ACCESSNET® -T Cube

Modular Base Station System for *ACCESSNET*® -T

With *ACCESSNET*® -T Cube Rohde & Schwarz presents a completely new, flexible and mobile TETRA communications system. The customer chooses whether the system is used as a single cell system for emergency situations, as a temporary radio service area enlargement of an existing network or for temporary increase of existing network capacities – no application boundaries are set. Operating conditions are diverse.

Our answer is uncompromising and consistent [3]:

- Consistently mobile,
- Consistently modular,
- Consistently multifunctional.

These solutions make life much easier for operators when operating networks with public safety tasks. The customer creates the *ACCESSNET*® -T Cube system from a broad selection of modules, tailor-made to his requirements. Environmentally challenging conditions do not present any problems for *ACCESSNET*® -T Cube.

Network radio coverage and capacity cost-optimization may be achieved by considering the *ACCESSNET*® -T Cube during network planning. In special cases, the required maximum radio coverage and capacity can then be achieved with *ACCESSNET*® -T Cube.

ROHDE&SCHWARZ

ACCESSNET®-T Cube

ACCESSNET® -T's different functionalities are transferred into the mobile operation field by *ACCESSNET*® -T Cube. Support of voice and data communication is in accordance with the open TETRA standard. *ACCESSNET*® -T Cube is portable, transportable or installable in vehicles. While a system, installed inside a vehicle, is "quasi" operational at all times, it takes only a few minutes of installation to have a fully operational mobile system also.

Fig. 1: Base Station Module, top view

Fig. 2: Basic Modules

ACCESSNET® -T Cube is seamlessly integrable into existing *ACCESSNET*® -T network structures. It can be updated and developed in parallel with its big brother - *ACCESSNET*® -T. This is achieved using homogeneous hardware and software for both system variants.

With a minimum of hardware expenditure, *ACCESSNET*® -T Cube supports the functionality of a TETRA base station in Stand-Alone-Operation. Depending on requirements, the customer can create or expand a mobile system according to the modular design principle. Mobile network structures with several radio base stations are possible. *ACCESSNET*® -T Cube also provides the connection to voice or data networks or the integration into *ACCESSNET*® -T network structures.

ACCESSNET®-T Cube Module Technology

ACCESSNET® -T Cube consists of individual modules. Different module combinations determine what kind of system functionalities are available. All modules are built in boxes that guarantee safe transportation and operation. TETRA Cube system modules contain different network elements, gateways and peripheral structured units. Further additional accessories for mobile deployment are also included.
The modular structure enables functional combinations depending on deployment conditions. The boxes are stackable and can be joint together through a connecting system. The boxes are closed during transportation. The boxes' portable design requires only two people for transportation. The easiness of handling makes transportation even over long distances possible.

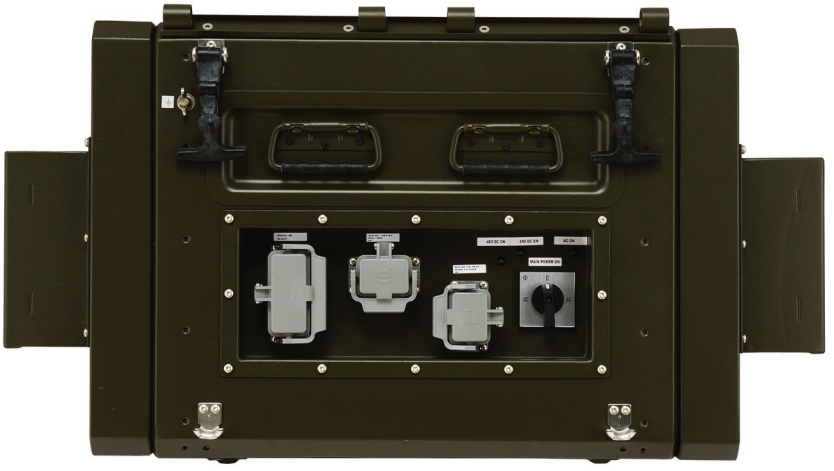

Fig. 3: Power Supply Module, side view

ACCESSNET®-T Cube System Technical Data:

Name:
Modular Basestation System (MBS-100)

Basic Modules:

Base Station Module	(BSM)
Power Supply Module	(PSM)
Branching Equipment RF-Module	(BEM)
Battery Module	(BPM)

Extension Modules:

Antenna Equipment Module	(AEM)
Mobile Terminal Module	(MTM)
Transfer Gateway Module	(TGM)
Radio-link Connection Module	(RCM)
Dispatcher-central Office Module	(DOM)
Heating and Cooling Module	(HCM)
Ventilator and Membrane Module	(VMM)
Management Console Module	(MCM)
Interconnection and Switching Module	(ISM)

Accessory Modules:

Accessories and Cable Module	(ACM)
Central Connection Module	(CCM)

General Technical Data:
Operational temperature:
-40°C to +55°C (transport and operation)
Protection class: IP 65
Power supply input PSM:
$24V_{DC}$, $48V_{DC}$ or 90 to $264V_{AC}$ / 47 to 63 Hz
(Optional $12V_{DC}$)
Output power supply PSM:
$12V_{DC}$ and $48V_{DC}$

Basis Station Module Technical Data:
1 or 2 carrier, TETRA V+D according to EN 300 392-2

Frequency ranges:
RX 380-460 MHz, full-range tuneable, in channel spacing steps
TX 390-470 MHz, full-range tuneable, in channel spacing steps
RX 806-876 MHz, full-range tuneable, in channel spacing steps
TX 851-921 MHz, full-range tuneable, in channel spacing steps
Configurative duplex spacing, min. 5 MHz

Sensitivity:
Static: -115 dBm
Dynamic (4 % of BER with Diversity): -112 dBm

Nominal transmitter output power:
Maximum 25 Watt per carrier
Power supply: 48 V_{DC}
Power consumption (2 carrier): Maximum 450 Watt

Branching Equipment RF-Module Technical Data:
Frequency ranges 2 carrier operation with RF Branching-Module:
380-400 MHz, 410-430 MHz, 450-470 MHz
Duplex spacing 10 MHz
806-821 MHz, 851-866 MHz
Duplex spacing 45 MHz
Other frequency ranges and duplex spacing on request

Subject to change

...mobility for professionals!

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