

THR880i Ex

Intrinsically safe TETRA handportable radio



The THR880i Ex handportable is a robust, intrinsically safe radio fulfilling the Ex II 2G Ex ib s IIC T4 specification. The radio combines certification for operation in explosion-prone areas with the user-friendliness, solid design and advanced features of the EADS i-range TETRA products. 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 incorporates a phone side and a radio side, designed to provide 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 EADS 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. In addition, specialist accessory manufacturers can provide ATEX-certified accessories suitable for the THR880i Ex.

THR880i Ex TETRA handportable radio

EADS THR880i Ex radio fulfills 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
II 2G Ex ib IIC T4 ATEX certification

Frequency bands

410 - 430 MHz
380 - 400 MHz*
806-825, 851-870 MHz*
*availability upon market demand

Power class

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

Size

- Weight: 275 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 130x130 pixels
- Display texts in more than 20 languages
- Support for Latin, Arabic, Greek, Chinese 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)
* measured at -130 dBm
- GPS activity indicator

- Automatic position saving
- 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
- 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 networks
- 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
- 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
- Status messages in DMO

Messaging

- Status and text messages
- Flash messages
- Predictive text input (T9)
- Unit alert (selective alert)

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
- AT command interface for applications
- Java MIDP 2.0 platform

Other features

- Voice feedback
- Configurable main menu
- Configurable fast menu
- Tx inhibit
- Speed dialling (one touch dialling, locations 2-9)
- Functional number keys
- DTMF tone dialling
- Any key answer
- Duplex call barring
- Multiple network support
- Aliasing

Battery

- Internal battery BLN-Ex (1420 mAh Li-Poly)
- Talk time up to 1,5 - 3 h (duplex)
 - Use time up to 8 - 17 h (5/5/90)
 - Standby time up to 17 - 28 h
 - Charging times 2.5 - 3.5 h (ACP-12, power off)

Note: GPS usage affects the above mentioned times.

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