



Motorola Wireless Broadband

Point-to-Multipoint (PMP) Access Network Solutions



Motorola Technology is as Simple as it is Powerful

Motorola Wireless Broadband Point-to-Multipoint (PMP) solutions are streamlined, powerful and simple, with built-in installation and deployment assistance, making Motorola solutions faster and easier to implement.

Components include:

Access Point (CAP) Module. The CAP seamlessly interfaces with an existing Local Area Network (LAN) via standard Ethernet connection. Compact and flexible, AP modules are built to be mounted outdoors, eliminating the need for overhead and in-ground wire or microwave.

AP Cluster. The foundation of the Motorola access network system is the AP cluster, a powerful system that includes six APs plus a Cluster Management Module (CMM). The CMM provides power for the CAP modules and includes an Ethernet switch and a GPS receiver.

Subscriber Module (CSM). CSMs are compact and unobtrusive access receivers that are easy to install at a user's or customer's site. Subscriber Modules can be mounted outside, and need no additional software installation. Each CAP module can serve up to 200 CSMs.

MOTOROLA WIRELESS BROADBAND SOLUTIONS

Motorola's comprehensive portfolio of reliable and cost-effective wireless broadband solutions 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 and Wi-Fi 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.

AP Cluster

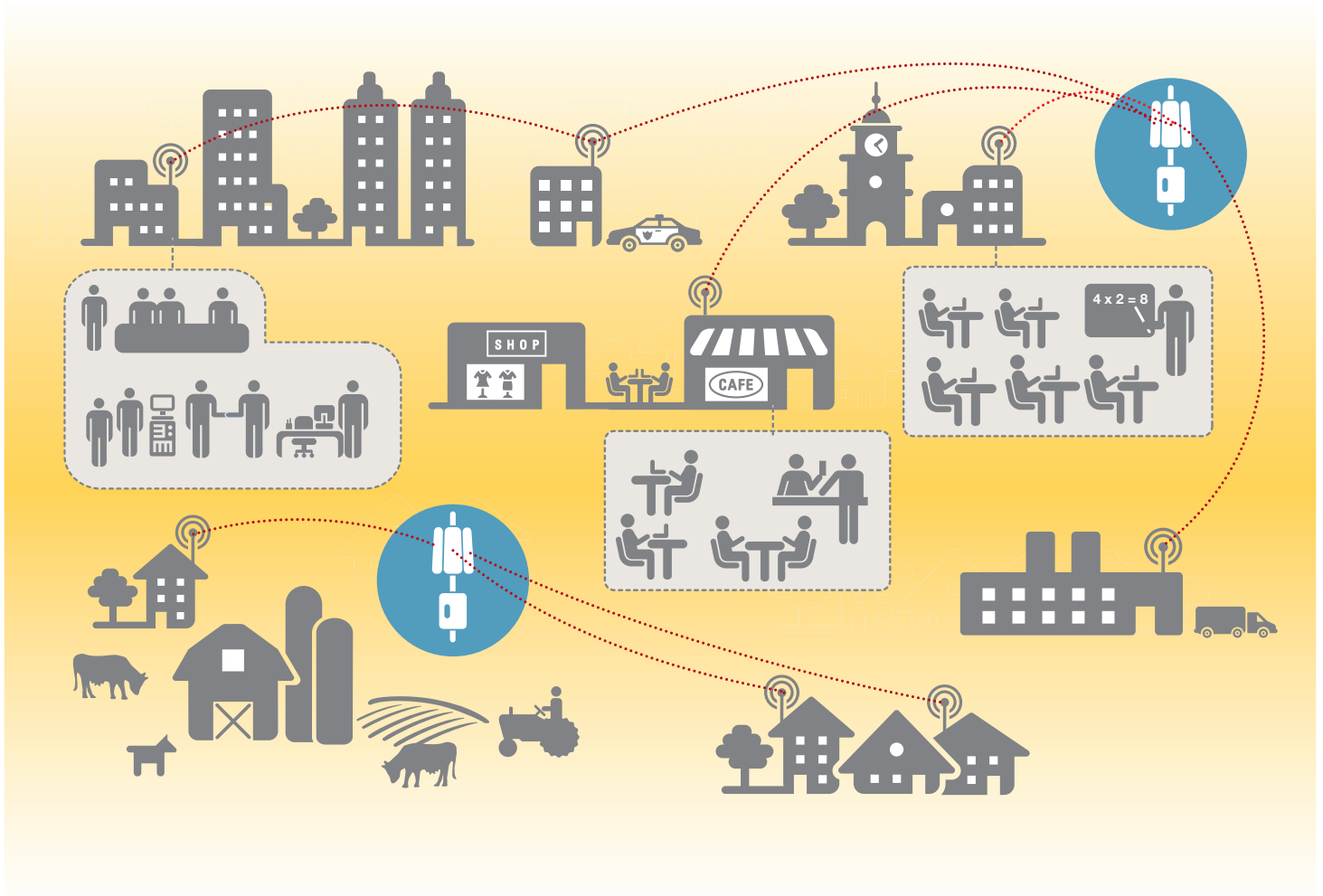


Subscriber Module CSM



Subscriber Module with Passive Reflector





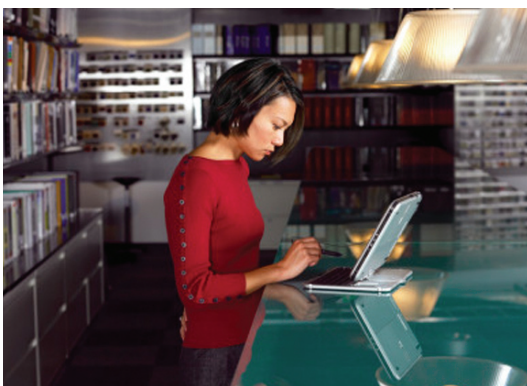
Delivering Reliable, Cost-Effective High-Speed Connectivity to Multiple Locations

Wireless broadband is quickly becoming the world's preferred technology for enterprises, municipalities and service providers delivering advanced and in-demand IP-based voice, video and data applications. Motorola Wireless Broadband Point-to-Multipoint solutions are leading the way with successful deployments all around the globe.

Motorola Wireless Broadband solutions deliver scalable, interference-resistant, high-speed connectivity to multiple residential, business, institutional and municipal locations. The platform combines exceptional reliability with robust performance, scalability, multiple layers of security, ease-of-use, accelerated deployment and remarkable affordability.

It also integrates seamlessly with existing network systems and management tools, making it easier and cost efficient to extend existing networks.

Maximizing the productivity of unlicensed wireless frequencies, Motorola Wireless Broadband Point-to-Multipoint solutions streamline the development, deployment, enhancement and extension of advanced IP-based wireless broadband networks. They excel at delivering ubiquitous high-speed connectivity and state-of-the-art services, and are currently helping drive successful business models as well as helping bridge the digital divide in more than 120 countries worldwide.



Solutions That Speed Deployment and ROI Without Accelerating Costs

Motorola Wireless Broadband Point-to-Multipoint solutions deliver the power, connectivity, high-demand services and cost-effectiveness that are crucial to increased return on investment and the ultimate success of virtually every wireless broadband network.

The platform combines superior broadband access performance with the flexibility to facilitate a wide range of commercial and private applications. The technology is designed to speed deployment and time to market, while helping control equipment, management and installation costs.

Specific benefits include:

Configuration Flexibility. Motorola Wireless Broadband Point-to-Multipoint solutions offer flexible configuration options for adaptation to meet the needs and expectations of different customer environments ranging from businesses to schools to government and community networks. The system is an exceptionally efficient and affordable municipal, small business and enterprise application.

Spectrum Options. The Motorola Wireless Broadband Point-to-Multipoint system provides wireless broadband access in a wide variety of spectrum choices—including 900 MHz, 2.4, 4.9, 5.1, 5.2, 5.4, 5.7 and 5.9 GHz—and helps ensure exceptional performance no matter which spectrum is best for your network.

Fast Installation. Its simple but elegant network design makes the Point-to-Multipoint system easier to install than most other networks. The solution features small cells that eliminate the need for coordination, and built-in installation and deployment assistance helps simplify every step of the deployment.

Lower Costs. The system makes broadband access to multiple locations extremely cost-effective. There are no major investments in equipment or software. The platform's exceptionally low acquisition, installation, operation and maintenance costs result in substantially lower cost of ownership.

THE ONE POINT WIRELESS SUITE

Wireless Manager is part of Motorola's comprehensive One Point Wireless Suite of integrated software solutions which make the design, deployment and management of wireless networks more visual, more complete and more efficient. With the software suite, you can design, deploy and manage your Motorola indoor and outdoor wireless broadband networks from inception through ongoing operation and expansion. In addition to One Point Wireless Manager, the suite includes applications that streamline the process of designing and verifying your network: PTP LINKPlanner, MeshPlanner, LANPlanner and RFMS for stand-alone WLAN management.



Enhancing the Business Case for Wireless Broadband Networks Around the World

Motorola Wireless Broadband Point-to-Multipoint solutions help provide the all-important user satisfaction, competitive differentiation and added revenue streams that are crucial to ensuring business growth, sustainability and ongoing success.

In addition to robust performance and proven reliability, Motorola Wireless Broadband Point-to-Multipoint solutions position network operators to offer today's—and tomorrow's—most innovative and sought-after applications such as high-speed Internet access, VoIP, video surveillance, interactive gaming and more. The system's high performance and extremely low latency of 5 to 7 milliseconds makes these high-demand technologies both efficient and cost-effective.

For networks of all kinds, Motorola Wireless Broadband Point-to-Multipoint solutions help deliver the crucial components of high satisfaction: service, security, productivity, affordability and enhanced user experience.

Interference Resistance. The solution's unique and powerful modulation scheme significantly improves the quality of data delivery and effectively mitigates interference from other systems of virtually every shape and spectrum. The system avoids self-interference by synchronizing all transmit and receive signals in the network via the Global Positioning System or GPS.

Extended Coverage. The Motorola Wireless Broadband Point-to-Multipoint platform's wireless signals are highly effective in line of sight (LOS) service in environments ranging from small communities to suburban areas to rural locations. Point-to-Multipoint equipment based on OFDM technology provides near-line of sight (nLOS) coverage into urban and other environments that present significant obstruction challenges.

Data Rates. Motorola Wireless Broadband Point-to-Multipoint networks offer fast upload and download speeds. The Point-to-Multipoint system offers up to 21 Mbps (aggregate data rates). Of course, speeds on any network are affected by several factors so actual upload/download speeds may vary, but the potential to offer an incredible broadband experience is inherent in the system.

Operating Ranges. The platform offers superior broadband access for networks of various sizes and coverage areas. Because operating ranges are highly dependent on power levels, many of the system's components support adjustable power to meet specific network and regulatory requirements.

Scalability. The Motorola Wireless Broadband Point-to-Multipoint solution's advanced scalability allows you to quickly accommodate changing needs, wider geographical areas, larger populations and higher traffic volumes. In addition, its high tolerance for interference and directional antennas ensure that adding additional transmitters increases capacity without degradation of performance.

Security. The system provides multiple layers of security, including the over-the-air DES (Data Encryption Standard) encryption standard. For the highest-grade security, the platform is also available in some areas with AES (Advanced Encryption Standard) that provides 128-bit encryption to ensure secure data delivery and exceptional reliability. AES makes it virtually impossible to crack a code.

VIDEO SURVEILLANCE: SEEING IS PROTECTING

For a variety of applications—including perimeter monitoring, access control, public and individual safety and more—video surveillance systems are rapidly becoming the technology of choice for a wide range of organizations. Motorola Wireless Broadband Point-to-Multipoint solutions provide a cost-effective, reliable backbone infrastructure for transporting any type of video, sound or data IP surveillance traffic that can dramatically improve protection of property, capital assets and personnel.

Motorola Wireless Broadband Point-to-Multipoint Solutions Are Empowering Networks Around the Globe

Motorola Wireless Broadband Point-to-Multipoint solutions are proven in the world's toughest and most dense environments. Powering high-speed wireless networks in more than 4,000 systems around the world, Motorola solutions help specific countries and organizations in a myriad of diverse applications.

Michigan, USA.

Replacing a Road Commission's costly telephone lines with high-speed wireless connectivity for collecting and sending traffic data.

Sergano, Italy.

Enabling a small municipality to cost-effectively monitor local streets and areas to help reduce crime.

Macedonia.

Quickly deploying the country's first wireless backbone network to deliver high-speed connectivity in both rural and urban areas. nationwide.

Heart of China Railway Bureau.

Upgrading rail station security monitoring in three coal-rich interior provinces.

Nova Scotia

Enabling Wireless Broadband Connectivity for 40,000 rural customers over 24,000 square miles

Peru.

Providing remote locations with high-speed communications for emergency first responders such as police and firefighters.

Kenya.

Empowering corporate ISP AccessKenya to quadruple its business in just two years.

Rajasthan, India.

Installing a wireless backbone network for connecting more than 10,000 local self-governing councils.

Australia.

Helping ISP CommsLogic provide wireless broadband connectivity and VoIP service throughout the state of Queensland.



PAGE 7 (Inside Back Cover):

POCKET FOR INSERTS



Experience the Motorola Advantage

Motorola is one of the most trusted resources for wireless communication solutions around the world. Here are a few reasons why. First, Motorola's more than 80 years of RF innovation and leadership make us the world's most experienced wireless communication resource. Second, we offer a broad array of advanced technology options that are globally proven in the real world. Third, we support our customers with a rich portfolio of service solutions and support. Motorola's dedication to creating and maintaining trusted relationships over the long-term means providers and users alike are assured of high levels of worldwide support as their networks grow over the years.



MOTOROLA

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