



TW1m TETRA voice and data modem

Small and powerful

The Airbus TW1m voice and data modem delivers high availability, extreme security and low energy consumption. The voice and data enabled modem can be used when unexpected downtime can risk the safety or even lives of users.

The wide-ranging integration options offered by the TW1m include all types of embedded systems –SCADA, custom telemetry, position tracking, perimeter access control, voice applications and many more.

The TW1m modem is small and energy efficient, yet big on performance, boasting a power class 3L TETRA transceiver and the advanced GPS positioning found on TETRA devices. Its high receive sensitivity provides excellent network coverage.

All key features included

The TW1m's features include GPS location, voice, data port type selection and T-SIM card reader. Optional features include higher TX power level and DMO Repeater.

Versatile connectivity

The TW1m comes with third-party off-the-shelf interfaces, allowing integrators to use their preferred method of connectivity and wiring. The board has a system connector for data/PEI and voice and a choice between RS-232 serial connector or a USB connector. It also offers interfaces for programming and power.

Safe and uninterrupted information transfer

Connected systems often have safety and security concerns. By using the TW1m, you always get the highest level of security, from mutual authentication to advanced encryption options.

The TW1m TETRA modem meets the highest data protection standards required by public safety organizations, with advanced security features that include an E2EE option.

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TW1m TETRA voice and data modem



Size

- Weight: 66 g
- Dimensions: 84 x 67 x 24,7 mm

Frequency bands

- RC-47: 380-400MHz, 406-430 MHz

Power class

- Compliant EN300392-2 power class 3L
- (Power class 3L as an option)
- Receiver class A
- RF power control, 4 steps of 5 dB, and 1 step of 2,5 dB

Configuration

This product is available with:

- TETRA Voice
- T-SIM card reader
- RS232 or USB data
- GPS

Durability

To be integrated into the overall solution - so not IP classified on its own

Interfaces

- System connector 1 for Data / PEI & audios
- System connector 2 for power toggle and service interface for parametering and flashing
- RS232 connection for data (serial port)
- USB connection for data
- Connector for external TETRA and GPS antenna connectors
- T-SIM reader
- Smart interface licence included
- USB for programming and flashing with TAQTO

GPS positioning

- Receiver with internal memory
- Power save mode
- GPS activity indicator
- Sensitivity -162dBm
- Simultaneous satellites up to 12
- Cold start accuracy (open sky)* 2,5 meters CEP
- Cold start, time to first fix (open sky)* < 30 seconds

*measured at -130dBm

Call types

- Phone calls in TETRA & public networks
- Express and group calls in TETRA
- 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
- Late entry

Direct mode features

- Up to 1500 DMO groups
- 500 DMO channels
- DMO gateway support as DMO subscriber (not a gateway itself)
- Support for DMO repeater type 1A & 1B as DMO subscriber
- 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)

Messaging

- Status messages
- Text messages with concatenation
- Situation indicators to a predefined address
- Call-out
- Unit alert (Selective alert)

Security

- Authentication and Mutual authentication
- Air Interface Encryption (AIE) security classes:
 - Class 1: Clear
 - Class 2: SCK
 - Class 3: DCK/CCK
 - Class 3G: (requires TETRA SIM card)
- 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)

Tetra SIM support

- TSIM holder as option
- TSIM card with subscriber identification information (ITSI and authentication key K)
- Easy to move subscriber information with TSIM card from one modem to another

Wireless data

- IP packet data
- AT-command interface for applications

Other features

- Remote control through SDS or status
- Duplex call barring
- Multiple network support
- Energy economy
- Clock synchronisation with network and/or GPS time
- Secondary Control Channel (SCCH)

Learn more about the TW1m:

www.securelandcommunications.com/tw1m-modem

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