DIMETRA Express

Take control of your communications

DIMETRA™ Express is a flexible TETRA digital voice and data communications solution for secure and reliable business and operations critical communications.

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DIMETRA Express is quick and easy to install, set up, deploy and manage. It is integrated into an IT network with just a single IP address, and the installation is completed in minutes through the browser-based installer. Once installed and set up, DIMETRA Express is also easy to manage and operate through browser-based network management and dispatch applications.

DIMETRA Express simplifies communications so that everyday operations in your organisation can be performed more efficiently, with increased control and reduced complexity. Its rich set of digital voice and data features enables people to communicate without delay to enhance safety and make faster and better decisions.

DIMETRA Express has the flexibility to meet your organisation's business needs today and can expand in capability, coverage and capacity to continue to meet your business needs as they evolve.

DIMETRA Express is a system that's been developed, built and supplied by a world leader in critical communications technology with a track record of more than twenty-five years providing robust, reliable and secure TETRA radio communication solutions.

Whether considering two-way radio communications for the first time, migrating from an analogue radio system to digital or refreshing an existing TETRA system – with DIMETRA Express your organisation will be taking advantage of a modern, flexible TETRA system.

MOTOROLA SOLUTIONS

Configurations

DIMETRA Express is available in many different configurations:

Standalone configuration

- Standalone Express server: This can be connected to new or existing Motorola Solutions MTS base stations (MTS1, MTS2 and MTS4)
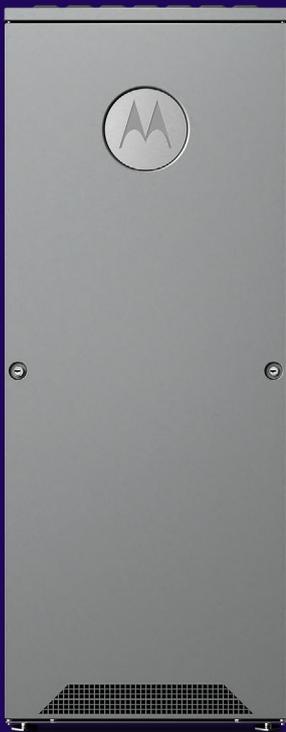
System configurations

- DIMETRA Express MTS1 system: Standalone Express server and 1 MTS1 base radio
- DIMETRA Express MTS2 system: Integrated Express server and 1 base radio in an MTS2 cabinet
- DIMETRA Express MTS4 system: Integrated Express server and 1-3 base radios in an MTS4 cabinet

Local or geographic redundancy[1]

- Option for locally redundant or geographically redundant DIMETRA Express server
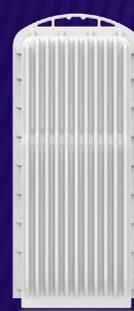
Expandable[2]

- DIMETRA Express is expandable to additional sites with DIMETRA MTS1, MTS2 or MTS4 base stations using Ethernet IP network site links

DIMETRA Express **MTS4** TETRA system

DIMETRA Express **MTS2** TETRA system

DIMETRA Express **MTS1** TETRA system

DIMETRA Express **standalone** server

Specifications

VOICE AND DATA

TETRA Voice Services including Group, Individual and System or Site Wide Call

Short Data Services and Packet Data Services[1]

VoIP Telephony Interconnect

Analogue Gateway[1]

Object Call with Barring Incoming Call / Barring Outgoing Call[1]

Common Secondary Control Channels[1]

SECURITY

Authentication[1]

Air Interface Encryption (AIE)[1]

Security Update Service[3]

BROWSER-BASED APPLICATIONS

Browser-Based Network Management[4]:	• Basic and Advanced View Option • Real-Time System Health Monitor • Bulk Loading of Radio Users and Talkgroups
Browser-Based Dispatch Console[1,4]	• Group PTT • Individual Call • Emergency Alarm • Text Messaging • Local Language Support • Console Patching
Browser-Based Radio Control Manager[1,4]	• Dynamic Group Number Assignment (DGNA) • Radio Stun

INTEGRATION & CONNECTIVITY

APIs[1]	• Voice Logging • Air Traffic Information Access • Fault Forwarding NBI • Enhanced Computer Aided Dispatch Interface (ECADI) • Dispatch Communication Server (DCS)[5]

Wireline Interoperability with WAVE PTX™[1]

Integrated Terminal Management (iTM) Integration[1] - with support for Wi-Fi Over-The-Air programming for codeplug updates.

TRACES UMR: Terrestrial RF Automated Coverage and Evaluation Solution (TRACES) Uplink Measurement Report (UMR) - enables collection of uplink data from a DIMETRA Express system for monitoring and evaluation of network coverage and performance in real time.[6]

Remote service access (VPN)

OPERATING AMBIENT TEMPERATURE

• Express Server[8]: -40 to 75 °C
• MTS1: -30 to 55 °C
• MTS2: -30 to 55 °C (without fans) / -30 to 60 °C (with fans)
• MTS4: UHF: -30 to 60 °C

[1] Licensed feature. For a full list of licensed features available for DIMETRA Express and more details about the features visit: www.motorolasolutions.com/dimetrasoftwarefeatures

[2] If the base station has more than one base radio, then one of the base radios can be a redundant base radio. The MTS1 supports this feature when in dual configuration with 2 base radios.

[3] Access to this service is dependent on the customer having a valid software maintenance license applied to the system, i.e. a service contract.

[4] Browser-based applications for a PC or tablet running Microsoft Windows® or Android™ operating system and a Google Chrome™ browser.

[5] DCS API also enables a third party dispatch application to connect two or more DIMETRA Express systems together.

[6] TRACES is sold separately.

[7] Up to 25 Watts with hybrid/cavity combiner. Up to 40 Watts bypassing combiner.

[8] The Express server is passively cooled. If mounted inside a cabinet, it will need additional cooling.

PHYSICAL PROPERTIES

Dimensions (HxDxW)	• Express Server: 7.9 cm x 17.5 cm x 26 cm • MTS1: 59.7 cm x 20.6 cm x 26.3 cm • MTS2: 61 cm x 48cm x 45 cm • MTS4: 143 cm x 57cm x 55 cm
Weight	• Express server: Approx. 3.8 Kg • MTS1: 20.5 Kg (excluding mounting bracket and Express server) • MTS2: Approx. 45 Kg • MTS4: Approx. 148 Kg

Full front access for easy maintenance, top cable entry, and bottom to top cooling airflow, allows the MTS2 and MTS4 to be placed up against a wall or neighbouring equipment, saving space.

MTS1 outdoor sealing kit option

TRANSMITTER AND RECEIVER SPECIFICATIONS

Dual receiver diversity option	MTS1
Dual and triple receiver diversity options	MTS2 and MTS4
Hybrid combiner	MTS2 and MTS4
Auto tune cavity combiner option	MTS4
Wide frequency range:	• MTS1, MTS2, MTS4: 350-470 MHz • MTS2, MTS4: 350-470 MHz and 806-870 MHz
Receiver sensitivity:	• MTS2, MTS4 350-470 MHz: -120 dBm typical (static at 4% BER) -113.5 dBm typical (faded at 4% BER) • MTS2, MTS4 806-870 MHz: -119.5 dBm typical (static at 4% BER) -113 dBm typical (faded at 4% BER) • MTS1 350-470 MHZ: -117.5 dBm guaranteed (static 4% BER) -111 dBm guaranteed (faded 4% BER)
Operating bandwidth:	• 350-470 MHz: 5 MHz • 806-870 MHz: 19 MHz
Customised duplex spacing including reversed Rx/Tx.	MTS2 and MTS4

Remote monitoring for transmit and receive antenna

Transmit power, configurable	• MTS1: 1 to 10 W • MTS2: 1 to 40 W[7] • MTS4: 1 to 40 W[7]

POWER

Input power:	• Express Server: 100-240 V AC, 50/60 Hz (external power adapter) or 9 V to 50 V DC • MTS1: -48 V DC • MTS2 and MTS4: 100/115/230 V AC, 50/60 Hz, or -48 V DC

Maximum power consumption (MTS fully equipped, maximum RF power):	• Express Server: 60 Watt
	• MTS1: 100 Watt
	• MTS2: 350-470 MHz: 640 Watt,
	     806-870 MHz: 700 Watt
	• MTS4: 350-470 MHz: 1300 Watt,
	     806-870 MHz: 1445 Watt

All specifications are subject to change without notice.

For more information, please visit
motorolasolutions.com/dimetraexpress

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