



THR880i TETRA HANDPORTABLE RADIO

Secure mobility



THR880i TETRA handportable radio

- **Integrated GPS receiver**
- **Active TFT color display with support for true color pictures**
- **Two-sided design**
- **Voice feedback**
- **Water and dust resistant, protected against shocks**
- **Support for smart card-based end-to-end encryption (option)**
- **Java MIDP 2.0 platform**
- **XHTML color browser**

An easy-to-use TETRA radio you can rely on

The THR880i from CASSIDIAN is an advanced TETRA handportable radio for reliable voice and data communication, providing a solid platform for new mobile applications and evolving security requirements including end-to-end encryption. Its unique two-sided design and the Series 40-style user interface make it easy and intuitive to use.

The phone side of the terminal features a color display, a convenient keypad and a user-friendly menu. The sharp, active high-resolution TFT display of the THR880i radio enables clear and convenient viewing of images, graphics and color pictures.

The other side, dedicated to radio features only the essential operating keys. Managing talk groups is easy with the multimode group selector. The voice feedback enables users to work with the radio without having to look at it as the radio terminal prompts many of the radio functions as they are selected, for example changing the talk group or switching to direct mode.

The THR880i radio is constructed from durable materials and is fitted with protective seals and bumpers to protect from shocks. Resistant to splash water and dust, the radio meets the IP55 classification.

Integrated GPS improves efficiency

An integrated GPS receiver enables positioning of the radio users based on their geographical co-ordinates. The radio's position can be transmitted over the TETRA network upon request either automatically at certain time or distance intervals, or as a reply to a single request. Using a separate positioning application, the unit's position can be shown on a digital map, allowing command and control to trace and contact field staff based on their geographical location.

For enhanced user safety, the radio can be programmed to send details of its current or latest position to a predefined address when a red key call or public emergency call is initiated. In addition, radio users can save their positions as waypoints, and send these to other users as short messages.





Delivering information with greater security

Protecting information security is paramount in mission-critical communications. To ensure that information is delivered only to those it is addressed to, the THR880i radio supports end-to-end encryption, based on smart card. If necessary, communications can be encrypted all the way from the sending unit to the receiving unit. The smart card based encryption provides the highest level of security, allowing implementation of organisation specific encryption algorithms.



Enhanced mobility

Reliable, real-time access to information while on the move is fundamental in today's professional communications. Graphical information such as detailed maps, pictures of missing persons or stolen vehicles can be fetched to the radio over a WAP/IP packet data connection. The Java™ platform on the terminal allows organisations easily introduce its own applications with a customised user interface, making information available to users quickly, conveniently and reliably.



Accessories

There is a wide range of accessories available for THR880i radios. TETRA Accessory Catalogue by Cassidian presents several alternatives for the following accessory categories:

- Audio
- Power
- Carrying
- Installation
- Connectivity



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Cassidian TETRA terminals fulfill the following specifications for TETRA radio equipment in the temperature range of -20°C to +55°C:

EN 300 392 V+D air interface

EN 300 394 V+D conformance testing

EN 300 395 TETRA Speech codec (ACELP)

Frequency bands

- 350-370 MHz
- 380-430 MHz
- 380-400 MHz
- 410-430 MHz
- 450-470 MHz
- 806-825 MHz, 851-870 MHz

Power class

- EN 300392-2 compliant, power class 4
- Receiver class A
- RF power control, 4 steps of 5dB

Size

- Weight: 247 g
- Dimensions: 147 x 57 x 35 mm

Durability

- Water and dust resistant according to IP55 classification

Display

- High-resolution, active TFT color display
- Up to 65,536 colors with 130 x 130 pixels
- Display texts in more than 25 languages
- Support for Latin, Arabic, Greek, Chinese, Cyrillic, Bulgarian and Korean character sets

Keypad / controls

- 2-sided user interface
- Alphanumeric keypad
- 4 navigation keys, 3 selection keys
- HI/LO key for loudspeaker control
- Power-on key, volume keys, red function key, duty key, fast menu key, group selector, back key

GPS receiver

- Sensitivity -152 dBm
- Cold start accuracy (open sky)*
5 metres (50% confidence level)
10 metres (95% confidence level)
- GPS activity indicator
- Automatic position saving

* measured at -130 dBm

- Position information sending on request or on triggers (e.g. time, distance, status message)
- Position sending during red key calls and public emergency calls
- Waypoints, waypoint guidance
- Saving own waypoint with one key press for Waypoint guidance
- NMEA routing to serial port
- Support for ETSI location information protocol for TETRA

Call types

- Phone calls in TETRA network
- Phone calls to public network
- Express and group calls in TETRA
- TETRA emergency calls
- Public emergency calls (e.g. to 112)

Group communication

- Up to 2000 talk groups
- Up to 200 talk group folders
- Up to 400 groups per folder
- Dynamic Group Number Assignment (up to 200 DGNA groups)
- Up to 10 background groups
- Priority scanning
- Scanning list up to 59 talk groups
- Voice override in group calls (pre-emption)
- Late entry

Direct Mode features

- Up to 180 DMO groups
- 60 DMO channels
- DMO gateway and repeater support
- Scanning
- DMO individual call
- Red key call to DMO group
- Red key call to TMO within TETRA network coverage
- Public emergency call within TETRA network coverage
- DMO SCK encryption, encryption classes 2a and 2b
- Status messages in DMO

Messaging

- Status messages
- Text messages with concatenation
- Flash messages
- Predictive text input (T9)**
- Unit alert (selective alert)

** in most languages

Security

- Authentication
- Mutual authentication
- Air Interface Encryption,
- Security classes:
 - Class 1: Clear
 - Class 2: SCK
 - Class 3: DCK/CCK
- Phone and security code
- Temporary disable/enable (Stun)
- Permanent disable (Kill)
- Alert for out of network coverage
- Support for smart card based end-to-end encryption (option)

Wireless data

- IP packet data
- WAP 2.0 over TETRA IP packet data
- XHTML color browser
- AT command interface for applications
- Java MIDP 2.0 platform

Other features

- Voice feedback
- Configurable main menu
- Configurable fast menu
- Configurable functions keys
- Tx inhibit
- Speed dialing (one touch dialing, locations 2-9)
- DTMF tone dialing
- Any key answer
- Duplex call barring
- Multiple network support
- Aliasing
- Clock synchronisation with network and/or GPS time
- Remote control through SDS or status
- Secondary control channel (SCCH)

Battery

Internal Battery BLN-4 Li-Ion 1880 mAh

- Talk time up to 2 - 4,5 h (duplex)
- Use time up to 11 - 25 h (5/5/90), up to 8-17 h (10/30/60)
- Standby time up to 25 - 40 h
- Charging times 2,5 - 3,5 h (ACP-12, power off)

Note: GPS usage affects the above mentioned times. Standby time may vary from 10 to 40 hours when GPS is in use.

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