

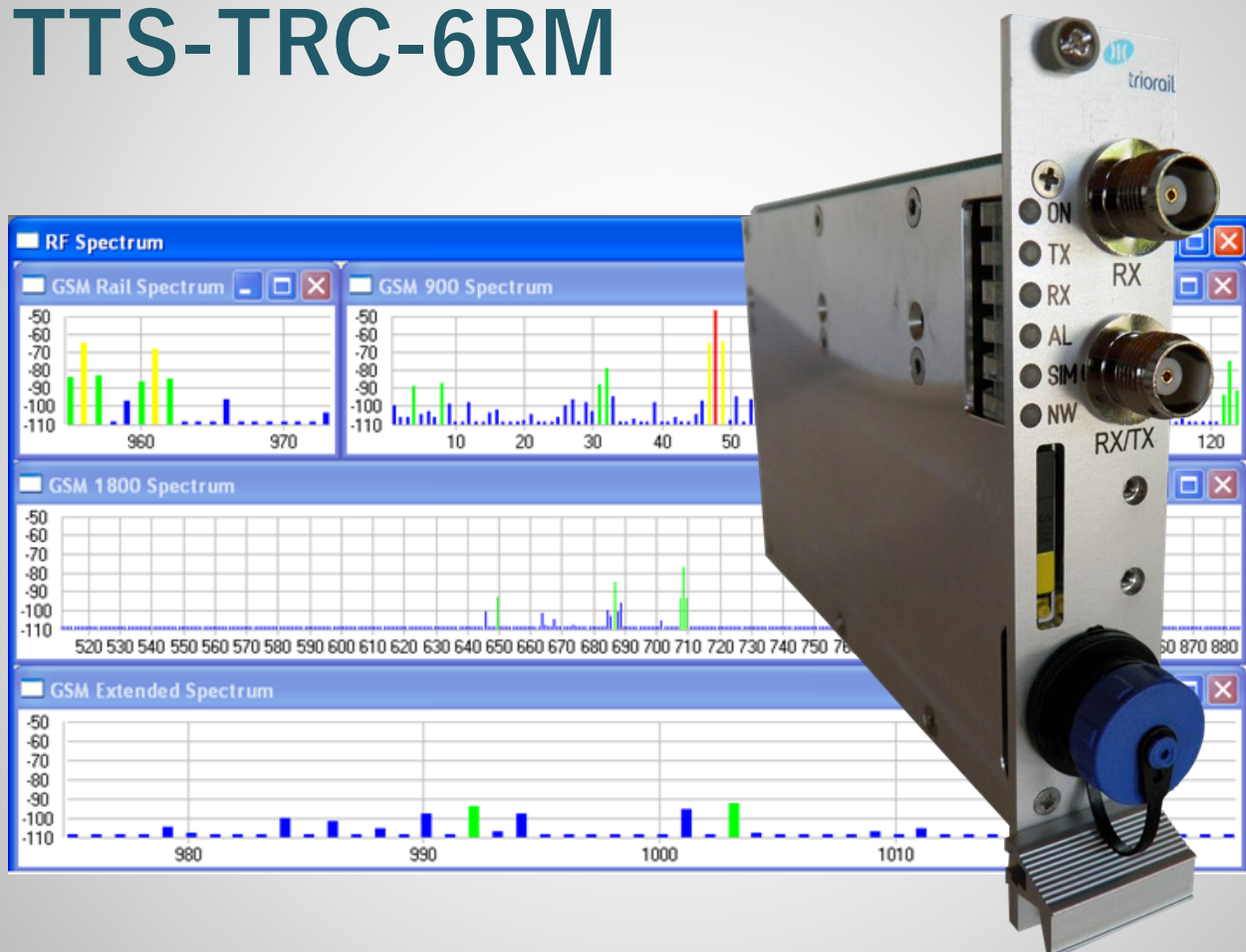


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GSM-R technology for railways

GSM-R / E-GPRS test module

TTS-TRC-6RM



Test transceiver made for ETCS/EDOR network measurements and monitoring

TTS-TRC-6RM

This rack-mounted module is the right choice for GSM-R, ETCS, EDOR network data communication testing and monitoring.



Technical data

Dimensions

L: 169.93 mm	(w/o front panel and connectors)
W: 25.00 mm	(fits 5HP)
H: 128.40 mm	(fits 3U)

Weight

440 g

Supply voltage

11 V_{DC} to 32 V_{DC}

Current consumption (12V_{DC}; 70°C)

Power down	2 mA
Idle	250 mA
CSD data	780 mA
GPRS (2TX/3RX)	1300 mA
E-GPRS (2TX/3RX)	820 mA
Inrush	8 A

Temperature range

-40°C to +85°C

Interfaces

96-pin backplane connector (IEC 60603-2)

USB interface Type Mini B

Status indicators 6-LEDs

Card reader Mini-SIM (1.8/3.0V)

Antenna connector A TNC 50 Ω (RX/TX)

Antenna connector B TNC 50 Ω (RX)

TrioTrace2 PC application

The inclusive TrioTrace2 PC SW visualizes all measured data in customizable Windows; Detection of GSM-R interferer; Trace log recording; Replay for post analyzing; Export of stored trace files in different formats.

ETCS L2

The device application supports a selected subset of parameters defined in the ERTMS GSM-R QoS test specification.

Part no.

TTS-TRC-6RM 4149

System features

Frequency bands

GSM-R/EGSM-R/EGSM900/GSM1800

RF output power

Class 2/8W	CSD/GPRS	900MHz bands
Class E1/2W	E-GPRS	900MHz bands
Class 1/1W	CSD/GPRS	1800MHz bands
Class E2/0.4W	E-GPRS	1800MHz bands

Professional Mobile Standard ETSI TS 102 933 V 2.1.1

ER-GSM Frequencies ETSI TS 102 392 V 1.1.1

EIRENE FRS 8.0.0/SRS 16.0.0 (Data only)

GSM Phase 2 and 2+; Mobile station class B

Control by AT commands via serial or USB interface

Data services

E-GPRS class 10

Modulation coding scheme MCS 1 – MCS 9

GPRS class 10

Coding scheme CS 1 – CS 4

CSD (transparent and non transparent mode)

Fax Group 3, class 1/2

PPP stack for GPRS/E-GPRS data transfer

Authentication PAP, CHAP

SMS MO, MT, CB, text and PDU mode

Test system

Layer 1	Serving/neighbor cell BCCH, ARFCN, cell ID, RX level, timing advance, power level
RR	ARFCN, channel type, time slot, network and base station color code
Messaging	GSM Layer 2/3, (E-)GPRS RLC/MAC, GMM/SM
GPRS	RLC/MAC, LLC, GMM, SM/SNDCP, TBF RLC mode, CS, NCO
MM	Cell ID, LA, MCC/MNC, TMSI, ciphering
QoS	GSM: FER, handover, call setup (E-)GPRS: LLC and RLC/MAC data rates
Forcing	BCCH, handover, channel, band, power class, GPRS
Scanning	Single ARFCN, set of frequencies, band, system information