



# MT680

TETRA Mobile Terminal





Mission Critical

Accomplished

## Highlights

### Rugged, Durable Design and Easy Operation



**260K Color**

The 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



**IP67**

The 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



The 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. The MT680 enables quick access to TETRA networks and roaming services. Additionally, the MT680 provides powerful interoperability with base stations and terminals of different manufacturers.

# Functions

## • 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

- |  |   |  |
|--|---|--|
| <ul style="list-style-type: none"> <li>▶ Group Call</li> <li>▶ Standard Group Call</li> <li>▶ Priority Group Call</li> <li>▶ Emergency Group Call</li> <li>▶ Receive Broadcast Call (TMO)</li> <li>▶ Late Entry</li> <li>▶ Talking Party Identification</li> <li>▶ DGNA Service</li> </ul> | <ul style="list-style-type: none"> <li>▶ Individual call</li> <li>▶ Standard Individual Call - Semiduplex</li> <li>▶ Standard Individual Call - Full Duplex (TMO)</li> <li>▶ Priority Individual Call</li> <li>▶ Calling Line Identification Presentation</li> <li>▶ Pre-emption Priority Call - PPC</li> </ul> | <ul style="list-style-type: none"> <li>▶ Telephone Call (PSTN/PABX)</li> <li>▶ Full Duplex Operation</li> <li>▶ DTMF</li> <li>▶ Calling Line Identification Presentation</li> <li>▶ Pre-emption Priority Call - PPC</li> </ul> |
|--|---|--|

## • Security Services

- ▶ Authentication
- ▶ Air Interface Encryption TEA 1, TEA 3, TEA4
- ▶ E2EE (End-to-End Encryption) Security Services ★
  - ▶ E2EE encryption module with full tamper-protection
  - ▶ Multiple Algorithm support
- ▶ PIN/PUK Code Access
- ▶ Security Class 1, 2 (3 ★)

## • User Safety

- ▶ Dedicated Emergency Button
- ▶ Talk Group Lock
- ▶ Keypad Lock
- ▶ Terminal configuration protection

## • 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
- ▶ 7 Languages\* (English, Simplified Chinese, Korean, Russian, Spanish, German, French)
- ▶ Selectable Profiles
- ▶ GPS Location Service Optional GPS MT680G
  - ▶ 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







\* Multi-language is available on request.

## • Data / Messaging Services








- ▶ Short Data Service (SDS) -- 1, 2, 3, 4, TL
- ▶ Status Message
- ▶ New text/status message notification during calls
- ▶ Packet Data Service
- ▶ Peripheral Equipment Interface (PEI)



## Standard Accessories

					
Palm Microphone SM16A1	Palm Microphone Hanger	Screws for Palm Microphone Hanger	Power Cord PWC10	Tube Fuse POA33	Mounting Bracket BRK11

## Optional Accessories

						
Desktop Microphone SM10A1	External Speaker SM09D1	Programming Cable (USB to Serial Port) PC35	Antenna	GPS Antenna GPS03	Data Transmission Cable PC39	External Power Supply (300W, backup battery applicable) PS2200z

## Specifications

General Specifications	
Dimensions (H×W×D) (with front panel)	70×184×201mm
Weight (with front panel)	1900g
Operating Voltage	10.8V-15.6V(Typical 13.2V)
Talk Groups- TMO	2048
Talk Groups- DMO	1024
Phonebook	512
Scan Lists	20 (20 groups in each list)
LCD Display	320X240pixels,260K Colors
Environmental Specifications	
Operating Temperature	-25°C -- +65°C
Storage Temperature	-40°C -- +80°C
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-810 F

RF Specifications	
Frequency Range	350-400 MHz 380-430 MHz 410-470 MHz* 806-870 MHz
RF Channel Spacing	25 KHz
RF Power Output	10W
Receiver Class	ETSI EN 392-2/396-2 Class A
RX Static Sensitivity	-112 dBm (typical -116 dBm)
RX Dynamic Sensitivity	-103 dBm (typical -105 dBm)
Audio Power Output	4W (internal) 10W (external)
GPS Specifications*	
GPS Antenna	High sensitivity omni-directional receiving antenna
Sensitivity	≤-154dBm
Accuracy	≤15m

\*The frequency band which is planned to be a future development, future information and availability is available on request.  
#GPS Specification condition: -130dBm Signal Strength and 95% percentile value, OPEN SKY  
All Specifications are subject to change without notice due to continuous development.



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