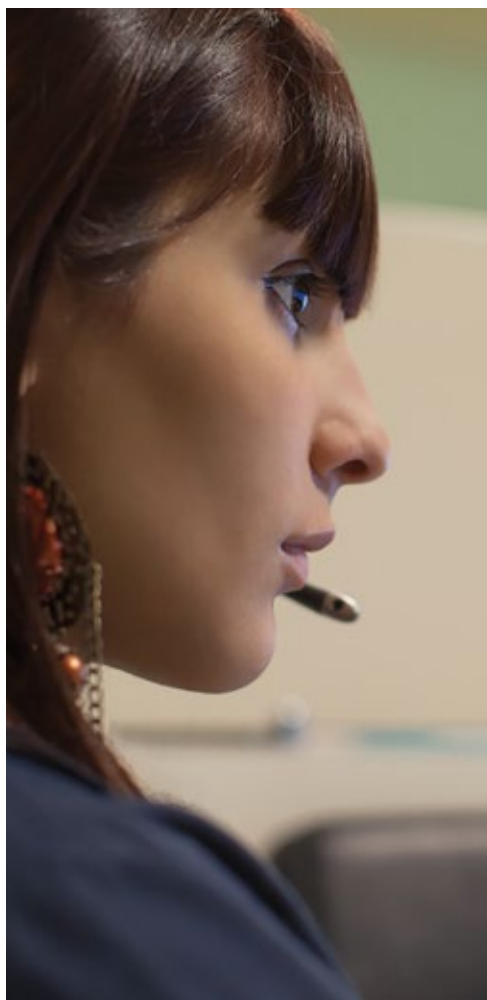# MOTOTRBO™ CONTROL ROOM SOLUTIONS

**SMARTPTT PLUS - TRBONET PLUS**
**PREMIUM CONTROL ROOM SOLUTIONS FOR MOTOTRBO™ DIGITAL TWO-WAY RADIO SYSTEMS**
**SOLD AND SUPPORTED BY MOTOROLA SOLUTIONS[1]**

# PREMIUM CONTROL ROOM SOLUTIONS

## FEATURE-RICH, ROBUST AND TRUSTED

Motorola Solutions brings you TRBOnet PLUS and SmartPTT PLUS through cooperation with Neocom Ltd and Elcomplus LLC - the market leaders for MOTOTRBO control room solutions in Latin America and the Caribbean

Exclusively available through Motorola Solutions and supported by our customer service teams, these products offer the most advanced features for radio fleet management, dispatch and voice and data communications. They leverage the enhanced wireline MOTOTRBO Network Application Interface (NAI) which allows dispatchers to interface directly with the repeaters over IP, improving the system stability, security and reliability but also reducing hardware overheads and lowering maintenance costs. The MOTOTRBO Control Room Solutions have undergone stringent quality testing in Motorola Solutions' labs ensuring they meet the highest standards of quality, solve business critical problems and deliver exceptional customer experiences.

### POWERFUL FUNCTIONALITY
The fully featured MOTOTRBO Control Room Solutions keep operators in complete control of even the most demanding multi-site systems. Designed with the dispatcher in mind, a wide variety of everyday operations can be automated using defined rules and smart tools such as scheduled text messages, voicemails for offline radios or geofencing. Dispatchers can now monitor the status of users and their location with live updates, while assigning tasks to the most relevant resources, and always ensuring the personnel safety with automatic alarms being raised when unplanned events occur.

### SIMPLE AND ROBUST
A key benefit of the MOTOTRBO Control Room Solutions is the new Network Application Interface which establishes a direct link between the control room solution and repeaters. With this new interface, connectivity is simplified for a more cost-effective and reliable solution architecture. And dispatchers benefit from an enhanced experience with full transparency, recording of all group and individual calls and more communications security from the radio to the application.

### MODULAR AND FLEXIBLE
These fully integrated solutions are completely modular so you only have to buy the features you need. They can be tailored to any individual requirement to ensure optimum performance across a range of industries. Both solutions are also easily scalable from small to large systems and are ready to grow with a business as it expands.

### TRIED AND TESTED
Developed specifically for MOTOTRBO professional digital two-way radio systems, both TRBOnet PLUS and SmartPTT PLUS have been tested in Motorola's engineering labs to ensure the highest quality performance and seamless integration into the MOTOTRBO system.

**SOLD AND SUPPORTED**

Products bearing the "Motorola Solutions Sold and Supported" logo are premium products developed by Motorola Solutions partners to fulfil critical functions in MOTOTRBO™ systems. These products are tested and integrated in direct cooperation with Motorola. They are sold through Motorola Channel Partners and supported through Motorola's customer service teams.

**MOTOTRBO CONTROL ROOM SOLUTIONS**

# MAXIMISE YOUR BUSINESS OPERATIONAL EFFECTIVENESS

To improve workforce productivity and operational effectiveness, you need to communicate with your employees and provide them with relevant information, virtually anywhere and at anytime. Fully integrated MOTOTRBO Control Room Solutions expand the functionality of your radio network with voice dispatch and advanced control and fleet management functionalities so your business becomes more efficient.

Managing an increasing flow of information and voice traffic, control room operators are right at the forefront of the action. They support staff in the field, organise maintenance tasks and are responsible for detecting when something goes wrong and making quick decisions. That's why it is critical to equip control room staff with premium tools that allow them to organise and deliver routine tasks more efficiently, communicate better with teams in the field and make faster, sounder decisions when incidents happen.

**INTEGRATING POWERFUL VOICE AND DATA COMMUNICATIONS WITH ADVANCED CONTROL AND DISPATCH FUNCTIONALITIES, MOTOTRBO CONTROL ROOM SOLUTIONS DRIVE YOUR BUSINESS.**

■ **COMMUNICATE WITH ALL TEAMS**
■ **MOBILISE THE RIGHT PEOPLE**
■ **ENHANCE SAFETY & PRODUCTIVITY**
■ **IMPROVE RESPONSE TIMES**
■ **STAY IN CONTROL**
■ **CONNECT WITH OTHER SYSTEMS**
■ **IMPROVE YOUR SYSTEM PERFORMANCE**

## MOTOTRBO CONTROL ROOM SOLUTIONS

# SIMPLIFY OPERATIONS AND MAKE BUSINESS SAFER

An effective dispatch management and control solution helps you optimise team communications to deliver greater efficiency and operational results. With voice calls, email and text messaging plus continuous radio status and location tracking, control room tasks are managed efficiently and effectively. Whether sending a text message to teams carrying out road repairs or using the GPS module to manage your fleet of buses and trams, MOTOTRBO makes response times more immediate, customer service more effective and operations more productive, improving business efficiency and personnel safety.

MOTOTRBO digital two-way radios and accessories allow teams to communicate clearly and conveniently. Adding MOTOTRBO Control Room Solutions improves the communication and provides enhanced management and control of workers and assets in the field. In the event of an emergency or accident, you can locate the closest personnel and put in place an immediate response. And if you want to determine if deliveries are on time or have been sent to the correct location, event logging means operators and managers can monitor and analyse all activity and performance.

**COMMUNICATION IS IMPROVED
MORE TASKS ARE AUTOMATED
GREATER EFFICIENCY IS ACHIEVED**

### MAXIMISING EFFICIENCY & SAFETY FOR HAZARDOUS CONSTRUCTION SITES

With specialist teams working to strict deadlines in potentially dangerous situations, reliable communications and personnel monitoring is critical for maximizing worker safety and efficiency. MOTOTRBO Control Room Solutions keep everyone connected so multiple teams can coordinate operations. Real-time personnel monitoring and automatic alarms provide an immediate response in the event of an emergency.

**CONSTRUCTION**
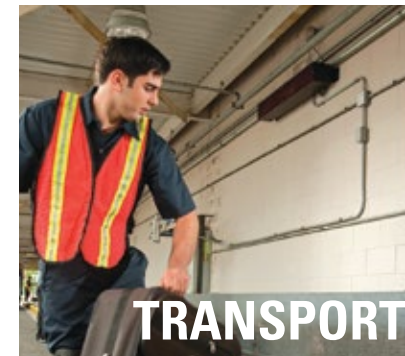
### MANAGING TRANSPORT SERVICES MORE EFFICIENTLY

Whether you are coordinating ground services for an airport, bus depot or train network, efficiency in the distribution centre is key. Operators need to monitor and be in constant contact with personnel to ensure the safety of workers and the public. Strong audio coverage across a wide area and efficient dispatch management helps ensure the smooth running of services and fast resolution of issues.

**TRANSPORT**

### ENHANCING SAFETY AND OPERATIONS IN REMOTE MINES

Often located in difficult to access locations where GSM coverage is limited, mining and exploration sites present a unique challenge. To efficiently manage daily operations and ensure worker safety, a reliable voice and data communications infrastructure is required to connect staff at the site with head office. A high performance control room solution enhances dispatch operations, tracks supply vehicles travelling between sites and enables a quicker response to break-downs and emergencies.

**MINING**

### OPTIMISING COMMUNICATIONS & EFFICIENCY IN MANUFACTURING

With many specialist teams working on shifts and to strict deadlines, manufacturing demands a strong, reliable communications system. And because working environments can be potentially hazardous, monitoring personnel at all times is critical. An integrated control room solution keeps everyone in touch with reliable inter-group radio coverage while tracking the location of multi-site workers.

**MANUFACTURING**

### DELIVER EXCEPTIONAL CUSTOMER SERVICE

Exhibitions, conferences, hotels and retail centres are fast-paced environments that rely on teams of workers coordinating tasks to ensure optimum service for customers. Managing and monitoring shifts is a key factor in maximising operational efficiency. Integrated MOTOTRBO Control Room Solutions help you stay in constant communication with your teams and let you track who is doing what and where so you can quickly reassign duties should the need arise.

**HOSPITALITY & RETAIL**

### KEEPING PERSONNEL SAFE ACROSS OILFIELDS

Maintaining good communication with work teams and ensuring their personal safety is a key priority for oil industry executives, especially in areas of extreme weather. Integrated MOTOTRBO Control Room Solutions boost communications between management and teams with extended call functionality while allowing for the monitoring and management of radio users across vast territories.

**OIL & GAS**

# COST-EFFECTIVE & EASY TO DEPLOY

## VOICE AND DATA COMMUNICATIONS

MOTOTRBO Control Room Solutions provide integrated fully-featured dispatch control over single and multi-site or channel systems, supporting voice communication and data operations for conventional single site repeater, IP Site Connect, Capacity Plus, Linked Capacity Plus and Connect Plus systems via the MOTOTRBO Networr Application Interface.

At the heart of the MOTOTRBO Control Room Solutions is the enhanced wireline Network Application Interface (NAI). This simplified architecture establishes a direct connection between the control room solution and repeaters. With no additional hardware required, system stability, security and reliability are improved for more effective dispatching, monitoring and records management.

Utilising the Network Application Interface, dispatchers can now communicate directly over IP to repeaters without having to go through control stations and associated gateways. This makes liaising with radios and talkgroups so much quicker, easier and more effective – essential when dealing with emergencies or reassigning workers to maximise productivity.

The simplified architecture also ensures MOTOTRBO Control Room Solutions are cost-effective with reduced hardware investment, easier deployment and less maintenance costs.

Redundancy can also be built in to ensure your system is always available. This ensures you never lose operational efficiency or put personnel at risk in the event of a system failure.

### KEY BENEFITS
- Less hardware and maintenance costs
- Better reliability due to reduced points of failure
- Full group and individual call recording
- Less complexity for easy deployment
- Easily integrates into existing on-site IT networks
- Redundancy with multiple clients working from server
- Works over multi-site and multi-channel systems

# THE MOTOTRBO NETWORK APPLICATION INTERFACE PROVIDES DIRECT CONNECTIVITY BETWEEN THE CONTROL ROOM SOLUTION AND REPEATERS

**SYSTEM USING NAI WIRELINE NETWORK ACCESS**

APP CLIENT/SERVER — IP NETWORK — MOTOTRBO NETWORK APPLICATION INTERFACE (NAI) — REPEATER — RADIOS
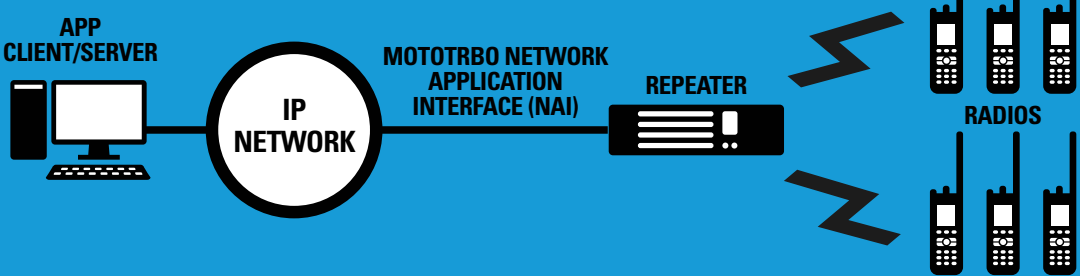
**SYSTEM WITHOUT NAI USING DEDICATED CONTROL STATIONS AND ASSOCIATED GATEWAYS**

APP CLIENT/SERVER — IP NETWORK — GATEWAY — CONTROL STATIONS — REPEATER — RADIOS
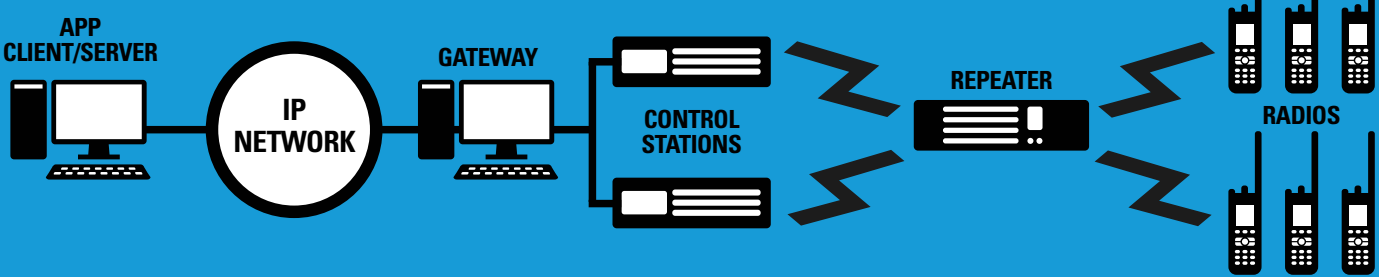
# FEATURE-RICH

MOTOTRBO Control Room Solutions include a variety of functional modules for improved fleet management and dispatch. In addition to the comprehensive set of core modules, users can add extra functionality and control with optional modules.

## CORE

### VOICE DISPATCH
Provides communications between the dispatcher and remote radios. Make broadcast, group, private, remote monitor or emergency calls even quicker using programmable shortcuts.
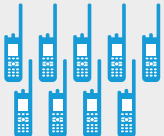
### FLEET ADMINISTRATION
Efficiently manage fleet operations and remotely control radios. Get live status updates and configure the radio to send online/offline reports to the server.

### EVENT LOGGING
Log all system events including voice calls, text messages and status changes. Customise rules, filter and group events or generate reports detailing location and radio status.

### ALARM & LONE WORKER
Improve the safety of personnel with automatic alarms and lone worker protection. The alarm can also be sent as an automated message, e-mail or SMS.

### JOB TICKETING
Create, assign and monitor job tickets through the radio network to deliver routine tasks more efficiently. Radio users can accept or decline the job ticket by simply pushing a button.

### TEXT MESSAGES & EMAIL
Easily communicate with other devices when voice communication is not possible. Send broadcast, group or private text messages. Radio users can text back to the dispatcher.

### TELEMETRY
Monitor and manage remote equipment from the control room. The system supports native MOTOTRBO telemetry with multiple profiles supported for different devices.

### RSSI MAPS
Provides a graphical representation of the network coverage area based on RSSI level of the received signals from GPS-enabled MOTOTRBO radios.

### GPS TRACKING
Follow workers, vehicles and business assets in real-time to ensure maximum safety and productivity. View routes, set up GeoFencing and log radio movements using a configurable set of rules.
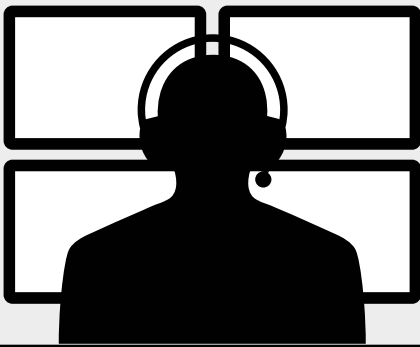
### VOICE RECORDING
Continuous voice recording of all calls with playback for analysis, reporting or training purposes. Audio files are stored in MP3 format on the Radio Server and Dispatcher.

## OPTIONAL
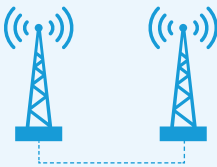
### IP SYSTEM BRIDGE

### ADDITIONAL DISPATCHER

### ADDITIONAL RADIO SERVER

### PHONE INTERCONNECT

# TRBOnet PLUS

**Developed in cooperation with Neocom, a leading edge communications company based in St Petersburg, TRBOnet PLUS is a professional PC-based, NAI enabled client-server dispatch software exclusively developed for MOTOTRBO™ digital two-way radio systems.**

With TRBOnet PLUS, operators can monitor audio, data and asset location, as well as provide record management and review events that have taken place. It's easy to track staff and key assets on a live map, send and receive private text messages to personnel in t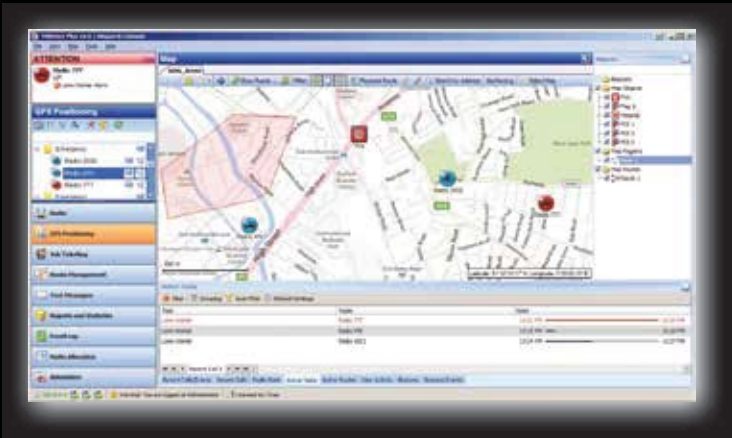he field and respond quickly and effectively to emergency situations. Dispatchers can also link multiple agencies or departments with a single touch for even greater flexibility.

The software can be operated over the internet by multiple dispatchers located anywhere using the 'Remote Dispatch' function. Detailed reports highlight essential information including audio recordings, texts sent, radio status (on/off) and much more.

Two key advantages of TRBOnet PLUS are its scalability and reliability. Administrators can easily increase the number of users on the radio communication network or its geographical coverage at any time to handle increased demand. And with the simplified Network Application Interface, high levels of performance are assured.

**SOLD AND SUPPORTED**

## FUNCTIONAL MODULES

### CORE

| | |
|---|---|
| VOICE DISPATCH | FLEET ADMINISTRATION |
| EVENT LOGGING | ALARM & LONE WORKER |
| JOB TICKETING | TEXT MESSAGES & EMAIL |
| TELEMETRY | GPS TRACKING |
| VOICE RECORDING | RSSI MAPS |

### OPTIONAL

| | |
|---|---|
| IP SYSTEM BRIDGE | ADDITIONAL DISPATCHER |
| ADDITIONAL RADIO SERVER | PHONE INTERCONNECT |

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## TECHNICAL INFORMATION

| RADIO SERVER PC SPECIFICATION | DISPATCHER PC SPECIFICATION | IP BANDWIDTH | MOTOTRBO HARDWARE |
|---|---|---|---|
| • Intel Core i5 processor or higher<br>• Windows 7 / 8 / Server2008 32 or 64 bits<br>• 3 GB RAM<br>• 180 GB Hard drive<br>• MS SQL Server 2008 Express Edition or higher | • Intel Core i3 processor or higher<br>• Windows 7 / 8 Professional 32 or 64 bits<br>• 3 GB RAM or better<br>• 180 GB Hard drive<br>• Sound card<br>• Microphone and Speakers or regular PC Headset | • Between Server and Repeater: 64 kbps per repeater<br>• Between Server and Client: 64 kbps per client per voice channel | • Radio Firmware Version: R01.12.02 or higher<br>• Repeater Firmware Version: R02.30.02 or higher |

These are general guidelines, the final system specifications will depend on users' MOTOTRBO system size and configuration.

## LANGUAGES

English, Spanish, French, Portuguese, Italian, German, Arabic, Czech, Hungarian, Korean, Polish, Russian, Turkish

## ARCHITECTURE
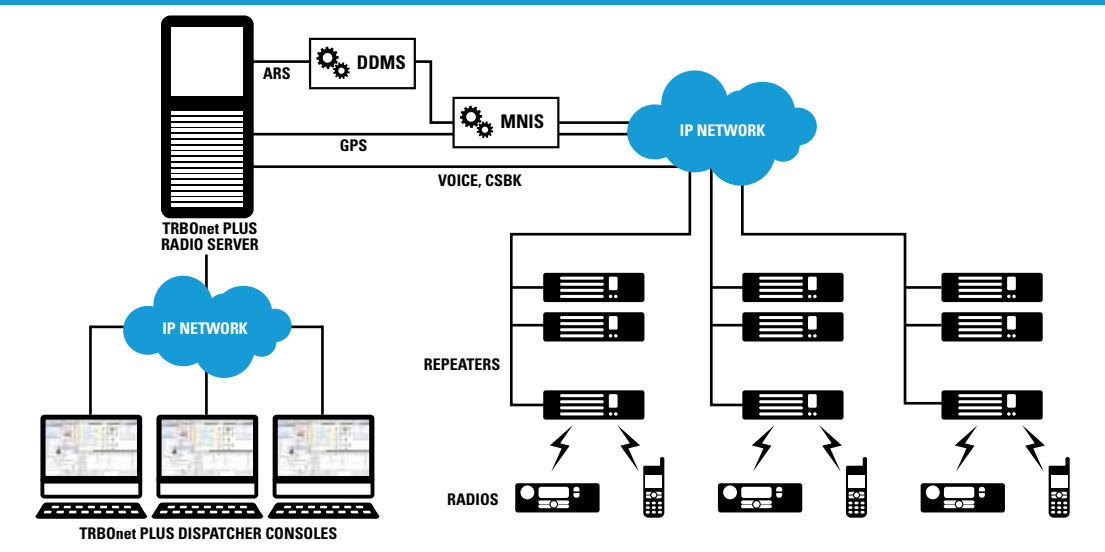
ARS
DDMS
MNIS
GPS
IP NETWORK
VOICE, CSBK
TRBOnet PLUS RADIO SERVER
IP NETWORK
REPEATERS
RADIOS
TRBOnet PLUS DISPATCHER CONSOLES

**KEY:**

**ARS:** Automatic Registration Service

**DDMS:** MOTOTRBO Device Discovery and Mobility Service

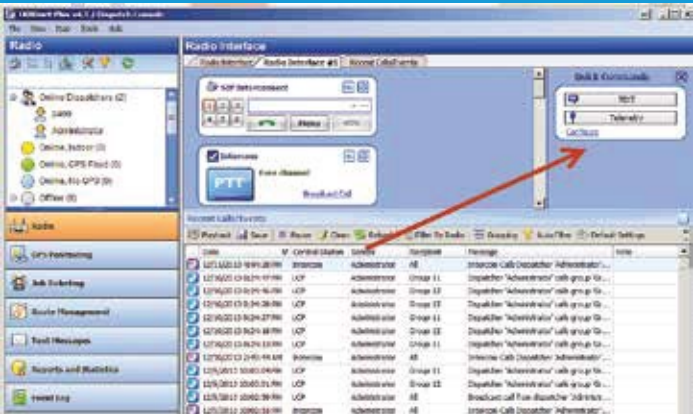**MNIS:** MOTOTRBO Network Interface Service

**CSBK:** Control Signalling Block

## USER INTERFACE

**GPS POSITIONING, LONE WORKER ALARM**
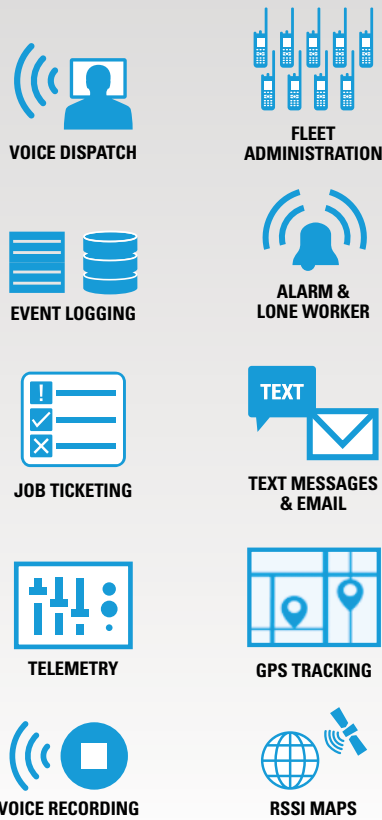
**QUICK COMMANDS**

# SmartPTT PLUS

**Developed in cooperation with Elcomplus, an innovative communications company based in Tomsk, SmartPTT PLUS is a professional dispatch software solution providing integrated fully-featured dispatch control over multi-site and multi-channel systems.**

Designed exclusively for MOTOTRBO digital two-way radio systems, this control room solution supports voice communications and data operations in Linked Capacity Plus, Connect Plus Capacity Plus and IP Site Connect using the Network Application Interface.
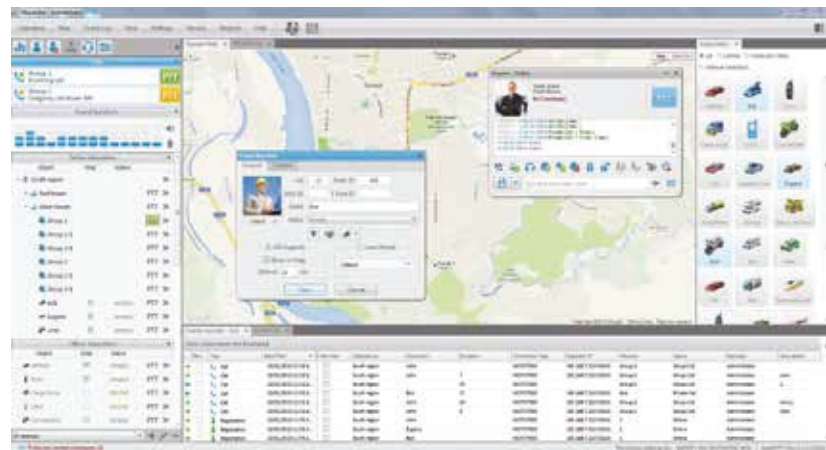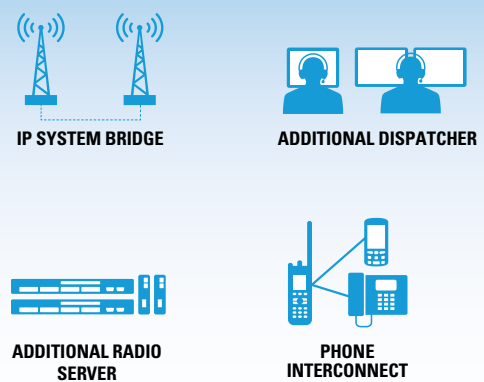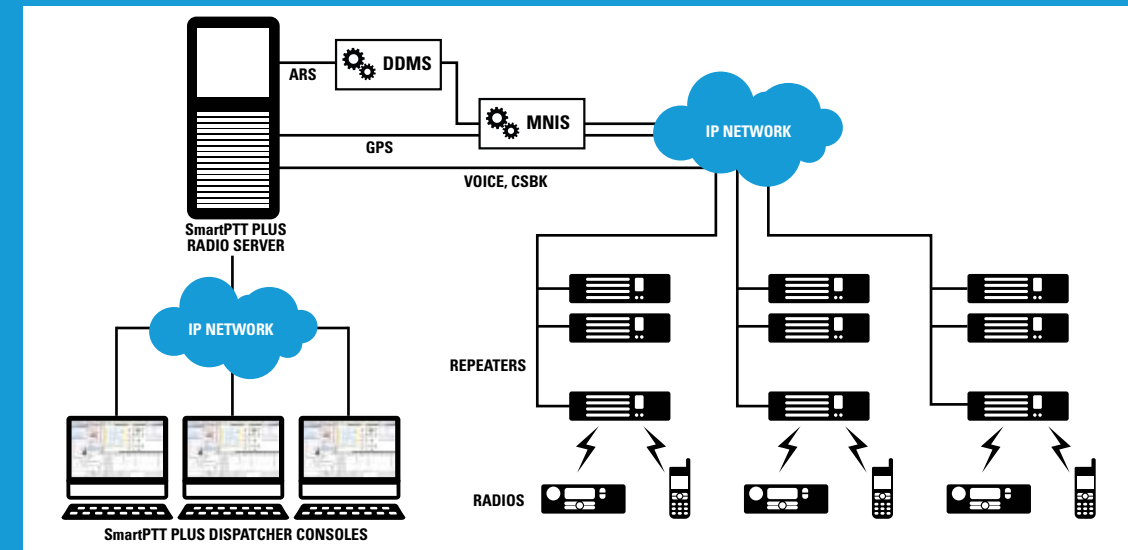
SmartPTT PLUS provides a flexible range of services to dispatchers, executives and team leaders, helping them manage their fleet and optimise productivity of workers and assets. The customisable user interface with hot keys enables quick and easy control. Monitor audio, data and asset location, access up-to-the-minute records and review events. Track staff and send or receive private text messages to personnel in the field for a quick response to emergencies.

An integrated solution for MOTOTRBO, SmartPTT PLUS bridges different types of networks and manages systems of any size and topology. It's easy to increase the number of users on the radio communication network or its geographical coverage at any time to handle increased demand. And with the simplified Network Application Interface, reliability is extremely high.

A key strength of SmartPTT PLUS is its distributed architecture allowing users to build reliable communication systems with hot standby servers. One dispatcher can connect to multiple servers at the same time, serving different sites and regions from one dispatcher position. It eases the deployment of two-level dispatch systems with independent regional dispatchers and a main control room dispatch position connecting all regional systems for centralised control.

**SOLD AND SUPPORTED**

## FUNCTIONAL MODULES

### CORE

- VOICE DISPATCH
- FLEET ADMINISTRATION
- EVENT LOGGING
- ALARM & LONE WORKER
- JOB TICKETING
- TEXT / TEXT MESSAGES & EMAIL
- TELEMETRY
- GPS TRACKING
- VOICE RECORDING
- RSSI MAPS

### OPTIONAL

- IP SYSTEM BRIDGE
- ADDITIONAL DISPATCHER
- ADDITIONAL RADIO SERVER
- PHONE INTERCONNECT

## TECHNICAL INFORMATION

| RADIO SERVER PC SPECIFICATION | DISPATCHER PC SPECIFICATION | IP BANDWIDTH | MOTOTRBO HARDWARE |
|---|---|---|---|
| • Intel Core i3 processor or higher<br>• 2 GB RAM or more<br>• Hard drive<br>• Network adapter<br>• Windows 7, Windows 8, Windows Server 2008 operating systems | • Intel Core i3 processor or higher<br>• 2 GB RAM or more<br>• Hard drive for database server: at least 12 GB with Microsoft SQL Server 2008 R2 Express.<br>• Sound card<br>• Network adapter<br>• Sound recording and playback devices (e.g. microphone and speakers)<br>• Windows 7, Windows 8 operating systems | • Between Server and Repeater: 64 kbps per a repeater<br>• Between Server and Client: 64 kbps per client per voice channel | • Radio Firmware Version: R01.08.32 or higher<br>• Repeater Firmware Version: R02.21.09 or higher |

These are general guidelines, the final system specifications will depend on users' MOTOTRBO system size and configuration.

## LANGUAGES
Arabic, Brazilian Portuguese, English, French, German, Italian, Korean, Polish, Russian, Slovak, Spanish, Simplified Chinese and Traditional Chinese

## ARCHITECTURE

**KEY:**

**ARS:** Automatic Registration Service

**DDMS:** MOTOTRBO Device Discovery and Mobility Service

**MNIS:** MOTOTRBO Network Interface Service

**CSBK:** Control Signalling Block

ARS — DDMS
GPS — MNIS — IP NETWORK
VOICE, CSBK
SmartPTT PLUS RADIO SERVER
IP NETWORK
REPEATERS
RADIOS
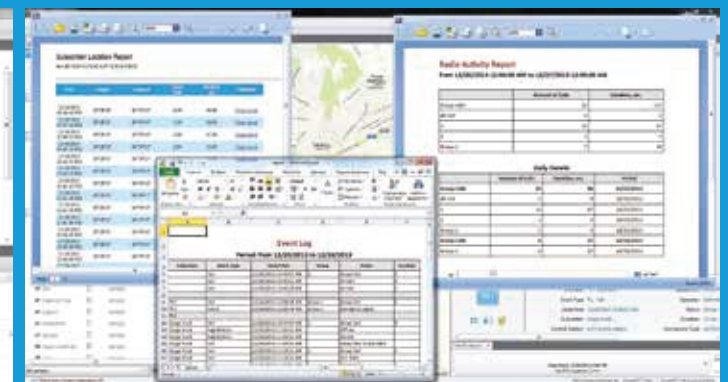SmartPTT PLUS DISPATCHER CONSOLES

## USER INTERFACE

**CUSTOM DISPATCHER INTERFACE, FLEET ADMINISTRATION**
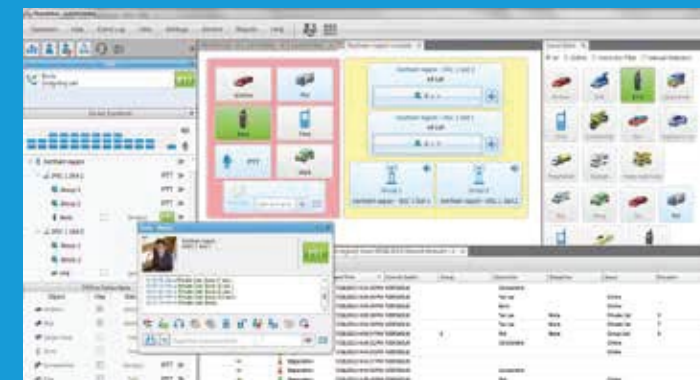
**REPORTING**

# MORE CONTROL, IMPROVED DISPATCHING AND AUTOMATION OF DAILY TASKS. GET MORE FROM YOUR MOTOTRBO RADIO SYSTEM.

1. This brochure is valid for Latin America and Caribbean region only

*MOTO**TRBO***
*REINVENTING*
*DIGITAL*

For more information on how to enhance operational efficiency and improve staff safety with MOTOTRBO Control Room Solutions - TRBOnet PLUS and SmartPTT PLUS, visit www.motorolasolutions.com/mototrbo

**MOTOROLA**