

ELETTRA PicoNode-T Targeted solutions for local TETRA networks

Thanks to the unrivalled set of services and applications, TETRA is on top of professional users preferences!

In the frame of the widely used ELETTRA Light family, a new optimised solution for small-medium TETRA networks is born. PicoNode-T today offers the state-of-the-art for local TETRA networks, up to 8 sites fulfilling the most critical user requirements

OVERVIEW

- · Cost effectiveness
- · Scalability from 1 site up to 8 sites
- Expandability: can be integrated as part of larger regional or national systems
- Optimisation of radio coverage
- · Flexibility
- Reliable (optional redundancy)
- · Field proven
- Ready for connection with external PABX/PSTN/ISDN networks

All our's TETRA solutions are compatible and can be integrated; thanks to this coherent approach, PicoNode-T networks can be integrated with larger SELEX's TETRA networks whenever needed. The PicoNode-T design is based on a modular approach in order

to improve the system scalability and to facilitate the upgrading of each system element whenever allowed by new technological advances.

The switching unit is enclosed in a dedicated rack called Pico-T, that is installed with a co-located radio Base Station in order to build the PicoNode-T node.

Other Base Stations (up to 7) can be remotely connected in order to deploy small-medium TETRA networks.

Despite of the reduced cost, PicoNode-T offers the most advanced features of TETRA, including:

Voice communications

- Group and broadcast calls with priority scanning of multiple groups
- Individual calls (half and full duplex)
- Dispatcher pool call

- Telephone (PABX or PSTN) calls
- Pre-emptive and Emergency call with Busy User Pre-emption

Data transmission

- · Status and short text messaging
- Short data and multislot data transmission (up to 28.8 Kbit/s)
- Additional control channels for data transfer (e.g. for AVL)
- · Simultaneous voice and data

Total security

- Authentication
- Static and Dynamic Keys Air Interface encryption (TEA1 and TEA2)
- · End-to-End encryption

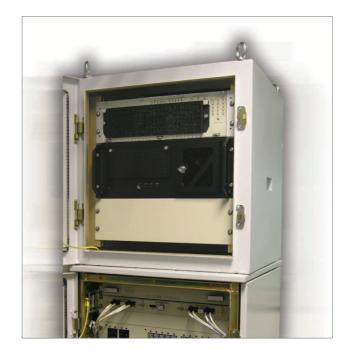
Comprehensive support to Command and Control

- Dynamic Group Number Assignment
- · Call Authorised by Dispatcher
- · Discreet Listening
- Group patching
- · Full data transmission support from dispatcher
- · Voice recording

Remote BS fallback mode

- Group, Broadcast and Individual call
- · Pre-emptive and emergency call
- · Status and short data messages

- · Local gateway and dispatcher connectivity
- Multislot data transmission (up to 28.8 Kbit/s)
- Air interface encryption (TEA1 and TEA2)
- End-to-End encryption
- RF interference protection & backup TRX
- No need of local GPS thanks to high accuracy of local clock



TECHNICAL DATA

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Frequency ranges:	380-400 MHz ; 410-430 MHz ; 450-470 MHz ; 806-870 MHz
Number of carriers (single node):	Up to 4
Redundancy:	Optional
RF output power:	TETRA class 2 (25W nominal) at antenna connector
Receiver sensitivity:	2dB better than other TETRA systems
	dynamic: -108dB
	static: -117dB
Receiver diversity:	Supported
Minimum number of antennas:	1
Interfaces:	• E1
	ISDN PRI/BRI
	Analogue / digital PABX / PSTN
	 LAN 10/100 Mbit
	• RS-232
	• GPS
International standard:	 Fully compliant with ETSI ETS 300 392-2
	 Certification of conf. to ETSI ETS 300 394-1
	Safety: EN60950 A1, A2
	Certificate CE
	EMC: in accordance to ETSI ETS 300 386
Environmental conditions:	Storage: ETSI ETS 300 019-1-1 class 1.2
	Transportation: ETSI ETS 300 019-1-2 class 2.2
	Operation: ETSI ETS 300 019-1-3 class 3.1
Networking capacity:	Networks comprising up to 8 BS controlled by a single PicoNode-T



(The technical data are referred to PicoNode-T built with ELETTRA BS-T2)



