TMR880i TETRA mobile radio

Mobile connection with confidence

The TMR880i TETRA mobile radio meets the requirements for secure and efficient voice and data communications.

The TMR880i consists of a radio transceiver and a separate control unit for easy installation and use in a wide variety of vehicles. The radio unit can be integrated into - and controlled by – an external device or application, making it ideal for data applications such as telemetry, positioning and remote control.

The CUR-3 control unit has a professional, balanced design and a large colour display for optimised visibility, even in changing light conditions. Voice feedback guides the user in talk group selection and the Fast Menu functions enabling reliable and intuitive operation.

Configurable menus and keys and a "Go to" quick menu enable customising of the radio to meet an organisation's precise needs.

TMR880i supports smart card based end-to-end encryption. Communications can be encrypted all the way from the sending unit to the receiving unit. This encryption solution provides the highest level of security, allowing implementation of organisation's specific encryption algorithms. The TMR880i has an integrated slot for the smart card. An external smart card reader is available for further flexibility.

The Java™ platform allows organisations easily introduce its own applications with a customised user interface.

With its integrated GPS/GNSS receiver, the TMR880i can provide the user - as well as the command and control centre - with accurate position information.

The position of a radio can be requested over the air or the radio can send its position at certain intervals, or at defined triggers. Users can view their coordinates, altitude, speed, and direction on the display. For enhanced user safety, the radio can be set to send details of its current or latest position to a predefined address. The user friendly position-based Waypoint guidance application can show the direction and distance to a selected destination.

AIRBUS

TMR880i TETRA mobile radio

Frequency bands
- 380 – 430 MHz
- 806 – 825, 851 – 870 MHz

Power class
- EN 300392-2 compliant, power class 3
- Receiver class A
- RF power control, 5 steps of 5 dB

Size
- Radio Unit
  - Weight: 1004 g
  - Dimensions: 60 x 182 x 125 mm (H x W x D)
- Control unit CUR-3
  - Weight: 240 g
  - Dimensions: 72 x 190 x 36 mm (H x W x D)

Durability
- Vibration resistant IEC-60068-2-6, IEC 60068-2-64, Fh broad-band
- Solar radiation resistant IEC-60068-2-5
- Temperature changes IEC-60068-2-14 Na

Display
- Transmissive high-resolution, active TFT color display
- 130 x 130 pixels, 65,536 colors
- Display texts in more than 25 languages
- Support for Latin, Arabic, Chinese, Korean, Cyrillic and Bulgarian characters and keymats
- Night vision mode

Keypad / controls
- Alphanumeric keypad
- 4 navigation keys, 3 selection keys
- Power-on key, volume keys, red function key, duty key, fast menu key, group selector, back key, display brightness control

A-GPS / GNSS receiver
- A-GPS receiver in 380-430 MHz version
- **GNSS** receiver in 800 MHz version (A-GPS, Glonass, BeiDou/Galileo)
- 1-3 satellite system simultaneously in use with **GNSS**
- 72 channels receiver with **GNSS**
- Sensitivity -162 dBm / -167 dBm
- Simultaneous satellites up to 12 (A-GPS) /**32 (GNSS)**
- Cold start accuracy (open sky)*- 2,5 meters / **2,0 metres** CEP
- Cold start , time to first fix (open sky)*- < 30 seconds / **< 26 seconds**
- * measured at -130 dBm / GPS+Glonass

A-GPSS/GNSS features
- Internal memory
- Automatic position saving
- Power save mode
- Positioning activity indicator
- 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
- SBAS augmentation systems (WAAS, EGNOS, MSAS, GAGAN) **in GNSS**

- Waypoints, waypoint guidance
- Showing caller's distance and direction during a call ('Where are you' feature)
- Saving own or caller's waypoint with one key press for Waypoint guidance
- Support for ETSI location information protocol for TETRA (LIP)

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

Network features (added as new)
- Multiple network support
- ISI support
- Clock synchronisation with network and/or GPS time
- Transmission barring (Tx inhibit)
- Load Directed Roaming (LDR)
- Alert for out of network coverage

Direct mode features
- Up to 180 DMO groups
- 60 DMO channels
- TMO-DMO via Gateway communications support, but not as a Gateway itself
- DMO repeater type 1A and 1B communications support, and acting itself as type 1A repeater (optional)
- 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 message, also during a call and even via Repeater/Gateway
- DMO SDS messages
- Network monitoring while in DMO

Group communication
- Up to 2 000 groups
  - 9999 group selection shortcuts
- Up to 200 group folders
- Up to 200 group sub folders with 3 layers
- Up to 400 groups per folder
- Dynamic Group Number Assignment (DGNA), up to 200 DGNA groups
- Up to 20 background groups
- Priority scanning
- Scanning list up to 60 groups
- Voice override in group calls (pre-emption)
- Late entry

Messaging
- Status messages
- Text messages with concatenation
- Situation indicators to a predefined address
- Flash messages
- Call-out
- Predictive text input T9 for most languages
- Unit alert (Selective alert)
- SDS3 polling

Security
- Authentication and Mutual authentication
- Air Interface Encryption (AIE) security classes:
  - Class 1: Clear
  - Class 2: SCK
  - Class 3: DCK/CCK
  - Class 3G: GCK (requires TETRA SIM card)
- Phone and Security code
- Temporary disable/enable (Stun)
- Permanent disable (Kill)
- Support for smart card based end-to-end encryption (option)

TETRA SIM support (option)
- TSIM card with subscriber identification information (ITSI and authentication key K)
- Easy to move subscriber information with TSIM card from one radio to another

Wireless data
- IP packet data
- WAP 2.0 over TETRA IP packet data
- xHTML browser
- AT-command interface for applications
- Java™ MIDP 2.0 platform

Interfaces
- Separate control unit CUR-3
- 16 configurable I/O pins
- Multiple audio devices
- Helmet audio interface
- Serial data
- External power on / off
- External PTT
- External emergency PTT
- 12 V supply voltage
- Ignition sense
- Internal slot for smart card
- External smart card reader
- Active GPS antenna
- TETRA antenna
- Service connector for programming
- USB flashing

Usability
- 500 phone book entries
- 4 profiles: General, Silent, Meeting, Outdoor
- Aliasing – call routing service
- Voice feedback
- Configurable main menu
- Configurable fast menu
- Configurable functions keys
- Speed dialing (one touch dialing, locations 2-9)
- DTMF tone dialing
- Any key answer
- Duplex call barring
- Remote control through SDS or status
- Secondary control channel (SCCH)