CASSIDIAN
AN EADS COMPANY

THR9 Ex

THR9 Ex intrinsically safe TETRA radio

FOR FURTHER INFORMATION PLEASE CONTACT

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THR9 Ex intrinsically safe TETRA radio

- **Intrinsically safe TETRA radio, certified according to ATEX and IEC-Ex specifications**
- **Large QVGA colour display supports true-colour pictures**
- **Robust construction resistant to water, dust and exposure**
- **Complete with Lifeguard, the advanced solution for a man-down alarm**
- **Vibrating alert**
- **Powerful, 2000 mAh battery for long operation time**
- **Battery and accessories can be changed within Ex area**

Promoting safety without compromising on function

The robust and modern THR9 Ex TETRA handportable radio from CASSIDIAN® combines high performance and security in mission-critical voice and data communication where intrinsically safe products are needed.

With ATEX and IEC-Ex certification for both gas and dust, the THR9 Ex offers the best protection against physical and environmental exposure in explosion-prone areas. It can be used where flammable substances are produced, processed, transported or stored.

Examples include oil and gas, petrochemical and steel industries as well as rigs, airports and harbours. The THR9 Ex also meets the needs of fire brigades for Ex-equipment when working in hazardous circumstances.

Features that could save lives

The new Lifeguard feature is the advanced solution for man-down functionality. Lifeguard recognises if the radio stops moving or remains horizontal for a given period, which may mean that the user is injured or has fallen. In this case the radio triggers an automatic alarm and sends its geographical coordinates to a predefined destination, which might be other team members or the dispatcher.

The THR9 Ex features a large and bright colour display, providing valuable information for users on changing situations in the field. For example, a red signal bar warns the user if the 2000 mAh radio battery is running low or network coverage is diminishing. It is also extremely easy for the user to recognise whether the radio is operating in trunked or direct mode, thanks to the distinctive colour schemes of the operating modes.

The large display supports high usability and also makes the THR9 Ex suitable for applications such as positioning, image communication, reporting and searching for information in databases.

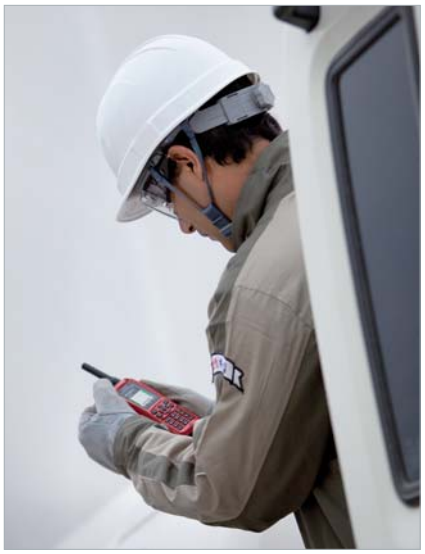
Tailored to support users – however they work

The THR9 Ex radio is fully customisable to suit each user organisation's needs and preferences.

The full alphanumeric keypad enables users to dial numbers freely, type text messages or enter data into applications. In addition, the keys can be programmed to work as shortcuts for predefined operations. The radio also has a dedicated fast menu key for the quick selection of the most common tasks, such as switching to direct mode. If the users' work profile does not require all the advanced features, it is possible to program the radio to provide only the necessary functionality. For example, some menu items such as the web browser can be blocked.

With the powerful 2000 mAh battery the THR9 Ex provides the best balance of size and capacity, providing excellent operation time even for the most intensive communication. A slim battery 1280 mAh is also available as an accessory.

A range of audio accessories, such as a remote speaker microphone, robust and light headsets and ergonomically designed carrying accessories make it possible to use the radio conveniently, without distracting users from the job in hand. Several THR9i's accessories, including travel and desktop charger and the car kit, are compatible with the THR9 Ex and can be used in non-Ex environment.



THR9 Ex intrinsically safe TETRA radio

THR9 Ex radio from CASSIDIAN fulfils 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
TETRA Speech codec (ACELP) according to EN 300 395

Explosion-proof certification

ATEX and IEC-Ex approval with:

- II 2G Ex ib IIC T4 Gb for gas
- II 2D Ex ib IIIC T96°C Db IP6X for dust

Frequency Bands

- 330 - 360 MHz
- 380 - 430 MHz
- 450 - 470 MHz

Power Class

- EN300392-2 compliant, power class 4
- Receiver class A
- RF power control, 4 steps of 5dB

Size

- Weight: 360g
- Dimensions: 133 x 58 x 40mm

Durability

- Water, dust, and shock resistant according to IP65 classification

Display

- Full-colour QVGA display
- Up to 262144 colours with 240 x 320 pixels
- Display reverse 180 degrees
- Display texts in more than 25 languages
- Support for Latin, Arabic, Bulgarian, Chinese, Cyrillic, Korean, Macedonian and Serbian characters
- Nightvision mode

Keypad/Controls

- 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

Messaging

- Status messages
- Text messages with concatenation
- Situation indicators to a predefined address
- Flash messages
- Predictive text input T9*
- Unit alert (selective alert)

GPS receiver

- Sensitivity -152 dBm
- Cold start accuracy (open sky)**
  - 5 meters (50% confidence level)
  - 10 meters (95% confidence level)
- GPS activity indicator
- Automatic position saving
- Position information sending on request or on triggers (time, distance, status message)
- Position sending during red key calls and public emergency calls
- Waypoints, waypoint guidance
- Showing caller's distance and direction during a call (Where are you?)
- Saving own or caller's waypoint with one key press for Waypoint guidance
- Network-based terminal assisted positioning
- Support for ETSI location information protocol for TETRA (LIP)

** For most languages*
*** Measured at -130 dBm*

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 3000 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 1500 DMO groups
- 500 DMO channels
- DMO gateway support
- Support for DMO repeater type 1A and 1B
- 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, encryption classes 2A, 2B and 2C
- DMO status messages
- ETSI TETRA type 1A DMO repeater operation (option)
- Re-broadcast of group and emergency groups calls on configured DMO groups

Security

- Lifeguard – the advanced solution for man down alarm
- 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)
- Transmission barring (Tx inhibit)
- 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
- XHTML colour browser

Other Features

- Voice feedback
- Configurable main menu and fast menu
- Configurable function keys
- Speed dialling (one touch dialling)
- Functional number keys
- DTMF tone dialling
- Aliasing
- Clock synchronisation with network and/or GPS time
- Any key answer
- Remote controlling through SDS or status
- Secondary Control Channel (SCCH)
- Vibrating alert
- Duplex call barring
- Multiple network support

Interfaces

- Side connector for audio accessories and data
- Bottom connector for charging, car kit and programming
- Internal smart card slot
- Connector for external antenna (car kit)

Battery

BLN Ex-2, Lithium-Ion 2000 mAh
Estimated values:

- Up to 15 h (5/5/90)
- Up to 14 h (10/30/60)
- Up to 17,5 h (standby)

BLN Ex-4, Lithium-Ion 1280 mAh (Slim battery)
Estimated values:

- Up to 11.2 h (5/5/90)
- Up to 10 h (10/30/60)
- Up to 12.9 h (standby)

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