

R-891 TetraNode Ultra Lite

General Description

The TetraNode Ultra Lite platform is based on an embedded controller platform, providing high reliability and excellent power efficiency. TetraNode Ultra Lite is intended for applications that require ease of configuration, simple maintenance and affordability.

TetraNode Ultra Lite is available in a 19" cabinet in two different heights and can be customized if there is a need for specialized solutions such as transportable or wallmount cabinets. This makes TetraNode Ultra Lite both a flexible and affordable solution that meets most business critical applications.

Typical users of TetraNode Ultra Light include smaller airports and seaports, industrial plants and small municipality networks.

Technical Overview

TetraNode Ultra Lite is a self-contained solution for a stand-alone TETRA site. The standard TetraNode Ultra Lite package comes with one or two carriers, while customized solutions can offer higher number of carriers by means of one or more Base Station. The embedded controller platform runs the same proven TetraNode software as supplied for the TetraNode

With TetraNode Ultra Lite you pay as you grow. Multi-site solutions are still affordable by interconnecting multiple Ultra Lite systems in one network, offering a capacity of up to six sites and a total of eight carriers. Interconnection to sites is based on open IP standards, allowing integration with standard off-the-shelf IP routers and switches that support Quality of Service.

TetraNode Ultra Lite systems can be re-used as standard Base Station Systems (BSSs) within a TetraNode Industrial or TetraNode High-End configuration. This allows growth beyond six sites, without any disinvestment due to redundant equipment or licenses.

Capacity, redundancy and functionality can be tailored to end-user requirements in order to keep cost in control. Standard available system options include: redundant controller, additional TETRA carriers and sites, VoIP telephony gateway (SIP), Network management, Line Dispatch and Voice-data Logging solutions.



The two-carrier version of TetraNode Ultra Lite is equipped by default with a fully redundant antenna configuration including redundant duplexer. It offers a high output power at the antenna and standard two-way diversity reception. The system is equipped with a high stability frequency source for 10 years of operation without the need for GPS synchronisation.

Finally, TetraNode Ultra Lite is equipped with a broad array of maintenance and self-diagnostics features, enabling the system to be remotely managed and facilitating on-site maintenance and troubleshooting.

Key Features

- Proven reliability
- Affordable platform for up to six sites and eight carriers
- Unparalleled scalability due to wide variety of system and feature options
- Ease of configuration and maintenance with true Plug and Play
- Superior RF performance
- Powerful Management, Dispatch and Logging solutions
- Possible to re-use components in TetraNode Industrial and High-End radio networks

Systems Extension and additional features

Beside the TNX-UL sub system and power supply systems the 12U or 32U enclosure can also house the following servers/applications :

- R-816 Voice logging Server
- R-817 Dispatcher server
- S-880 SIP telephone Interface 4 lines onboard
- R-1800 I/O interface
- R-1810 Site power controller
- R-1820 Light Stack

Licenses for :

- L-962 TetraNode Packet Data Gateway



Mechanical of the TNX sub system

Standard package

- Single or twin TETRA Base Station transceivers
- Dual receiver diversity
- Integrated antenna combing
- Ultra-high stability frequency reference for 10 years of operation without the need for GPS calibration
- Embedded controller with TetraNode software
- Preconfigured database with 500 subscribers and 50 talk groups

System options

- Additional TETRA Base Station transceivers (in total max. 8 transceivers distributed over max. 6 sites)
- Network Management Station
- Line Dispatch Station Gecko & Chameleon
- Voice-over-IP Gateway (SIP), max. 4 channels
- TetraNode IP Gateway (TIG), max. 4 connections
- Redundant controller

Functionality

- Speech Services: Individual Call, Duplex Call, Group Call, Broadcast Call, Telephone Call², Priority Call, Emergency Call
- Data Services: Status message, Short Data Service, Packet Data, Circuit-switched Data
- Supplementary Services: Call Identification, Talking Party Identification, Call Forwarding, Late Entry, Dynamic Group Number Assignment

Power supply

- Power supply voltage 90 to 240_{AC}, 50/60 Hz
- Power consumption, typical 30 W per controller
250 W per carrier

Mechanical, 19" 12U cabinet

Dimensions (W x H x D) 600 x 600 x 770 mm
Weight Max. 95 kg

Mechanical, 19" 32U cabinet

Dimensions (W x H x D) 600 x 600 x 1650 mm
Weight Max. 198 kg

Environmental

Operating temperature -25 to 55 °C

Storage temperature -40 to 85 °C

Humidity < 95% at +40 °C,
non-condensing

Ordering specifications

Deliverable system

- R-891 TetraNodeUltra lite I (TNX- UL)
 - S-804 UL processor system
 - S-220 2U –tray
 - S1010 TNX License / release
 - S-200 Base station IP Switch

Features / Add-on

- R-891-R Redundant Processor board in same enclosure as Main TNX-UL
 - S-804 UL processor system
 - S1010 TNX License / release

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TetraNode Mission Critical Communications