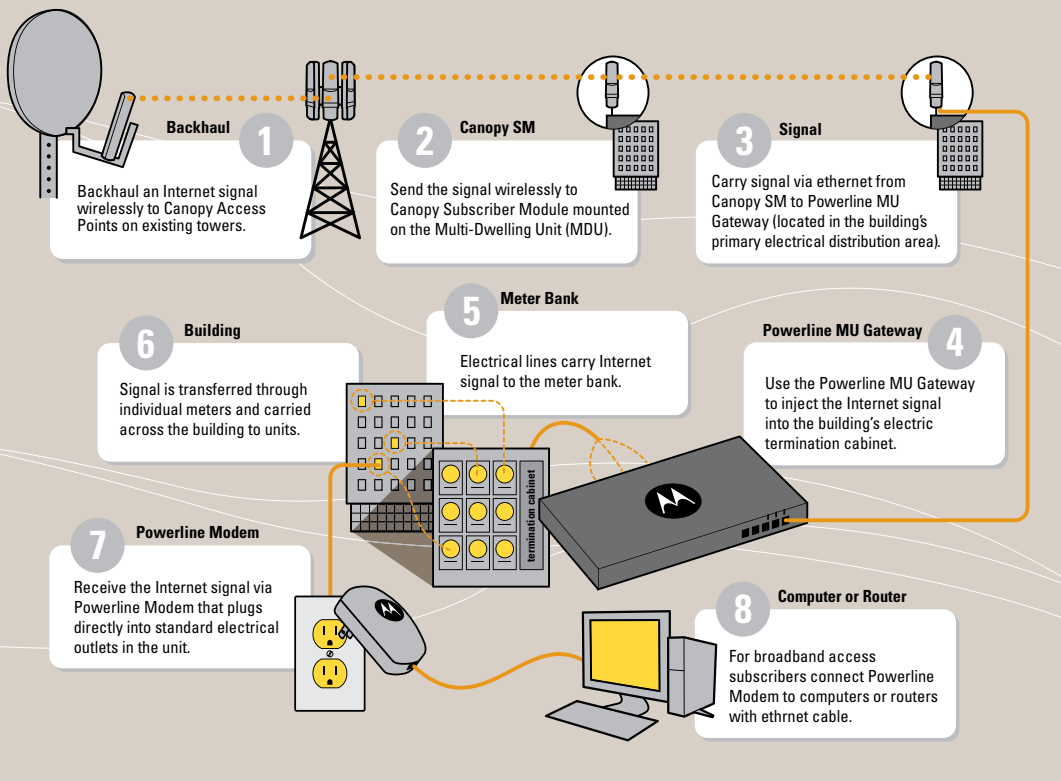
- **The Canopy® Platform.** Powerline MU uses equipment from Motorola's globally proven wireless broadband system, including: the point-to-point series of wireless Ethernet bridges for backhaul as well as Canopy Access Points (APs) and Subscriber Modules (SMs). In most cases, a Canopy SM is mounted to the rooftop of the multi-unit building, receiving the broadband signal and sending it to the Powerline Gateway via Ethernet cable or phone line. Since the installation is confined to the premises, there is typically no need to involve the local utility in the installation process.
- **MU Gateway.** This device receives the Ethernet signal from the Canopy SM, converts it into HomePlug® protocol and injects it into the building's existing electrical wiring system. The signal is then sent to individual units or tenants through the master meter or individual tenant meters. One compact gateway can reliably serve up to 50 subscribers simultaneously, and can be located in several areas within a building, normally the basement or electrical or phone closet. If necessary, you can add more Powerline MU Gateways to serve additional subscribers.
- **Powerline Modem.** The Powerline Modem brings plug-and-play broadband access to each subscriber. The unit plugs into a standard AC power outlet and converts the signal to Ethernet protocol. Output can then be connected directly to a computer,

or to a router in a multiple-computer office or home environment. Additional features include support for VLAN security tagging, QoS, bandwidth and element management and over-the-air software upgrades. Also included are four LEDs that support quick troubleshooting, reducing the need for on-site service visits.

- **HomePlug Technology.** The HomePlug Powerline Alliance is an organization that is developing in-the-home and to-the-home powerline communications technology protocols. These are being widely used in the industry and are contributing to IEEE's standards development. HomePlug-compliant products use existing power lines as a path to send and receive high-speed data. Powerline MU operates based on the latest HomePlug protocol and uses the HomePlug version 1.0 Intellon Turbo (85 Mbps) chipset.
- **Prizm Element Management System (EMS).** Canopy Prizm EMS software helps you manage your BPL network resources more effectively by providing a centralized view of the network. The technology enables you to keep your network operating at peak efficiency at all times, allowing you to manage and troubleshoot down to the Modem level in each unit. The Prizm System can operate as a stand-alone system or can integrate easily into any Network Management System or EMS that uses an SNMP, http or Telnet interface. Prizm also helps you increase security and provides the ability to offer tiered services by managing bandwidth allocation.

Additional Powerline MU products include the Powerline MU Hybrid Adapter that allows use of unused phone lines for additional backhaul capacity and the Powerline MU Panel Extender, an accessory that allows coupling across four separate 3-phase power distribution panels.

Motorola's Powerline MU BPL Solution Opens a World of Opportunity



- Serve new multi-unit markets beyond the reach of existing broadband technologies
- Provide broadband service long before DSL or cable are viable alternatives
- Offer consistent, reliable service to multi-unit business and residential subscribers
- Provide service quickly without the investment of a new wireline infrastructure
- Reach out to remote customers without large capital investment
- Offer tiered bandwidth for greater service flexibility
- Enable VoIP applications with the QoS and latency you need
- Deliver plug-and-play connectivity—no subscriber appointments are needed
- Ensure network security with DES encryption and Modem security with VLAN tagging

Connecting the Unconnected: The Platform

Motorola has been a global leader and innovator in wireless technology for over 75 years. Our expertise at “connecting the unconnected” has literally been proven all around the world. MOTOwi4 is a portfolio of innovative wireless broadband solutions that create, complement and complete IP networks. Delivering IP coverage to virtually all spaces, the MOTOwi4 portfolio includes Fixed Broadband, WiMAX, Mesh, Broadband Over Powerline and enterprise WLAN solutions for private and public networks.



For more information about how Motorola's Powerline MU solution for multi-unit locations can help you multiply your broadband revenues, call us at 1.800.795.1530 or 1.866.515.5825 or visit us on the web at www.motorola.com/motowi4.



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