



# GSM-R USB modems 2W



**TRM-5T USB**  
**TRM-5T USB ext<sup>\*)</sup>**

**GSM-R new defined to cope with  
challenging radio interferer**

<sup>\*)</sup> Extended GSM-R

**GSM-R technology for railways**

# TRM-5T USB / TRM-5T USB ext

The USB modems allow greater flexibility for immediate use and provide excellent receiver characteristics.



## Technical data

Dimensions	45 x 40 x 20 mm [LxWxH]
Weight	70 g
Supply voltage	via USB
Current consumption	
Idle mode	50 mA
Speech mode	160 mA [Average]
GPRS Class 10	400 mA [Average]
In-rush current	910 mA
Temperature range	-25°C to +70°C

## Interfaces

USB mini B	[Support of Windows® 8/10 with USB CDC-ACM driver; Digital audio and power supply via USB]
Antenna connector	SMA 50Ω
Display	3 status LED
Card reader	Mini-SIM [1.8 V / 3.0 V]

## ASCII features

VGCS	[Voice Group Call Service]
VBS	[Voice Broadcast Service]
UUS1	[User-to-User Signaling 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]

## Applications

The modems TRM-5T USB and TRM-5T USB ext can be applied easily and ad hoc for GSM-R and EGSM-R data and voice solutions within PC, notebook or other computing environment.

## System / Standards

Frequency bands	
GSM-R/EGSM900/GSM1800	[TRM-5T USB]
EGSM-R/EGSM900/GSM1800	[TRM-5T USB ext]
RF output power	
Class 4 [2 W]	{GSM-R/EGSM-R/EGSM900}
Class 1 [1 W]	{GSM1800}
Professional Mobile Standard	ETSI TS 102 933 V 2.1.1
ER-GSM Frequencies	[TRM-5T USB ext only] ETSI TS 102 932 V 1.1.1
GSM Phase 2 and 2+	
Mobile station class B	
Audio	Voice triple-rate codec for HR, FR and EFR AMR for non ASCII applications supported
Control by AT commands via USB CDC ACM interface	
SIM application toolkit	

## Data services

GPRS class 10 with up to 85.6 kbps [DL] and 42.8 kbps [UL]
PBCCH supported
Coding scheme CS 1-4
CSD data transmission with up to 14.4 kbps [Transparent and non transparent mode]
Fax group 3, class 2
PPP stack for GPRS data transfer
TCP/IP stack access via AT commands
Authentication: PAP, CHAP
Protocols: TCP, UDP, HTTP, FTP, SMTP, POP3
SMS via GSM, GSM-R and GPRS [MO, MT, CB, text and PDU mode]

## Part no.

TRM-5T USB	1331
TRM-5T USB ext	1332