



## Pico-GW - Pico Gateway TETRA equipment for external public networks connections (PABX-PSTN)

SELEX Communication's **Pico-Gateway (Pico-GW)** may be considered as one of the most relevant element in any TETRA network, providing access to the external world.

With the increasing availability of different communications' technologies, interoperability among systems is emerging as an important qualifying factor, especially in mission critical operations where TETRA is the main actor.

Moreover, typical professional users, acting in harsh or emergency scenarios, need a constant and reliable connection with remote command posts, sometimes reachable only through traditional telephonic network.

The Pico-GW, providing a scalable and future-proof wide range of interfaces, acts as a bridge between TETRA and different networks, transporting voice and data over ISDN links as well as 2 and 4wE&M.

One of the key features of the system is the possibility to improve secured transmission at TETRA End-to-End level using encryption boards.

Both normal and fallback mode can reach outstanding security

performance against eavesdropping, with state-of-the-art protection ensured by continuous algorithms development and upgrade.

Two versions are available:

- **Pico-GW Top-Mounted**
- **Pico-GW Stand-Alone**

As the name suggests, the first model is designed to be perfectly mounted on top of existing TETRA Base Stations, sharing the same power supply and reducing system complexity, while the second one is completely autonomous and can be deployed in different parts of the network.

This may offer the opportunity to create, especially when the number of infrastructural devices is high, a remote and centralized point of aggregation, increasing performances and reducing costs.

The system support "on-field gateway addition", with no constraints on the original BS configuration. The Pico-GW can be added and installed in every moment with no additional

adds-on and without service interruption.

From a functional point of view, SELEX Communications' Pico-GW can act in three main ways, satisfying different customers' requirements.

These functions can be summarized as follows:

- **Agent:** provides the configuration to other applications and manages alarms.
- **Telephonic GW:** provides interfaces between TETRA system and external telephonic networks.
- **Control Room Server (CRS):** provides server applications for the dispatcher operator.

Conversion from TETRA specific format to the more typical and universal 64 Kbit/s PCM coding, is implemented on dedicated DSP resources.

### INTERFACES

SELEX Communications' Pico-GW basic features set includes a PCI-EIU without DSP board, realizing a 2 Mb/s link towards TETRA network elements.

According to the specific customers' needs, it can be equipped with a wide range of boards including a PCI E1 board for ISDN-PRI links, a 4wE&M PCI board in case of LAN Dispatcher Station (LDS)/analog PABX links and a PCI board for 2W PSTN links.

Our typical attention to market and users' requirements ensures a constant upgrade in the number and typology of supported interfaces, granting a future-proof solution.

### RESILIENCE

SELEX Communications' Pico-GW can be redounded when high resilience is needed. In this case two servers can be integrated in the same rack, preserving space utilization. Two types of redundancy are used:

- **Active-Active (2A)**
- **Load-Sharing (L/S)**

In the 2A two instances of the application (one per GW-server) works independently, while the L/S is based on a periodic registration of the GW application to the SCN and outgoing calls are addressed to the last registered GW.

TYPE	PRESENCE	LINK
PCI-EIU without DSP board	Always present	2 Mb/s (toward Net. element)
PCI E1 board	In case of ISDN-PRI link	2 Mb/s
4wE&M PCI board	In case of LDS/analogPABX	Four wire interface
PCI board	In case of 2W PSTN link	2w, twelve ports PSTN

### TECHNICAL DATA

Physical Dimensions:	<ul style="list-style-type: none"> <li>• Height 620 mm in case of Pico-GW Top</li> <li>• Height 670 mm in case of Pico-GW Stand Alone;</li> <li>• Width 600 mm;</li> <li>• Depth 600 mm.</li> </ul>
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 (Stationary use at weather protected loc.) class 3.1
EMC:	<ul style="list-style-type: none"> <li>• CE marked.</li> <li>• compliant with EN 300 386 and EN 55022 class A.</li> <li>• Safety: compliant to EN60950</li> </ul>