



High-Speed, High-Bandwidth Mobile Access: The Broadband Advantage

To increase efficiencies and impact, public safety agencies around the globe are turning to wireless broadband technology and advanced applications to enhance their ability to keep communities safe. Video is one critical capability among many that continues to gain momentum. However, just as enterprises need to control costs and achieve meaningful ROI with their IT investments, so too do public safety agencies that fight for every funding dollar. Wireless broadband technologies, such as Mesh Wide Area Networks (MWAN), provide the flexibility and scalability public safety and municipal agencies need to cost-effectively “future proof” their networks and support high-bandwidth data applications that have the power to transform the mobile environments in which they live and work.

The Need for Speed

Streaming video. High-speed access at highway speeds. Enhanced traffic control. All require new levels of bandwidth to ensure quality and reliable performance. With the formal ratification of the 802.11n standard and introduction of outdoor wireless mesh products that have adopted this technology, public safety and municipal agencies have greater choices than ever before for expanding their network infrastructure and leveraging advanced applications such as eTicketing, intelligent traffic systems and streaming video surveillance. The latest wireless technologies will allow greater security monitoring of buses and trains, provide rapid uploading and downloading of mobile data through vehicles in motion and deliver greater cost savings and operational efficiencies by making the right IT investments.

One Complete Solution

Not all wireless broadband solutions are created equal. Public safety networks require both indoor and outdoor connectivity and secure, reliable performance. Network planners and operators must carefully assess manufacturer and integrator claims before making significant investments. Motorola is one of the few companies that can provide a complete solution. Its portfolio of Mesh Wide Area Network (MWAN) solutions, such as the MWAN 4300 product series, are ushering in a new era of content-rich, real-time applications for public safety, government and enterprise operations around the globe. The new, high-power 802.11n AP 7181 multi-radio outdoor mesh access point, together with the AP-7131 indoor 802.11n access point, creates a seamless indoor/outdoor mesh network solution that ensures contiguous coverage throughout a city or



Taking a Closer Look at Public Safety Video Requirements

In 2008, the Office for Interoperability and Compatibility (OIC) within the Department of Homeland Security and the U.S. Department of Commerce's Public Safety Communications Research program formed the Video Quality in Public Safety Working Group. Composed of representatives from each public safety discipline – local, state, and Federal law, fire, and emergency medical services; Federal partners; representatives from academia and non-profit entities; and manufacturers – the Group coordinates efforts among organizations and agencies that are developing video standards for their own use. While each public safety agency's overall video needs are unique, many common elements exist that require similar video quality specifications. The Working Group is developing a set of application independent use cases and a User Guide to help public safety agencies determine their particular use cases. The Working Group effort will help practitioners implement effective video systems for their specific needs. Future outputs of the Working Group will include a glossary of shared terminology related to video quality, video equipment, and the development of specifications to aid public safety agencies in becoming more effective.

For more information on this initiative, visit www.safecomprogram.gov/SAFECOM

campus environment. Motorola's MWAN portfolio also provides vehicle mounted modems (VMM), which are particularly well suited to meet public safety network requirements. The VMM 4300 offers a 4.9 GHz, 5.4 GHz or 5.8 GHz radio for wireless backhaul connectivity, enabling high bandwidth applications such as video surveillance while traveling at speeds up to 80 mph. The VMM 4300 can reside on the same network as the MWAN IAP 4300, which supports 802.11a/b/g rates or the AP 7181, to provide coverage throughout a community. The products use Motorola's patented

MeshConnex™ routing technology, delivering efficient routing, low hop latency, low routing overhead, high-speed handoffs and proven scalability. A recent improvement to MeshConnex, Opportunistic Radio Link Adaptation (ORLA), provides a key decision-making element that selects data rates that will provide the best throughput at any given time. The combination of MeshConnex and ORLA ensures customers using a Motorola Mesh Wide Area Network enjoy reliable throughput at the highest possible data rate at highway speeds.

Advanced Capabilities in Motion

The VMM 4300, used in combination with either the IAP 4300 or the AP 7181, delivers a powerful public safety broadband solution. The VMM 4300 can be mounted in buses, trains or public safety vehicles. The net result is greater real-time visibility and situational awareness of incidents as they occur. For example, a police car that has been monitoring a situation on a bus via video enabled by the VMM 4300, can intercept the bus in real-time and take action before the situation escalates. This is a powerful tool to deliver enhanced safety and security to officers and the citizens they protect.

About Motorola Wireless Broadband

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, 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.



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