

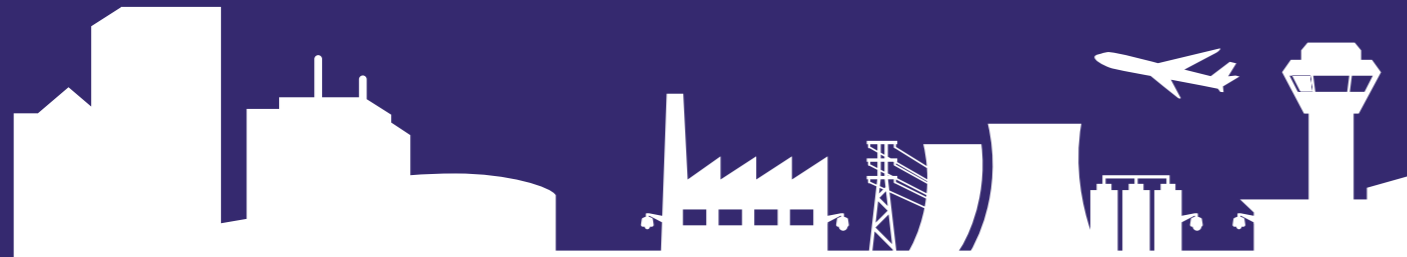
MOTOROLA TETRA SOLUTIONS



SAFER CITIES. THRIVING COMMUNITIES.



PUBLIC SAFETY COMMUNICATIONS AN EVOLVING LANDSCAPE



Public safety operations are becoming increasingly information-driven, requiring access to a widening range of text, imaging, video and collaboration applications. Although TETRA networks support secure and reliable narrowband services (with improved rates available with TEDS), throughput constraints limit their suitability for real-time video or high speed data.



NEW FOR 2013

MTS4L TETRA AND LTE WORKING TOGETHER

Dual technology MTS4L base station enables operators to deploy a TETRA/TEDS network and be ready for the addition of an LTE eNode B in the same base station cabinet. Installation of the eNode B can be performed with the minimum of disruption to TETRA service. This allows the operator to time and scale the overlay of LTE service to meet their unique operational needs. The cabinet is also available in an Earthquake Region 4 version.



INSTALL ENODE B IN A LIVE MTS4L TETRA BASE STATION.



Broadband and mobile radio networks aren't converging to just one single point, they're exploding all around us. They cover more area, and create new boundaries. They collect more data, and introduce new threats. They offer revolutionary applications, and unleash unprecedented complexity. And they're fundamentally changing the operating environment of Public Safety professionals.

Motorola's communication solution is the first mission-critical, multi-net operating environment. It allows Public Safety professionals to transition securely and seamlessly between mobile radio and broadband networks, private or public. It unifies the data sources and services that enable next generation mobile applications, and dynamically prioritises the information that matters most, to the people who need it most. And it's built on a future-ready, open architecture that's simple to manage and constantly reinforced.

It's the foundation that safer cities and thriving communities are built on.

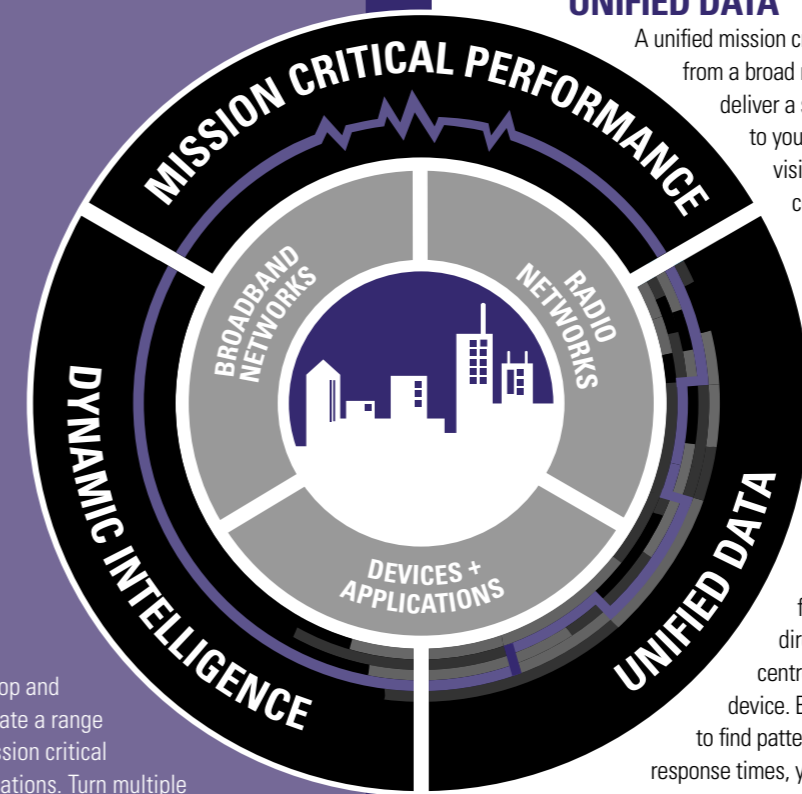
BENEFIT FROM A COMPREHENSIVE DEVICE AND APPLICATION PORTFOLIO

Support a myriad of use cases using a wide array of specialised devices, including LTE USB and rugged vehicle data modems; rugged LTE smart phones and a comprehensive range of TETRA portable and mobile radios.



THE MOTOROLA SOLUTION A UNIFIED MISSION CRITICAL OPERATING ENVIRONMENT

Take advantage of technology convergence by combining standards-based TETRA, TEDS and LTE systems to create a future-proof, multi-net operating environment that lets you unify big data, transform communications and dramatically enhance the efficiency and effectiveness of your agencies.



UNIFIED DATA

A unified mission critical operating environment helps you bring together data from a broad range of sources, transform it into the intelligence and deliver a single, common, real-time operational view of every situation to your first responders. Your network managers can maintain visibility and control across all dimensions of the unified communications network while preserving the operational requirements of every agency and each user. And, you and your technology partners can leverage a standards-based, open API development environment to rapidly deliver innovative apps designed for public safety.

DYNAMIC INTELLIGENCE

Multi-net mission critical systems must handle a single, unified stream of information and turn raw data into intelligence that can be delivered to your frontline officers in real time. A common operating environment lets you dynamically prioritise radio and broadband traffic for those users most critical to serving an incident. You can direct voice, Push-To-Talk, images and video from the command centre to the field over the best network to the most suitable device. By deploying mobile applications that synthesize information to find patterns, target it where needed, analyse crime and measure response times, you can make more informed decisions.

MISSION CRITICAL PERFORMANCE

Your mission requires an operating environment built on a standards-driven, high performance architecture engineered for extreme survivability, dependability and security. Faced with new data security threats, you need concentric rings of protection that secure sensitive communications with end-to-end group security, information assurance and intuitive management, monitoring and controls. With secure and seamless roaming from private TETRA, TEDS and LTE broadband networks to commercial operator networks, enterprise WLANs and DMR systems, you can have pervasive mobile voice and data coverage from day one.

Develop and integrate a range of mission critical applications. Turn multiple voice and data streams into a single, coherent operational view by using standards-based protocols to access private LTE, TEDS and TETRA services such as location, presence, addressing and messaging. In addition, unified Push-To-Talk services ensure voice interoperability across TETRA, Public Safety LTE and commercial operator networks.

IMAGING THE FUTURE

NEW
FOR 2013

THE WORLDS FIRST TETRA PORTABLE WITH EVIDENTIAL IMAGE CAPTURE

From enhanced intelligence gathering to efficient reporting, the multimedia capabilities of the MTP6000 radios create many possibilities for public safety. With an integrated high-resolution camera, the first of its kind in a TETRA radio, the MTP6750 makes it easy for law enforcement officers to capture critical crime scene information. The MTP6750 attaches meta-data to each image, enhancing investigative capabilities and enabling investigators to reconstruct the events that took place during a critical incident.

GETTING THE RIGHT INFORMATION TO THE RIGHT USERS

By equipping your frontline workers with vital local intelligence, you'll make them safer and more effective in the field. With MTP6000 series radios and PICS, you'll be able to rapidly disseminate vital information such as missing persons, confidential operational information and mission briefings to any groups or individuals that require it – all in 3 simple steps.

SAFER PERSONNEL

TRUST YOUR COMMUNICATIONS LIFELINE

Industry's best guaranteed receiver sensitivity performance, of the new MTP6000 Series ensures that radio coverage can **extend up to 14% further***.

Experience class-leading audio performance, **supporting up to 2W audio power** through the built-in loudspeaker or through our **IMPRES** remote speaker microphone. Support covert operations with a broad range of wireless accessories worn in a pocket or on a lapel to connect to the radio instantly.

FOCUS ON THE MISSION NOT THE TECHNOLOGY

Our unmatched rugged design helps maximize the uptime of the radio fleet and minimize personnel safety risks. The radios meet or exceed all 11 categories of the stringent military (MIL) test specification standards and are IP65 and IP67 compliant for exposure to water.

SMARTER DECISIONS

KNOW WHAT YOU'RE DEALING WITH

Time-critical intelligence delivered directly to their radios enables your staff to make better-informed decisions.

Using the InfoPush service, dispatchers can enable a swifter response by pushing time-critical content, such as pictures of a missing child, directly to front line officers via the TETRA network.

Front line personnel can access vital intelligence via the SD card while the content centrally managed to ensure that the information stays up-to-date.

ENHANCE EVIDENCE GATHERING

Early capture of photographic evidence can be operationally vital, even crucial to a successful prosecution.

The new MTP6750 radio lets front line officers capture critical photographic evidence and ensure its integrity with our unique Digital Fingerprint technology.

FASTER OPERATIONS

STREAMLINE THE AUDIT TRAIL

Administering evidential images can be time consuming, which means less time on the front line.

With Photograph and Intelligence Communication System (PICS) supported on the MTP6000 Series, evidential images, along with the relevant meta-data, can be automatically uploaded to a secure image database, helping your staff get back on the front line faster.

SHORTEN THE LEARNING CURVE

Radio users gravitate toward familiar-looking equipment and accessories. Equipping your team with auto-configuring IMPRES accessories helps your front line staff adopt and effectively use their radios with the optimum audio settings. A common, intuitive user interface of our portable and mobile radios will simplify implementation.



*Based on the Hata urban propagation model with no intermediate obstructions.



Using the iTM PICS solution, intelligence teams can load images and descriptions to the SD card in the MTP6550 and MTP6750 radios from a central location. This ensures officers leave the station with the latest information, available at a press of a button.

Capture perishable evidence that may alternatively be lost with the MTP6750 radio. Auto-generated digital fingerprint, including time, date location, user ID and meta-data ensures integrity of captured evidence.

MTP6750



COMPREHENSIVE PORTFOLIO FOR 2013

EXPECT MORE

HUNDREDS OF SOFTWARE FEATURES DEVELOPED OVER THE YEARS, INCLUDING:

EFFICIENCY

- Multi-slot Packet Data to increase data speeds over TETRA for an enhanced experience of applications such as picture messaging
- Secondary Common Control Channel for reduced network congestion
- Radio Messaging System (RMS) for sending high-priority messages for immediate viewing
- Call Out for sending near-instant, high-priority messages to part-time or off-duty officers and receiving notifications when they accept an assignment
- INFOPUSH to send data or pictures for immediate display on the screen of the radio
- RUI/RUA is a key tool to control pooled radios, making it possible for end users to enter a security code and automatically have access to their personal settings

SECURITY

- End-to-end Encryption enabling ultra-high voice and data security for special situations or agencies
- Terminal Kill to disable radio functionality and prevent unauthorised operation of lost or stolen radios

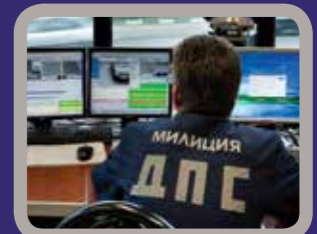
CONGESTION MANAGEMENT

- Radio and Cell Control to manage congestion by controlling which radios are given priority access, which are blocked from local site trunking and which work where networks overlap



TETRA ACCESSORIES FOR THE TOUGHEST CHALLENGES IN THE MOST DEMANDING ENVIRONMENTS

In the heat of the moment, you need high quality and reliable communications at your fingertips. Accessories personalise your radio to the unique challenges you face in your work environment. Our extensive range of tough and reliable TETRA accessories helps your radio work at the limit in the most demanding situations.



INTEGRATE YOUR FLEET

A fast and effective terminal management system is key in maintaining total control of your fleet, wherever it's located, so you can react and coordinate resources with minimal impact to the user. Our iTM is a modular system aimed at fleets of 100 to 150,000 radios. Servers store all radio details including versions and programming data while management PCs create upgrade and configuration jobs. Reporting tools keep you constantly updated and email lets you send upgrade reminders. To complement our imaging solution we've introduced iTM pics to seamlessly integrate image management to front line and back end processes.



INTEGRATED BLUETOOTH®

Bluetooth 2.1 audio is embedded in the radio enabling fast and secure pairing with a variety of wireless accessories, and White List for authorised pairing. Our exclusive Operations Critical Wireless accessories handle loud environments, while the slimline Bluetooth PTT easily fits in the hand or pocket or on the lapel. It has a large PPT button, fast and secure pairing, and long battery life.

NEW FOR 2013

MTP6000 SERIES

Designed based on direct input from front line officers, the MTP6550 and MTP6750 delivers the intuitive operation, reliability and uncompromising IP65 and IP67 performance that is vital to mission critical operations.

MTP3000 SERIES

A family of radios are packed with features essential for safe and effective operations, including significant improvements in areas such as audio and ruggedness. The user interface is optimised for those making the transition from analogue radios and includes two controls for group and volume.

MTP850 S

Integrated Man Down, rugged side connector, IP55 and the option for 1.8W and DMO repeater for extending coverage.

MTP850Ex

ATEX, FM and IEC certified, this TETRA radio is optimised for use in dangerous and explosive gas and dust environments. It can be used whilst wearing thick industrial gloves and is available in the 800 MHz band.

TCR1000

The world's smallest TETRA radio, available for users who need low visibility TETRA communications. A comprehensive and expanded set of accessories is available to optimise the unit for all types of covert operations.

SAFER

- Hear and be heard in difficult environments with enhanced audio
- Stay in touch with great coverage, improved Rx sensitivity and high power options

SMARTER

- Versatile installation options in and around the vehicle, up to 40m from the radio with the MTM5500
- Control the radio and make voice and data calls with the Telephone-Style Control Head

FASTER

- Faster TEDS data communications to improve efficiency and safety
- Link to data devices for flexibility and powerful applications



SINGLE CONTROL HEAD INSTALLATION



The **MTM5200** is the TEDS-ready base model that shares the enhanced audio and receiver sensitivity of the current MTM5400.



The **MTM5400** includes high power modes and the Gateway Repeater functionality features required by end users in areas of limited coverage.

MULTIPLE CONTROL HEAD INSTALLATION



Optional Second Control Head

The **MTM5500** is a highly flexible and capable system radio that permits the installation of multiple control heads and/or the new Telephone-Style Control Head up to 40m from the radio.



Combining class leading robustness with a sleek ergonomic design, the discreet **Telephone-Style Control Head (TSCH)** provides flexibility and ease of operation, making it well suited for in-vehicle applications. Fully compatible with MTM5400 radios, the design attributes of the TSCH ensure uncompromising performance for mission-critical operations.



PRODUCT SELECTOR

MTM5200	MTM5400	MTM5500
1 CONTROL HEAD		2 CONTROL HEADS
STANDARD POWER	HIGH POWER FOR LOW COVERAGE AREAS	
NOT INCLUDED	GATEWAY REPEATER INCLUDED	
TEDS AND ESSENTIAL FEATURES		
ESSENTIAL	HIGH CAPABILITY	PREMIUM

NEW FOR 2013

MTM5000 SERIES TETRA MOBILE RADIOS

The Motorola MTM5400 Mobile TETRA/TEDS radio has been joined by two new models to give you a choice of specifications to match your end user profiles and needs.

MTM5000 SERIES ACCESSORIES

Supported with over 100 accessories and installation kits, the MTM5000 radio family can be fitted in a wide range of vehicles and boats. The installation can be tailored to the specific needs of the users, in particular with speakers, microphones and PPT controls selected and positioned for the optimum performance and ease of use. Numerous antenna options ensure a convenient fit on the vehicle and exceptional radio performance.



AUDIO MOBILE MICROPHONE AUDIO MOBILE MICROPHONE AUDIO MOBILE MICROPHONE AUDIO LOUDSPEAKER ANTENNAS 380-430 MHZ ANTENNAS 380-430 MHZ

WHAT IS A VIRTUALISED CORE, AND WHY WOULD I NEED ONE?

Older communications networks often ran on dedicated hardware, which could only run software specifically developed for it. The Motorola TETRA core takes advantage of powerful IT platforms to run new and future TETRA software that provides the necessary functionality for today's and future networks.

Over time new hardware platforms will become more powerful and decrease in size and power consumption. If you choose to take advantage of these improvements, the new units will still run the existing and future software loads. Specialised software products, such as third party security software, can be integrated easily into the system. The virtualised core separates the hardware and software migration paths giving you the freedom to develop, upgrade and maintain your TETRA network in a way best suited to your needs.



The MTS4L TETRA/LTE base station makes it easy to build LTE upgrade capability in to a TETRA network. Adding LTE requires no additional footprint and can be done in less than 60 minutes with minimum or no interruption in TETRA service.

TEDS will increase the data speeds on TETRA networks whilst retaining their inherent security and resilience. TETRA virtualised core software and industry standard hardware platforms radically simplify upgrades and implementation of new features. Unified Network Services enable your TETRA network to interwork with other bearers and command and control systems with minimum adaptation.



NETWORKS THE EFFICIENCY YOU NEED, WHEN YOU NEED IT

OPTIMISED FOR OPERATION CRITICAL CUSTOMERS

Dimetra IP Compact was developed for industrial and enterprise customers looking for reliability and efficiency, as well as availability and security from their communication systems.

SCALABLE FOR ALL SIZES OF NETWORKS

Dimetra IP Compact and Micro were developed for industrial and enterprise customers looking for lower cost of ownership, an easy migration path from existing analogue radio systems, as well as the availability and security of a TETRA communication system. The groundbreaking MTS1 features a compact and robust design for easy transportation and rapid indoor or outdoor installation.

TETRA

TETRA & TEDS

VIRTUALISED CORE

TETRA/LTE READY BASE STATIONS

LTE OVERLAY ON TETRA



MOTOROLA INTEGRATED BILLING & ADMINISTRATION SYSTEM

MiBAS, the Motorola Integrated Billing & Administration System reduces the complexity of operating TETRA. It enables comprehensive agency administration, reducing the cycle time of radio programming and activation, and providing both real time and historical views of voice and data traffic.



GREEN TETRA AWARD

Motorola's 8.1 infrastructure and software release won the Green TETRA Award, demonstrating significant power and space savings in TETRA switching centers.

RELEASE 8 DOES A LOT MORE FOR A LOT LESS

This power-efficient software for base stations supports both Dimetra TETRA and TEDS, providing cutting-edge voice and data applications with reduced space requirements and unmatched energy efficiency.

- Lower total cost of ownership
- More capacity, more security
- Future-ready

LESS COST

Release 8 does a lot more for a lot less. The virtualised servers and all IP architecture reduce power consumption by up to 70%.

HIGHER CAPACITY

The flexible IP base enables rapid upgrades to additional capacity. State-of-the-art IT servers enable exceptional levels of voice and data network capacity – a 50% increase in site capacity and 115% greater voice capacity.

ENHANCED SECURITY

Comprehensive advanced server redundancy options and improved link security to prevent intrusion and malicious attacks.

LONG TERM EVOLUTION

A TETRA system is a long-term investment, which continually evolves. Release 8 provides an upgrade path to support broadband and LTE networks. Its virtualised architecture separates software and hardware platforms, creating an operating environment ready to support future unified TETRA and LTE broadband systems.

WHY UPGRADE TO TEDS?

TEDS will provide a significant increase in data speeds whilst retaining all of the TETRA security and resilience features. TEDS is:

- Here Today • Standards Based • Covers 90% of Applications
- On current systems, requires no new hardware

Motorola is 100% committed to TEDS

INTEGRATED COMMAND & CONTROL

TRANSFORM DATA INTO INTELLIGENCE



YOUR COMMUNITY COUNTS ON YOU TO KEEP THEM SAFE, TRANSFORM THE WAY YOU RESPOND AND CONNECT WITH THE CITY

TEXTS. PHOTOS. VIDEO.

This will be your new reality and Control Room communications will be forever changed.

The legacy system your agency has relied on for decades to help protect your communities can no longer keep up with the demands of increasingly mobile and socially-connected citizens. The expectation that public safety agencies will be able to harness the technology that citizens use every day to communicate has never been higher.

New technologies have to work flawlessly with existing legacy infrastructure and applications, plus scale to accommodate future needs. Your agency has to interoperate with other agencies and jurisdictions. And, everything has to be intuitive and user-friendly to save staff precious seconds.

To transform how you protect and respond, you need an effective way to bring together and operationalise the data that surrounds you. Motorola Integrated Command and Control solutions combine new technologies and advanced communications systems, like TEDS and public safety LTE, to deliver real-time data and video so dispatchers and first responders can share a common operational view for smarter, faster decisions.

We understand the unique needs of public safety and the challenges of integrating existing and next generation technology. We'll work with you to develop and deploy a solution that meets your requirements and then support you to maintain your systems and add functionality as your needs grow.

Motorola will help you transform the way you respond, simplify your operations and allow you to more effectively focus on your mission - keeping communities safe.



TAKE CONTROL OF YOUR RADIO AND TELEPHONE COMMUNICATIONS M-VISION

Imagine the situation. An emergency call comes, teams have to be located and mobilised, resources managed and critical information dispatched to the right people quickly. You need an effective system in place to plan a rapid response.

M-Vision is an ideal command and control solution offering full on-screen integration with voice communications, mobile data, smart-phone devices and video. The system is highly configurable, so you can tailor it to your own specific operational needs. Perfect for single-agency fire, police and ambulance services or as a multi-agency solution providing all the functionality for call taking and dispatching.

As situations develop, M-Vision can provide voice and text updates so response teams have up to the minute data at their fingertips. Operators track incidents and response status in real-time on a single screen, rescheduling officer duties, initiating radio calls and liaising with support agencies. All for faster response and incident resolution.

OPTIMISING VIDEO INTO REAL-TIME INTELLIGENCE DASHBOARDS

Motorola's integrated real-time video solutions enable police and security officers to approach an incident with more operational intelligence than ever before. Inputs from multiple data sources such as video, sensors, alarms, computer-aided dispatch (CAD) and records are processed with real-time analytics to deliver one operational view. This enables better situational awareness and allows for more proactive responses resulting in smarter and safer decisions.

Advanced public safety analytics deliver intelligent data and video to enable you to anticipate situations such as crowd formations, recognize faces, or automatically detect number plates of interest helping agencies become more proactive, shortening response times and optimising resource strategies.



MOTOROLA CONSOLES

The advantages of Motorola Integrated Command & Control is its inherent scalability with the ability to tailor solutions to individual needs. Consoles such as the MCC 7500 are designed for effortless integration and ease of use in the field with a flexible interface. They provide secure prioritised emergency communications and work seamlessly with existing analogue or conventional networks for simple migration to a TETRA trunking solution. Motorola consoles are ready to evolve with your needs too, keeping you at the forefront of communication technology now and in the future.



MCD 5000 DESKSET

A flexible desktop console, the MCD 5000 Deskset provides digital control for a variety of Motorola two-way radios, and can connect directly to a radio or over an IP network using the MCD 5000 Radio Gateway Unit (RGU).

NEW
FOR 2013

GLOBAL SOLUTIONS AND SERVICES FOR MISSION CRITICAL CHALLENGES

Motorola's Services take the technology management burden off your hands and free you to focus on your core mission. Our comprehensive portfolio of services offerings is built on a lifecycle approach, encompassing PLAN, IMPLEMENT and RUN.

INTRODUCING SERVICE FROM THE START FOR DIMETRA SMALL SYSTEMS MISSION CRITICAL SUPPORT FOR YOUR MISSION CRITICAL SYSTEMS

When operating in a mission critical environment, system downtime is not an option - lives could depend on it. You need the peace of mind that availability is optimised and first responders can communicate as required. In the event of an outage, you need a contingency and support plan to ensure challenges are overcome seamlessly.

Service from the Start for Dimetra Small Systems helps maintain system availability with expert remote technical support, next business day dispatch of replacement hardware and access to the latest pre-tested anti-virus updates; all backed by Motorola's globally integrated services infrastructure, highly qualified sales technicians and partner community providing the investment protection you need to reduce your total cost of ownership.

REDUCE YOUR RISK

With Service from the Start, you can rest assured that technical support queries are dealt with promptly to ensure minimal downtime. Our technical experts work with your Motorola partner, as required, to isolate, diagnose and resolve hardware and software issues, leaving you to focus on your mission.

LOWER YOUR TOTAL COST OF OWNERSHIP

Adding Service from the Start to your Dimetra Small System means you can budget in advance for your system's maintenance needs and have confidence that you're covered.

TRACES 2013 TETRA AWARDS WINNER

2013
INTERNATIONAL
TETRA
AWARDS
WINNER

Motorola's TETRA RF Automated Coverage and Evaluation Solutions (TRACES) for real-time coverage monitoring of mission-critical networks received two prestigious awards at the 2013 International TETRA Awards. It was the only solution to win two awards - "Best TETRA Innovation" and "Best Solution for Enterprise".

TRACES allows public safety organisations and network operators to collect, visualise and evaluate data from mission-critical TETRA networks. It enables them to view usage patterns and quickly identify and react to coverage black spots, thereby maintaining a stable network at all times. The solution was developed in collaboration with London's Metropolitan Police Force. They wanted a solution to help them gain visibility into network coverage issues that impacted the ability of officers to make calls during major events in the City; with ability to evaluate and analyse data post event.



John Adams, of London's Metropolitan Police said:

“TRACES has given us tremendous insights into our TETRA network and cost savings. Its recognition at the International TETRA Awards is well deserved.”

SOLID ANSWERS TO REAL-WORLD CHALLENGES

Communication is the heart of your operation, connecting teams and enabling your staff to achieve a rapid, well-coordinated response that links vision to mission accomplished. A cohesive action plan that reduces risk, contains cost and ensures business continuity is critical to the success of your communications strategy.

With services that help you through each phase of your technology's lifecycle, you can **PLAN** your communications solution to fit the organisation's current and future needs. You can **IMPLEMENT** new networks, devices and applications, extend the life of existing systems or add functionality and capability. And, you can **RUN** ongoing operations to reduce downtime, improve value and productivity, and provide comprehensive services to the solution.



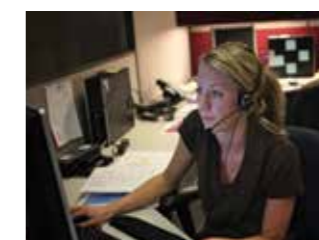
PLAN

We can help you develop a strategic plan for your technology investments with offerings that include Planning, Design and Training.



IMPLEMENT

We can bring together the right elements to help you integrate your entire communications system from networks to devices to applications.



RUN

Our expert mission critical support services keep vital operations running and technology investments providing you with the communications solutions you need.



Our highly secure hosted and managed solutions enhance your operational effectiveness, filling resource gaps and delivering technical expertise via our best-in-class operations centres, proven methodologies and highly qualified service response.

TETRA LIFECYCLE MANAGEMENT

Lifecycle planning is essential to provide comprehensive investment protection, ensuring your TETRA network continues to evolve and expand to meet new end-user needs. Our Lifecycle Management program provides customers with a well-defined plan that predicts costs over the lifespan of the system.



SAFER CITIES. THRIVING COMMUNITIES.

For more information on our TETRA Solutions, please visit us on the web at:
www.motorolasolutions.com/TETRA

Additional literature about our showcased solutions is available for download at:
ccw.motorolasolutions.com



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MOTOROLA