

## Next Generation 8 Watt GSM-R Module



**TRC-5**  
**TRC-5 ext**

**Compact 8 Watt GSM-R technology new defined to cope with  
challenging neighborhood radio interferences**

**Optional: Extended GSM-R**

# TRC-5 / TRC-5 ext

The TRC-5 and TRC-5 ext are the first 8 Watt compact modules of the 5<sup>th</sup> generation. This new 8 Watt module generation surpasses the ETSI professional mobile standard by far. The TRC-5 ext supports the extended frequency band of GSM-R.

## Technical Data

- Dimensions 125 x 70 x 30 mm (L x W x H)
- Weight 500g
- Supply voltage 14-50 Vdc
- Current consumption 20°C / 70°C  
(at 24V) 37mA / 160mA idle mode  
180mA / 310mA voice call  
180mA / 310mA GPRS 4RX/1TX  
312mA / 440mA GPRS 3RX/2TX
- Peak current 4A
- Temperature range -40°C to +85°C
- Advanced receiver performance  
Average RX Blocking Level for EGSM900 interferer: > 17 dBm  
Average IM3 Threshold for EGSM900 interferer: > 11 dBm



## System / Standards

- Frequency bands  
GSM-R / EGSM 900 / GSM1800 (TRC-5)  
EGSM-R / EGSM900 / GSM1800 (TRC-5 ext)
- Professional Mobile Standard ETSI TS 102 933-1/2 V1.2.1
- ER-GSM Frequencies ETSI TS 102 932-1/2 V1.1.1  
(TRC-5 ext only)
- GSM Phase 2 / Phase 2+
- Mobile station class B
- Output power 900 MHz 8 Watt  
1800 MHz 1 Watt
- Triple-rate codec for HR, FR,EFR
- Adaptive multi-rate (AMR)  
for non ASCII applications supported
- Control with AT commands via UART  
or USB interface (virtual COM-Port)

## Data Services

- GPRS class 8 (8Watt); class 10 (2 Watt)
- PBCCH (Packet Broadcast Control Channel) support
- Coding scheme CS 1-4
- CSD data transmission up to 14.4 kbps  
(Non transparent and transparent mode)
- PPP stack for GPRS data transfer
- Fax group 3, class 2
- TCP/IP stack access via AT command
- Protocols: TCP, UDP, HTTP, FTP, SMTP, POP3

## Interfaces

- RS232 serial interface (9-pin D-Sub)
- USB Mini B connector (service and maintenance interface)
- Power supply connector / RIA PLUGCON Type 382
- SMA Antenna connector
- Audio connector (Western RJ50 / 10-pin)
- 3 Status LEDs
- Miniature 3.0V/1.8V SIM card reader

## ASCII Features

- VGCS (Voice Group Call Service)
- VBS (Voice Broadcast Service)
- UUS1 (User-to-User Signalling type 1)
- eMLPP (enhanced Multi-Level Precedence and Preemption)

## EIRENE Features

- FN supported (Functional Number)
- PFN supported (Presentation Functional Number)
- REC supported (Railway Emergency Call)

## Target Applications

The 8 Watt TRC-5 and TRC-5 ext modules are designed for CAB radio and ETCS L2 train control systems and fit to portable and fixed installations.

## Part No.

TRC-5:	1337
TRC-5 ext:	1339



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