



DTX-500 Radio Base Station

Radio Base Station for *ACCESSNET*[®]-T

The DTX-500 Radio Base Station is developed to provide the professional mobile radio users and system operators with a resilient and cost effective product conforming to the ETSI TETRA specification. The *ACCESSNET*[®]-T TETRA Radio Base Station DTX-500 has been developed and manufactured making use of the latest progress in technology in order to optimise flexibility and quality and to minimise service and maintenance with the result of a

cost effective product. Industrial design and extensive use of SMD technology has reduced the size of the DTX-500. Heavy integration of microprocessor and DSP technology in the Transceiver (TR) part and Base Station Controller has been deployed giving management control of almost all functions and access to a large number of DC and AC test points. Together with an extensive use of built-in FLASHROM for configuration selections and calibration parameters,

nearly all hard-to-access mechanical adjustment has been eliminated. Communication channels make it possible to supervise, diagnostic and control the settings and functionality of the DTX-500 by local or remote connection to the Base Station Controller via O&M interface. This makes it easy to operate and maintain the DTX-500 and even software upgrade and download of new software may be done remotely.



...mobility for professionals!

Full support of speech and data services in full and half-duplex modes in compliance with the open standard for TETRA are those things we take for granted today. This ensures the DTX's ability to support a variety of terminals from a wide range of suppliers.

The DTX-500 can be configured with up to 8 TETRA carriers in a 19 inch rack giving in total 32 logical channels with access to all functions and terminals from the front.

The system is expandable in steps to a total of 16 carriers by adding an extension rack to the site system. All 16 carriers are controlled from the Base Station Controller in the first cabinet, even if the channels are assigned to different radio cells.

Up to 4 transmitter antennas and 2x4 receiver antennas (receiver diversity) are provided by the DMX-500. Each individual TR can be assigned to any one out of four antenna positions. It gives the flexibility to

configure the system in up to 4 separate sectors and cells with 4 independent sets of TX and RX antennas.

The DTX-500 is equipped with a transceiver output power of 25W from each channel and with motor tuned cavity combiners. By using Tower Mounted Amplifier (TMA) excellent quality performance and good coverage is obtainable. Furthermore, the DTX-500 gives support for interface and gateway to PSTN, ISDN and PDN.

Technical Specifications DTX-500

General

Frequency bands	300-344 MHz, 380-400 MHz, 410-430 MHz, 806-821/851-866 MHz, others on request
Transceiver bandwidth	10 MHz TR411 RX/TX
Duplex separation	10 MHz
Filter bandwidth	5 MHz
Carrier separation	25 kHz
TX power before combiner	max. 25 W
Receiver diversity	dual as standard
Cavity combiner system	motor-tuned with support for up to 16 carriers per antenna/cell
Hybrid combiner system	available as option
Power supply range	48 V _{DC} , 115 or 230 V _{AC} (optional)
Power consumption	≈ 400 VA (1 TETRA carrier) ≈ 1400 VA (8 TETRA carriers)

Environment

Operating temperature	+ 5°C ... +40°C
Storage temperature	-25°C ... +55°C
Relative humidity	25% to 75% non-condensed

Dimensions

Height	2100 mm
Width	550 mm
Depth	520 mm
Weight	approx. 150 kg

Interfaces

Air interface specification	EN 300 392-2 (TETRA V+D) Ethernet 10/100 Mbit E1 Interface GPS for time and frequency specification O&M Interface RS232 and TCP/IP
Interface to DMX (switch)	E1 S ₀ 64 kBit/s
Output power	1 - 25 Watt
TETRA carrier	2-16 (from 8 carriers two racks)
Diversity	2 RX antennas

Subject to change



ROHDE & SCHWARZ