

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.



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, MTS LiTE, MTS 2 and MTS4)

System configurations

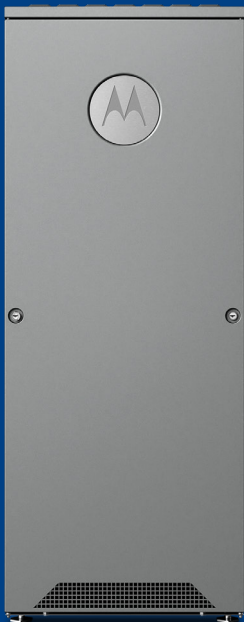
- DIMETRA Express MTS1 system:
Standalone Express server and 1 MTS1 base radio
- DIMETRA Express MTS LiTE system:
Standalone Express server and 1 base radio in an MTS LiTE cabinet.
- DIMETRA Express MTS2 system:
Integrated Express server and 1 base radio in an MTS2 cabinet
- DIMETRA Express MTS4 system: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

Local or geographic redundancy¹

- Option for locally redundant or geographically redundant DIMETRA Express server

Expandable²

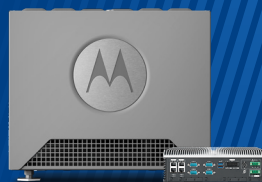
- DIMETRA Express is expandable to additional sites with DIMETRA MTS1, MTS LiTE, MTS2 or MTS4 base stations using Ethernet IP network site links



DIMETRA Express
MTS4 TETRA system



DIMETRA Express
MTS2 TETRA system



DIMETRA Express
MTS LiTE 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 Services¹

VoIP Telephony Interconnect

Analogue Gateway¹

Object Call with Barring Incoming Call / Barring Outgoing Call¹

Common Secondary Control Channels¹

SECURITY

Authentication¹

Air Interface Encryption (AIE)¹

Security Update Service³

BROWSER-BASED APPLICATIONS

Browser-Based Network Management⁴:

- 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

APIs¹:

- 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^{TM1}

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 Server⁸: -40 to 75 °C
- MTS1: -30 to 55 °C
- MTS LiTE -30 to 60 °C (with fans)
- MTS2: -30 to 60 °C (with fans)
- MTS4: UHF: -30 to 60 °C (with fans)

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
- MTS LiTE: 45 cm x 38 cm x 48 cm
- MTS2: 61 cm x 48 cm x 45 cm
- MTS4: 143 cm x 57 cm x 55 cm

Weight

- Express server: Approx. 3.8 Kg
- MTS1: 20.5 Kg (excluding mounting bracket and Express server)
- MTS LiTE: Approx. 36 Kg
- 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 MTS LiTE, 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 and MTS LiTE

Dual and triple receiver diversity options MTS2 and MTS4

Hybrid combiner MTS2 and MTS4

Auto tune cavity combiner option MTS4

Wide frequency range:

- 350-470 MHz: MTS1, MTS LiTE, MTS2 and MTS4
- 806-870 MHz: MTS LiTE, MTS2 and MTS4

Receiver sensitivity:

- MTS LiTE, MTS2 and MTS4 350-470 MHz: -120 dBm typical (static at 4% BER)
- -113.5 dBm typical (faded at 4% BER)
- MTS LiTE, MTS2 and 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. MTS LiTE, MTS2 and MTS4

Remote monitoring for transmit and receive antenna

Transmit power, configurable

- MTS1: 1 to 10 W
- MTS LiTE, MTS2 and MTS4: 1 to 40 W⁷

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
- MTS LiTE, 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 W
- MTS1: 100 W
- MTS LiTE: 350-470 MHz: 310 W, 806-870 MHz: 340 W
- MTS2: 350-470 MHz: 640 W, 806-870 MHz: 700 W
- MTS4: 350-470 MHz: 1300 W, 806-870 MHz: 1445 W

All specifications are subject to change without notice.

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.





For more information, please visit
motorolasolutions.com/dimetraexpress

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