



# DIMETRA X CORE MISSION-CRITICAL TETRA COMMUNICATIONS FOR TODAY AND TOMORROW

**DIMETRA™ X Core is a highly flexible, reliable and secure TETRA digital radio system, for voice and data, that's scalable from a single site to a national network.**



DIMETRA X Core is a mission-critical communications solution for large organisations and public safety agencies.

It provides robust and reliable mission-critical voice and data communications capability and is designed to work in the most challenging environments. Multiple levels of fallback built into DIMETRA X Core helps protect your communications against loss of voice and data services.

DIMETRA X Core's software defined core enables new features and capabilities to be added to tailor the communications solution to your individual needs. This extends the value of your DIMETRA system, maximising operational efficiency, safety and security.

Communication solutions also need to offer organisations wide-reaching collaboration so that everyone who needs to be part of a conversation, can be. DIMETRA X Core allows individuals across agencies, regions and even

countries to work together. It also enables interoperability with mobile broadband networks.

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

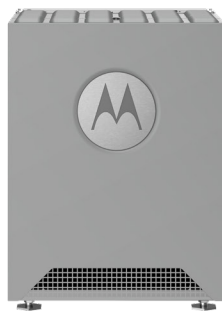
Whether your organisation is deploying a mission-critical communications network for the first time, replacing a legacy analogue network or refreshing an existing TETRA network — DIMETRA X Core provides the mission-critical voice and data communications your organisation needs for the next 15 years or more.



# SPECIFICATIONS



**MTS4** BASE STATION  
(HOLDS UP TO 4 BASE RADIOS)<sup>1</sup>



**MTS2** BASE STATION  
(HOLDS UP TO 2 BASE RADIOS)



**MTS1** BASE STATION  
(1 BASE RADIO)



**DIMETRA X CORE**  
**CABINET**

## VOICE AND DATA

TETRA Voice Services including Group, Individual Call

Short Data Services and Packet Data Services<sup>2</sup>

VoIP Telephony Interconnect - IP enabling connection to an external VoIP network via IP-PABX; SIP protocol support

Analogue Gateway<sup>3</sup>

Object Call with Barring Incoming Call / Barring Outgoing Call<sup>2</sup>

Common Secondary Control Channels<sup>2</sup>

## SECURITY

Authentication<sup>2</sup>

Air Interface Encryption (AIE)<sup>2</sup>

End-to-End Encryption<sup>3</sup>

Security Update Service<sup>4</sup>

Cyber security options, including:

- Anti Virus
- Operating System patching
- Site link encryption
- Perimeter protection
- Operating System hardening
- Two-Factor Authentication

## INTEGRATION AND CONNECTIVITY

APIs<sup>1</sup>

- Voice Logging
- Air Traffic Information Access
- UEM North Bound Interface (NBI)
- Enhanced Computer Aided Dispatch Interface (ECADI)
- Dispatch Communication Server (DCS)

Wireline Interoperability with WAVE PTX<sup>2</sup>

Terrestrial RF Automated Coverage Evaluation Solution (TRACES)<sup>5</sup>

Service Access Firewall (SA FW) / Remote service access

Interface support to Intelligent Middleware

Inter-System Interface (ISI)<sup>2,3</sup>

Ethernet site links

Interface to customer enterprise network

## REDUNDANCY AND RESILIENCE

Redundant Core Components

Local Redundancy

Geographic Redundancy<sup>3</sup>

Redundant Links (Alternate Paths)

Edge Resilience

Local Site Trunking (LST)

Redundant Base Radios / Redundant Site Controller

Direct Mode Operation (DMO) - Device to Device



# SPECIFICATIONS

## PHYSICAL PROPERTIES

|                    |  |
|--------------------|--|
| Dimensions (HxDxW) | <ul style="list-style-type: none"> <li>X Core Cabinet:           <ul style="list-style-type: none"> <li>Single rack 185 x 101 x 61 cm</li> <li>Geographical redundancy racks 185 x 101 x 61 cm</li> </ul> </li> <li>Edge Server: 7.9 x 17.5 x 26 cm</li> <li>MTS1: 59.7 x 20.6 x 26.3 cm</li> <li>MTS2: 61 x 48 x 45 cm</li> <li>MTS4: 143 x 57 x 55 cm</li> </ul> |
|--------------------|--|

|        |   |
|--------|---|
| Weight | <ul style="list-style-type: none"> <li>X Core<sup>6</sup>:           <ul style="list-style-type: none"> <li>Single rack 275 Kg</li> <li>Geographical redundancy racks 250 Kg (each rack)</li> </ul> </li> <li>Edge Server: Approx. 3.8 Kg</li> <li>MTS1: 20.5 Kg (excluding mounting bracket)</li> <li>MTS2: Approx. 48 Kg</li> <li>MTS4: Approx. 141 Kg</li> </ul> |
|--------|---|

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:                               | <ul style="list-style-type: none"> <li>MTS1, MTS2, MTS4: 350-470 MHz</li> <li>MTS2, MTS4: 350-470 MHz and 806-870 MHz</li> </ul>   |
| Receiver sensitivity:                               | <ul style="list-style-type: none"> <li>MTS2, MTS4 350-470 MHz:           <ul style="list-style-type: none"> <li>-120 dBm typical (static at 4% BER)</li> <li>-113.5 dBm typical (faded at 4% BER)</li> </ul> </li> <li>MTS2, MTS4 806-870 MHz:           <ul style="list-style-type: none"> <li>-119.5 dBm typical (static at 4% BER)</li> <li>-113 dBm typical (faded at 4% BER)</li> </ul> </li> <li>MTS1 350-470 MHz:           <ul style="list-style-type: none"> <li>-117.5 dBm guaranteed (static 4% BER)</li> <li>-111 dBm guaranteed (faded 4% BER)</li> </ul> </li> </ul> |
| Operating bandwidth:                                | <ul style="list-style-type: none"> <li>350-470 MHz: 5 MHz</li> <li>806-870 MHz: 19 MHz</li> </ul>  |
| Customized Duplex Spacing including reversed Rx/Tx. | MTS2 and MTS4  |
| Remote monitoring for transmit and receive antenna  |  |
| Transmit power, configurable                        | <ul style="list-style-type: none"> <li>MTS1: 1 to 10 W</li> <li>MTS2: 1 to 40 W<sup>7</sup></li> <li>MTS4: 1 to 40 W<sup>7</sup></li> </ul>  |

## POWER

|              |  |
|--------------|--|
| Input power: | <ul style="list-style-type: none"> <li>X Core rack: 100-240V AC, 50/60 Hz</li> <li>Edge Server: 100-240V AC, 50/60 Hz (external power adapter) or 9V to 50V DC</li> <li>MTS1: -48V DC</li> <li>MTS2 and MTS4: 100/115/230V AC, 50/60 Hz, or -48V DC</li> </ul> |
|--------------|--|

|   |  |
|---|--|
| Maximum power consumption (MTS fully equipped, maximum RF power): | <ul style="list-style-type: none"> <li>X Core rack<sup>6</sup>:           <ul style="list-style-type: none"> <li>Single rack 1.2 KW</li> <li>Geographical redundancy racks 0.8 KW (each rack)</li> </ul> </li> <li>Edge Server: 60 W</li> <li>MTS1: 100 W</li> <li>MTS2: 350-470 MHz: 640 W, 806-870 MHz: 700 W</li> <li>MTS4: 350-470 MHz: 1300 W, 806-870 MHz: 1445 W</li> </ul> |
|---|--|

## OPERATING AMBIENT TEMPERATURE

- X Core rack: 20 to 25°C
- Edge Server<sup>8</sup>: -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

## DISPATCH COMMUNICATIONS<sup>9</sup>

- MCC 7500C Dispatch Console: Provides standard dispatch operations.
- MCC 7500S Dispatch Console: Supports secure end-to-end encrypted voice dispatch.
- Dispatch Communications Server (DCS): Provides the ability to develop specialised control room solutions through the DCS Application Program Interface (API).
- Secure-Dispatch Communications Server (S-DCS): Supports end-to-end encrypted solutions through the DCS Application Program Interface (API).

## VOICE LOGGER<sup>9</sup>

NICE Inform Recorder

## ENVIRONMENTAL

Compliant with Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on Waste Electrical and Electronic Equipment (WEEE) and Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

## REGULATORY

EN 55024 and EN 55032

## SERVICE AND SUPPORT PACKAGES<sup>9</sup>

**Keep systems operating at peak performance with our service and support packages**  
Rely on us to help you achieve your performance targets with the right service level you need for your DIMETRA system to best match your requirements. Each service package, from Essential to Premier, provides a higher level of support and transfers to Motorola Solutions the risk and responsibility of providing the right level of services for your communications needs.

For more information, please visit  
[motorolasolutions.com/dimetraXcore](http://motorolasolutions.com/dimetraXcore)

<sup>1</sup> 8 Base Radios are supported with an Expansion Cabinet

<sup>2</sup> Licensed feature. For a full list of licensed software features available visit: [www.motorolasolutions.com/dimetrasoftwarefeatures](http://www.motorolasolutions.com/dimetrasoftwarefeatures)

<sup>3</sup> Additional hardware is required.

<sup>4</sup> Access to this service is dependent on the customer having a valid software maintenance agreement, i.e. a service contract.

<sup>5</sup> TRACES is sold separately.

<sup>6</sup> Weight and Power consumption based on minimum configuration.

<sup>7</sup> Up to 25 Watts with hybrid/cavity combiner. Up to 40 Watts bypassing combiner.

<sup>8</sup> The Edge Server is passively cooled. If mounted inside a cabinet, it will need additional cooling.

<sup>9</sup> For more information please visit [motorolasolutions.com/dimetra](http://motorolasolutions.com/dimetra)





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