



## THR880i Ex

### Intrinsically safe TETRA handportable radio

**The THR880i Ex handportable radio from CASSIDIAN is a robust, intrinsically safe radio fulfilling the II 2G Ex ib IIC T4 specification.**

The radio combines certification for operation in explosion-prone areas with the user-friendliness, solid design and advanced features of the i-range TETRA products from Cassidian.

It is designed for safe and reliable communication in places where inflammable substances are produced, processed, transported or stored, such as chemical and petrochemical industries, oil and natural gas production, as well as rigs and harbours.

The radio's two-sided design, a phone side and a radio side, provides the user with the highest ergonomics and ease of use for demanding fieldwork. With IP55 classification the THR880i Ex has the best protection against physical and environmental exposure.

Featuring integrated GPS, voice feedback, colour display, XHTML browser and Java™ platform, the THR880i Ex provides the widest range of voice and data services as well as positioning. Supporting smart card based end-to-end encryption, it is fully compliant with the other Cassidian i-range radios. Users don't need to compromise on safety or functionality when operating in hazardous circumstances.

The accessories and PC software tools of the THR880i and THR880i Light radio models are, except for the battery, compatible with the THR880i Ex model, although the standard accessories cannot be used in hazardous areas. The THR880i Ex has its own special battery model BLN-Ex.

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

- Audio
- Power
- Carrying
- Installation
- Connectivity



## THR880i Ex TETRA handportable radio

Cassidian TETRA terminals fulfill the following specifications for TETRA radio equipment in the temperature range of -20°C to +50°C:

EN 300 392 V+D air interface

EN 300 394 V+D conformance testing

EN 300 395 TETRA Speech codec (ACELP)

II 2G Ex ib IIC T4 ATEX certification

### Frequency bands

- 380 - 400 MHz
- 410 - 430 MHz
- 806 - 825, 851 - 870 MHz

### Power class

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

### Size

- Weight: 292 g
- Dimensions: 157 x 57 x 35 mm

### Durability

- Water and dust resistant according to IP55 classification

### Display

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

### 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
- Position information sending on request or on triggers (e.g. time, distance, status message)

\* measured at -130 dBm

- 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 support
- DMO repeater support (1A and 1B)
- 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 dialling (one touch dialling, locations 2-9)
- DTMF tone dialling
- 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-Ex (1400 mAh Li-Poly)
- Talk time up to 1,5 - 3 h (duplex)
- Use time up to 8 - 12 h (5/5/90)
- Use time up to 5 - 8,5 h (10/30/60)
- Standby time up to 17 h
- Charging time up to 2,5 h (ACP-12, power-off)

Note: GPS usage affects the above mentioned times.

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