MTM5000 SERIES TETRA MOBILE RADIOS

SAFER SMARTER FASTER

ENABLING CURRENT AND FUTURE CRITICAL COMMUNICATIONS

TRENDS IN TETRA CORE NEEDS

TETRA Systems continue to be deployed in more and more countries supporting Public Safety and Mission Critical operations with secure, reliable, and resilient communications. Motorola has shipped over 2 million TETRA radios to customers around the world.

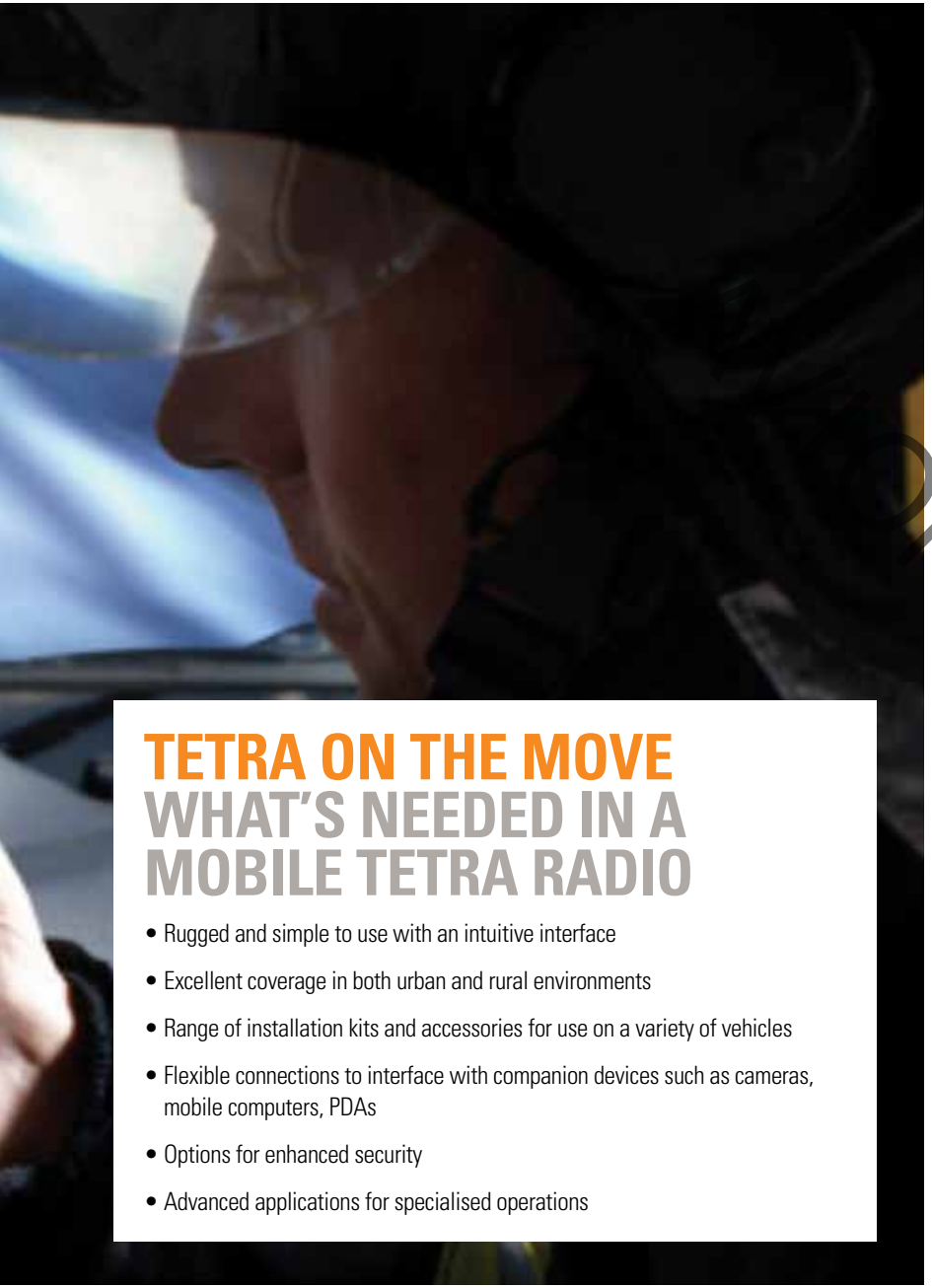
Users of TETRA require:

- Rapid and reliable call connections
- Rugged terminals to withstand all weather conditions and rough handling
- Secure communications to prevent unauthorised reception or interception
- Resilient systems to withstand sabotage or natural events, and separation from public systems which become overloaded
- User location for safety and efficiency
- Data services, with a migration path to broadband in the future

DATA IS GROWING IN IMPORTANCE

When it was introduced the dominant use of TETRA was for voice communications, but the use of TETRA as a data bearer has steadily increased. Beginning with the use of status messaging and text, data over TETRA has evolved into the use of picture messaging, WAP, and data-base access. TETRA is also being used for machine to machine communication in industries such as power distribution.

TEDS will enrich the data experience for all types of users. For example data base access will be faster, and additional data can be accessed such as pictures. Uploads can also be enlarged to include fingerprints, pictures and small video clips.



TETRA ON THE MOVE
WHAT'S NEEDED IN A MOBILE TETRA RADIO

- Rugged and simple to use with an intuitive interface
- Excellent coverage in both urban and rural environments
- Range of installation kits and accessories for use on a variety of vehicles
- Flexible connections to interface with companion devices such as cameras, mobile computers, PDAs
- Options for enhanced security
- Advanced applications for specialised operations

SOFTWARE FEATURES
TO CUSTOMISE THE MTM5000

The Motorola mobile radio family has been deployed by many public safety and industrial users. Special applications have been developed to meet the particular needs of these customers which are available for all users. These are just some examples.

Messaging Applications. Special messaging applications are available to increase the speed of communicating with teams. For example, Disaster Alert which is an emergency pre-emptive priority call made by a user alerting a single pre-defined group to the presence of a disaster such as an earthquake or major accident.

Resource Allocation. Call out is an application to determine quickly which mobile units are available to answer a call and to then allocate them to the task.

Optimising the network. GPS service inevitably uses some data capacity, LIP throttling limits the impact of GPS traffic when the network is congested. Secondary Control Channel (SCCH) will increase capacity for data traffic in a TETRA network by opening a second channel. This will help to speed-up the flow of GPS and SDS traffic. Network access can be adapted for special needs, either by preventing access for unauthrorised users or providing preferential access for special users.

Security. End to End encryption can be enabled on either voice or data services. Stun or Kill will temporarily or permanently disable the radio if stolen from or in the vehicle.

SDS Remote Control. Enables control of one or more terminals from a workstation and a controlling TETRA Radio Over the Air using the PEI interface. For example a local fire controller using a field PC and a controlling MS can increase or decrease volume of an individual radio, or change talk groups. Or a Dispatcher or controller can directly request GPS position of an officer who is not responding to a call.

READY FOR THE FUTURE, THE EVOLUTION OF TETRA AND CRITICAL COMMUNICATIONS

TETRA has continued to evolve since it's introduction in 1992 and users have been offered a continuous stream of improvements and enhancements which have increased the functionality, reliability, and value of the TETRA network. During this time the data speeds of TETRA have increased with the introduction of Multi-Slot Packet Data. Now with the introduction of TETRA Enhanced Data Service (TEDS) a further significant increase is enabled. This has come at a time when many users are experiencing the benefits of mobile data using public carriers and PDAs and Smartphones. TEDS will support the migration of many applications across to TETRA networks with the attendant benefits of security and resilience.

MTM5000 SERIES
TETRA MOBILE RADIOS

The Motorola MTM5400 Mobile TETRA radio has been joined by two new models to give a choice of specifications to match end user profiles and needs.

SAFER

- HEAR AND BE HEARD IN DIFFICULT ENVIRONMENTS WITH ENHANCED AUDIO
- STAY IN TOUCH WITH GREAT COVERAGE, IMPROVED RX SENSITIVITY AND HIGH POWER OPTIONS

SMARTER

- VERSATILE INSTALLATION CONNECTS END USERS IN AND AROUND THE VEHICLE, UP TO 40M FROM THE RADIO WITH THE MTM5500
- CONTROL THE RADIO AND MAKE VOICE AND DATA CALLS INSIDE OR OUTSIDE THE VEHICLE WITH THE TELEPHONE STYLE CONTROL HEAD

FASTER

- BE READY FOR TEDS FOR FASTER DATA COMMUNICATIONS TO IMPROVE EFFICIENCY AND SAFETY
- LINK TO DATA DEVICES FOR FLEXIBILITY AND POWERFUL APPLICATIONS

FOR AREAS WHERE COVERAGE IS RESTRICTED

SINGLE CONTROL HEAD INSTALLATION

The **MTM5200** is the base model sharing the enhanced audio and receiver sensitivity of the current MTM5400, as well as being TEDS-ready.

The **MTM5400** includes high power modes and the Gateway Repeater functionality features required by end users in areas of limited coverage.

MULTIPLE CONTROL HEAD INSTALLATION

Optional Second Control Head

The **MTM5500** is a highly flexible and capable system radio which permits the installation of multiple control heads and/or the new Telephone Style Control Head up to 40m from the radio.

Combining class leading robustness with a sleek ergonomic design, the discreet **Telephone - Style Control Head (TSCH)** provides flexibility and ease of operation, making it well suited for in-vehicle applications. Fully compatible with MTM5500 radios, the design attributes of the TSCH ensure uncompromising performance for mission-critical operations.

MTM5000 SERIES BENEFITS

EXTENDED OPERATIONAL RANGE

- Up to 10W transmit power (MTM5400/5500), with class leading receiver sensitivity delivers comprehensive network coverage
- Integrated DMO Gateway, DMO Repeater capabilities (MTM5400/5500), ensure secure and resilient communications where needed most

SUPERIOR AUDIO PERFORMANCE

- Next generation audio architecture delivering the loudest and clearest audio performance of any Motorola TETRA mobile available on the market*

HIGH SPEED DATA CONNECTIVITY

- TEDS Ready hardware - with a simple software license upgrade, enables 20x faster data connectivity for accessing back-office systems and databases
- Integrated USB 2.0 PEI, enabling rapid radio programming and standardised interfacing to data terminals and accessories. For additional flexibility, USB host and slave modes are also supported

LOW USER MIGRATION COSTS

- Familiar cellular style user interface and VGA colour display for enhanced usability and reduced staff training costs
- Same user interface as market proven MTM800 Enhanced mobile radios
- Re-use of MTM800 Enhanced accessories using GCAI connector

ENHANCED END TO END ENCRYPTION OPTIONS

- Integrated hardware for SIM based end to end encryption
- Universal Crypto Module option**

ADVANCED TERMINAL MANAGEMENT

- USB 2.0 interface for fast radio programming via Motorola's integrated Terminal Management solution

FLEXIBLE INSTALLATION OPTIONS

- Fully DIN-A compatible and available in Dash, Desk, Remote Head and Motorcycle mount formats
- Supports multiple control heads - an ideal solution for installations in trains, ambulances and fire vehicles where more than one control point might be required

RUGGED DESIGN WITH EXCEPTIONAL RELIABILITY

- Includes IP67 control head option (MTM5200/5400), for exposed and challenging environments
- Front and Rear rugged GCAI connector for reliable connection of audio and data peripheral equipment
- Mobile radio and accessories are performance matched for enhanced reliability
- MTM5500 ethernet style connections enable up to 40m separation to either the new eCH Control Head or the Telephone Style Control Head

*Assuming the appropriate audio accessory is used **Model specific

MTM5000 SERIES SOLUTIONS

The MTM5000 Series brings an ever wider range of installation options to the operator, with multiple control and expansion head options together with the option of multiple control head installation options up to 40m from the radio, with either the new eCH or the TSCH.

PRODUCT SELECTOR

MTM5200	MTM5400	MTM5500
1 CONTROL HEAD		2 CONTROL HEADS
STANDARD POWER	HIGH POWER FOR LOW COVERAGE AREAS	
NOT INCLUDED	GATEWAY REPEATER INCLUDED	
TEDS AND ESSENTIAL FEATURES		
ESSENTIAL	HIGH CAPABILITY	PREMIUM

MTM5200 AND MTM5400

EXPANSION HEAD OPTIONS

EXPANSION HEAD
SINGLE STD CONNECTION

EXPANSION HEAD ENHANCED
STD AND AUXILIARY 25 PIN AND RS232

CONTROL HEAD OPTIONS

STANDARD CONTROL HEAD

REMOTE CONTROL HEAD

IP67 CONTROL HEAD

INSTALLATION OPTIONS

DASH MOUNT -
CAR, TRUCK

REMOTE HEAD MOUNT -
CAR, AMBULANCE, FIRE TRUCK

UP TO 10m

DESK MOUNT -
CONTROL CENTRE

IP67 MOUNT -
BOAT, MOTORCYCLE

UP TO 10m

USER SUPPLIED TERMINAL

DATA ONLY INSTALLATION

MTM5000 SERIES ACCESSORIES

MTM5500

EXPANSION HEAD OPTIONS

FLEXIBLE EXPANSION HEAD
(ETHERNET READY)
2X STD ETHERNET TYPE, ETHERNET SIM READER AND RS232

CONTROL HEAD OPTIONS

FLEXIBLE CONTROL HEAD (eCH)
SUPPORTS EXTERNAL SPEAKERS AND PTT

TSCH (TELEPHONE STYLE CONTROL HEAD)
SUPPORT EXTERNAL SPEAKERS AND PTT

INSTALLATION OPTIONS

MULTIPLE CONTROL HEADS -
AMBULANCE, FIRE TRUCK, INCIDENT CONTROL VEHICLE, METRO TRAIN

USER SUPPLIED TERMINAL

ETHERNET TYPE — DATA ONLY INSTALLATION

AUDIO - VISOR MICROPHONE

AUDIO - MOBILE MICROPHONE

AUDIO - MOBILE MICROPHONE

AUDIO - MOBILE MICROPHONE

AUDIO - MOBILE MICROPHONE

AUDIO - MOBILE MICROPHONE

AUDIO - LOUDSPEAKER

MOUNT - DASH OR FLOOR BRACKET

ANTENNAS

ANTENNAS

ANTENNAS

ANTENNAS

ANTENNAS

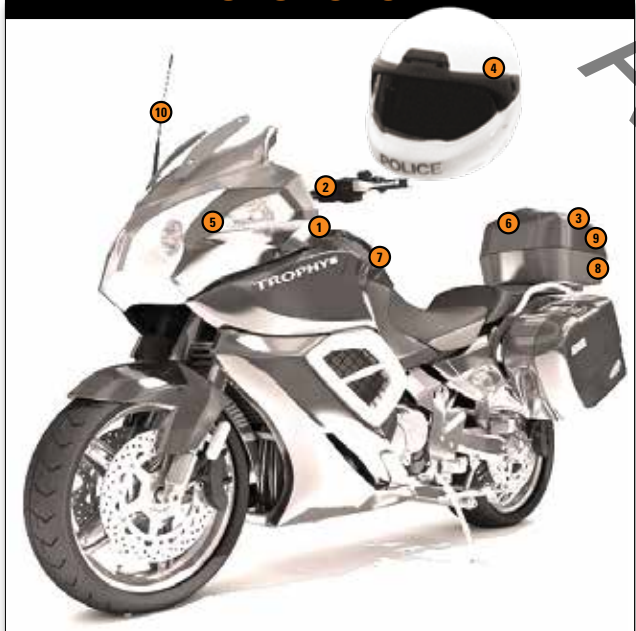
CONTROL STATION

CONTROL STATION POWER SUPPLY

ALARMS, SWITCHES & CABLES

MTM5000 SERIES INSTALLATION OPTIONS

MOTORCYCLE*



1 Remote Mount Fixtures
2 Handlebar Controls (PTT Talk Group)
3 Headset Interface QD (Quick Disconnect)
4 Headset (Helmet)
5 Remote Control Head IP67
6 Loudspeaker (External or Internal)
8 Standard Control Head
9 Alternate Microphone (In rear box)
10 Antenna and/or GPS Combination

*For information on Covert Motorcycle Installations please contact your local Motorola representative

POLICE CAR

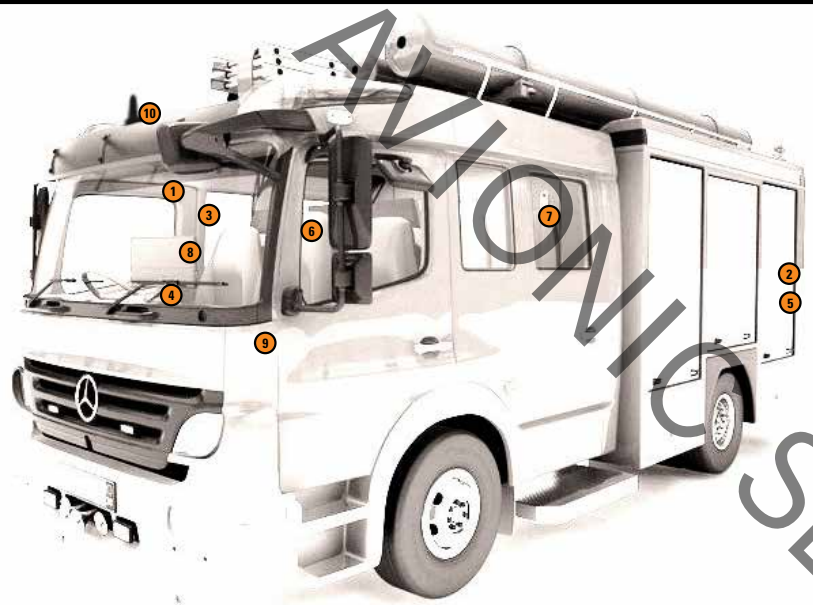
1 Dash or Remote Mount Fixtures
2 Loudspeaker
3 Visor Mic
4 PTT (Dash)
5 ALT Microphone (Fist or Handset)
6 Antenna: Wide Range, Roof Mount, Glass, Low Profile Combi
7 Antenna: Mag Mount

AMBULANCE

1 Dual Control Head Fixtures (Front)
2 Dual Control Head Fixtures (Back)
3 Visor Mic
4 PTT (Front)
5 PTT (Rear)
6 ALT Microphone (Handset) (Dash)
7 ALT Microphone (Handset) (Rear)
8 Loudspeaker (Dash)
9 Loudspeaker (Rear)
10 Antenna Low Profile

These illustrations show how the radio can be installed in four typical vehicles.
In addition there are kits to fit the radio into a wide variety of cars, trucks, trams, control vehicles, control rooms, covert cars and motorcycles, and even boats.

FIRE ENGINE



1 Dual Control Head Fixtures
2 Pump Bay Solution
3 Visor Mic
4 PTT (Dash)
5 PTT (Pump Bay)
6 ALT Microphone (Dash)
7 ALT Microphone (Rear)
8 Fist Microphone
9 Speakers
10 Antenna

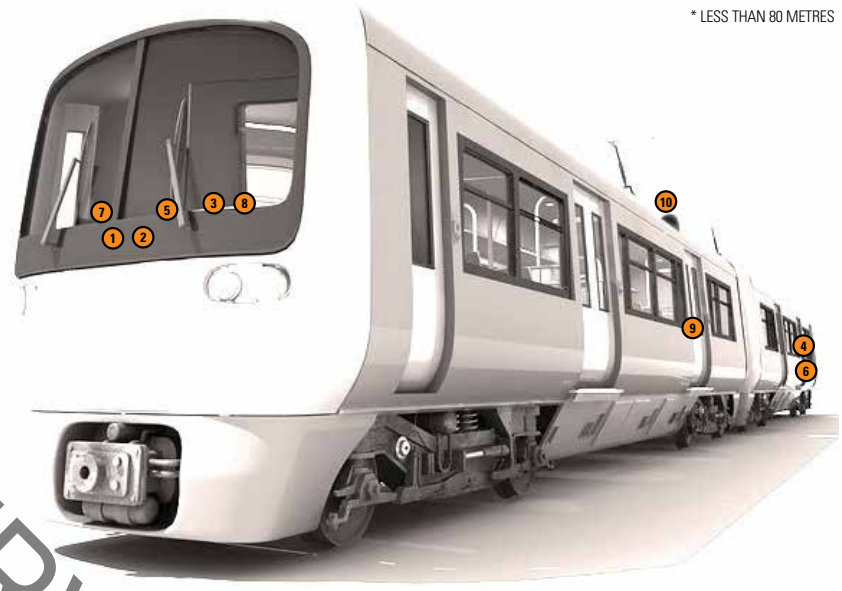
Front & Rear Setup (optional)

FRONT

REAR

SMALL TRAIN / TRAM*

* LESS THAN 80 METRES



1 Dual Control Head
2 Cab Radio
3 Visor Mic (Gooseneck) (Front)
4 Visor Mic (Gooseneck) (Back)
5 PTT (Front)
6 PTT (Rear)
7 Multi Purpose Handset (Multi Function Intercom/Standard Intercom) (Passenger Emergencies)
8 Loudspeaker
9 Radio
10 Antenna (Roof)

MODELS - COMPLIANT WITH DIN 75490 (ISO 7736)

	MTM5200	MTM5400	MTM5500
Dash	Compact radio for fast vehicle installation		N.A.
Desk	Compact radio, for use in the office. Optional range of accessories such as desk tray with integrated loudspeaker		N.A.
Multiple Remote Control Head	N.A.		Radio with multiple remote mount control head capability.
	N.A.		Range of installation options enable use in cars, vans and other vehicles
Motorcycle	Environmentally enhanced radio meeting IP67 specification. Suitable for demanding environments such as motorcycle, fire appliance and marine installations		N.A.
Expansion head "Databox"	Radio without a control head, for data applications, or customised application development		

GENERAL

	Dimensions HxWxD (mm)	Weight Typical (g)	Dimensions HxWxD (mm)	Weight Typical (g)	Dimensions HxWxD (mm)	Weight Typical (g)
Dash and Desk models (transceiver + control head)	60x188x198	1300	60x188x198	1300	N.A.	
Transceiver only	45x170x169	1070	45x170x169	1070	45x170x169	1070
Standard control head	60x188x31	230	60x188x31	230	N.A.	
Remote control head	60x188x39	300	60x188x39	300	60x188x39	300
Motorcycle control head	60x188x39	320	60x188x39	320	N.A.	

USER INTERFACE & DISPLAY

Display	Diagonal dimension	2.8"	
	Type	VGA - 640x480 pixels Transflective TFT, 65,000 colours	
	Backlight	Variable backlight, User configurable	
	Font sizes	Standard & Zoom mode (90 pixels, 4.5mm high) characters	
TSCH		N.A.	Available as option*
Buttons & Keypad	Numeric	Integral backlit numeric keypad of 12 keys, with keypad lock option	
	International keypad versions	Roman, Arabic, Cyrillic, Korean, Chinese, Taiwanese characters	
	Programmable function keys	3 programmable function keys (plus 10 programmable numeric keys)	
	Navigation	4-way navigation key, menu and soft keys	
	Emergency	Emergency button with backlight	
	Shortcuts	User configurable shortcuts to menus and common features using "One-Touch-Button" feature	
Rotary	Dual Function	Talkgroup and volume change with lock option	
Indication	LED	Tri-colour LED	
	Tones	Configurable notification tones	
User Interface Languages	Standard Options	Arabic, Chinese Simplified, Chinese Traditional, Croatian, Danish, Dutch, English, French, German, Greek, Hebrew, Hungarian, Italian, Korean, Lithuanian, Macedonian, Mongolian, Norwegian, Portuguese, Russian, Spanish, Swedish	
	User defined	User programmable, using ISO 8859-1 character	
Menu		Tailored to user needs	
		Menu Shortcuts	
		Menu Configuration	
Contacts Management		Cellular Type	
Contact List		Up to 1000 contacts	
		Up to 6 numbers per contact, Max 2000 numbers	
Multiple Dialling Methods		User selects how to dial	

USER INTERFACE & DISPLAY

	MTM5200	MTM5400	MTM5500
Fast/Flexible Call Response	Private Call Response to a Group Call via One Touch Button		
Multiple Ring Tones	Configurable with CPS		
Message Manager	Cellular Type		
Text message list	20		
Intelligent Keypad Text Input	All Control Heads		
Status list	100		
Country/Network Code List	100		
Scan lists	40 lists of 20 groups		
Discrete Mode	All Control Heads		
Screen Saver	gif image & text (any user's selection)		
Universal Time Display	All Control Heads		
Keypad Lock	All Control Heads		
Talkgroup Folders	Dual layer folder structure (folder/subfolder)		
	256 folders		
Favourite Folders	Up to 3 (to store any favourite talkgroup)		

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature (°C)		-30 to +60	
Storage Temperature (°C)		-40 to +85	
Not in use - Storage	ETSI 300 019-1-1 CLASS 1.3	Non-Weather Protected Storage Locations	
Not in use - Transportation	ETSI 300 019-1-2 CLASS 2.3	Public Transportation	
Stationary use - Weather Protected Locations	ETSI 300 019-1-3 CLASS 3.2	Partly Temperature Controlled Locations	
Mobile use - Ground Vehicle Installation	ETSI 300 019-1-5 CLASS 5.2	Climatic Tests	
Mobile use - Ground Vehicle Installation	ETSI 300 019-1-5 CLASS 5M3	Mechanical Tests	
Rail Certification Environmental	EN50155:2007 and IEC60571 ED. 3.0	Environmental	
MIL STD	810 C/D/E/F Specifications	All 11 categories met (or exceeded)	
Dust and Water Ingress Protection	IP54 (dust cat. 2)	Dash/Desk/Remote models	
	IP67	Motorcycle model (only control head is IP67; transceiver is IP54)	MTM5500 TSCH IP55

ELECTRICAL SPECIFICATIONS

Voltage Range		10.8 to 15.6 V DC	
Current Consumption (A, typ.)	Idle / Rx / Tx @ 10W	N.A.	0.5 / 1.0 / 1.2 (TX 3.4A Peak)
	Idle / Rx / Tx @ 3W	0.5 / 1.0 / .9 (TX 2.2A Peak)	
	Tx - Multi Slot PD (4 slots) @ 5.6W	N.A. (3W only)	2.7
	Tx - TEDS @ 3W	2.3	
	Using USB host	Adds 0.5A	

RF SPECIFICATIONS

		MTM5200	MTM5400	MTM5500
Frequency Bands (MHz)		350 - 390, 380 - 430, 410 - 470, 806 - 870		380 - 430, 410 - 470, 806 - 870
Transmitter RF Power	TETRA Release 1	N.A. (3W only)	10W, Class 2 Note: MSPD	
	TETRA Release 2 (TEDS)	3W, Class 3		
RF Power Control	6 Power Step Levels (steps of 5 dBm)	Starting at 15 dBm; finishing at 40 dBm		
Receiver Class		A & B		
Receiver Static Sensitivity (dBm)		-114 minimum, -116 typical (ETSI 300-392-2)		
Receiver Dynamic Sensitivity (dBm)		-105 minimum, -107 typical (ETSI 300-392-2)		

* Please refer to the separate specification sheet ** For availability of other language keypads please contact your local MSI representative

GPS SPECIFICATIONS

Simultaneous Satellites	12
Mode of Operation	Autonomous or assisted (A-GPS)
GPS Antenna	Supports active antenna (5V, 25mA supply)
Autonomous Acquisition Sensitivity	-143 dBm / -173 dBW
Tracking Sensitivity	-159 dBm / -189 dBW
Accuracy	<5m (50% probable) <10m (95% probable)
TTFF (HOT Start - Autonomous)	<1s
TTFF (WARM Start - Autonomous)	<11s
TTFF (COLD Start - Autonomous)	<36s
Location Protocols	ETSI Location Information Protocol (LIP) Motorola LRRP

VOICE SERVICES

Talkgroups		2048 (TMO) & 1024 (DMO)
Phone book entries		1000 persons. Up to 6 numbers per entry (mobile, office etc). Max 2000 entries
Scan lists		40 lists of 20 talkgroups
Trunked Mode (TMO) Services	Group call	Late Entry, TMO/DMO Mapping
	Private call	Half / Full Duplex
	Telephony (PABX, PSTN, MS-ISDN)	Full Duplex
	DGNA	Up to 2047 groups
	Scanning	Attachment signalling, supports SWMI initiated attachment/detachment
Direct Mode (DMO) Services		Group call
		Private call
Emergency (tailored by users)	Tactical	Emergency Group Call to ATTACHED talkgroup
	Non-Tactical	Emergency Group Call to DEDICATED talkgroup
	Individual	Emergency Call to PREDEFINED party (half/full duplex)
	Smart emergency	TMO/DMO/DMO to TMO automatic switching options
	Hot Mic	Configurable timers for automatic open mic (talk without PTT)
	Location	Location (GPS) sent with emergency
	Target Address	Sent to individual or group address (selected or dedicated)
	Alarm (status message)	Emergency Status (or other pre-defined status)

DATA SERVICES

Status	Alias messages	400 Entries
	Options	Can be sent via One-Touch or via menu
Short Data Service (SDS)	Inbox	200 Entries (short messages), 40 Entries (long messages of up to 1000 characters)
		Cellular style iTAP predictive text entry
	Target Address	Sent to individual or group address (selected or dedicated)
	Voice Call Interaction	SDS messages can be sent and received during a voice call
Packet Data (PD)	Multi-slot PD	Data transmission with up to 4 slots supporting up to 28.8 kbit/s gross
	TETRA Enhanced Data Service (TEDS) (via software upgrade)	Supporting 25kHz and 50kHz channel bandwidths and enabling practical data rates of up to 80kbit/s
TEDS (capable)		QAM Channels: 25 kHz and 50 kHz (but not D8PSK channels)
		QAM modulation/coding modes: 4-QAM R1/2, 16-QAM R1/2, 64-QAM R1/2, and 64-QAM R2/3
WAP	Integrated WAP browser (including WAP-PUSH)	Integrated Openwave browser
		WAP 1.2.x and WAP 2.0 compatibility for UDP/IP Stack
Peripheral Equipment Interface (PEI)	Interface Protocol	AT Commands - Full Set ETSI Mandatory Compliant
		AT Multiplexer - 4 Virtual Physical Port (simultaneous PD, SDS, AT commands and Air Tracer SESSIONS)
		TNP1; enables simultaneous PD and SDS sessions
Terminal Management		Programmable via Motorola Integrated Terminal Management (iTM) solution
	Over-The-Air Programming (OTAP) Mode* Capable	Background Mode Programming (BMP) capable* - while radio is operational (providing TETRA services) it is being programmed/configured. * Planned features with software upgrade

GATEWAY SERVICES

	MTM5200	MTM5400	MTM5500
DMO/TMO Gateway	N.A.	Group voice calls from DMO to TMO	
	N.A.	Group voice calls from TMO to DMO	
	N.A.	Emergency group call from DMO to TMO	
	N.A.	Emergency group call from TMO to DMO	
	N.A.	Transmission of Gateway Presence Signal	
	N.A.	Automatic detection and management of co-located Gateways	
	N.A.	Call Pre-emption (in either direction)	
	N.A.	SDS messaging from DMO to TMO (including GPS) or from TMO to DMO*	
	N.A.	Configurable routing of SDS messages to console or PEI*	
	N.A.	Intelligent handling of point to point calls and SDS messages whilst operating as a Gateway*	

REPEATER SERVICES

DMO Repeater	N.A.	Repeats DMO voice calls on selected talkgroup
	N.A.	Repeats SDS and Status messaging on selected talkgroup*
	N.A.	ETSI type 1A DMO Repeater for channel efficient operation
	N.A.	Transmission of Repeater Presence Signal
	N.A.	Priority Call
	N.A.	Emergency Call (Pre-emptive Priority Call)
	N.A.	E2EE Encrypted DMO traffic
	N.A.	Monitoring of and participation in calls whilst in Repeater mode
	N.A.	Configurable Repeater Power Levels

INTERFACES

RS232		For PEI (Four Virtual Ports via AT Multiplexer enable PC applications to run simultaneously Packet Data, AT Commands, SDS, SCOUT)
USB		USB 2.0 support for PEI (Two Virtual Ports via standard Windows drivers enable PC applications to run simultaneously Packet Data and AT Commands)
		USB 2.0 support for PEI (Four Virtual Ports via AT Multiplexer enable PC applications to run simultaneously Packet Data, AT Commands, SDS, SCOUT); rapid programming
		USB On-The-Go (host & slave) capability for intelligent PEI applications
		USB 1.1 support (Host Mode) to manage USB Slave Devices (e.g. SIM CARD READER)
Rugged Accessory Connector (GCAI)		GCAI - Motorola accessory and ancillary interface for connection of accessories, data terminals and programming
General Purpose Input/Output	Digital I/O	7 (4 on remote and motorcycle control head, 3 on transceiver)
	Analog input	4 (1 on remote and motorcycle control head, with 4 levels)

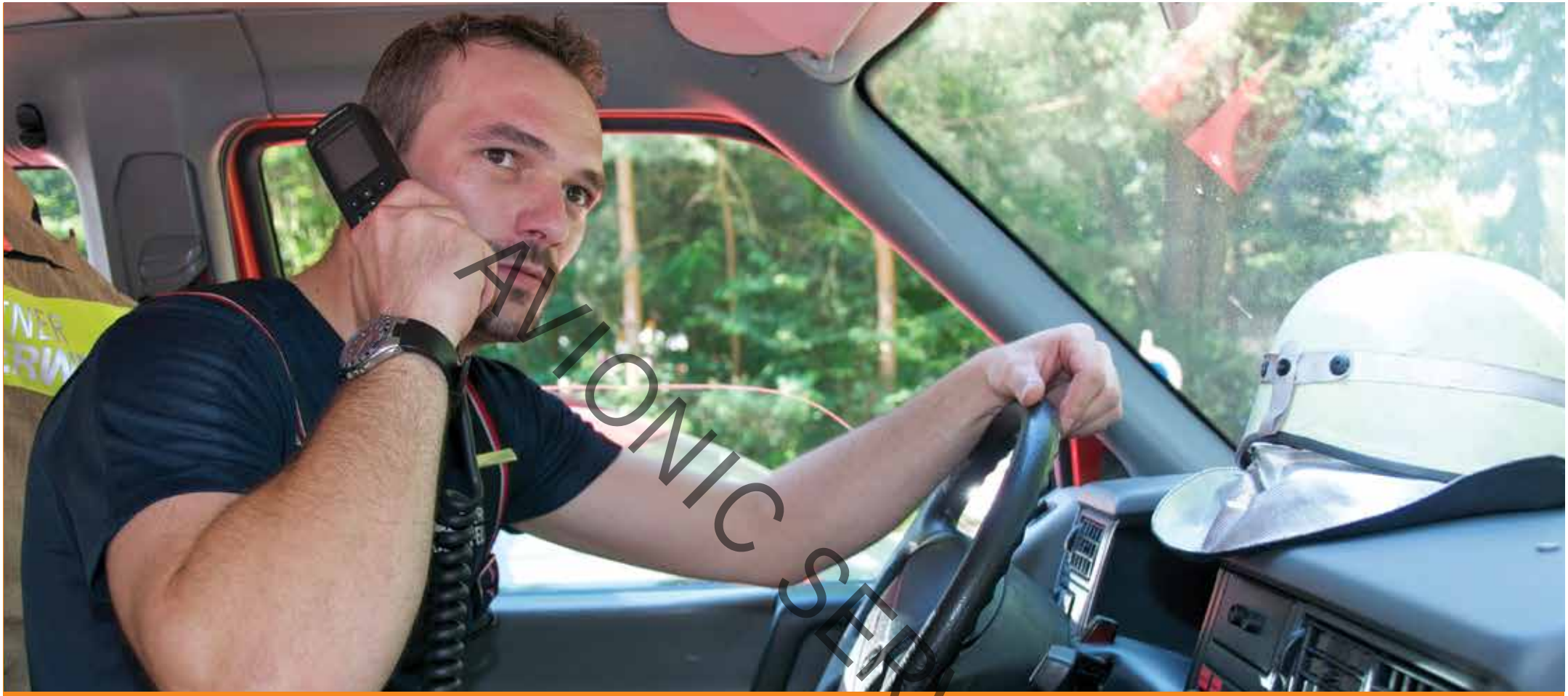
SECURITY FEATURES

Air Interface Encryption	Algorithms	TEA1, TEA2, TEA3
	Security Classes	Class 1 (Clear), Class 2 (SCK), Class 3G
	Authentication	Infrastructure initiated and made mutual by terminal
Provisioning		Secure provisioning tool via Key Variable Loader (KVL)
User Access Control		PIN/PUK code access
	Service Profile Selection for Radio User Assignment / Radio User Identity (RUA/RUI) Operation	Based on login credentials, a radio user can be limited to only those radio capabilities defined in pre-installed service profiles, selected by the infrastructure
Data		Packet Data user authentication
End to End Encryption (EtEE)	Voice E2EE	Enhanced End to End Encryption with OTAR supported through Universal Crypto Module (UCM) and SIM (via integrated card slot) and or Cryptr 2 Broadband IP unit.
	Packet Data E2EE	
	Short Data (SDS) E2EE	

REGULATORY COMPLIANCE

Radio (R&TTE Article 3.2)	EN 303 035-1
	EN 303 035-2
	ETSI EN 300-394-1
	ETSI EN 300-392-2
EMC (R&TTE Article 3.1.b)	EN 301 489-1 V1.3.1
	EN 301 489-18 V1.3.1
Electrical Safety (R&TTE Article 3.1.a)	EN 60950-1 (2001)
	EN50360:2001 EME
Environmental	Directive 2002/96/EC WEEE
	EN50155:2007 (IEC 60571 ED. 3.0)
Automotive	E-mark, Automotive EMC Directive 95/54/EC
Rail Certification EMC	EN50121-3-2:2006 (IEC 62236-3-2 Ed.2.0)

* Future software release



For more information on the MTM5000 Series radios, please visit us on the web at:
www.motorolasolutions.com/MTM5000

MTM5000_SERIES_BROCHURE_(10/14)

MOTOROLA