

Brochure



MXM7000

TETRA and LTE mobile solution

Your apps. Your comms. Your team. Together

MXM7000 is for users who require both mission-critical push-to-talk and android applications in the vehicle



MXM7000

Mission-critical converged TETRA and LTE mobile solution

MXM7000 is a secure mobile solution for mission-critical TETRA and 4G LTE broadband voice and data communications. It comprises the MXM7000 LTE control head with Android OS and the MTM5500 TETRA transceiver – for in-vehicle or desk-mounted use.

With its external roof-mounted antenna, the MXM7000 offers high transmit power and receiver sensitivity that helps keep people connected, even in areas of low coverage. LTE connectivity can turn the vehicle into a broadband hotspot for tethering a range of devices. The MXM7000 LTE control head runs on the Android operating system, supporting applications for workforce productivity.

The rugged MXM7000 is easy to use and operate, with a touch screen for interacting with data, glove-friendly buttons and separate LEDs for TETRA and broadband notifications.

With mission-critical TETRA and LTE broadband for voice and data, along with LTE tethering capabilities in a rugged, secure and easy to operate solution, the MXM7000 transforms communications.





Converged mobile solution

In-vehicle mission-critical connectivity

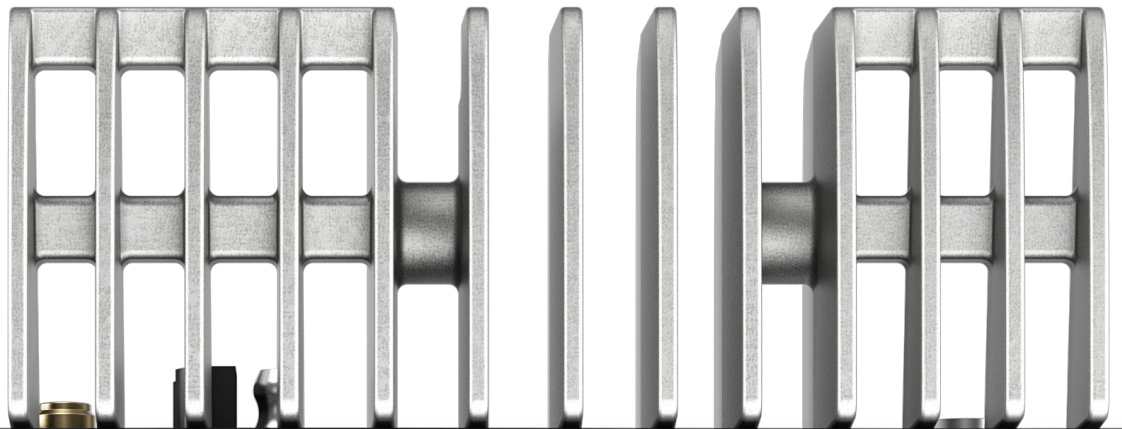
The MXM7000 is a fully-featured mission-critical mobile solution with TETRA and LTE broadband voice and data communications. Instead of different solutions for LMR and LTE, you need only install the MXM7000 LTE control head and the connected MTM5500 TETRA transceiver¹.

By optimising in-vehicle space, and having one interface for TETRA and LTE, the MXM7000 helps mobile teams to focus on the task at hand. The MXM7000 can also be configured as a desk-mounted solution.

Rugged and ready for action

Your personnel and vehicles work in all kinds of conditions and environments.

The rugged MXM7000 is ready to handle extreme temperature and vibration. The control head display is made from tough Corning® Gorilla® glass. It has been tested to the MIL-STD-810H military standard developed by the U.S. Department of Defence. With an IP54 rating, the MXM7000 control head is also protected from limited dust ingress and water spray from any direction.



¹ If you already have a MTM5500 TETRA transceiver please speak to your Motorola Solutions representative to see if the MXM7000 LTE control head is compatible with your model.



Location precision

When the unexpected happens, it's important to know exactly where your people are. The MXM7000 supports GPS and aGPS (Assisted GPS) as well as other Global Navigation Satellite Systems (GNSS) including Galileo, Beidou and GLONASS.

Secure communications

Staying protected against threats is crucial. The MXM7000 is a highly secure converged TETRA and LTE solution with security features in both the TETRA transceiver and MXM7000 control head.

TETRA transceiver

Multiple levels of security protect your mission-critical TETRA data and communications. TETRA security features include:

- Air Interface Encryption² (AIE) where data and communications are encrypted between terminals and base stations
- Over-The-Air-Rekeying³ (OTAR) that enables radio users to stay out in the field and have encryption keys remotely pushed to their device
- End-to-End Encryption closes the gap of unencrypted communications through the TETRA network infrastructure. It is available on the TETRA transceiver via an optional Hardware Security Module (HSM). The HSM uses 256-bit AES to encrypt voice, data and location information from sender to receiver

LTE control head

The MXM7000 control head is security hardened with a range of security features including:

- User Authentication using PIN or password
- Hardware-backed encryption with Trusted Execution Environment (TEE) for key storage
- Trusted boot process with the use of tamper resistant hardware
- Android OS hardening and SELinux access control
- Auditing / logging functionality, with security logs captured and stored in a secured manner
- Data-at-Rest protection using Android's AES256 File Based Encryption.
- Data-in-Transit encryption with IPsec VPN support
- Secured device management and configuration with the use of our Integrated Terminal Management (iTM) solution
- Restricted recovery mode to avoid unauthorised access to features

² MXM7000 supports TEA 2. Please check with your Motorola Solutions representative about availability in your region.

³ Supports: Group Cypher Key (GCK), Common Cypher Key (CCK) and Static Cypher Key (SCK)





Mission-critical TETRA voice and data communications

Rely on uncompromising TETRA communications

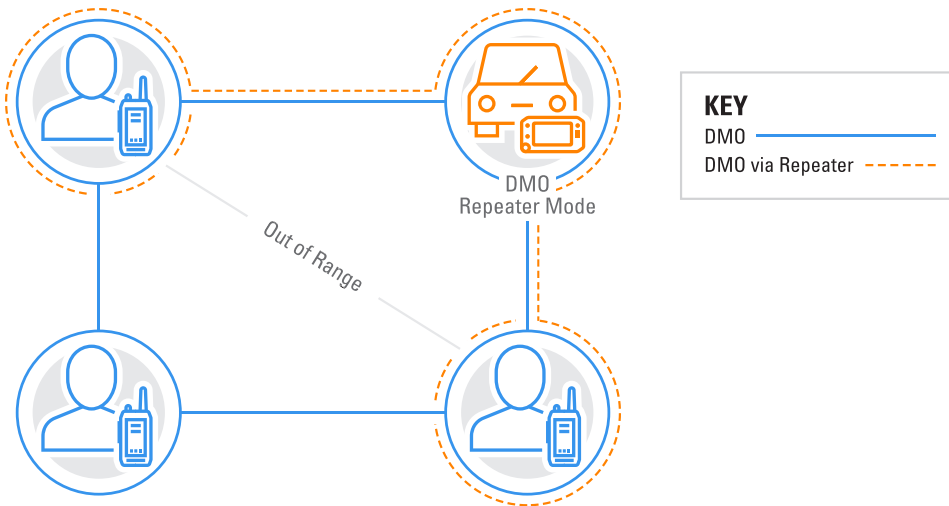
The MXM7000 has been designed to provide reliable in-vehicle TETRA coverage for voice and data. It has dynamic receiver sensitivity of -109dBm (typical), static receiver sensitivity of -117dBm (typical) and high 10 watt transmission power, allowing users to maintain conversations and send SDS messages even in remote areas.

Its external roof-mounted antenna supports higher transmit power than a portable radio. This capability can be extended to nearby portable radios, to keep their users connected to the TETRA network.



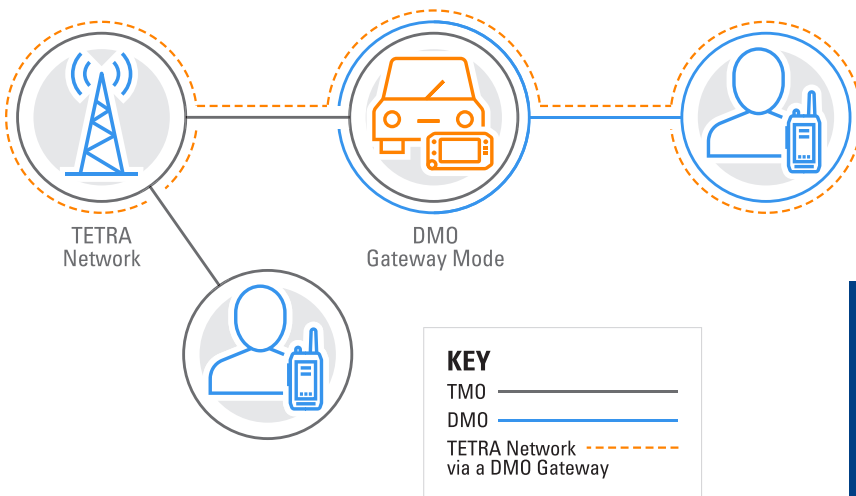
DMO repeater functionality

The MXM7000 also has Direct Mode Operation (DMO) repeater functionality to act as a bridge between users who are out of coverage of each other, but within coverage of the MXM7000. This can be used to extend the DMO range by retransmitting group calls, private calls and data from one TETRA radio to another.



Gateway to a TETRA network

When a device is connected to the TETRA network it is in Trunked Mode Operation (TMO). When in gateway mode⁴, the MXM7000 acts as a bridge between TETRA radios and the TETRA network to preserve trunked communications. For example, police officers investigating inside a building with thick walls may lose network coverage on their portable TETRA radios, but with the MXM7000 acting as a gateway, the officers only need their portable radios to be able to reach the MXM7000 in the car outside via DMO, and the MXM7000 can be the connection to the TETRA network via TMO.



⁴ Future software release



With high transmit power of 10w and high receiver sensitivity the MXM7000 helps keep teams connected



Enhanced with LTE voice and data capabilities

Unlock powerful LTE mobile broadband

Equip vehicles with a solution that not only provides mission-critical TETRA voice and data communications but also broadband voice and data capabilities via LTE, as well as the ability to run Android applications.

The MXM7000 can run work applications created for your specific use cases. Whether that's location data on a military training exercise, push-to-talk via WAVE PTX™, mobile video footage from a roadside incident or servicing updates on the rail network, users get real-time visibility of the latest information.

Extend to PTT LTE

The WAVE PTX application can run on the MXM7000 to provide PTT over LTE broadband.

WAVE PTX is a carrier-independent broadband PTT service that delivers the MCPTT-based features necessary to enhance user safety, increase situational awareness, and improve operational efficiency. It allows the MXM7000 user to communicate over an LTE network using the WAVE PTX application.

Create a local hotspot

The MXM7000 enables Wi-Fi tethering that turns the vehicle into a Wi-Fi hotspot that opens access to broadband data for a wide range of devices. Tethering laptops, tablets, body-worn and vehicle video cameras and other equipment to the MXM7000 Wi-Fi Access Point connects them to LTE, enabling information sharing and live streaming. Devices can also be connected via the Ethernet port on the MXM7000 LTE control head.





MXM7000 can help connect other devices to LTE by acting as modem to the LTE network via a Wi-Fi hotspot and Ethernet

- Military vehicles on exercises can set up a Wi-Fi hotspot connected to LTE that helps provide personnel in the field with essential mission and mapping information
- Police can communicate with colleagues over TETRA voice and stream body-worn and in-vehicle video camera footage back to the control room over LTE
- On-board train systems, that run the length of the train via Ethernet, can share information with the control room over LTE via the MXM7000





Easy to use

Effortless operation in the field

The MXM7000 has been designed for ease and efficiency on the move. It features a toughened Corning® Gorilla® glass 5-inch touch screen display to take advantage of the capabilities of Android applications. The display has been optimised to support use with gloves, including disposable and combat gloves.

As well as the touch screen, there are an array of easy to use controls, including a large dual-function rotary knob for volume and talkgroup selection and two programmable buttons for activating frequently used functions. To the left of the screen, two status LEDs provide separate notifications for TETRA and LTE. Should users get into difficulties, the MXM7000 includes an emergency button.

Future-proof connections

To equip the MXM7000 for today and tomorrow, a variety of connectors are included for linking up with sensors and accessories. The control head includes a GCAI-MMP, and there's a 26-pin connector on the transceiver – same connector as MTM5000 TETRA radios. The MXM7000 also includes a USB-A port, enabling connections to other devices. For example, with the right software, a police officer can connect a dash-mounted camera for continuous live incident streaming. The MXM7000 also supports Bluetooth® 5.1 for data transfer.



Supports night-time operations

The MXM7000 has a night vision mode that makes it suitable for military operations. This dims the display screen to a very low intensity that can only be seen effectively while wearing night vision goggles.

Multiple configurations to suit your needs

The MXM7000 is a highly flexible solution with multiple installation options. It is hardware-ready to support two control heads from one transceiver, as well as to support two transceivers controlled from one control head. With two control heads connected to one transceiver, users in the front and back of a fire engine, train or boat can control the same radio. With one control head controlling two transceivers, a single user can switch radios on different Trunked Mode Operation (TMO) or Direct Mode Operation (DMO) channels from one location.

The loudspeaker, push-to-talk button and microphone of the transceiver can also be configured in multiple configuration options. The control head also has mounting options via a trunnion or in a 2-DIN frame.

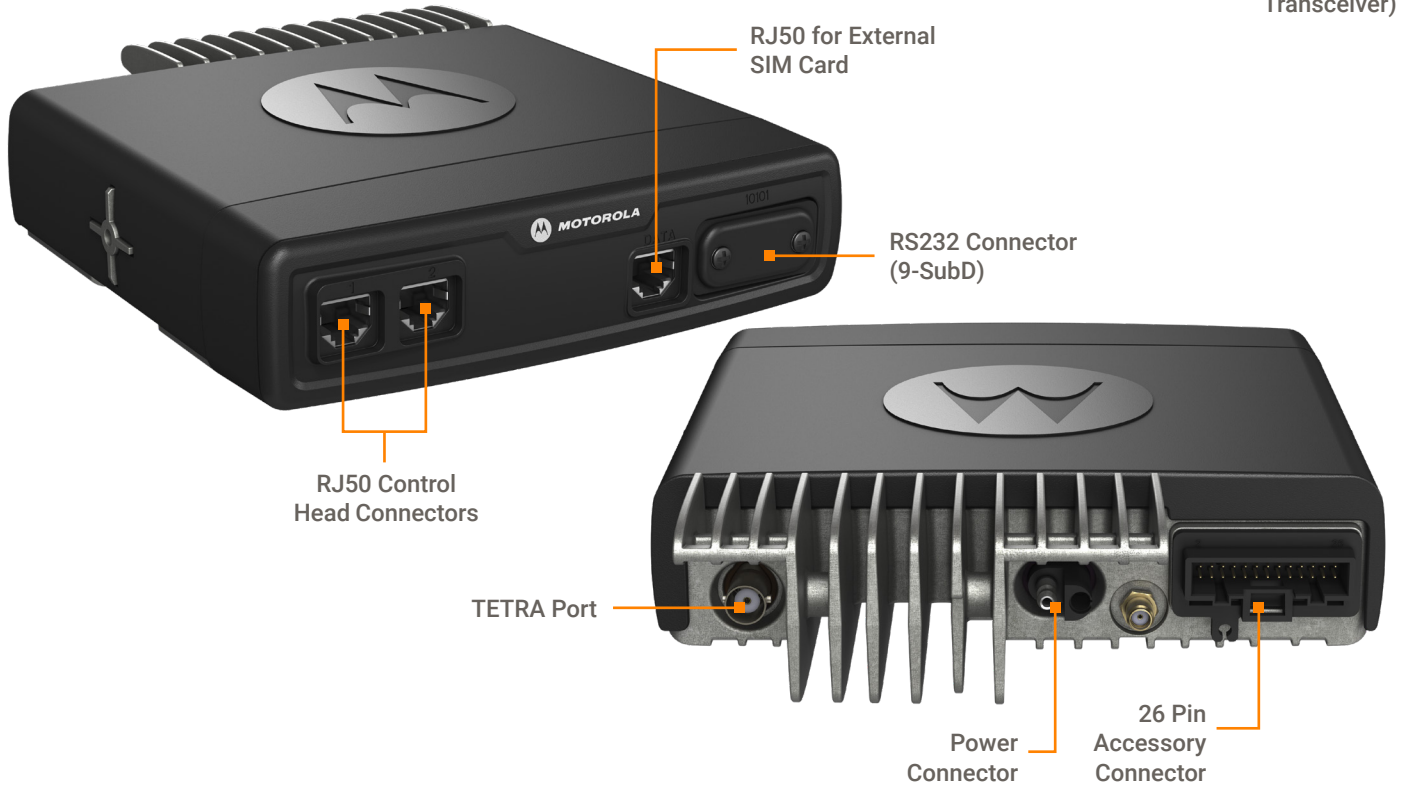
The MXM7000 has intuitive controls and rugged 5-inch touch screen



MXM7000 LTE control head



TETRA transceiver



Accessories

You can customise the installation and user experience to the needs of your team with a wide range of accessories available for the MXM7000. Accessories include: mounting solutions, mobile microphones, external speakers and cables.

Control head mounting solutions

Mount the MXM7000 control head on the vehicle dash or on a desk with the trunion solution. The trunion also allows for pivoting of the screen. Alternatively, attach the control head in the centre console of a vehicle with the 2-DIN Frame.



Trunion



2-DIN Frame



Antenna

Simplifying and streamlining installation work is the new combined magnetic mount antenna that works with TETRA⁵, LTE and GNSS, removing the need for a separate antenna for each of TETRA, LTE and GNSS.



Audio

There is a range of compatible audio accessories including mobile speakers, microphones, remote speaker microphones and PTT buttons for the MXM7000.



Cables

We offer a selection of installation cables to best tailor each installation to your configuration needs, and our power cables have protection circuitry for both control head and transceiver.

With the MXM7000, you can reuse a range⁶ of your existing stock of MTM5000 series audio accessories and cables, saving you the time and cost of re-equipping your teams.

⁵ A low pass filter is required between the TETRA cable from the antenna and the TETRA transceiver.

⁶ Please contact your Motorola Solutions representative for more details.





Simple to deploy and manage

Simplified fleet management

MXM7000 is easy to deploy and manage. It comprises an MTM5500 TETRA transceiver⁷, LTE control head and a single antenna for TETRA and LTE voice and data. You can also reuse existing accessories and cabling⁸ from MTM5000 TETRA radios.

With the MXM7000, you only need to purchase and maintain one in-vehicle solution for TETRA and LTE, saving cost and time. Having one supplier for your TETRA and LTE communications using industry standard connector interfaces, helps you quickly and efficiently manage your fleet.

Streamlined field deployment

The MXM7000 uses the same Integrated Terminal Management (iTM) tool as other TETRA radios from Motorola Solutions, for fast and easy programming of your fleet.

Hardware-ready for Wi-Fi Over-the-air updates

The MXM7000 supports both 2.4GHz and 5GHz bands of Wi-Fi. MXM7000 is hardware-ready for Wi-Fi over-the-air updates that will enable radio managers to take advantage of Wi-Fi for device programming and updates. Planned upgrades that would have taken weeks could be done in a few hours. Instead of having to physically update each mobile device, a MXM7000 could be updated as soon as the vehicle is in range of its assigned Wi-Fi. This will reduce the hassle and operational downtime associated with upgrades.

Wi-Fi connections are secured via the Transport Layer Security (TLS1.2) protocol to ensure the data pipe between the device and the server is secure and data integrity is guaranteed. This means that updates could be performed securely anywhere the MXM7000 can access assigned Wi-Fi.

⁷ If you already have a MTM5500 TETRA transceiver please speak to your Motorola Solutions representative to see if the MXM7000 LTE control head is compatible with your model.

⁸ Some additional cables will be required, for example the cable from the control head to antenna. Please contact your Motorola Solutions representative for more details.



Get the most from your MXM7000

To support your MXP7000 fleet and maximise the value of your investment, we offer a one-year standard warranty. There is an option to extend that warranty with additional services⁹ such as:

Hardware repair

Troubleshooting, testing and repairing your equipment at a centralised facility.

Technical support and service desk

Remote technical support services to ensure your radios are rapidly restored and functional.

Software maintenance

Access to latest certified software releases for reliable and secure device operations.

⁹ Please contact your Motorola Solutions representative for more details.





To learn more, visit:
www.motorolasolutions.com/mxm7000



All specifications are subject to change without notice

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