


MOTOROLA WIRELESS BROADBAND

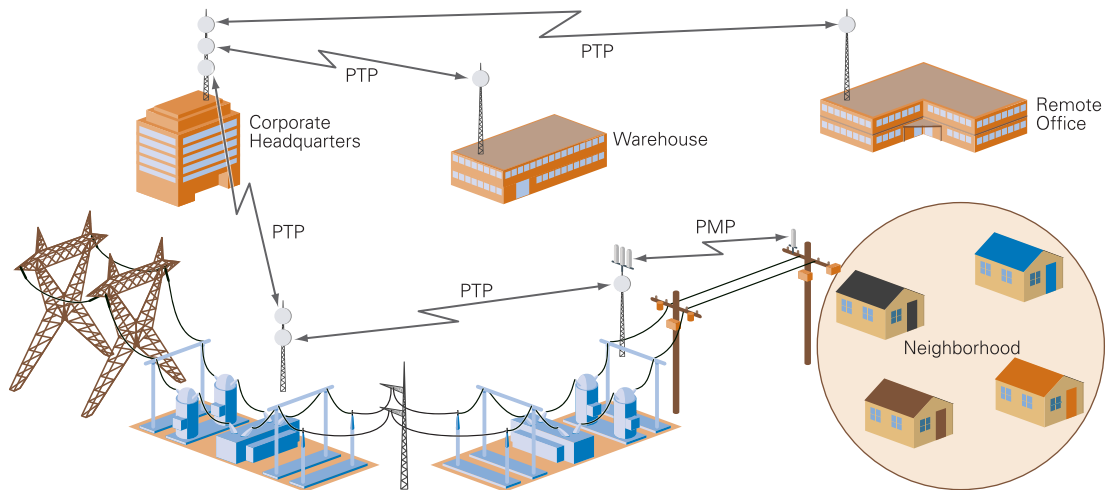
PTP 800

Licensed Ethernet Microwave

Utilities: Networking the Smart Grid

Typical Application:

PTP 800 links connecting buildings and backhauling AMI data, with a Motorola Point-to-Multipoint (PMP) link collecting and transmitting AMI data to the PTP network



On a global scale, Utilities are planning their migrations to the Smart Grid of the future. The purpose of this intelligent grid is to drive greater energy efficiency, reliability and affordability via a fully-capable data communications network that provides near real-time data concerning power transmission, distribution and consumption. The transition has begun with implementation of AMI (Advanced Metering Infrastructure) systems that include millions of smart meters as well as Distribution Automation and SCADA (Supervisory Control and Data Acquisition) systems for remote monitoring and control of critical infrastructure. A robust, high-capacity and cost-effective data communications network is vital to providing the connectivity for these Smart Grid operations as well as additional applications today and in the future.

Powering Today, Preparing for Tomorrow

As Utilities prepare for tomorrow's Smart Grid, they must also deliver a wide range of today's communication applications. These include video surveillance connectivity and backhaul to help keep a secure eye on facilities and substations; links to rural locations that can't be reached by private cellular or wired networks; communications that will connect warehouses, data centers and central offices; and disaster recovery to ensure long-term network solvency, whether against natural (fires, hurricanes, earthquakes) or man-made (vandalism or violence) forces.

Costly Wires

Utilities typically employ a hybrid communication system, or a network of networks, that integrates these mission-critical, operational functions. This results in a mix of architectures that are often cable-connected via copper and fiber lines. Many of these wireline networks are restrictive and impose costly service fees. For point-to-point backhaul of AMI data, many companies use public-carrier cellular networks, thus incurring ongoing monthly service fees which can become prohibitive over time.

Typical applications:

- AMI backhaul
- Video surveillance
- Remote monitoring and control (SCADA)
- Links to rural facilities
- Building-to-building and campus connectivity
- Last-mile fiber extensions
- Disaster recovery

“Control and automation have emerged as key priorities for tomorrow’s networks; the present aging infrastructure provides the opportunity to adopt such measures as part of overall network renewal strategies.”

— John Baker, Annex I Operating Agent, IEA (International Energy Agency),
from “Smarter Electricity Grids for Competitive Markets.”



Outdoor Unit



Compact Modem Unit

Cost-Saving Wireless

Wireless broadband is a more economical way to achieve ample bandwidth, while allowing today’s electric, oil, gas and alternative energy producers to run a more sophisticated system of telemetry, SCADA, surveillance and system management. In addition, a wireless system can adequately serve current communication requirements and accommodate future Smart Grid applications.

A private wireless network not only meets the connectivity objectives of utility providers, but also eliminates or greatly reduces recurring fees, installs much faster (typically in a day or less) and imposes minimal disruption in operations. As a result, a number of utilities are turning to Ethernet microwave technology to upgrade antiquated, analog equipment and to extend the life of their legacy hardware, while starting the transition toward tomorrow’s IP-based networks.

A Powerful Solution

Operating in the 6 to 38 GHz* radio frequency (RF) bands with up to 368 Mbps full-duplex throughput and user-configurable channel bandwidths from 7 to 56 MHz, Motorola’s Point-to-Point (PTP) 800 Licensed Ethernet Microwave solutions are uniquely designed for the multi-purpose communication needs of utilities, including access and backhaul for multiple Smart Grid applications. Our flexible “capacity-as-you-grow” throughput option lets you purchase the capacity you need today and increase throughput as Smart Grid applications expand.

“No Surprises” Link Planning

With Motorola’s free PTP LINKPlanner tool, you can have confidence that your PTP 800 system will perform to today’s requirements and migrate to a fully-implemented Smart Grid network. Included in the One Point Wireless Suite, PTP LINKPlanner lets you easily optimize single or multiple links, conduct “what-if” scenarios, immediately view changes and accurately predict throughput and reliability prior to purchase. A LINKPlanner-optimized system makes for a simpler, less labor-intensive installation. Plus, the integrated configuration feature provides a complete licensed-microwave Bill of Materials (BOM) to streamline the ordering process.

Future-Proofing Your Capabilities

Truly, the Smart Grid is a promising and even inevitable vision for the global utilities industry. However, it requires a high-performance communications network, one that can deliver today’s functionality while forging a smooth path toward the all-IP network of tomorrow. Proven and highly-accessible wireless broadband solutions will satisfy the Smart Grid need for a high-capacity utility management system, supporting the universal push for greater energy efficiency.

From disaster recovery to far-reaching campus connectivity, PTP 800 radios can meet your communications requirements with affordable, reliable, powerful and scalable connectivity and can bring you one step closer to your utility enterprise of the future. Plus, Motorola has the expertise to help you deploy an affordable, high-performance communications network that provides reliable data, voice and video services for your varied demands.

Motorola Wireless Broadband

PTP 800 solutions are included in Motorola’s comprehensive portfolio of reliable and cost-effective wireless broadband solutions that, together with our WLAN solutions, provide and extend coverage both indoors and outdoors. The Motorola Wireless Broadband portfolio offers high-speed Point-to-Point, Point-to-Multipoint, Mesh, Wi-Fi and WiMAX networks that support data, voice and video communications, enabling a broad range of fixed and mobile applications for public and private systems. With Motorola’s innovative software solutions, customers can design, deploy and manage a broadband network, maximizing uptime and reliability while lowering installation costs.

Key Features:

- 6 to 38 GHz bands
- Up to 368 Mbps (full duplex)
- 7 to 56 MHz channel widths
- Asymmetric and “capacity-as-you-grow” throughput
- Easy, fast deployment
- Wind speed survival up to 150 mph (242 kph)
- Latency to < 115 μ s at full capacity

* PTP 800 models operating in the 6 to 38 GHz frequencies will be available in a series of product releases.



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