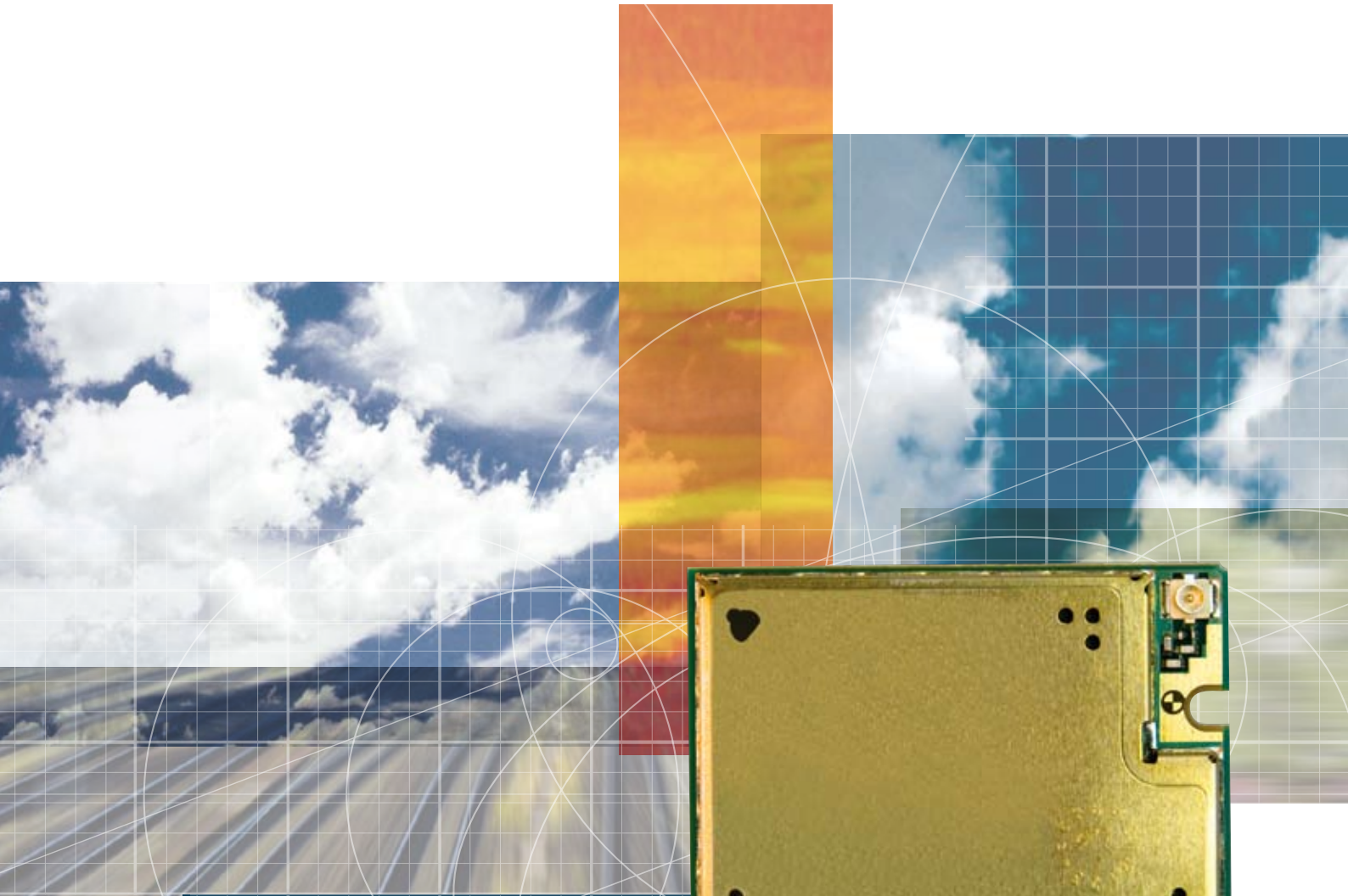




special products for special customers

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TRM-3



Approved Technology for
the GSM-Rail System

TRM-3

The TRM-3 is a reliable and high-performance module for GSM-R, the new radio system for railways. Due to long standing product experience and innovative technologies this professional device is the high-end module for GSM-R.

Technical Data

- Dimensions 35 x 32.5 x 2.95 mm (L x W x H)
- Weight 5.5 g
- Supply voltage range 3.3...4.8 V
- Power consumption:
 - Power down 50 μ A
 - Sleep mode 3.0 mA (DRX=5)
 - Idle mode 15 mA
 - Speech mode 260 mA (average),
 - GPRS (class 10) 450 mA (average)
 - Peak 3 A
- Temperature Range: Normal operation: -20°C to +70°C
Restricted operation: -40°C to +70°C
Storage: -40°C to +85°C

System / Standards

- Quad-band GSM-R / EGSM 900 / GSM 1800 / GSM 1900
- GSM Phase 2 / Phase 2+
- GPRS multi-slot class 10
- Output power:
 - Class 4 (2 W) at GSM-R / EGSM900
 - Class 1 (1 W) at GSM1800 / GSM 1900
- AT commands via serial interface
- SIM Application Toolkit

Data Services

- GPRS class 10
- Mobile station class B
- PBCCH support
- Coding scheme CS 1-4
- CSD data transmission
 - up to 14.4 kbps; USSD
 - Non transparent mode: V.110
- Fax: group 3, class 2
- TCP/IP stack access via AT command
- Internet services: TCP, UDP, HTTP, FTP, SMTP, POP3

Special Features

- RIL driver for Microsoft® Windows Mobile® 6 based devices
- Multiplex driver for Microsoft® Windows XP® and Windows Vista®

Specifications for Voice

- Triple-rate codec for HR, FR, EFR
- Adaptive multi rate (AMR)
- Hands-free operation
- Noise reduction and echo cancellation

SMS via GSM and GPRS

- Point-to-point MO and MT
- SMS cell broadcast
- Text and PDU mode

Interfaces

- Interface to external SIM
- Board-to-board connector
- Digital and analog audio interfaces
- Two serial interfaces
- Power supply 3.3 ... 4.8 V
- Antenna connector and antenna solder pad
- Battery charger

Target Applications

TRM-3 can be applied for data and voice embedded solutions within GSM-Rail environment.

