

DESIGNED FOR TODAY READY FOR TOMORROW

MTP6650 TETRA PORTABLE RADIO

MOTOROLA SOLUTIONS

DATA SHEET



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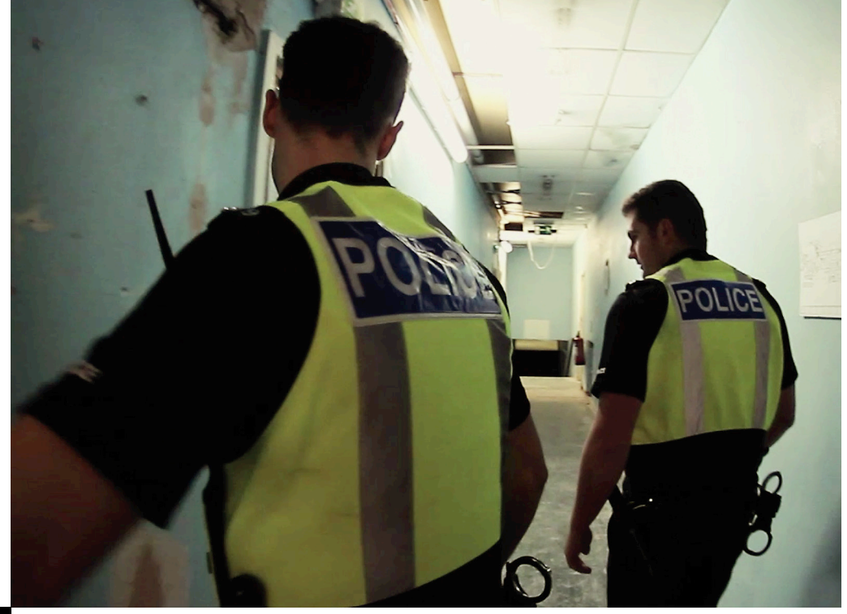

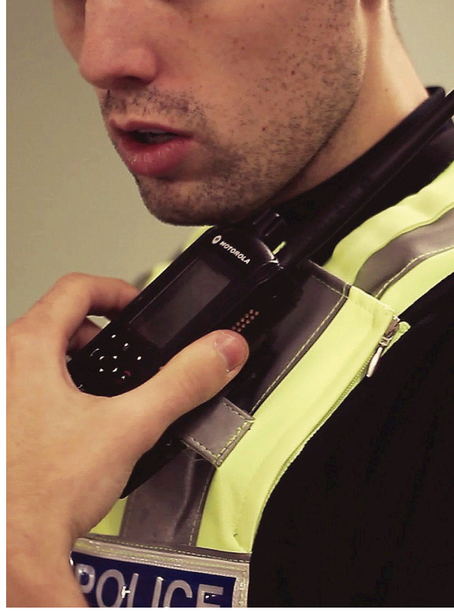

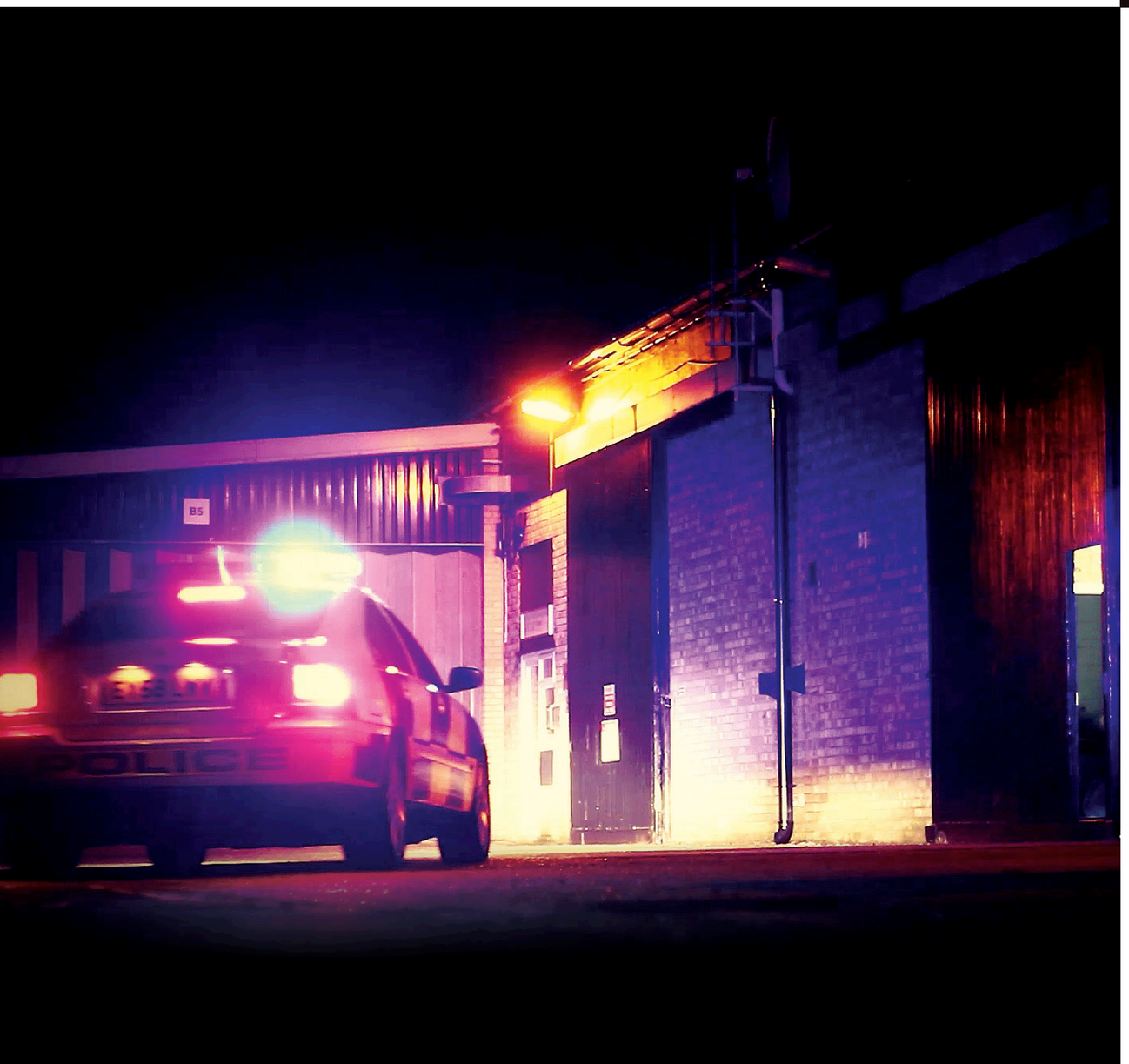

OVERCOMING TODAY'S CHALLENGES WHILE PREPARING FOR TOMORROW'S IS NO EASY TASK. ESPECIALLY WHEN IT COMES TO PUBLIC SAFETY.

The MTP6650 TETRA portable radio is designed to help you do both. With its enhanced coverage, built-in Bluetooth® 4.0 wireless technology, Wi-Fi readiness, expanded location services, and full car kit support, it's an exceptional radio now that will support your team well into the future.

Take coverage, for example. Now you can reach personnel even in marginal areas with Class 3 transmit power. Plus, you have the ability to optimise your coverage based on the type of environment in which your team is working. The new open standard SMA connector gives you the flexibility to use different antennas.

There's also Bluetooth® 4.0 for adding connected devices—such as a PTT button or a heart rate monitor—without adding wires.

And you can easily transform your portable radio into a virtual mobile using the full car kit.

Whether you're guiding teams into an emergency or allocating day-to-day resources based on location, now you can do it more effectively.

The MTP6650 delivers additional Global Navigation Satellite System (GNSS) capabilities to Eastern Europe and Asia, enhancing GPS with GLONASS and BeiDou.

THE MTP6650 TETRA PORTABLE RADIO WILL SUPPORT YOUR TEAM NOW AND WELL INTO THE FUTURE.

Key Features:

- Class 3 transmit power
- Wideband 350-470 MHz
- SMA connector
- Bluetooth® 4.0 wireless technology
- Full car kit support
- GPS, BeiDou and GLONASS
- 2W audio output
- Advanced noise suppression
- microSD card
- Large 2" display
- Simple and intuitive user interface
- Rated IP67 and MIL-STD 810G
- Greater than 16 hours battery life
- Wi-Fi hardware ready





WORK WIRELESSLY.

WITH BLUETOOTH® 4.0 WIRELESS TECHNOLOGY, YOU CAN EQUIP YOUR TEAM WITH THE LATEST WIRELESS SOLUTIONS.

Connect to multiple devices—such as audio, PTT, and sensors—and enjoy the freedom of using the radio without being wired to it.

For example, pair the MTP6650 TETRA portable radio with a wireless PTT button that can be activated without having to reach for the radio. Then, hide the radio in a backpack or underneath clothing for covert operations. Bluetooth® 4.0 also enables partners to develop new collaborative solutions, including biometric sensors that can monitor vital signs. The possibilities are practically endless.



EXTEND YOUR RANGE.

IN AN EMERGENCY, YOU CAN'T AFFORD TO BE LET DOWN BY POOR COVERAGE.

So rely on the enhanced coverage of the MTP6650 TETRA portable radio instead. Send voice and data messages and make emergency calls in marginal areas with the help of Class 3 transmit power. Optimise coverage using the new SMA connector, which gives you the ability to switch antennas based on the environment in which your team is working, or when the radio is worn under a protective vest. And be able to reach your team inside buildings due to its high receive sensitivity.

Wherever it's deployed, the MTP6650 puts you in control. When you need to increase your coverage, choose a high power setting. When you want to preserve battery life, toggle to a lower one.



CREATE A VIRTUAL MOBILE.

TODAY'S SHRINKING BUDGETS REQUIRE SMARTER MOBILE SOLUTIONS.

Turn your MTP6650 TETRA portable radio into a virtual mobile with the simple addition of the MTP6000 Series Car Kit. Then enjoy hands-free operation along with in-car charging and expanded coverage.

The kit uses the car's own battery, so you can charge your portable on the go without slowing down. With the MTP6650 and a car kit, there's no need to buy an expensive mobile radio, or the filters, switches, and extra batteries one requires. Not to mention incurring the additional installation time and cost.







MANAGE EVERYONE, EVERYWHERE.

OPTIMISING RESOURCES AND IMPROVING SAFETY BEGIN WITH KNOWING WHERE EVERYONE IS.

So we designed the MTP6650 TETRA portable radio with the latest GNSS, providing access to global services such as GPS, GLONASS, and BeiDou. With accurate location data for all personnel, you can mobilise teams closest to an incident. Ensure that critical messages get to the right people. And ultimately, shorten emergency response times.

GNSS helps keep personnel safe, too. You know precisely where to send help if people are in trouble, whether they activate their emergency alert manually or it triggers the automatic "man down" sensor.



KEEP INFORMATION AT HAND.

ACCESS DAILY BRIEFINGS, ROUTE MAPS, PICTURES OF SUSPECTS OR MISSING CHILDREN, AND MORE.

The microSD card slot lets you easily expand storage and keep critical information at your fingertips, so it's always there when you need it. Or, use the microSD card slot to boost security, delivering end-to-end encryption for those who require the ultimate in protection.





HEAR AND BE HEARD.

OUT ON PATROL, THE ABILITY TO COMMUNICATE CLEARLY CAN BE THE DIFFERENCE BETWEEN LIFE AND DEATH.

The MTP6650 makes sure you can hear and be heard even when sirens are blaring thanks to 2W audio output and advanced noise suppression technology. With its Slimport speaker, you receive an even distribution of sound all around the radio wherever it's being worn. Listen at full volume using the speaker or audio accessories, and experience the clarity you depend on. At the same time, an intelligent microphone eliminates the need for audio profiles and provides wide dynamic range, making sure your message gets across in the most demanding environments.



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Motorola GCAI rugged side connector for audio accessories.

Robust keypad with enhanced tactility

Rugged bottom connector with self-cleaning design and corrosion resistance. Offers USB support

Robust battery latch

Man-Down feature activates emergency alerting based on motion detection and incline angle threshold settings



Emergency alert button

Status indicator

Programmable key

PTT with enhanced tactility

Programmable key

High performance audio based on Motorola Slimport technology

Rugged product design with IP67 submersibility

Automatic keypad backlit

Bottom microphone



External antenna connector

Integrated Bluetooth® 4.0 technology

Grip texture

microSD card media storage



Antenna ring accessory for colour-coded labelling

Programmable multi-function rotary knob supporting volume setting, talkgroup selection

Top microphone

Large 2" QVGA display with 262,000 colours with fast response user interface



MTP6650 ACCESSORIES

CHOOSE FROM A VARIETY OF MOTOROLA ORIGINAL™ ACCESSORIES DESIGNED, TESTED AND CERTIFIED TO OPTIMISE THE PERFORMANCE OF YOUR MTP6650.

MTP6000 SERIES CAR KIT

Transform the MTP6650 portable radio into a virtual mobile radio with a wide range of mobile accessories, including a variety of microphones, speakers, remote PTT options, telephone style handset, alarm relay and emergency footswitch.



INTEGRATED BLUETOOTH®

The MTP6650 has Bluetooth 4.0, which enables connectivity to a variety of wireless accessories. Our exclusive Operations Critical Wireless accessories handle loud environments, and an optional wireless PTT seamlessly links to any accessory. Just put the PTT in a pocket or on a lapel and connect instantly.



IMPRES™ AUDIO ACCESSORIES

Connect an IMPRES audio accessory, and the MTP6650 identifies it automatically. Whether it's a Remote Speaker Microphone or a Surveillance Kit, your radio assigns the correct profile to optimise audio performance. The IMPRES large speaker microphone matches the high-powered speaker on your radio so you can hear clearly even in high noise environments. What's more, whether you speak loudly or quietly, directly into or away from the microphone, with IMPRES, the volume adjusts automatically, providing clear audio in all environments.







MTP6650 SPECIFICATIONS

GENERAL	
Audio Output	2W
Keypad	Automatic keypad backlight
	4 direction navigation key
	3 selection keys
	4 x 3 keypad
One Touch Buttons	Single button activation for multiple functions
Controls	Large PTT button with enhanced tactility
	Emergency Button
	Programmable multi-function rotary switch
	2 programmable side keys
Battery Options	Battery Duty Cycle: Class 4 Class 3L Class 3 1650mAH 5/5/90 >16hr >15hr >14hr 1650mAH 5/35/60 >12hr >11hr >10.5hr 2150mAH 5/5/90 >21hr >20hr >18.5hr 2150mAH 5/35/60 >16hr >15hr >14hr
	IMPRES (3400)mAH*
Additional Storage	Micro SD card (up to 32GB additional capacity)**

SIZE & WEIGHT	
Height	132mm
Width	59mm
Depth	34mm (with STD Battery)
Weight with STD Battery	292g (with 80mm stubby antenna)

RF SPECIFICATIONS	
Frequency Bands	350-470 MHz
Transmitter RF Power	Class 3, 3L & Class 4
Adaptive Power Control	Per EN 300 392-2
Receiver Class	A and B
Receiver Static Sensitivity	-116dBm (min); -118dBm (typical)
Receiver Dynamic Sensitivity	-107 dBm (min); -109 dBm (typical)

DMO REPEATER SERVICES
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

LOCATION SERVICES	
GPS Tracking Sensitivity	-159 dBm (guaranteed)
	-160 dBm (typical)
GPS Accuracy	<5m (probable at -130dBm)
Protocols	ETSI LIP, Motorola LRRP

GNSS SPECIFICATIONS	
Constellation Support	GPS, GLONASS, BeiDou
Tracking Sensitivity	-130dBm (Typical)
Horizontal Accuracy	< 5 m (Typical)
TTFF Cold Start	< 60 sec (Typical)
TTFF Hot Start	< 10 sec (Typical)

LICENSED OPTIONS	
Software upgrade optional features	TETRA Enhanced Data Service (TEDS)
	Multi-Slot Packet Data (MSPD)
	WAP Browser
	WAP Push Service
	Bluetooth 4.0 & 2.1 Support No v
	GNSS (GPS, BeiDou, GLOSNASS)
	Wi-Fi*
	Call Out
	Enhanced Security: OTAR/DMO SCK
	Air interface encryption
	End to End Encryption Options
	Permanent disable
	Temporary disable
	RUA/RUI
	Man-Down feature
	Class 3 or 3L transmit power
	DMO Repeater

SECURITY SERVICES	
Authentication	Infrastructure initiated and made mutual by radio terminal
Air Interface Encryption - Algorithms	TEA1, TEA2, TEA3
Protocols - Security Classes	Class 1 (Clear), Class 2 (SCK), Class 3 (GCK)
End to End Encryption	Enhanced End to End Encryption with OTAK supported through AES128 or AES256 CRYPTR microSD

MTP6650 SPECIFICATIONS

DATA SERVICES	
Short Data	STATUS messaging in TMO & DMO
	SDS messaging in TMO & DMO
	Short Data applications
TNP1	Simultaneous operation of Packet Data and Short Data Services over a common Peripheral Equipment Interface (PEI)
AT Commands	Full Set of AT Commands (including Voice Control)
Radio Fleet Management	Compatible with Motorola Integrated Terminal Management (iTM) solution

USER INTERFACE	
Display	Large 2" QVGA with 262K vivid colours
	Backlight I Flip screen, large icons and scalable text font options
	Screen saver gif image & text (user defined)
	Universal time display
Multiple languages	
Keypad lock	Keypad and rotary lock
Talkgroup Management	User friendly, flexible, efficient, fast and efficient interface
Favourite Folders	Up to 3 (to store any favourite talkgroup)
Menu	Customisable to user needs
	Menu shortcuts
	Menu configuration
Contacts management	Cellular feature phone style (rapid search)
Multiple dialling methods	User selects how to dial
Fast, flexible call response	Private call response to a group call via One Touch Button
Vibrate Alert and multiple ring tones	
Message manager	Cellular feature phone style (flexible)
Text message list	20
Intelligent keypad text input	
Status list	400 alias messages
Country/Network Code List	100
Scan lists	40 lists of 20 groups
Covert Mode	

MAIN VOICE SERVICES	
Full Duplex	TMO: Private, PABX, PSTN, Emergency
Half Duplex	TMO: Private, Group, Emergency
Talkgroup Management - DMO	Private, Group, Emergency
	Inter-MNI, Gateway, Repeater
Dialling	Direct, Scroll, Speed, One touch button/key, Alpha Search, Call History Redial
Emergency call (user customised)	Tactical: Emergency Group Call to ATTACHED talkgroup
	Non-Tactical: Emergency Group Call to DEDICATED talkgroup
	Individual: Emergency Call to PREDEFINED party (half/full duplex)
	HOT MIC: Allows user to talk without needing to press PTT (user enabled)
Status Message	DMO to TMO: Sent to dispatch console (user enabled)
Preemptive Priority Calls	Enter DMO emergency (with/without gateway) or enter TMO emergency
PTT Double Push	

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature °C	-30 to +60
Storage Temperature °C	-40 to +85
Humidity	ETSI 300 019-1-7 class 7.3E
Dust and Water Ingress Protection	IP67, IP66, IP65 per IEC 60529
Shock, drop and vibration	ETSI 300-019 1-7 class 5M3

RECOMMENDED SERVICES
Service from the Start with Comprehensive Coverage***

ACCESSORIES
SMA Antennas (short stubby, long stubby, whip)
Coloured rubber antenna ring labels
Batteries (Li Ion 1650 mAh & 2150 mAh and IMPRES Li-ion 3400 mAH*)
Battery chargers and vehicle adapters
Various carry options
Audio headsets
Remote speaker microphones
Earpieces
Full Car Kit
USB programming and data cables

* Availability subject to future software release. ** Micro SD card slot is either Extended applications or End to End Encryption. *** Availability may vary by country. Please check with your local Motorola representative for full details.



For more information, please visit: MotorolaSolutions.com/MTP6650

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