



WAVE PTT

**INTEROPERABLE,
SECURE GROUP
COMMUNICATION**



MOTOROLA
SOLUTIONS



WAVE™ 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.

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 makes it possible.

BRIDGE TWO-WAY RADIO WITH BROADBAND NETWORKS

With WAVE 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.

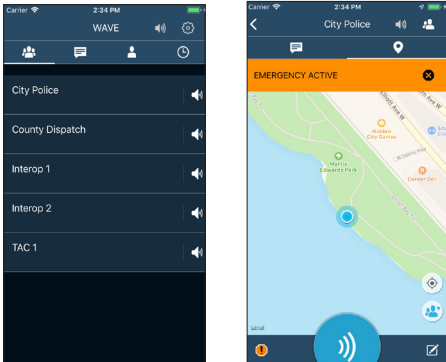
Embrace Broadband

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 CLIENT APPLICATIONS

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

MOBILE COMMUNICATOR



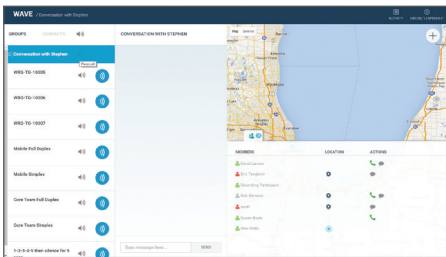
TURN YOUR MOBILE PHONE INTO A MULTI-CHANNEL PTT HANDSET

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

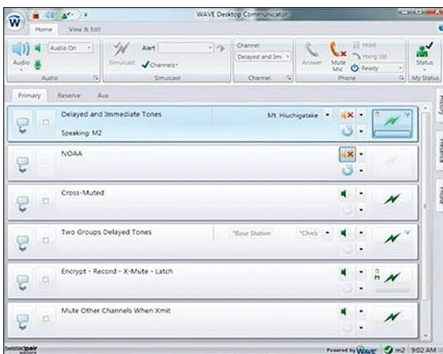


USE A WEB BROWSER TO ACCESS YOUR WAVE COMMUNICATIONS CHANNELS

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 SECURITY

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

Fully Encrypted Voice and Data

Encrypted communications across both broadband and radio networks ensures it is only heard by those intended. Encrypted connections for Microsoft Active Directory protects your user credentials across multiple domains.

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.

EMERGENCY CALL

WAVE supports emergency calls in both broadband-only and LMR interoperable environments. Any user, WAVE or radio, can initiate an emergency call and alert everyone to the situation.

WAVE REDUNDANCY

WAVE can be configured for either geographic or local redundancy of all WAVE core components. Upon failure or disconnection, the backup component will automatically take over to maintain broadband PTT service.

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 support capabilities such as caller ID and emergency calls, 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 are asking how to extend radio communications to smartphone users.

REDUNDANCY

WAVE redundancy for ASTRO 25 High Availability and DSR configurations means your broadband PTT interoperability service

continues to perform in the event of an ASTRO 25 core switch. Redundant interoperability links is supported in both ASTRO 25 Trunking and Digital Conventional configurations.

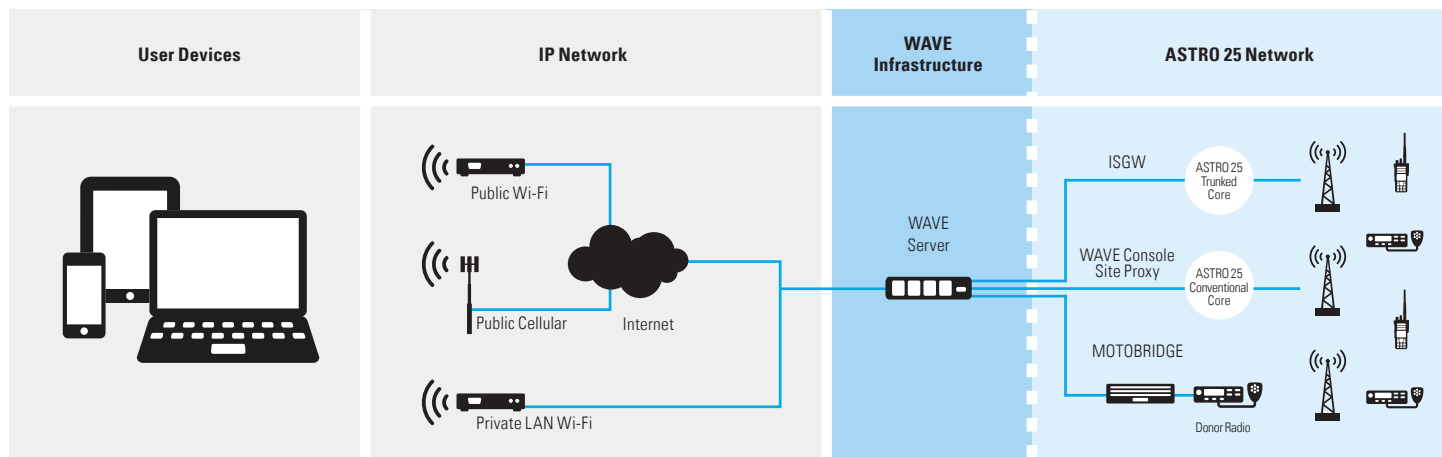
ENCRYPTED INTEROPERABILITY

WAVE 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.

EMERGENCY CALLS

Emergency calling between WAVE and ASTRO 25 Trunking and Digital Conventional users means that any user, WAVE or ASTRO 25, can initiate an emergency call, bringing everyone on the talkgroup or channel into the conversation.

WAVE INTERFACES INTO ASTRO 25





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 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 includes a wireline interface to DIMETRA networks, enabling greater system scalability and performance. WAVE'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.

ENCRYPTED INTEROPERABILITY

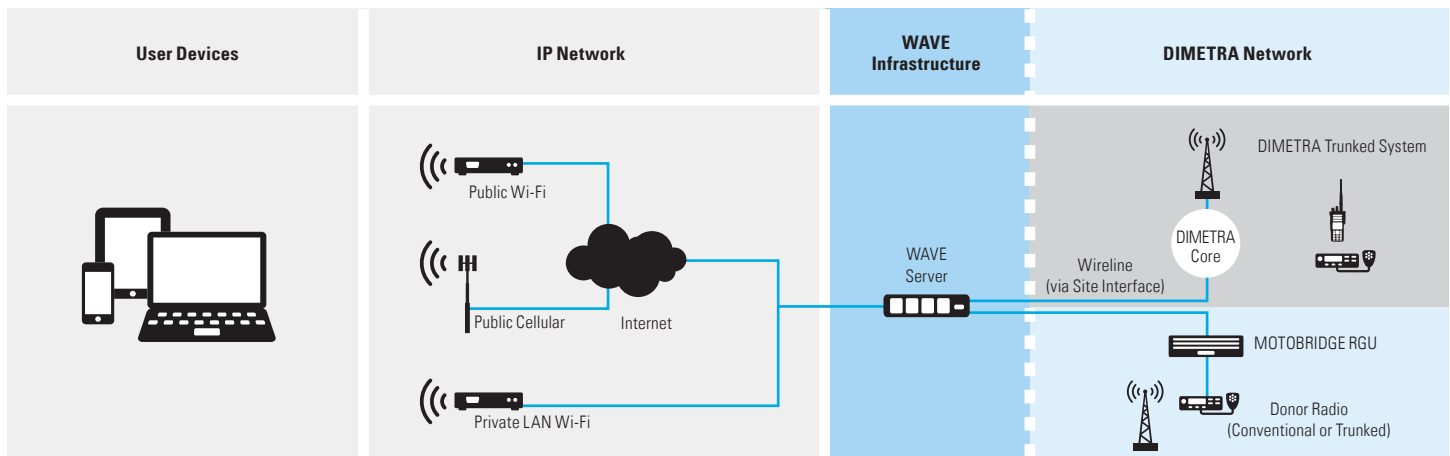
WAVE supports DIMETRA encrypted talkgroups to WAVE using a DIMETRA site interface wireline solution with the DIMETRA encryption keys securely stored in the WAVE CRYPTR

device. With WAVE encrypted talkgroups, your mission-critical PTT communications stay secure from the radio core to the broadband edge.

EMERGENCY CALLS

Emergency calling between WAVE and DIMETRA users means that any user, WAVE or DIMETRA, can initiate an emergency call, bringing everyone on the talkgroup or channel into the conversation.

WAVE INTERFACE INTO DIMETRA

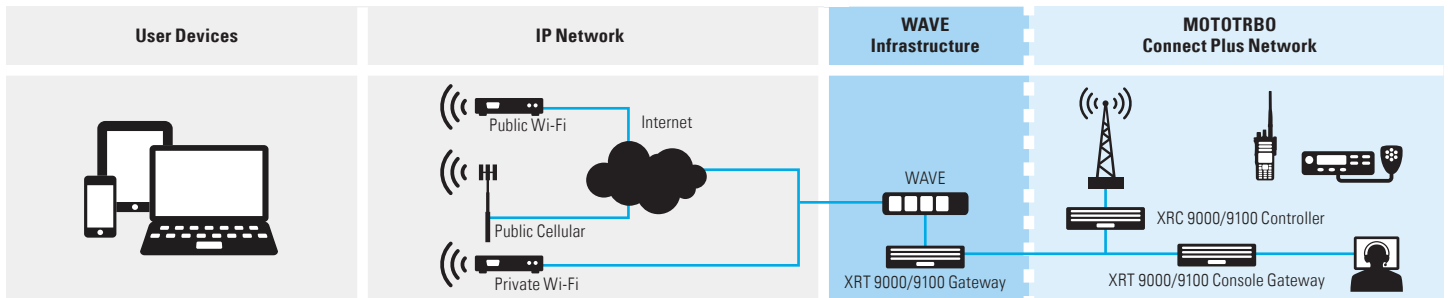


WAVE FOR MOTOTRBO

WAVE uses a wireline interface to integrate with a MOTOTRBO™ Connect Plus, Capacity Plus and Capacity Max radio systems. The WAVE Server manages all communications between MOTOTRBO systems and broadband networks and devices, and maintains user credentials and configuration information for smartphone clients. Now with emergency call support, WAVE clients recognize emergency calls initiated from MOTOTRBO Capacity Max and Capacity Plus systems.

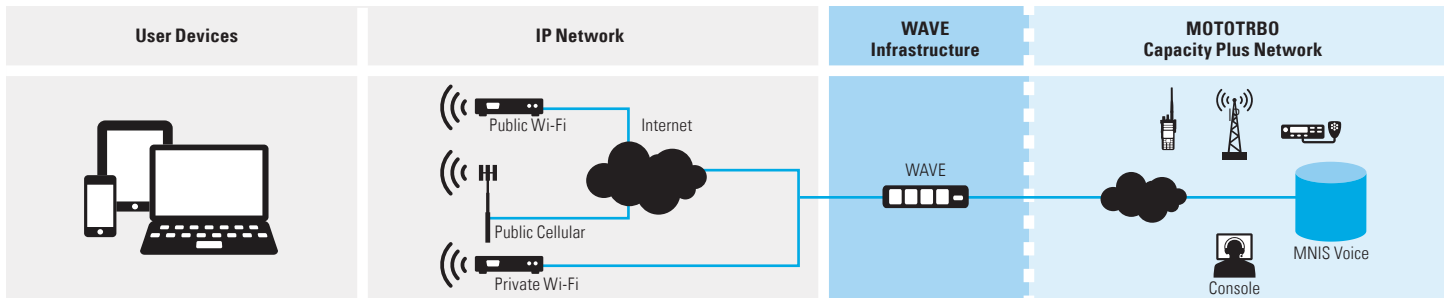
EXTENDING A MOTOTRBO CONNECT PLUS SYSTEM

For MOTOTRBO Connect Plus systems, the WAVE 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.



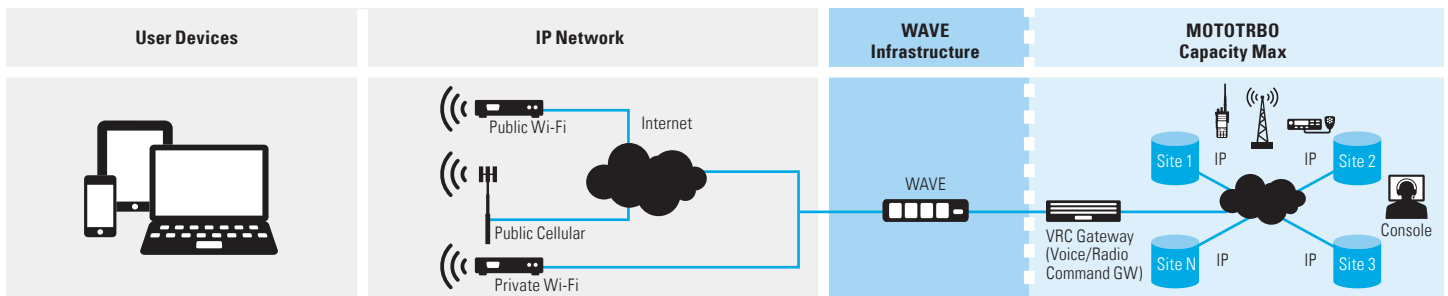
EXTENDING A MOTOTRBO CAPACITY PLUS SYSTEM (SINGLE SITE / MULTISITE)

For MOTOTRBO Capacity Plus systems there is no requirement for an XRT gateway or donor radios as the WAVE 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.



EXTENDING A MOTOTRBO CAPACITY MAX SYSTEM

For MOTOTRBO Capacity Max systems, the WAVE 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.



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	MOTOBIDGE wireless interface to virtually any radio system
Encrypted Radio Talkgroups	ASTRO 25 DIMETRA MOTOTRBO Capacity Plus MOTOTRBO Capacity Max
Emergency Calling	Broadband Only ASTRO 25 Digital Conventional ASTRO 25 Trunking DIMETRA MOTOTRBO Capacity Plus MOTOTRBO Capacity Max
Provisioned WAVE Clients	Up to 5000
Provisioned Channels	Up to 8000

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

