



**THR9i**

## THR9i TETRA handportable radio



**FOR FURTHER INFORMATION PLEASE CONTACT**

Cassidian / Würthstrasse 85 / 89077 Ulm / Germany / T: +49 (0) 731 392 11

Cassidian / MetaPole / 1, boulevard Jean Moulin / CS 40001 / 78996 Elancourt Cedex - France / T: +33 (0)1 61 38 50 00

Cassidian / Hiomotie 32 / 00380 Helsinki - Finland / T: +358 10 4080 000 / e-mail: [scs@cassidian.com](mailto:scs@cassidian.com)

# THR9i TETRA handportable radio

- Water and dust resistant according to IP65
- Large QVGA colour display with support for true colour pictures
- Lifeguard, the advanced solution for man down alarm
- Unique GPS based «Where Are You?» application for enhanced user safety and efficiency
- Configurable menu and short-cut keys for easy operation
- Voice feedback
- Vibrating alert
- Java™ MIDP 2.0 platform for applications
- XHTML colour browser
- Support for smart card-based end-to-end encryption (option)



The THR9i TETRA handheld radio from CASSIDIAN® delivers high performance and usability for mission-critical voice and data communication. With IP65 protection, the largest sharpest on the market QVGA display and high battery autonomy the THR9i is a solid and easy to use communication tool.

### Keeping track of situations

In critical situations it is important to know if additional resources are nearby. The GPS based 'Where are you?' feature shows on the radio display during a call how far your team members are. When you press the PTT, they will also see where you are. This position information can be stored as waypoint for later use. During emergency call the radio sends its coordinates to a predefined destination.

### Loud and clear

THR9i offers clear sound and excellent audibility for voice calls. The enhanced Cassidian style user interface with user-friendly menu and the unique voice feedback provide extra user comfort. The large display makes it possible to catch all critical information at a glance. For example, you can clearly see if you are working in direct or network mode. A red signal on the display gives a clearly visible alert on low battery capacity, and when network coverage is diminishing.

The large display of the THR9i also allows users to view sharp images, as well as benefit from mobile applications that present mission critical information in a clear visual format. Thanks to its enhanced memory and Java™ support, the THR9i can receive and host applications that can be customised to meet specific needs.

### Adapting to your work

The compact THR9i is easy to carry on a lapel or belt, equipped with a solid belt clip or a carrying case.

With an easy and reliable battery connection mechanism and two battery options, one with an extended capacity, the radio can keep even the heaviest radio users in contact throughout their shift.

The robust side connector is dedicated to audio accessories such as lightweight headsets or a robust speaker microphone, as well as for data. The radio's bottom connector is used for charging, for data connection and programming.

THR9i radios can be managed using the smart Taqto® terminal management tool which allows several radios to be updated and re-configured simultaneously.

### Safe and secure on the field

For enhanced user safety, the radio provides an advanced Lifeguard solution, also known as man down alarm. If the radio stops moving or remains horizontal for too long, it triggers a local alert. If the user does not respond, the radio automatically activates an alarm and sends its coordinates to a predefined destination over the TETRA network.



### Accessories

There is a wide range of accessories available for THR9i radios. TETRA Accessory Catalogue by Cassidian presents several alternatives for the following accessory categories:

- Audio
- Power
- Carrying
- Installation
- Connectivity



# THR9i TETRA handportable radio

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  
 TETRA Speech codec (ACELP) according to EN 300 395

## Frequency Band

- 330-360 MHz
- 350-380 MHz
- 380-430 MHz
- 450-470 MHz

## Power Class

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

## Size

- Weight: 270 g
- Dimensions: 133 x 58 x 31 mm

## Durability

- Water, dust and shock resistant according to IP65 classification

## Display

- Full-color QVGA display
- Up to 262144 colors with 240 x 320 pixels
- Display backlight off by single key press
- Display reverse (180 degrees by single key press)
- Display texts in more than 25 languages
- Support for Latin, Arabic, Bulgarian, Chinese, Greek, Korean, Macedonian, Russian and Serbian

## 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

## GPS receiver

Inbuilt A-GPS receiver with internal memory

- Power save mode
- GPS activity indicator
- Sensitivity -162 dBm
- Simultaneous satellites up to 12
- Cold start accuracy (open sky)\*  
- 2.5 meters CEP
- Cold start TTFB, time to first fix (open sky)\*  
- < 30 seconds
- Position information sending on request or on triggers (e.g. time, distance, status message)
- Position information sending during red key calls and public emergency calls
- Waypoints, waypoint guidance
- Showing caller's distance and direction during a call ("Where are you" feature)

\* measured at -130 dBm

- 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)

## Call Types

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

## Group Communication

- Up to 3 000 groups
- Up to 200 group folders
- Up to 400 groups per folder
- Dynamic Group Number Assignment (DGNA), up to 200 DGNA groups
- Up to 10 background groups
- Priority scanning
- Scanning list up to 59 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
- 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, 2B and 2C
- DMO status messages
- DMO SDS messages
- ETSI TETRA type 1A DMO repeater operation (option)
- Re-broadcast of group and emergency groups calls on configured DMO groups

## Messaging

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

## Security

- Lifeguard - an advanced man down alarm
- Authentication
- Mutual authentication

\*\* for most languages

- Air Interface Encryption (AIE) 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
- XHTML color browser
- AT-command interface for applications
- Java™ MIDP 2.0 platform

## Interfaces

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

## Other Features

- Voice feedback
- Configurable main menu
- Configurable fast menu
- Configurable function keys
- 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
- Vibration alert
- Remote control through SDS or status
- Secondary Control Channel (SCCH)

## Battery

Li-Ion 1900 mAh (premium battery) and 4600 mAh (heavy duty battery)

Estimated values for 1900 mAh battery:

- Up to 19 h (5/5/90)
- Up to 16,5 h (10/30/60)
- Up to 25 h (standby)

Estimated values for 4600 mAh battery:

- Up to 36 h (5/5/90)
- Up to 32,5 h (10/30/60)
- Up to 48 h (standby)

Note: GPS usage affects the above mentioned times.

## FOR FURTHER INFORMATION PLEASE CONTACT

Cassidian / Wörthstrasse 85 / 89077 Ulm / Germany / T: +49 (0) 731 392 11  
 Cassidian / MetaPole / 1, boulevard Jean Moulin / CS 40001 / 78996 Elancourt Cedex - France / T: +33 (0)1 61 38 50 00  
 Cassidian / Hiomotie 32 / 00380 Helsinki - Finland / T: +358 10 4080 000 / e-mail: scs@cassidian.com