MTP3000 SERIES
TETRA RADIOS

SAFE. TOUGH. EASY TO USE.

MOTOROLA SOLUTIONS

MTP3000 SERIES
KEY FEATURES

IP65, IP66 & IP67

WIDEBAND, 350-470 MHZ
& 800 MHZ

GPS & BEIDOU OR GLONASS

END-TO-END ENCRYPTION

MAN DOWN

VIBRATE ALERT

MTP3000 SERIES

DESIGNED TO WORK IN THE TOUGHEST, MOST DEMANDING ENVIRONMENTS, DAY IN, DAY OUT.

The MTP3000 Series radios are the result of more than 15 years of focus in TETRA on increasing user safety, enhancing efficiency and improving communications. The radios are packed with features that are essential for safe and effective operations, as well as loud and clear audio and a rugged design.

The MTP3500 features a simple keypad, while the MTP3550 has a full keypad.

Both the MTP3500 and MTP3550 are fully featured radios for public safety and mission-critical users, with a man down sensor, vibrate alert and End-to-End Encryption (E2EE).

And for those requiring a feature rich radio they both have secure Bluetooth™ and Global Navigation Satellite System (GNSS) capability, including GPS and BeiDou or Glonass.

They also have IP65, IP66 and IP67 for dust and water ingress protection, wideband support for 350-470 MHz and 800 MHz, as well as a RFID hardware option.

SAFE

CLEAR AUDIO AND LONG RANGE

The MTP3000 Series is optimised for excellent audio performance in all types of noisy and demanding situations. Audio through both the speaker and accessories is clear even at full volume, and the user can be heard above loud background noise.

High receiver sensitivity and high transmit power gives the MTP3000 Series the capability to maintain communications in the most demanding situations at long range, in built up areas and in buildings.

Hardware enabled End-to-End Encryption (E2EE) is the most secure method for preventing the interception of critical voice or data communications.

The sensor detects whether a radio has been static for a pre-set time or has tilted beyond a pre-set angle. Man down is of particular value for the protection of fire officers in front-line operations, but also for lone security personnel or industrial workers operating in hazardous environments.

TOUGH

DURABLE CONNECTORS AND RUGGED DESIGN

The MTP3000 Series is fitted with two rugged connectors that provide corrosion resistance, conductivity and low insertion resistance. The side connector has excellent pull strength. The bottom connector is protected inside the radio. It has a self-cleaning mechanism to resist dust and dirt, but if required – it is also easy to clean.

With IP65, IP66 and IP67 the MTP3000 series radios can withstand immersion in a metre of water for 30 minutes, or a high pressure water jet from a fire hose. A range of tough and effective audio and energy accessories are also available.

EASY TO USE

INTUITIVE HARDWARE AND SOFTWARE FEATURES

The two knob interface will suit users migrating from an analogue radio. Users can navigate quickly through the simple interface on the wide transflective screen that is easy to see in both low light and direct sunlight.

Vibrate alert for incoming calls and messages will allow officers or workers to stay covert or be discreet when silence matter.

Easily identify different radios for different users, groups, coverage areas or tasks with optional colour identification bands around the antenna.

Optional colour identification bands for groups with different tasks, coverage areas or shifts

MTP3550

High Performance Global
Positioning Antenna

Standard   RFID

Hardware Option
for Security or
Inventory Control

Slim Side
Connector for
Audio Accessories

End-to-End
Encryption

Top
Microphone

Intuitive Easy
Simple Use
Interface with
Easy Text

Programmable
Buttons

Tactile
Keypad

Loud and
Clear Audio

Man Down
Sensor

Vibrate Alert for
Incoming Calls

Full Keypad

Bottom
Microphone

Easy to Use Separated Volume
and Talkgroup Knobs

IP65/66/67 Dust and Water
Ingress Protection

Emergency Alert Button

Durable Bottom Connector

MTP3500
Simple Keypad ▶

MTP3550
Full Keypad ▶

GENERAL SPECIFICATIONS

Dimensions	Height: 124mm Width: 53mm Depth: 33.5mm (with 1950mAh battery) 36.7mm (with 2200mAh & IMPRES2 3400mAh battery)
Weight	280g (with 1950mAh battery) 295g (with 2200mAh battery)
Battery Options	1950mAh standard battery 2200mAh standard battery 3400mAh IMPRES2 battery

AUDIO

Audio Output Power at Max Volume	2W

TETRA SERVICES

RF

Frequency Bands	350-470 MHz, 800 MHz
Transmitter RF Power	Class 3 (1.8W) Class 4 (1W)
Adaptive Power Control	Per EN 300 392-2
Receiver Class	A and B
Receiver Static Sensitivity	350-470 MHz: -116dBm (min); -118dBm (typical) 800 MHz: -114dBm (min); -116dBm (typical)
Receiver Dynamic Sensitivity	350-470 MHz -107dBm (min); -109dBm (typical) 800 MHz: -105dBm (min); -107dBm (typical)

DATA

Short Data	STATUS messaging in TMO and DMO
	SDS messaging in TMO and DMO Supports concatenated SDS (1000 characters)
	Short data applications
	Callout (simple, full, E2EE)
	Access to SDS during an emergency call
Packet Data	Supports TNP1 - simultaneous operation of Packet Data and Short Data Services over a common Peripheral Equipment Interface (PEI)
AT Commands	Full set of ETSI and enhanced AT commands

VOICE

Full Duplex Call	TMO: Private, PABX, PSTN, emergency
Half Duplex call	TMO: Private, group, emergency
	DMO: Private, group, emergency
Emergency Call Management (user customisable)	Tactical: Emergency group call to ATTACHED talkgroup
	Non-Tactical: Emergency group call to DEDICATED talkgroup
	Individual: Emergency call to PRE-DEFINED party (half/full duplex)
	Hot Mic: Allows user to talk without needing to press PTT button
	Smart TMO/DMO selection for Emergency Call set up to ensure call gets through
	Emergency Status message sent to dispatch console
Other Voice Functions	Inter-MNI
	Gateway
	Repeater
	PTT double push
	Pre-emptive priority calls

DMO REPEATER

DMO repeater mode features and functions	ETSI type 1A DMO Repeater for channel efficient operation
	Repeats DMO voice and tone signalling on selected talkgroup
	Repeats SDS and Status messaging on selected talkgroup
	Transmission of Repeater Presence Signal
	Emergency Call (Pre-emptive Priority Call)
	Monitoring of and participation in calls whilst in Repeater mode

SECURITY

Authentication	Infrastructure initiated and made mutual by radio terminal
Air Interface Encryption - Algorithms	TEA1, TEA2, TEA3
End-to-End Encryption	Enhanced End-to-End Encryption with OTAK supported through AES128 or AES256
Other Security Features	Temporary disable (stun)
	Permanent disable (ETSI standard or V2-Customer Restore)

CONNECTIVITY

BLUETOOTH

Bluetooth Versions Supported	Bluetooth 2.1 + EDR, Bluetooth 4.0, Bluetooth Smart (BTLE)
Bluetooth Security	Bluetooth 2.1 Introduces Mandatory Encryption with Secure Simple Pairing (SSP), Easier Pairing and Preventing Sniffing/Hacking
Bluetooth Audio Profiles	Headset Profile (HSP), Fast PTT with Motorola Solutions Accessories
Bluetooth Data Profiles	Serial Port Profile, Dial Up Networking Profile, Discovery Mode, Generic Access Profile, Generic Attributes Profile (GATT), Heart Rate Profile, Battery Service Profile, Devices Info Profile

RFID

Tag Type	866-868 MHz RFID Knob

LOCATION SERVICES

SATELLITE / OUTDOOR NAVIGATION SERVICE

Constellations Supported	GPS, BeiDou/Glonass
Antenna	Integrated Internal Antenna
Simultaneous Satellites	12
GNSS Tracking Sensitivity, dBm	GPS: -160 dBm (guaranteed); -161 dBm (typical)
Accuracy, 3D	<5 (95% probable at -130dBm)
Protocols	ETSI LIP (Short and Long), Motorola LRRP
TTFF Cold Start	<60 sec (typical)
TTFF Hot Start	<10 sec (typical)

INDOOR NAVIGATION SERVICE

BTLE Indoor Location	iBeacon™ / Bluetooth Low Energy Beacon
Protocols	ETSI LIP (extended)

SOFTWARE FEATURES

For a full list of available licensed features please visit:	motorolasolutions.com/tetradevicessoftware

RECOMMENDED SERVICES

Services for TETRA radios	motorolasolutions.com/deviceservices

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature [1]	-30°C to +60°C
Storage Temperature	-40°C to +85°C
Humidity (Condensation & High), Temperature Change, Low and High Temperature	ETSI 300 019-1-7 class 7.3E
Shock (bumps & shock), drop (free fall & drop & topple) and vibration (random & sine)	ETSI 300-019 1-7 class 5M3
Dust and Water Ingress Protection	IP65/66/67

[1] Performance may be degraded at extreme temperatures

USER INTERFACE

Display	1.7" Colour Transflective Display, 132x90 pixel screen with 262K vivid colours
	Backlight, flip screen, large icons and scalable text font options
	Screen saver gif image & text (user defined)
	Universal time display
	Multiple display languages, user selectable
Controls	Keypad and rotary lock
Keypad	User configurable one touch buttons and keys, extensive list of functions
Menu	Customisable to user needs
	Menu Shortcuts
Talkgroup Management	User friendly, flexible, fast and efficient interface
Talkgroups	TMO folders: up to 256, TMO talkgroups: up to 10000 DMO folders: up to 128, DMO talkgroups: up to 2000
Favourite Talkgroup Folders	3
Scan lists	40 lists of up to 20 groups
Contacts Management	Rapid search
Contacts	Up to 1000 contacts with 6 numbers per contact, (maximum 2000 unique numbers)
Dialling Methods	Dialling Direct, Scroll, Speed, One touch button/key
Message Manager	Distinct folders for each message type
Text Message List	Up to 200 entries (short messages) At least 20 entries for outbox (long messages up to 1000 characters) At least 10 entries for inbox (long messages up to 1000 characters)
Status List	400 pre-defined messages assignable to one touch buttons
Other Features	Intelligent keypad text input
	Covert Mode
	Man Down

ACCESSORIES

Batteries (Li Ion 1950 mAh & 2200 mAh and IMPRES Li-ion 3400 mAh)
Battery chargers and vehicle adapters
Various carry options
Audio headsets
Remote speaker microphones
Earpieces
Programming and data cables

Notes:
Some features mentioned are optional, and some require additional software licences.
Feature availability may vary by country.
Please check with your local Motorola Solutions representative for full details.

US MILITARY STANDARD MATRIX [2]

	MIL-STD810C		MIL-STD810D		MIL-STD 810E		MIL-STD 810F		MIL-STD 810G		MIL-STD 810H	
	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.
Low Pressure	500.1	I	500.2	II	500.3	II	500.4	II	500.6	II	500.6	II
High Temperature	501.1	I, II	501.2	I/A1, II/A1	501.3	I/A1, II/A1	501.4	I/Hot, II/Hot	501.6	I/A1, II/A1	501.7	I/A1, II/A1
Low Temperature	502.1	✓	502.2	I, II	502.3	I, II	502.4	I, II	502.6	I, II	502.7	I, II
Temperature Shock	503.1	✓	503.2	A1/C3	503.3	A1/C3	503.4	I	503.6	I-C	503.7	I-C
Solar Radiation	505.1	II	505.2	I/A1	505.3	I/A1	505.4	I/A1	505.6	I/A1	505.7	I/A1
Rain	506.1	I, II	506.2	I, II	506.3	I, II	506.4	I, III	506.6	I, III	506.6	I, III
Humidity	507.1	II	507.2	II	507.3	II	507.4	✓	507.6	II/Aggravated	507.6	II/Aggravated
Salt Fog	509.1	I	509.2	I	509.3	I	509.4	✓	509.6	✓	509.7	✓
Blowing Dust & Sand	510.1	I	510.2	I, II	510.3	I, II	510.4	I, II	510.6	I, II	510.7	I, II
Vibration	514.2	VIII/CatF, XI	514.3	I/Cat10, II/Cat3	514.4	I/Cat10, II/Cat3	514.5	I/Cat24, II/Cat5	514.7	I/Cat24, II/Cat5	514.8	I/Cat24, II/Cat5
Shock	516.2	I, II, V	516.3	I, IV, VI	516.4	I, IV, VI	516.5	I, IV, VI	516.7	I, IV, VI	516.8	I, IV, VI

[2] Where a test method has multiple procedures, the applicable procedures are listed. A tick "✓" indicates that the there is only one procedure.

DEVICE SERVICES

ACHIEVE MISSION CRITICAL PERFORMANCE

RADIO PERFORMANCE IS CRITICAL FOR EFFECTIVE MISSION-CRITICAL OPERATION. YOUR USERS RELY ON THEIR RADIOS TO BE AVAILABLE AND CONNECTED.

You and your users count on the radio to operate at optimal efficiency. To help support the performance of your MTP3000 radio fleet and maximise the value of your investment, we offer a variety of service packages that transfer the risk and responsibility to Motorola Solutions to provide the right level of services[3] for your radio fleet needs.

The service capabilities offered include:

HARDWARE REPAIR
Troubleshooting, testing and repair of your equipment at a centralised facility

ACCIDENTAL DAMAGE
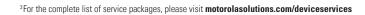When the unexpected happens, we have you covered with a quick repair turnaround

TECHNICAL SUPPORT AND SERVICE DESK
Remote technical support services to ensure that your radios are rapidly restored and functional

SOFTWARE MAINTENANCE
Access to latest certified software releases ensure reliable and secure device operations

You can rely on us to help you achieve your device performance targets and maximise the value of your radio investments with the right level of services designed specifically for your needs. Each package provides a higher level of support, transferring the risk and responsibility to Motorola Solutions.

[3]For the complete list of service packages, please visit **motorolasolutions.com/deviceservices**

MTP3000 SERIES TETRA RADIOS
YOUR LIFELINE
WHEN TIME IS CRITICAL

For more information on the MTP3000 Series TETRA radios, please visit **motorolasolutions.com/MTP3000**

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