WAVE™
5000

INTEROPERABLE, SECURE GROUP COMMUNICATION

MOTOROLA
SOLUTIONS

WAVE 5000 enables interoperable push-to-talk (PTT) communication across broadband and radio networks and devices so that critical, time-sensitive information flows quickly and securely between mobile workers and teams.

Whether on a smartphone, radio, computer or landline, your personnel can connect instantly and securely with WAVE 5000.

USE RIGHT DEVICE FOR THE JOB

Perhaps you're an executive traveling for a conference but you want to stay connected to your radio system.

Or, you use your radio for operational purposes and do not need to carry a ruggedized radio with you all of the time. Maybe you're a government agent working undercover. Your smartphone and ear buds would be ideal to connect to other tactical units while keeping you inconspicuous. For every police officer on the beat, agent on a job or worker on shift, there are many other personnel that can provide support, often life-saving assistance, with PTT communications using smartphones, tablets or PCs from any location. WAVE 5000 makes it possible.

BRIDGE TWO-WAY RADIO WITH BROADBAND NETWORKS

With WAVE 5000 you can experience functionality that lets you build and operate secure, highly-scalable solutions for today's most demanding communications environments:

Connect Radio to Radio
Connect multiple, disparate two-way radio systems and remove barriers to communication interoperability and workforce collaboration.

Extend Radio To Broadband
Extend workforce communications beyond radio to include smart devices and broadband networks for seamless communications in any location.
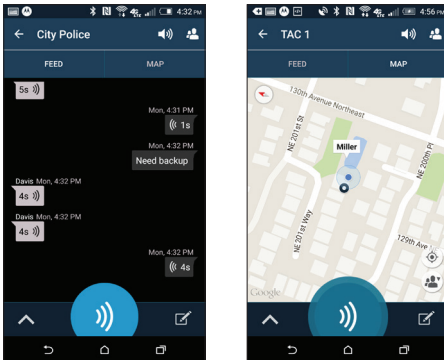
Embrace Broadband
Secure, 'over-the-top' PTT connecting smart devices over 3G, 4G LTE and Wi-Fi networks delivers greater choice and flexibility when choosing a non-radio, carrier-independent communications solution.

WAVE 5000 CLIENT APPLICATIONS

Whatever the device or available network, WAVE has client applications that meet the needs of all types of users.

MOBILE COMMUNICATOR
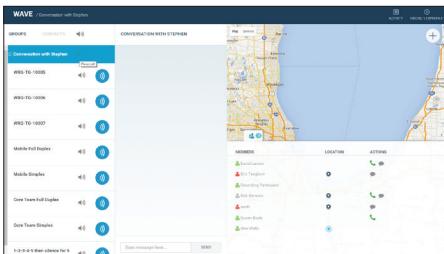
TURN YOUR MOBILE PHONE INTO A MULTI-CHANNEL PTT HANDSET

Not everyone needs or wants to carry a radio handset. But they do want instant, secure access to important, often mission-critical communications wherever they are located.

With a WAVE Mobile Communicator installed on a smartphone, tablet or custom handheld, any user can access PTT communications and collaborate with groups or other users as required. Mapping, presence and channel activity monitoring improve situational awareness for everyone.

Install WAVE Mobile Communicator on Android or iOS mobile phones and augment with remote speaker microphones and other accessories to create a radio-like user experience.
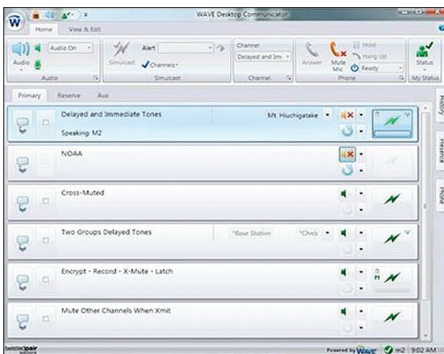
WEB COMMUNICATOR

USE A WEB BROWSER TO ACCESS YOUR WAVE COMMUNICATIONS CHANNELS

You're a computer-based worker who would like to stay connected to your team from anywhere. WAVE Web Communicator provides device agnostic communications from your web browser.

Simply log in for instant access to your groups and contacts and start communicating via PTT or text. See communication history and the location of other team members.

DESKTOP COMMUNICATOR

ACCESS PTT COMMUNICATIONS FROM YOUR DESKTOP PC

You're not a mobile worker in the field responding to events and service calls, but you're there to provide support from headquarters, a communications center or a remote location. Let's turn your desktop PC into a PTT communications hub.

WAVE Desktop Communicator is a software application that allows workers to use their desktop or laptop PC to monitor, transmit and receive audio from multiple communication systems such as two-way radio networks and telephones. With an intuitive and easy-to-use display, the Desktop Communicator runs on virtually any PC, from multiprocessor desktop machines to netbooks.

ADVANCED DESKTOP COMMUNICATOR

FEATURE RICH COMMUNICATION CONSOLE

Designed for small to mid-sized organizations, the WAVE Advanced Desktop Communicator is an enterprise-grade communication console.

Advanced Desktop Communicator gives operators the ability to display and manage hundreds of communications channels that make up a complex and fluid communications environment. Multiple radio channels, telephone calls and other communications systems can be quickly patched together. Activity displays, audio recording and instant replay provides a complete session history for archiving and audit trail purposes.

WAVE 5000 SECURITY

Multiple layers of security ensure your communication is heard only by those intended.

Broadband to Radio Encryption
Because your voice and data communications are encrypted on both broadband and radio networks, you can be assured that it is only heard by those intended.

Standards-Based TLS 1.2 Support
Transport Layer Security protects the privacy and data integrity of communication between the WAVE server and mobile client application This is particularly important when operating on public broadband networks not completely in your control.

Device Authorization
A unique identifier per device prevents unauthorized devices from accessing the system, even if account credentials are stolen. Only those with authorized devices and login credentials are able to gain access to your communications.

WAVE 5000 REDUNDANCY

WAVE 5000 can be configured for either geographic or local redundancy. Upon failure or disconnection, the backup physical server and corresponding virtual servers will automatically take over to maintain service including the management server, proxy server and media server.

WIRELINE RADIO INTEGRATION

Eliminate the donor radio for each interoperable talkgroup with a direct IP wireline interface. With wireline integration, talkgroups can be added or removed through software configuration, which translates to less hardware and maintenance costs. What's more, wireline interfaces can pass unit ID and other information not possible with donor radio configurations.

WAVE FOR ASTRO 25

If you're one of the over two million users that rely on a Motorola Solutions P25 radio for daily communications as well as emergency response in the most demanding situations, you value the importance of staying connected with fellow first responders and supporting teams when it matters most.

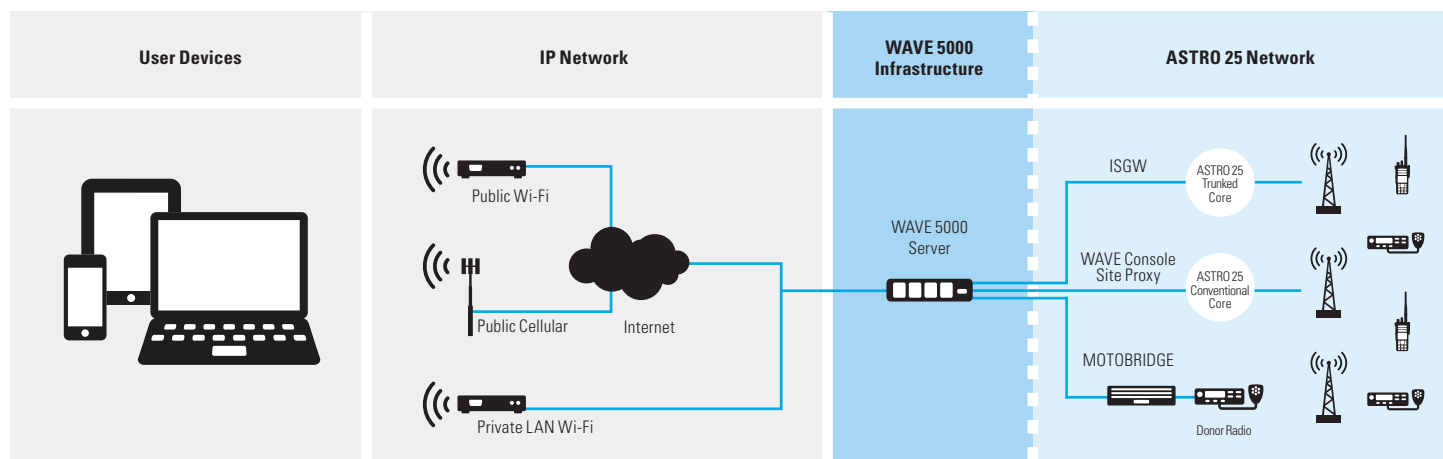And like the majority of your industry peers, you will have noted the wide availability of broadband data networks and smart mobile devices. You are asking how they can be used to improve public safety communications for everyone.

The answer lies with WAVE 5000 and its ability to add another performance-driven layer of capability to ASTRO® 25 systems by securely extending PTT communications to non-radio users over broadband networks, from any location.

ASTRO 25 ENCRYPTED INTEROPERABILITY WITH WAVE

WAVE 5000 supports ASTRO 25 encrypted talkgroups and encrypted conventional channels with encryption keys securely stored in the WAVE CRYPTR device. With WAVE encrypted talkgroups, your mission-critical PTT communications stay secure from the radio core to the broadband edge.

WAVE 5000 INTERFACES INTO ASTRO 25

User Devices	IP Network	WAVE 5000 Infrastructure	ASTRO 25 Network

Public Wi-Fi
Public Cellular
Internet
Private LAN Wi-Fi

WAVE 5000 Server

ISGW — ASTRO 25 Trunked Core
WAVE Console Site Proxy — ASTRO 25 Conventional Core
MOTOBRIDGE
Donor Radio

WAVE FOR DIMETRA

Motorola Solutions DIMETRA™ solution offers secure, reliable and efficient communications customized to meet the needs of different markets. With a large installed base and multiple vendor support, we offer a wide choice of products and applications so organizations can select exactly the right solution for their needs.

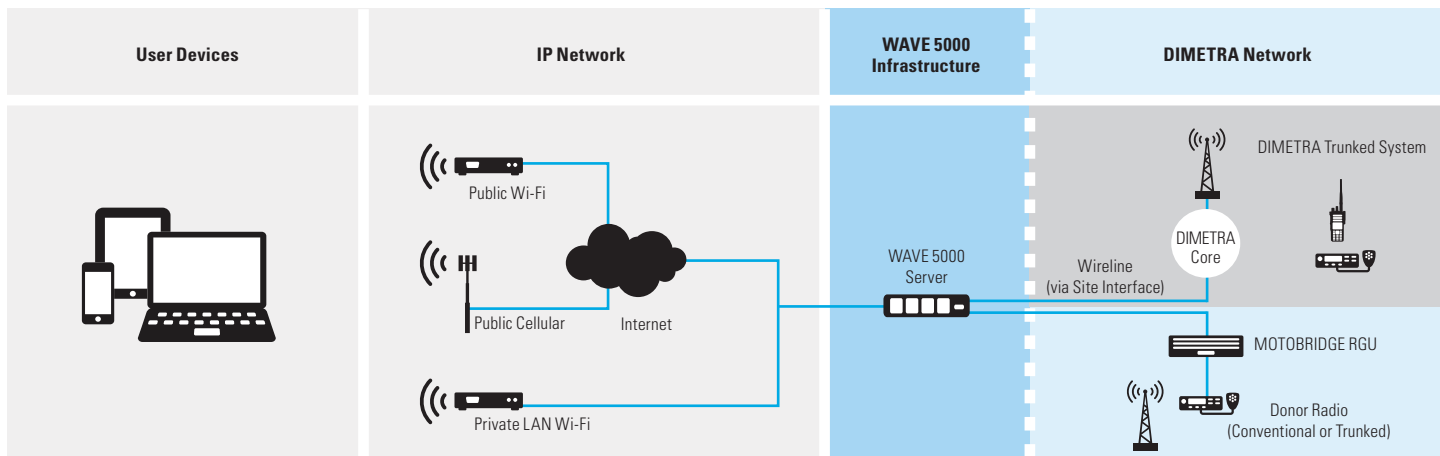WAVE 5000 continues this system flexibility by enabling secure and scalable extension of DIMETRA networks to fixed and mobile broadband users and devices, enhancing team collaboration and effectiveness.

WAVE 5000 includes a wireline interface to DIMETRA networks, enabling greater system scalability and performance. WAVE 5000's wireline interface supports up to 39 simultaneous DIMETRA to WAVE calls and the ability to provision up to 300 different DIMETRA talkgroups to interoperate with WAVE.

DIMETRA ENCRYPTED TALKGROUP INTEROPERABILITY WITH WAVE

WAVE 5000 supports DIMETRA encrypted talkgroups to WAVE using a DIMETRA site interface wireline solution with the DIMETRA encryption keys securely stored in the WAVE CRYPTR device. With WAVE encrypted talkgroups, your mission-critical PTT communications stay secure from the radio core to the broadband edge.

WAVE 5000 INTERFACE INTO DIMETRA

User Devices	IP Network	WAVE 5000 Infrastructure	DIMETRA Network

Public Wi-Fi
Public Cellular
Internet
Private LAN Wi-Fi
WAVE 5000 Server
Wireline (via Site Interface)
DIMETRA Core
DIMETRA Trunked System
MOTOBRIDGE RGU
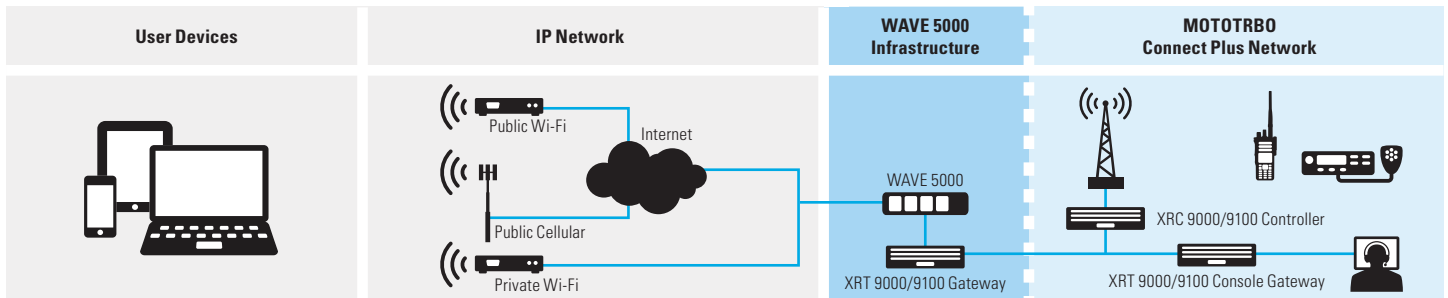Donor Radio (Conventional or Trunked)

WAVE FOR MOTOTRBO

WAVE 5000 uses a wireline interface to integrate with a MOTOTRBO™ Connect Plus, Capacity Plus and Capacity Max radio systems. The WAVE 5000 Server manages all communications between MOTOTRBO systems and broadband networks and devices, and maintains user credentials and configuration information for smartphone clients.
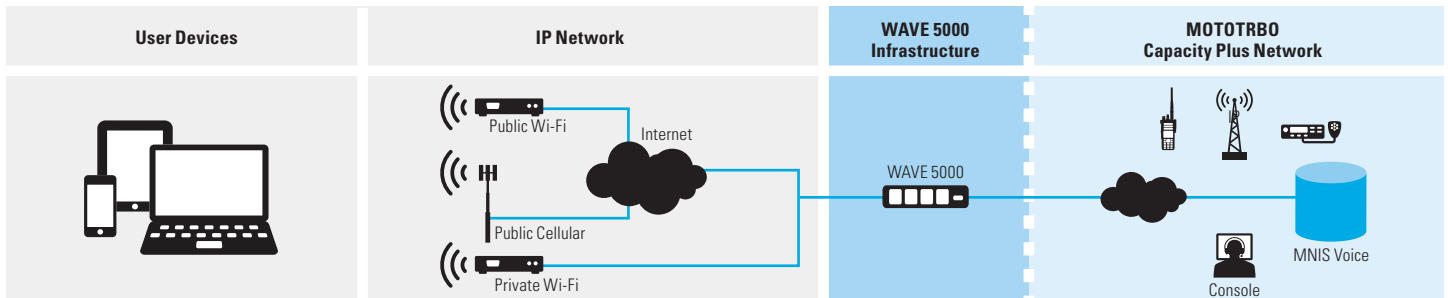
EXTENDING A MOTOTRBO CONNECT PLUS SYSTEM

For MOTOTRBO Connect Plus systems, the WAVE 5000 Server integrates directly with an XRT 9000 or XRT 9100 Connect Plus Gateway. This interface provides an IP-based wireline connection to your Connect Plus system for a highly-scalable, reliable and secure broadband PTT integration.

User Devices	IP Network	WAVE 5000 Infrastructure	MOTOTRBO Connect Plus Network

Public Wi-Fi · Internet · Public Cellular · Private Wi-Fi · WAVE 5000 · XRT 9000/9100 Gateway · XRC 9000/9100 Controller · XRT 9000/9100 Console Gateway
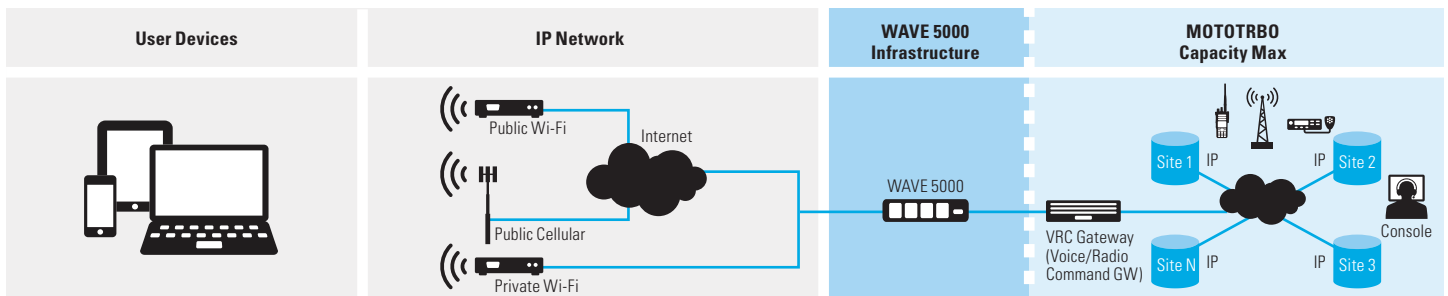
EXTENDING A MOTOTRBO CAPACITY PLUS SYSTEM (SINGLE SITE / MULTISITE)

For MOTOTRBO Capacity Plus systems there is no requirement for an XRT gateway or donor radios as the WAVE 5000 Server integrates directly with the system using the IP-based MNIS voice interface. Repeaters that need connectivity to WAVE should have NAI voice licenses enabled.

User Devices	IP Network	WAVE 5000 Infrastructure	MOTOTRBO Capacity Plus Network

Public Wi-Fi · Internet · Public Cellular · Private Wi-Fi · WAVE 5000 · MNIS Voice · Console

EXTENDING A MOTOTRBO CAPACITY MAX SYSTEM

For MOTOTRBO Capacity Max systems, the WAVE 5000 Server integrates directly using a MNIS VRC Gateway. No XRT or donor radios are needed. One VRC Gateway Talkpath license is required for each simultaneous call through to the WAVE server. These licenses are loaded on the CMSS.

User Devices	IP Network	WAVE 5000 Infrastructure	MOTOTRBO Capacity Max

Public Wi-Fi · Internet · Public Cellular · Private Wi-Fi · WAVE 5000 · VRC Gateway (Voice/Radio Command GW) · Site 1 IP · IP Site 2 · Site N IP · IP Site 3 · Console

SPECIFICATIONS

WAVE Clients Supported	WAVE Mobile Communicator WAVE Web Communicator WAVE Desktop Communicator WAVE Advanced Desktop Communicator
Wireline Radio Integration	ASTRO 25 Trunked 7.13+ ASTRO 25 Digital Conventional (M Core) 7.17+ DIMETRA (DIPS/DIPC) 8.1+ DIMETRA (DIPM) R3 MOTOTRBO Connect Plus R01.05+ MOTOTRBO Capacity Plus R2.4+ MOTOTRBO Capacity Max R2.7+
Wireless Donor Radio Integration	MOTOBRIDGE wireless interface to virtually any radio system
Encrypted Radio Talkgroups	ASTRO 25 DIMETRA MOTOTRBO Capacity Plus MOTOTRBO Capacity Max
Provisioned WAVE Clients	Up to 5000
Provisioned Channels	Up to 8000

For more information about WAVE 5000 please visit
www.motorolasolutions.com/wave

MOTOROLA SOLUTIONS