MOTOROLA

MTM800 Enhanced

TETRA Mobile radio

Key Benefits Include

High resolution VGA colour display
- Wide viewing angle and readable in most light conditions
- Ideal for displaying high resolution pictures (maps, photos and other images)

Data application
- Multi-slot packet data provides real-time access to databases

Accessory portfolio
- Best in class audio, rugged connector

Comprhensive, flexible installation options
- Address the challenging environment for installation in modern vehicles
- Fully DIN-A compatible available in Dash, Desk, Remote Head or Motorcycle model to fit almost any requirement

Common user interface
- With portable terminals (MTH800 / MTP850), simplifying user training

Access to mobile applications
- Remote access to user databases through optional integrated WAP* browser and Multi Slot Packet Data

New accessory interface
- Enabling enhanced audio and data connectivity such as USB

Seamless access to voice and data – when and where it's needed

Motorola's Enhanced MTM800 is the latest MOTOROLA TETRA mobile designed for use by professional organisations where it is essential for mobile radios to be rugged, flexible and provide high quality voice communications and fast access to mobile applications. By delivering fully integrated voice and data services it ensures users have access to up to date intelligence, enabling them to make truly informed decisions.

Specifications

MODELS (380-430MHZ)*1		
Dash	M80**P**CS6TZ5AN	Compact radio, for vehicle installation. Compatible for installation in DIN slot
Desk	M80**P**CS6TZ4AN	Compact radio, for use in the office. Optional range of accessories such as desk tray with integrated loudspeaker
Remote	M80**P**CS6TZ6AN	Radio with remote mount control head capability. Range of installation options enable use in cars, vans and other vehicles.
Motorcycle	M80**P**CS6TZ2AN	Environmentally enhanced radio meeting IP67 specification. Suitable for demanding environments such as motorcycle, fire appliance and marine installations.
Expansion head "Databox"	M80**P**CC6TZ5AN	Radio without a control head, for data applications, or 3rd party development

*1 The fourth character of the model number describes the frequency band of the model. Current frequency designators are :
N : 350 - 390 MHz P : 380 - 430 MHz R : 410 - 470 MHz U : 806 - 870 MHz

Product Specifications

PHYSICAL		
Dimensions (H x W x D) mm	60x185x175 60x185x31 49x170x155 60x185x39 60x185x39	Dash and Desk models (radio + control head) Standard control head only Radio chassis only Remote control head Motorcycle control head
Weight (typ) kg	1.5	Dash model, radio & control head

USER INTERFACE & DISPLAY		
Display	Diagonal dimension Type Backlight Options Font size	2,8" VGA - 640 x 480 pixels Transflective TFT , 65K colours variable backlight, user configurable Wallpaper and Privacy screen saver Standard & Zoom mode (90 pixels, 4.5mm high) characters
Buttons & Keypad	Numeric International keypad versions Function keys Navigation Emergency Shortcuts	Integral backlit numeric keypad of 12 keys, with keypad lock option Roman, Arabic, Cyrillic, Chinese, Korean, Bopomofo characters 3 programmable function keys 4 way navigation key, menu and soft keys Emergency button with backlight User configurable shortcuts to menus and common features using "One-Touch" feature
Rotary	Dual function	Talkgroup and volume change with lock option
Indication	LED Tones	3 colours LED Configurable notification tones
User Interface Languages	Standard Options	English, French, German, Spanish, Dutch, Swedish, Norwegian, Russian, Greek, Arabic, Chinese traditional & simplified, Korean.
	User defined	User programmable, using ISO 8859-1 character

ENVIRONMENTAL SPECIFICATIONS		
Operating Temperature (°C)	-30 to +60	
Storage Temperature (°C)	-40 to +85	
Humidity	ETS 300 019-1-5 class 5.1 and 5.2 EIA/TIA 603 (95%)	
Dust and Water	IP54 (cat.2) IP67 (cat.2)	Dash/desk/remote Motorcycle
Shock, drop and vibration	ETS 300 019-1-5 class 5M2 and 5M3 MIL 810 C/D/E/F	

ELECTRICAL SPECIFICATIONS

Voltage Range	10.8 to 15.6 V DC	
Current consumption (A, typ)	Idle / RX / TX	0.6 / 1 / 1.3
	Multi Slot PD (4 slots)	3A
	using USB host	Adds 0.5A

RF SPECIFICATIONS

Frequency Bands (MHz)	350 – 390	380 – 430	410 – 470	806 – 870
Transmit Band (MHz)	350 – 390	380 – 430	410 – 470	806 – 825
Receive Band (MHz)	350 – 390	380 – 430	410 – 470	851 – 870
DMO Band (MHz)	350 – 390	380 – 430	410 – 470	851 – 870
Transmit / receive Separation (MHz)	10	10	10	45
Switching Bandwidth (TMO) (MHz)	40	50	60	19
Switching Bandwidth (DMO) (MHz)	40	50	60	19
RF Channel Bandwidth (kHz)	25 (all bands)			
Transmitter RF Power	3W, Class 3 (all bands)			
RF Power Control	4 Steps of 5 dB			
RF Power Level Accuracy	+/- db 2			
Receiver Class	A & B			
Receiver Static Sensitivity (dBm)	-112 minimum, -114 typical			
Receiver Dynamic Sensitivity (dBm)	-103 minimum, -105 typical			

GPS SPECIFICATIONS

Simultaneous Satellites	12
Mode of operation	Autonomous or assisted (A-GPS)
GPS antenna	Supports active antenna (5V, 25mA supply) via FME male connector
GPS Sensitivity	-152 dbm / -182dbW
Accuracy	5 meter (50% probable) 10 meter (95% probable)
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	
Trunk Mode (TMO)	Group call	Late entry, TMO/DMO mapping, announcement calls, priority calls, Site Wide Call
	Private call	Half and full duplex. Flexible dialling by list scroll, short number dial, direct entry, alphabetical search, last number called. Busy user pre-emption
	Telephony	Full duplex, DTMF overdial, Busy user pre-emption.
	DGNA	up to 2047 groups
	Scanning	attachment signalling, supports SwMI initiated attachment/detachment
Direct Mode (DMO)	Group call	late entry, TMO/DMO mapping,
	Private call	
	Compatibility	Gateway & repeater
Emergency	Smart emergency	TMO / DMO / DMO to TMO automatic switching options
	Hot Mic	Configurable timers for automatic open mic
	Location	Location (GPS) sent with emergency
	Target Address	Sent to individual or group address (selected or dedicated)
	Alarm	Emergency status

DATA COMMUNICATIONS

Status	Alias messages	100
	options	sent via one-touch, or via menu
Short Data Service (SDS)	Inbox	20 messages
	100 predefined and user defined messages	
	iTAP predictive text entry	
	Target Address	Sent to individual or group address (selected or dedicated)
	voice interaction	SDS can be sent and received during voice call
Packet Data	Single Slot	7.2 kbps gross
	Multi Slot	Up to 28.8kbps gross
WAP* (with software upgrade)	Integrated WAP* browser	Openwave WAP* Mobile Browser
	compatibility	WAP* 1.2.x compatible and WAP* 2.0 compatible for UDP/IP stack
Peripheral Equipment Interface (PEI)	Interface Protocol	AT Commands TNP1* ; enables simultaneous PD & SDS sessions

INTERFACES

RS232	For PEI	
USB	Rapid programming & configuration supported via USB. USB Host capability for future use	
Rugged accessory connector (GCAI)	GCAI – Motorola accessory and ancillary interface for connection of accessories, data devices and programming.	
General Purpose Input/Outputs	Digital I/Os*	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	Class1 (clear), Class2 (SCK), Class3 (DCK and CCK)
	Authentication	Infrastructure initiated and made mutual by terminal
Provisioning	Secure provisioning tool (key variable loader KVL)	
User Access Control	PIN /PUK code access	
Data	Packet data user authentication	
End to end encryption	Enhanced E2E encryption with OTAR supported through optional hardware module, with full Tamper Protection.	

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	WEE
	Directive e2002/95/EC	RoHS

* Planned features or developments, please contact Motorola for information on availability and upgrade requirements

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MTM800E/SPEC-ENG(02/07)

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