

Next Generation 8 Watt  
embedded GSM-R Module



**TRC-5AP2**  
**TRC-5AP2 ext**

**8 Watt GSM-Rail technology new defined to cope with  
challenging neighborhood radio interferences made for  
CAB radio and ETCS L2 embedded solutions**

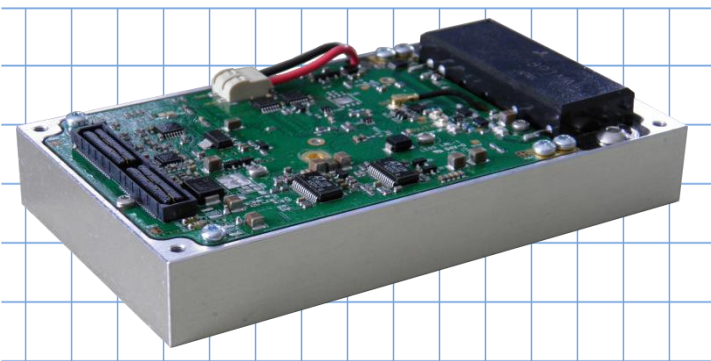
**Optional: Extended GSM-R**

# TRC-5AP2 / TRC-5AP2 ext

The TRC-5AP2 and TRC-5AP2 ext are the first 8 Watt modules of the 5<sup>th</sup> generation. This new 8 Watt module generation surpasses the ETSI professional mobile standard by far. The TRC-5AP2 ext supports the extended frequency band of GSM-R.

## Technical Data

- Dimensions 125 x 70 x 25 mm (L x W x H)
- Weight 350g
- Supply voltage 14-50 Vdc
- Current consumption (at 24V)
  - 20°C / 70°C
  - 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 / EGSM900 / GSM1800 (TRC-5AP2)
  - EGSM-R / EGSM900 / GSM1800 (TRC-5AP2 ext)
- Professional Mobile Standard ETSI TS 102 933-1/2 V1.2.1
- ER-GSM Frequencies (TRC-5AP2 ext only) ETSI TS 102 932-1/2 V1.1.1
- 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 (8 Watt), class 10 (2 Watt)
- PBCCH (Packet Broadcast Control Channel)
- 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 commands
- Protocols: TCP, UDP, HTTP, FTP, SMTP, POP3

## Interfaces

- 80-pin QSE connector / Samtec™ QSE-040-01-L-D-A
- U.FL 'RX' Antenna connector (split mode: RX only; merge mode: off)
- U.FL 'RX/TX' Antenna connector (split mode: TX only; merge mode: RX/TX combined)
- Miniature 3.0V/1.8V SIM card reader

## ASCI Features

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

## EIRENE Features

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

## Target Applications

The 8 Watt TRC-5AP2 modules are designed for CAB radio and ETCS L2 train control systems and fit perfectly into your application as an embedded solution.

## Part No.

TRC-5AP2:	1341
TRC-5AP2 ext:	1342