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Transportable Communication System R&S®TMS-C

For stationary and mobile communications and remote control

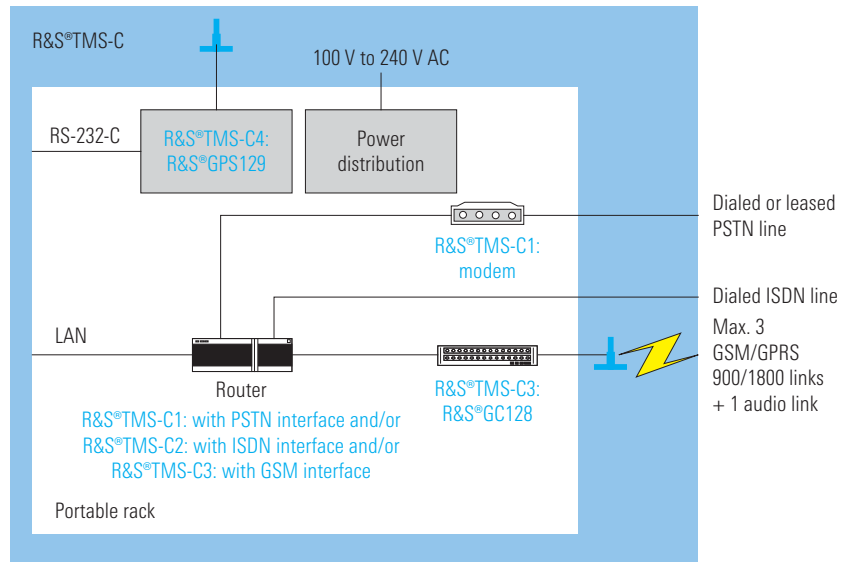
- ◆ Integrated equipment for network connections in a portable rack
- ◆ Easily carried by two persons
- ◆ Operable 24 hours per day
- ◆ Compact and cost-effective
- ◆ Quick setup and availability
- ◆ Remote control for R&S®TMS and R&S®TMSR systems
- ◆ Wide power supply range 100 V to 240 V AC, 11 V to 32 V DC (with option R&S®TMS-B3)

Overview

The Transportable Communication System R&S®TMS-C can integrate equipment for network connections via a PSTN line and/or an ISDN line and/or up to four GSM/GPRS 900/1800 links in a portable rack. In addition, it can integrate an R&S®GPS129 for automatically determining the system's location and for providing a high-precision reference frequency.

The R&S®TMS-C consists of the following commercial off-the-shelf components:

- ◆ Router
- ◆ Power distribution
- ◆ Portable rack
- ◆ Option R&S®TMS-C1: modem and interface for the router for a network connection via a dialed or leased PSTN line
- ◆ Option R&S®TMS-C2: interface for the router for a network connection via a dialed ISDN line



Block diagram of the R&S®TMS-C with all options

- ◆ Option R&S®TMS-C3: Communication Unit R&S®GC128 and interface for the router for a network connection via a GSM/GPRS 900/1800 link (as options: two additional GSM modules within the R&S®GC128 for channeling and one for use as a telephone)
- ◆ Option R&S®TMS-C4: R&S®GPS129 with R&S®ARGUS device driver

R&S®GPS for automatically determining the system's location and for the reference frequency

- ◆ Option R&S®TMS-B3: external DC/AC converter for converting 11 V to 32 V DC to 230 V AC
- ◆ Option R&S®TMS-B4: front and rear cover for portable rack with openings for cables and fan

Front view of the R&S®TMS-C with options



Application

Today's electromagnetic spectrum is getting more and more crowded, resulting in an ever growing demand for regulation and control.

The new technologies not only occupy higher frequency ranges – they also penetrate distant remote areas.

As a result, measurements far beyond the reach of standard fixed or mobile monitoring stations are required. The R&S®TMSx and R&S®TMSR transportable monitoring stations are an excellent solution.

Nevertheless, it is very important for the various monitoring stations to be able to communicate with each other and with control stations, e.g. regional or national headquarters. The Transportable Communication System R&S®TMS-C is especially designed for this purpose.

The connection via PSTN or ISDN is perfect for fixed stations or transportable systems where the necessary infrastructure is available, e.g. on roofs of buildings.

Mobile and transportable systems in rural areas can be connected via the GSM network. The optional GSM modules, of which as many as three are permitted, enable efficient communications and channeling to meet even high bandwidth requirements.

One additional GSM module for speech communications is also available as an option.

The extremely versatile R&S®TMS-C permits a highly flexible network scenario. A central control station can, for example, connect to a specific monitoring station and perform measurements. If Spectrum Monitoring Software R&S®ARGUS is installed on that station, even automatic measurements can be defined. The connection can then be cleared down and new connections to other stations can be established.



Rear view of the R&S®TMS-C with options

In the meantime, the measurement will be continued by R&S®ARGUS. After the user-defined end of the measurement, the connection can be reestablished in order to retrieve the results.

For direction finding and location purposes, several DF stations must be combined in order to perform synchronized and simultaneous measurements. This coordinated communication can be done by the R&S®TMS-C as well.

The R&S®TMS-C can be used in fixed, mobile and transportable systems alike. Its compact, lightweight but sturdy design makes operation in frequently varying locations very convenient.

Hardware components

A WIC interface for the router can provide either two RS-232-C or one ISDN connection. Since the router provides only two slots for WIC interfaces, a maximum of either four RS-232-C interfaces or one ISDN and two RS-232-C interfaces is possible.

Depending on the equipment used, the following combinations of connections are possible.

Four RS-232-C interfaces:

ISDN	PSTN	GSM modules
0	0	4
0	1	3
0	2	2

In other words, the four RS-232-C interfaces provided by the two WIC cards can be used for either four GSM modules or one modem and three GSM modules or two modems and two GSM modules.

If the router is equipped with one ISDN interface and two RS-232-C interfaces, the following combinations are possible:

ISDN	PSTN	GSM modules
1	0	2
1	1	1
1	2	0

For detailed information about the hardware, refer to the following data sheet or Technical Information:

- ◆ Data sheet R&S®GC128
- ◆ Technical Information R&S®GPS129

Further information

Further information on the R&S® ARGUS system family is available on the Internet at www.argus.rohde-schwarz.com or from your local Rohde & Schwarz representative.

Information can also be obtained by sending an e-mail to argus@rohde-schwarz.com.

Specifications

General data	
Operating temperature range	-10 °C to +45 °C with option R&S®TMS-B4: -10 °C to +50 °C
Storage temperature range	-40 °C to +70 °C
Humidity	80 % cyclic, +25 °C/+40 °C
Sinusoidal vibration	5 Hz to 150 Hz
Random vibration	10 Hz to 500 Hz
Shock	40 g shock spectrum
EMC	meets EMC directive of EU (89/336/EEC) and German EMC law
Safety	meets EN 60950/VDE0805
Quality standard	developed and manufactured in compliance with ISO 9000
Power supply	100 V to 240 V AC/ 47 Hz to 63 Hz/235 VA DC power supply on request
Dimensions (W x H x D) (box)	555 mm x 358 mm x 720 mm
Weight	27 kg (basic version) with option R&S®TMS-C1: plus 3 kg with option R&S®TMS-C3: plus 2.5 kg with option R&S®TMS-C4: plus 3 kg with option R&S®TMS-B3: plus 8 kg

Ordering information

Designation	Type	Order No.
Basic version		
Transportable Communication System for R&S®TMS200/ R&S®TMS210 Router, power distribution and portable rack	R&S®TMS-C	3026.4919.02
Options		
PSTN Network Connection for R&S®TMS-C Interface for router and modem for network connection via analog dialed or leased line	R&S®TMS-C1	3026.7760.02
ISDN Network Connection for R&S®TMS-C Interface for router for network connection via dialed ISDN line	R&S®TMS-C2	3026.7818.02
GSM Network Connection for R&S®TMS-C Interface for router and R&S®GC128 for network connection via GSM/ GPRS 900/1800	R&S®TMS-C3	3026.7860.02
R&S®GPS129 and R&S®ARGUS Device Driver GPS for R&S®TMS-C	R&S®TMS-C4	3026.7918.02
External DC/AC Converter, converts 11 V to 32 V DC to 230 V AC	R&S®TMS-B3	3026.7618.02
Front and Rear Cover for portable rack with opening for cables and fan for R&S®TMSx	R&S®TMS-B4	3026.7660.02

More information at
www.rohde-schwarz.com
(search term: TMS-C)



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