



# MTP850Ex

## ATEX TETRA Terminal.

High performing communication and user safety



Motorola's market leading ATEX TETRA portable terminal, the MTP850Ex provides high quality communication with comprehensive user safety when in environments containing potential explosive gas and dust.

Motorola is a world leader in the development and deployment of TETRA communication solutions, and the MTP850Ex ATEX TETRA radio delivers safe and reliable communications for users with a powerful set of features to enhance the capability of TETRA.

### High Performance Communication

The MTP850Ex delivers best in class audio performance in the typical noisy environments where specialist users from industry or public safety operate

### Data Applications Capability

Support of WAP plus simultaneous Short Data Service (SDS) and Multi-Slot packet data services via TNP1 protocol.

## Key Features

### High Performing Communication

- Full TETRA voice and data capability including Multi-Slot Packet Data and integrated WAP browser
- Powerful, high quality audio in most demanding environments
- Full range of supporting ATEX certified accessories to tailor customize solution

### Comprehensive User Safety

- ATEX & IECEx gas and dust approvals
- Large key pad format
- Large icon screen menu
- GPS user location for C&C monitoring
- In-built man down alarm

### Simplified Keypad with Large Buttons

Easy to use with gloves, facilitates operation in difficult environments with limited visibility

### Simplified User Interface - Large Icons/Fonts

Ensures easy access to critical features

### GPS Location Services

A state of the art integrated GPS receiver provides ability to locate personnel thereby improving user

**MTP850Ex ATEX TETRA Handportable**

| ATEX SPECIFICATIONS |      |  |
|---------------------|------|--|
| ATEX Rating         | Gas  | II 2G Ex ib IIC T4   |
|                     | Dust | II 2D Ex tD A21 IP6x ib D21 T90°C  |
| IEC EX Rating       | Gas  | Ex ib IIC T4<br>(Approved for Zone 1 & 2, Equipment Group II, Gas Group C, Temperature Class T4, -20°C to +50°C) |
|                     | Dust | Ex tD A21 IP6x ib D21 T90°C<br>(Approved for Zone 21 & 22, Equipment Group II)                                   |

**Specifications**

| PHYSICAL        |   |
|-----------------|---|
| Dimensions (mm) | 135 x 55 x 38                                   |
| Weight (typ) g  | 400 including battery, antenna                  |
| Battery         | 725 mAh, 7.2V<br>12 hrs, typ, 5/5/90 duty cycle |

| RF SPECIFICATIONS                  |                            |
|------------------------------------|----------------------------|
| Frequency Bands (MHz)              | 380 – 430                  |
| Switching Bandwidth (MHz)          | 50                         |
| RF Channel Bandwidth (kHz)         | 25                         |
| Transmitter RF Power               | 1W                         |
| RF Power Control                   | 3 Steps of 5 dB            |
| RF Power Level Accuracy            | +/- db 2                   |
| Receiver Class                     | A & B                      |
| Receiver Static Sensitivity (dBm)  | -112 minimum, -115 typical |
| Receiver Dynamic Sensitivity (dBm) | -103 minimum, -107 typical |

| VOICE SERVICES |                                |                        |
|----------------|--------------------------------|------------------------|
| Talkgroups     | 2048 (TMO) & 1024 (DMO)        |                        |
| Phone Book     | 1000 persons                   |                        |
| Scan Lists     | 40 lists, 20 talkgroups / list |                        |
| TMO Services   | Group Call                     | Late entry             |
|                | Private Call                   | Half / Full Duplex     |
|                | Telephony                      | Full Duplex            |
|                | DGNA                           | up to 2047 groups      |
| DMO Services   | Group Call                     | Late entry             |
|                | Private Call                   |                        |
|                | Compatibility                  | Gateway & Repeater     |
| Emergency      | Smart Emergency                | DMO / TMO / DMO to TMO |
|                | Hot Mic                        | Configurable timers    |
|                | Location                       | Send on emergency      |
|                | Target Address                 | Individual or Group    |
| Other Services | Alarm                          | Emergency Status       |
|                | Ambience Listening             |                        |
|                | Transmit Inhibit               |                        |

| ENVIRONMENTAL SPECIFICATIONS |  |
|------------------------------|--|
| Operating Temperature (°C)   | -20°C to +50°C (Hazardous Environments)<br>-20°C to +50°C (Non-Hazardous Environments) |
| Storage Temperature (°C)     | -40°C to +85°C   |
| Humidity                     | ETS 300 019-1-5 Class 5.1 and 5.2  |
| Dust and Water               | IP64 (Cat 2)   |
| Shock, drop and vibration    | ETS 300 019-1-5 Class 5M2  |

| GPS SPECIFICATIONS      |                                |
|-------------------------|--------------------------------|
| Simultaneous Satellites | 12                             |
| Mode of Operation       | Autonomous or assisted (A-GPS) |
| GPS Antenna             | Integrated in TETRA antenna    |
| Sensitivity             | -152 dBm / -182 dBw            |
| Accuracy                | 5 meter (50% probable)         |
| Location Protocols      | ETSI LIP<br>Motorola LRRP      |

| DATA SERVICES            |                             |                             |
|--------------------------|-----------------------------|-----------------------------|
| Status Messaging         | Alias Messages              | 100                         |
| Short Data Service (SDS) | Inbox                       | 20 messages                 |
|                          | Target Address              | Individual or Group Address |
|                          | Voice Interaction           | Send / receive during calls |
| Packet Data              | Single or Multi Slot        | 7.2kbps - 28.8 kbps gross   |
| WAP                      | Integrated Openwave browser |                             |
| PEI                      | AT Commands                 |                             |

| INTERFACES       |  |
|------------------|--|
| RS232 PEI        | For connection of data devices                   |
| Rugged Accessory | For programming and audio accessory connectivity |

| SECURITY FEATURES        |   |  |
|--------------------------|---|--|
| Air Interface Encryption | Algorithms  | TEA1, TEA2, TEA3                                       |
|                          | Security Classes  | Class1 (clear), Class2 (SCK), Class3 (DCK, CCK & GCK*) |
| Key Provisioning         | Secure provisioning tool (key variable loader KVL)<br>Over the Air Rekeying (OTAR) for SCK and Class 3 (CCK & GCK*) |  |
| Authentication           | Infrastructure initiated and made mutual by terminal  |  |
| Network Access           | Temporary Enable / Disable (Stun)   |  |
|                          | Permanent Enable / Disable (Kill)   |  |

The information in this document may be subject to change without further notice

- Please note all product features are subject to infrastructure support



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