



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

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 <ul style="list-style-type: none"> • dynamic: -108dB • static: -117dB
Receiver diversity:	Supported
Minimum number of antennas:	1
Interfaces:	<ul style="list-style-type: none"> • E1 • ISDN PRI/BRI • Analogue / digital PABX / PSTN • LAN 10/100 Mbit • RS-232 • GPS
International standard:	<ul style="list-style-type: none"> • 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:	<ul style="list-style-type: none"> • 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)

