

DIMETRA MTS4 TETRA BASE STATION

HIGH PERFORMANCE. LOW COST OF OWNERSHIP.

Uncompromised network coverage is a fundamental requirement of mission critical communications. In order to provide reliable coverage, networks must be resilient to unforeseen events both natural and man-made. When financial resources are restricted, a solution that delivers high performance while minimizing total cost of ownership is essential. That is why operators value the 'best-in-class' radio performance and fully redundant design of the DIMETRA™ MTS4 TETRA Base Station.

DESIGNED FOR HIGH PERFORMANCE

Providing support for X.21, E1, IP-over-Ethernet and Multi Protocol Label Switching (MPLS), the MTS4 enables operators to utilize the most efficient and cost effective transmission networking technologies available today and in the future.

FLEXIBLE CAPACITY AND COVERAGE

The compact MTS4 is a high performance base station with state-of-the-art capacity and coverage enhancing capabilities:

- Common Secondary Control Channel (C-SCCH) – additional control channels on the main carrier, quadrupling existing capacity.
- 'Best-in-class' transmitter output power and receiver sensitivity, together with various diversity options, enabling a reduction in the number of sites required to achieve a given level of coverage, increased data performance and enhanced audio quality.
- The flexibility of connecting up to eight base radios to one Receiver antenna, easing implementation costs and reducing cycle time.

OPTIMISED TOTAL COST OF OWNERSHIP

The running costs of base station sites typically account for a significant portion of the total cost of ownership of any TETRA network. MTS4 base stations are specifically designed with advanced features that help to minimise operational expenditures. Such features enable:

- Better power consumption through use of high efficiency processing and amplification platforms – delivering significant operational cost savings over the network's lifetime.
- Reduced transmission costs – native Multi Protocol Label Switching (MPLS) support using IP-over-Ethernet capability means that the MTS4 can enable up to 70% savings compared with non-IP based transmission.
- Reduced battery back-up capacity requirement and low heat dissipation due to excellent power efficiency. With an efficient integrated battery charger, power supply costs are kept to an absolute minimum.

DAY AND NIGHT SECURITY

With the MTS4, there is no need to worry about theft or vandalism. The base station equipment includes security features for peace of mind:

- External alarm interface supports 15 alarm inputs and 2 external control outputs.
- Lockable door equipped with standard alarm contacts – an effective intrusion detection system.



RELIABLE AND EASY TO MAINTAIN

The MTS4 offers supreme reliability plus flexible access for easy servicing.

Key features include:

- Two E1 or Ethernet interfaces can be provided with the MTS4 to facilitate implementing link redundancy using ring configurations. Redundant E1 and Ethernet ports can be activated in the event of link failure, ensuring continuous connectivity.
- Local Site Trunking – in the event of site link failure, the base station is able to operate independent of the mobile switching office, maintaining secure talkgroup communications throughout.
- Non-GNSS operation – supports operation in the absence of a GNSS signal, ideally suited to underground applications.
- Full redundancy of site controller and base radio subsystems including support for automatic main control channel switching.

ADDITIONAL FEATURES

- Interference detection and correction
- Air Interface Encryption
- Multi-Slot Packet Data (MSPD) for enhanced data services
- TETRA Enhanced Data Services (TEDS) for high speed data services.
- Hot swappable modules
- Traffic channel rotation
- Dynamic channel allocation between voice and packet data

SPECIFICATIONS

| | UHF | 800MHz |
|--|--|---|
| Frequency Bands | 350 - 430 MHz, 380 - 470 MHz | 851 to 870 MHz (Tx), 806 to 825 MHz (Rx) |
| Operating Bandwidth | 5 MHz | 19 MHz |
| Base Radios | Up to 4 BRs (16 time slots) | |
| Carrier Spacing | 25 kHz (25 / 50 kHz for TEDS) | |
| Transmit Power at top of base station cabinet | 25 Watt (10 Watt TEDS) 40 Watt (with combiner bypass) (20 Watt TEDS) | |
| Receiver Sensitivity at top of base station cabinet / input connector | -120 dBm typical (static at 4% BER) -113.5 dBm typical (faded at 4% BER) | -119.5 dBm typical (static at 4% BER) -113.5 dBm typical (faded at 4% BER) |
| Diversity Reception | Single, dual or triple-diversity, duplexed or non-duplexed | |
| Combiner Options | Combiner Bypass, Hybrid combiner, Auto Tune Cavity, Manual Tune Cavity | |
| Transmission | Ethernet, X21 or fractional E1 connection Multi Protocol Label Switching (MPLS) Two Ethernet or Two E1 ports with inbuilt multiplexer for either loop protection or redundancy (up to 10 base stations can be connected in loop) Support for satellite transmission | |
| High Speed Data | TEDS QAM modulation schemes with 25 / 50 kHz channel bandwidths | |
| Input Power | Input Power 115/230 V AC, 50/60Hz and 48 V DC Equipped with integrated battery chargers | |
| Power Consumption (fully equipped with 4 base radios) | 1300 Watt | 1445 Watt |
| Operating Ambient Temperature | -30 to 60 °C | -30 to 55 °C |
| Width x Height x Depth | 55cm x 143cm x 57cm | |
| Weight | 141 Kg (fully equipped with 4 base radios) | |

For more information, please visit us on the web at: motorolasolutions.com/DIMETRA



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