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# Triotrace Test System

## TTS-TRC-3



Approved GSM Test  
Technology

Datasheet

# TTS-TRC-3

The TTS-TRC-3 is a high performance test system with ASCII features for observing and testing GSM(-R) networks. Due to long standing product experience and innovative technologies this professional ASCII 8 watt device is a smart gear for GSM(-R) measurements.

## Technical Data

- Dimensions 125 x 70 x 30 mm (L x W x H)
- Weight 500 g
- Power consumption 800 mA max. (without Peltier element)  
3.5 A (peak)
- Supply voltage 14 - 50 volt DC
- Temperature range -25°C to +85°C



## System / Standards

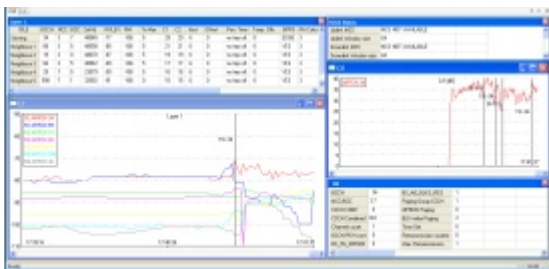
- Quad-band GSM-R / EGSM 900 / GSM 1800 / GSM 1900
- GSM Phase 2 / Phase 2+
- GPRS multi-slot class 8 (8 Watt), class 10 (2 Watt)
- Mobile station class B
- Output power
  - 900 MHz 8 Watt
  - 1800 MHz 1 Watt
  - 1900 MHz 1 Watt

## Specifications for Voice

- Triple-rate codec for HR, FR, EFR
- Adaptive multi-rate ( for non ASCII tests supported)

## Triotrace PC Application

- Trace log recording
- Online / offline protocol analysis



## Data Services

- GPRS class 10
- PBCCH support
- Coding scheme CS 1-4
- CSD data transmission
  - Up to 14.4 kbps
  - Non transparent mode
  - Transparent mode

## Interfaces

- USB Interface (USB Mini B connector)
  - 2x serial via USB
  - Digital audio via USB
- AT commands via RS232 or USB (CDC ACM) interface
- Voltage supply via RIA PLUGCON typ 382
- Antenna connector (SMA) 50 ohm
- Indication LEDs
- Miniature SIM card holder

## 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 (Railway Emergency Call)

## TTS Features\*

- Two serial ports over USB for simultaneous trace information and data transfer (CSD/GPRS) or AT cellular commands
- Monitoring and Quality of Service information for GSM/GPRS
- GSM/GPRS forcing functions
  - Channel
  - Band
  - Voice codec
- ASCII specific forcing function
- Scanning capabilities
  - Single ARFCN
  - Set of frequencies
  - Complete band

## ETCS L2 Features

The ETCS L2 test extension is available as optional feature. The additional data sheet 'TTS Extension ETCS L2' provides more details.

\* compatible with TTS-S55 software interface