GSM-R test module 8W

TTS-TRC-5

Compact 8 Watt GSM-R test device for network measurements and monitoring with best in class receiver performance

Extended GSM-R

GSM-R technology for railways

Datasheet

TTS-TRC-5

This compact 8W module is the right network probe for GSM-R in-depth Testing and monitoring. The test system provides first hand interferer detection. The new extended frequency band of EGSM-R is supported.

Technical data

Dimensions	125 x 70 x 30 mm [LxWxH]		
Weight	500 g		
Supply voltage	14 – 50 Vdc		
Current consumption	@24Vdc	@20°C	@70°C
Idle mode		37 mA	160 mA
Speech mode		180 mA	310 mA
GPRS (cl. 10)		312 mA	440 mA
Standby current	@24Vdc	22 mA	
In-rush current	@70°C	4 A	
Temperature range	-20°C to +85°C		

Interfaces

RS232 serial interface	9-pin D-sub
USB mini B	Service, test and maintenance only
Power supply	RIA PLUGCON type 382
Antenna connector:	Type SMA
Audio	10-pin Western RJ50
Display:	3 status LEDs
Card reader	Mini-SIM

ASCI / EIRENE

VGCS, VBS, UUS1, eMLPP

FN, PFN, REC

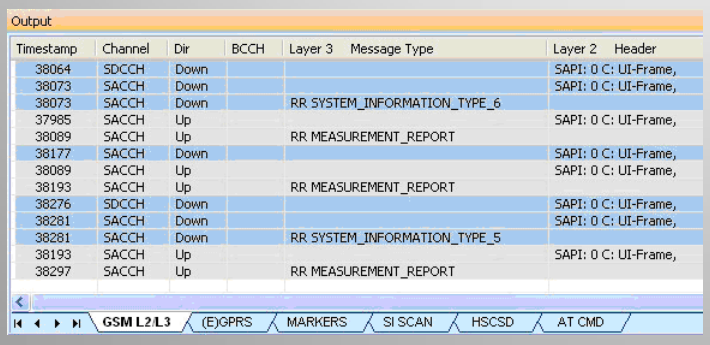
ETCS L2

QoS / subset of values defined in the ERTMS/GSM-R QoS test Specification [QoS working group, v1.2.i, 06-07-2006]

Transfer delay of user data frames

Round trip delay evaluation [optional loopback terminal required]

Data transmission interference and data throughput



System / Standards

Frequency bands	EGSM-R/GSM-R/EGSM900/GSM1800
RF output power	Class 2 [8 W] for GSM-R/EGSM-R/EGSM900 Class 1 [1 W] for GSM1800
Professional Mobile Standard	ETSI TS 102 933 V 1.2.1
ER-GSM Frequencies	ETSI TS 102 932 V 1.1.1
GSM Phase 2 and 2+,	Mobile station class B
Audio	Triple-rate codec for HR, FR and EFR AMR for non ASCI apps supported
AT commands	via serial or USB interface

Data services

GPRS class 10

PBCCH supported; Coding scheme CS 1-4

CSD with up to 14.4 kbps [Transparent and non transparent mode]

Fax group 3, class 2

PPP stack for GPRS data transfer

Authentication: PAP, CHAP

Protocols: TCP, UDP, HTTP, FTP, SMTP, POP3

SMS via GSM-R and GPRS [MO, MT, CB, text and PDU mode]

Test system

Layer 1		Serving/neighbor cell BCCH, ARFCN, cell ID, RX LEVEL, timing advance, power level
Radio Resources		ARFCN, channel type, speech codec, time slot, network and base station color code
Messaging		GSM Layer 2/3, GPRS RLC/MAC, GMM/SM
GPRS		RLC/MAC, LLC, GMM, SM/SNDCP, TBF, RLC mode, CS, NCO
Mobility Management		Cell ID, LA, MCC/MNC, TMSI, ciphering
QoS	GSM:	FER, handover, call setup
	GPRS:	Data rates of LLC and RLC/MAC
Forcing		BCCH, handover, channel, band, power class, GPRS, time slot, TCH, ASCI
Scanning		Single ARFCN, set of frequencies, band, system information

TrioTrace2 PC application

TrioTrace2 SW to visualize 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

Part no.

TTS-TRC-5	4141

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