

TDM880i TETRA data modem

Powerful Data Communications

The TDM880i is an advanced TETRA data module dedicated to SCADA, smartgrid, telemetry, remote control and positioning applications, especially in embedded solutions.

While it can also be used as a stand-alone device, it is designed to be integrated with a master device in applications such as automatic meter reading, intelligent traffic systems and other embedded systems. Its 3 W output power ensures efficient delivery of your vital data.

Easy integration

The TDM880i is a compact printed circuit board, optimised for easy integration, yet encapsulates the full functionality of a TETRA data radio. The serial interface for interacting with TDM880i is available in two variants. A low voltage version for direct connection with external CPU is available directly on the interface connector. For external devices, an accessory set is available providing RS232 interface with flow control capability. Also, signals indicating operational status of the device and power control inputs are available in multiple voltage version variants.

All in a single package

The TDM880i uses IP data and SDS messages for TETRA communication. Its I/O lines and RS232-serial interface for AT commands enable connectivity to a wide variety of applications. The I/O lines can be configured as outputs that can be controlled by short data messages, while as input they can be used to trigger to send status message or location information to predefined destinations. The module can use intelligent message transfer options for managing the traffic load, such as control channel associated with an ongoing group call.

AIRBUS

TDM880i – for powerful data

TDM880i fulfil 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

Size

- Weight: 110 g
- Dimensions: 160 x 64 x 22 mm

Frequency Bands

- 380 – 430 MHz

Power Class

- Compliant with EN300392-2 power class 3 (3W)
- Receiver class A

Security

- Authentication
 - Mutual authentication
 - Air Interface Encryption (AIE) with dynamic and static ciphering keys (DCK/CCK) supporting TETRA encryption algorithms TEA-1, TEA-2, TEA-3
- Support for security classes:
- Class 1: Clear
 - Class 2: SCK
 - Class 3: DCK/CCK
 - Temporary disable/enable (stun)
 - Permanent disable (kill)

Wireless Data

- TETRA IP packet data, single slot
- AT-command interface for applications
- Group address SDS send and receive
- SDS sending on FACCH in an ongoing group call
- Secondary control channel SCCH

Positioning

- Inbuilt GPS receiver
- Power save mode
- Cold start accuracy (open sky)*
 - 5 meters (50% confidence level)
 - 10 meters (95% confidence level)
- Cold start TTFF, time to first fix (open sky)*
 - 40 seconds (average)
 - 60 seconds (95% confidence level)
- NMEA output can be activated using AT command interface
- Support for ETSI location information protocol for TETRA (LIP)
 - Time & distance based triggers
 - Position sending upon request
 - Saved track retrieval
- GPS Track saving with managed backlog sending

*measured at -130 dBm

Advanced I/O Line Functionality

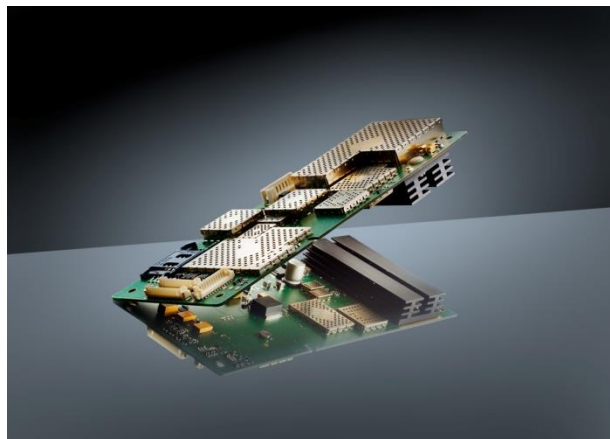
- I/O Line state change by SDS
- I/O Line triggered SDS sending
- Power On indication
- In Service indication
- GPS Fix indication
- Over temperature indication
- Location sending triggered by I/O line state change
- Buffered I/O line triggered alerts

Interfaces

- CPU interface with 2.8 V signal levels
 - Serial interface with AT command and IP data support
 - IGS power on/off control
 - Device status indication signals
- I/O interface
 - 12 user configurable I/O lines
 - Device status indication signals
 - 5 V logic levels
- Power supply with level sensitive IGS signal Input
- RS-232 with AT command and IP data support available through accessories
- GPS antenna interface with IPX jack connector, includes +5VDC feed for active antenna
- TETRA antenna interface with MMBX connector

Accessories

- AC/DC power supply (ACR-1)
- Power cable CA-124 with inline fuses
- Data adapter CA-125 enabling use with DLR-3T data cable
- Programming and parametering adapter CA-123 (to be used with DAU-9S)
 - RF adapter cables are available for converting PCB RF connectors to TNC (TETRA RF)/SMA (GPS) connectors



For more information please contact

Airbus Defence and Space / Hiomotie 32 / 00380 Helsinki/ Finland / T: +358 10 4080 000 / e-mail: marketing@securelandcommunications.com

Airbus Defence and Space / Wörthstraße 85 / 89077 Ulm / Germany / T: +49 (0) 731.392-0 /

Airbus Defence and Space / MetaPole / 1, bld Jean Moulin / CS 40001 / 78996 Elancourt Cedex / France / T: +33 (0)1 61 38 50 00