



# MT680

## TETRA Mobile Terminal



10W RF output power, easy operation, flexible installation, front panel compliant with IP67, and built-in powerful speaker; Hytera TETRA mobile radio offers you real-time communications and dispatching for mission critical.





# MT680

## Highlights

### Rugged, Durable Design and Easy Operation

MT680 rugged design is enhanced with a large 260K color TFT LCD enabling the access of pertinent information with ease, even under bright sunlight. User-friendly interface, keypad entry, and powerful (4W) speaker provides excellent operation and communication experience.

### Exceptional Quality and Flexible Installation

MT680 flexibility allows for virtually any install location. You may integrate the front panel with the main unit, or install it separately at a place where you can easily access operation controls. The optional front panel is IP67 compliant, capable of delivering you exceptional performance in extreme conditions.

### Versatile Services and Functions

MT680 supports all TETRA voice and data services. With its built-in GPS feature, information about your location will no longer be an issue. Optional encryption feature will bring you more benefits. The expansion port is another advantage, enabling you to customize your radios feature.

### Instant and Seamless Communication

High transmit power (10W) enables you to reach team members long distances. MT680 enables quick access to TETRA networks and roaming services. Additionally, MT680 provides powerful interoperability with base stations and terminals of different manufacturers.



# Features

## Operation Mode

- ▶ Trunking Mode Operation (TMO): communications over TETRA network (semiduplex and full duplex mode)
- ▶ Direct Mode Operation (DMO): direct communications between terminals without network intervention (semiduplex mode)

## Voice Services

### Group Call

- ▶ Standard Group Call
- ▶ Priority Group Call
- ▶ Emergency Group Call
- ▶ Broadcast Call
- ▶ Late Entry
- ▶ Talking Party Identification
- ▶ DGNA Service
- ▶ Group Call Scan
- ▶ Talk Group Management

### Individual call

- ▶ Standard Half Duplex Individual Call
- ▶ Standard Full Duplex Individual Call (TMO)
- ▶ Priority Individual Call
- ▶ Emergency Individual Call
- ▶ Calling Identification
- ▶ Pre-emption Priority Call

### Telephone Call (PSTN/PABX)

- ▶ Full Duplex Telephone Call
- ▶ DTMF
- ▶ Calling Identification
- ▶ Pre-emption Priority Call

## Security Services

- ▶ Authentication
- ▶ Air Interface Encryption TEA 1, TEA 3, TEA 4
- ▶ E2EE (End-to-End Encryption) Security Services
  - E2EE Encryption Module
  - Multiple Algorithm Support
- ▶ PIN/PUK Code Access
- ▶ Security Class 1, 2, 3
- ▶ Ambient Listening
- ▶ Discreet Listening
- ▶ Stun/Kill
- ▶ Configure Information Protection

## Advanced Features

- ▶ Provides Java Application Platform
- ▶ WAP Browser\*
- ▶ Over The Air Programming (OTAP)\*
- ▶ GPIO Program\*
- ▶ Circuit Mode Data\*

## User Safety

- ▶ Emergency Button
- ▶ Keypad Lock
- ▶ Out of Network Alarm
- ▶ Multimode GPS Application
- ▶ Low Battery Alarm
- ▶ Emergence Call Red Screen

## Data / Message Services

- ▶ Short Data Service (SDS) - Type1, Type2, Type3, Type4, TL Data
- ▶ Status Message
- ▶ Packet Data Service (PEI)
- ▶ One Button-trigger Status Message
- ▶ Long SDS Receiving
- ▶ Further Developing Interface Reserved
- ▶ At Command (PEI)

## Global Positioning Service

- ▶ Built-in and Fully Integrated GPS
- ▶ Position Information Transmission during Emergency Call
- ▶ Time Synchronization and Calibration
- ▶ Multimode GPS Application (time trigger, distance trigger, time & distance trigger)
- ▶ Remote Enable/Disable
- ▶ Support Lip Protocol
- ▶ Position Information Display

## User Interface Features

- ▶ 16 programmable key for quick access to function
- ▶ Multi-function Talk Group Selector and Volume Control Knob
- ▶ 4-way Navigation Keys
- ▶ Dedicated Emergency Button
- ▶ Call Log: missed/received/dialed lists
- ▶ Flexible Dialing (list scroll, direct dial, alphabetic search, last number redial)
- ▶ External Palm Microphone
- ▶ Adjustable Display Contrast

- ▶ 11 Languages (English, Simplified Chinese, Korean, Russian, Spanish, German, French, Farsi, Catalan, Malay, Arabic etc.)
- ▶ Selectable Profiles
- ▶ GPS Location Service
  - Built-in high sensitivity GPS
  - Full programmable position update triggers
  - Position information transmission during Emergency Alarm
  - Time Synchronization and Calibration
  - Identification of caller's position and distance

\* Realized in Version 6.0



\*The front panel in compliant with IP67 when installed separately.

# Specifications

General	Frequency Bands		350-400MHz/380-430MHz 410-470MHz/806-870MHz
	Dimensions (HxWxD)	Machine	70 x 184 x 201mm
		Front Panel	70 x 184 x 82mm
		Remote Machine	70 x 184 x 177.6mm
		Base Station	174.3 x 230 x 321.3mm
	Weight	Machine	1900g
		Front Panel	395g
		Remote Machine	1655g
		Base Station	6356g
	Operating Voltage	Machine & Remote Machine	10.8V-15.6V (Typical values 13.2V)
Base Station		AC 13 2V 1φ 8V-15 6V DC 100-240Vac/50-60Hz	
Environmental	Operating Temperature		-25 ~ +65
	Storage Temperature		-40 ~ +85
	Humidity		ETS 300 019 (95%)
	Water and Dust Protection		IP54 (main unit) IP67 (front panel) IEC60529 or GB-4208-93
	Drop, Shock & Vibration		MIL-STD- 810C/D/E/ F/G
GPS	Sensitivity		-146dBm acquisition sensitivity -162dBm tracking sensitivity
	Accuracy		2.5m CEP
	Cold Start (Time to First Fix)		< 35s
	Hot Start (Time to First Fix)		< 1s

Item	Low memory machine	High memory machine
Talk Groups - TMO	2048	3000
Talk Groups - DMO	1024	2000
Phonebook	1000	1000
Missed Calls	20	20
Received Calls	20	20
Dialed Calls	20	20
Inbox	50	400
Outbox	20	50
Drafts	10	50
Drafts -TMO	61	61
Folder -TMO	64x200 (200 groups in each list )	200x200 (200 groups in each list )
Folder -DMO	32x200 (200 groups in each list )	50x200 (200 groups in each list )

RF Specifications	
RF Channel Bandwidth	25KHz
RF Power Output	10W
RF Power Level Accuracy	± 2dB
Receiver Class	ETSI EN 392-2/396-2 Class A
RX Static Sensitivity	-112dBm (typical -116dBm)
RX Dynamic Sensitivity	-103dBm (typical -105dBm)
Maximum Audio Power Output	4W (internal) 10W (external)

All specifications are subject to change without notice due to continuous development.

## Standard Accessories



Palm Microphone (IP54)  
SM16A1



Tube Fuse  
POA33



Mounting Bracket  
BRK11



Power Cord  
PWC10

## Optional Accessories



Water proof Palm  
Microphone(IP67)  
SM16A2



External Speaker  
SM09D1



DesktopMicrophone  
SM10A1



Foot Switch  
POA44



Antenna



GPS Antenna  
GP504



Power Supply for  
Base Station  
PS16002



External Power Supply  
(300W, backup  
battery applicable)  
PS22002



Programming Cable  
(USB Port)(RoHS)  
PC35



Data Transmission  
Cable (RoHS)  
PC39



IP54 Remote Control Kit  
(Without control head)  
RCC08 (3m cable)  
RCC09 (6m cable)  
RCC10 (15m cable)



IP67 Remote Control Kit  
(With control head)  
RCC11 (3m cable)  
RCC12 (6m cable)  
RCC13 (15m cable)

Pictures above are for reference only and may vary from actual products.



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