



MOTOROLA APPLICATION BRIEF

**IT'S INTENSE ON THE  
FRONT LINES.  
WE HAVE YOUR BACK.**



**POINT-TO-POINT WIRELESS SOLUTIONS  
FOR BORDER CONTROL**



## REMAIN SAFE AND IN CONTROL.

Right now, your agents are watching a suspicious sport utility vehicle as it heads toward the check point. The plates are quickly run through the vehicle identification system, and they match a stolen vehicle. A thorough search reveals a bag hidden in a customized compartment under the chassis. It's stuffed with a few hundred thousand dollars worth of drugs. Agents confiscate the drugs and make the arrest.

### MISSION ACCOMPLISHED.

All this takes only a few minutes, thanks to your Motorola high-speed wireless communication network. Around the world, our Point-to-Point (PTP) Wireless Solutions are supporting border control operations with fast access to vital information such as vehicle and license plate data, arrest records and missing-person images. In addition, surveillance video keeps agents in constant contact with command to track their every move.

## EVERY DAY ON BORDER CONTROL IS TENSE

With the rise in terrorism and drug trafficking, your agents are under more pressure than ever to welcome permissible new travelers and goods into the country, while restraining people and materials that pose a threat or break the law. In seconds, agents have to analyze a situation and take the appropriate action, without jeopardizing their safety or the safety of welcome visitors. At the same time, your team is responsible for stopping anyone who unlawfully crawls, drives, sails or tunnels beyond the boundary. So, reaction time and immediate access to vital information make all the difference. Your real-time communication network has to perform as quickly and dependably as your agents do, in all types of environments and weather conditions.

You have hundreds, or maybe thousands, of miles to cover, and not enough personnel to be everywhere at once. Our PTP wireless network solutions can give you that needed extra coverage through powerful technologies that help you keep a watchful eye on every border mile. Because our radios can reliably send and receive data, voice and video over distances up to 124 miles, your communications can go farther with fewer hops. That also allows you to reduce your overall wireless network costs.

PTP 600 radios with FIPS 140-2 Level 2 certification meet regulatory requirements for cryptographic algorithms, key security and tamper evidence.

Recognizing the highly confidential nature of your communications, we have made and continue to make extensive investments in security. Today, our systems support several security capabilities,<sup>1</sup> including: HTTPS/TLS and SNMPv3; identity, auditing and event management; FIPS (Federal Information Processing Standard) 197 128/256-bit AES (Advanced Encryption Standard); disaster recovery capabilities; vulnerability management; and FIPS 140-2 Level 2 compliance.<sup>2</sup>

<sup>1</sup> Certain security features and compliance certifications may not be available on all PTP systems.

<sup>2</sup> You can confirm certification status online at: <http://csrc.nist.gov/groups/STM/cmvp/inprocess.html>

### Licensed Solutions for Border Control

PTP 600 – 4.5 and 4.8 GHz  
(licensed for federal and NATO exclusively)

PTP 600 – 4.9  
(licensed for public safety usage)

PTP 800 – 6 to 38 GHz  
(Ethernet-based licensed microwave)

Our broad portfolio of PTP Wireless Ethernet Bridges gives you a range of communication options to address a wide variety of applications, information technology (IT) infrastructures and budgets. You can choose among systems operating in the 4.5, 4.8 and 4.9 GHz bands which are licensed for use by federal, NATO and public safety agencies exclusively; the license-exempt 5.4, 5.8 and 5.9 GHz bands; and the 6 to 38 GHz bands for Ethernet licensed microwave. Our cost-effective, high-capacity PTP solutions allow you to deliver triple-play communications in virtually any environment. Plus, our ruggedized radios are designed to withstand severe weather, extreme temperatures and high winds.

## HOLDING THE LINE

To help you maintain the country's borders, you can deploy PTP solutions for a wide array of uses.

- **Formidable Backhaul:** Typically, a country's border is studded with thousands of surveillance cameras. Our PTP solutions can reliably stream video from your surveillance cameras back to your command center in real time. In addition, the systems can backhaul voice-over-IP (VoIP) calls, telemetry data and information from data collection devices such as exit kiosks and Land Mobile Radios (LMRs).
- **Leased-Line Replacement:** By replacing T1 lines and fiber with PTP systems, you can eliminate or greatly reduce recurring fees and extend connectivity to remote areas not served by wire or fiber. Your wireless communication network can be up and running much faster because you don't have to wait six months or more for a carrier to run T1 lines. Plus, PTP systems can provide you with much greater bandwidth than T1 service. In the case of fiber, cables are often accidentally cut by construction workers or field technicians. So, replacing fiber can also provide more reliable communications.
- **Network Redundancy:** To ensure that critical communications are always available, you can use PTP systems to provide redundancy for existing wired or fiber networks. With up to 99.999% availability, our systems offer the reassurance that vital communications will continue in the event of a wired or fiber outage. Plus, those same redundant systems can also provide additional capacity where needed.
- **Connecting with Co-Workers and Partners:** In the performance of your duties, you often need to coordinate with various Customs and Border Protection (CBP) offices and agencies such as local law enforcement, fire departments and emergency medical teams. To make this type of collaboration effective, you need reliable, high-performance, secure and fail-safe communications. Our PTP systems can enable these communications from building-to-building, between buildings in a campus setting and across wide expanses of terrain.
- **Remote Training:** In order to do their jobs effectively, your field agents and officers must know the most recent border control laws, policies, procedures and techniques. A PTP solution can supply ample bandwidth for publishing multi-media content, hosting web conferences and providing remote access to curricula.

### Typical Uses

#### Backhaul:

- Video surveillance cameras
- VoIP
- Data collection devices and telemetry
- In-vehicle mobile computers
- Land Mobile Radios (LMRs)

#### Communications:

- Leased-line and fiber replacement
- Network redundancy
- Inter-agency and intra-agency
- Building-to-building
- Remote training for officers and agents

### Protecting Our Harbors

Project Hawkeye is a U.S. Coast Guard (USCG) initiative that monitors five seaports stretching from urban Boston to tropical Key West. Hawkeye identifies and tracks vessels that are approaching the harbors, giving Watch Officers real-time data to enable vital decision making. The USCG needed to backhaul long-range cameras and sensors which

monitor activity across the coastal waters off these Eastern seaports. After testing other systems, they deployed our PTP links to feed streaming video, camera control, RADAR information, shipboard Automatic Information System (AIS) information, tracking data, LAN traffic and remote control of ancillary devices to the command centers.

Our PTP radios provide reliable, high-speed backhaul connectivity over water and land, through metropolitan-area interference, and in various harsh marine climates. In addition, the systems contend with obstructions from sea-going vessels which regularly block communications.

## KEY PTP ADVANTAGES

Our mission is to make your job a little easier and safer by giving you access to the people and information you need, when you need it. To accomplish this, our PTP solutions employ a unique combination of innovative technologies that offer you several communication advantages, including:

- **Anywhere Connectivity:** You can establish communications in non-line-of-sight (NLOS), long distance line-of-sight (LOS) and high-interference locations as well as over water and deserts. In fact, our radios often perform in locations that were previously considered un-connectable.
- **Extended Reach:** Our radios can communicate across distances of up to 124 miles in a single hop so you can go farther at less cost.

- **Worry-Free Durability:** With more than 1.5 billion field hours logged, our radios are proven to withstand the rigors of outdoor use. In addition, PTP 600 radio casings are Ingress Protection (IP) 66 rated for resistance to dust and water ingress.
- **Weather-Proof Performance:** Our radios are engineered to withstand winds up to 202 mph and temperatures from -40° to 140° Fahrenheit, performing steadfastly in rain, snow, sleet and blistering sun.
- **Multi-Level Security:** While all our systems are engineered to be inherently secure, they also support additional security capabilities and compliance certifications to protect your over-the-air communications.
- **“No Surprises” Link Planning:** Prior to purchase, our easy-to-use PTP LINKPlanner tool lets you accurately predict link performance based on geography, distance, antenna height and other factors specific to your deployment. LINKPlanner is available as a stand-alone tool or included in our One Point Wireless Suite.
- **Fast Deployment:** With easy-to-follow deployment assistance features, PTP links can be deployed quickly – typically in one to two days.
- **Performance-Enhancing Tools:** Systems include industry-leading metrics to help you attain the best possible performance from your wireless system. Those metrics include antenna alignment information, interference and throughput measurements, measurements of signal level and quality, and troubleshooting diagnostics.
- **Flexible Network Management:** Your team can easily manage your wireless network via the Web and a standard Internet browser, your existing network management system and/or our Wireless Manager, Version 2.2 or higher.

## SUMMARY

When every moment counts, our PTP solutions can support you with secure, high-speed, carrier-grade wireless communications to enable better decision making and incident outcomes. With our broad family of products, we can help you configure just the right solution for your applications, infrastructure, environment and budget. So, let us show you how you can keep critical communications flowing and vital information at hand with a PTP wireless network.



## WIRELESS NETWORK SOLUTIONS

Our PTP solutions are included in our Wireless Network Solutions portfolio, giving you the agility you need to better protect and serve the public. Our unrivaled wireless solutions include indoor WLAN, outdoor wireless mesh, point-to-multipoint and point-to-point networks as well as voice over WLAN solutions. Combined with powerful software for wireless network design, security, management and troubleshooting, our solutions deliver trusted networking and anywhere access to organizations across the globe.



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