

PIS Audio Solutions

Public Address, Phone & Intercom Systems
for on-board passenger information systems (PIS)



ErvoCom
COMMUNICATIONS SYSTEMS

Quality that connects.



Innovative passenger information audio solution

ErvoCom's PIS audio system PAN-SYS is an innovative digital Public Address, Phone and Intercom solution for rolling stock. State-of-the-art TCP/IP based audio amplifiers with high-end audio quality ensure optimal sound quality within the train. The digital intercom terminals using noise suppression enable high speech clarity.

The system consists of a central control software (RCSS2170), which is responsible for the digital switching, the digital audio amplifiers PAA2171/PAA2191/PAS2171, the passenger intercom terminals FGSS2197/HRSS2197/PICO22, train attendant intercom devices TAI2197/TAI2207 and a driver telephone uCOB2200 as a communication interface for the train driver. All components are interconnected via the on-board Ethernet network and can be configured, managed and updated via a central software platform. For redundancy considerations the audio amplifiers and the conductor or driver telephone can also use a UIC interface.

The train announcements are fully automated based on the timetables and actual geo-location data of the passenger information system. Nevertheless, there are always situations where the driver or the control center needs to inform the passengers about delays or special events by means of manual announcements. By using the driver's phone uCOB2200 the driver can make manual announcements. The control center in turn has the option of establishing communication with the passengers via the TRS2090 train radio system or via an LTE router. Audio amplifiers can be controlled individually, allowing selective announcements and volume control for each passenger coach. For volume control, different criteria such as vehicle speed, time of day or ambient noise level in the passenger compartment can be used. Since the audio lines do not have to be routed through the car couplings, cabling effort is reduced significantly.

ErvoCom's PIS audio solution provides the customer with highest reliability, and speech intelligibility, and supports the maintenance and commissioning team to configure the system easily and quickly.

• Main Audio-Features

- SIP Proxy & Trunking Server, Call routing & Priorisation
- Dynamic volume regulation based on speed, date & time, noise measurement
- Announcement synchronisation for Public Address

• Complete configuration via web interface

- Train layout & System components
- IP addressing scheme

• Efficient commissioning of new trains

- Centralized volume calibration with STIPA audio output
- Device test mode, centrally controlled over the RCSS

• Software & Config Management

- Centralized SW & Config storage
- Centralized Software & Configuration Rollout

• Advanced Monitoring & Diagnostics

- Device monitoring over API or GUI
- Live SIP call monitoring, including SIP registrations & call history
- Live noise level measurement of Intercom

• Rail certifications

- EN50155 & EN45545-2

References

Northern Europe

- Roslagsbanan
- Metro Glasgow
- Newcastle upon Tyne

Central Europe

- SBB CFF FFS
- RhB, SZU, ZB, RBS
- Tramway du Mont-Blanc
- Arriva Netherlands

Western Europe

- Metro Barcelona
- FGV Valencia
- Mallorca

Asia-Pacific

- Jakarta
- Metro Hanoi
- Manila LRT
- Perth

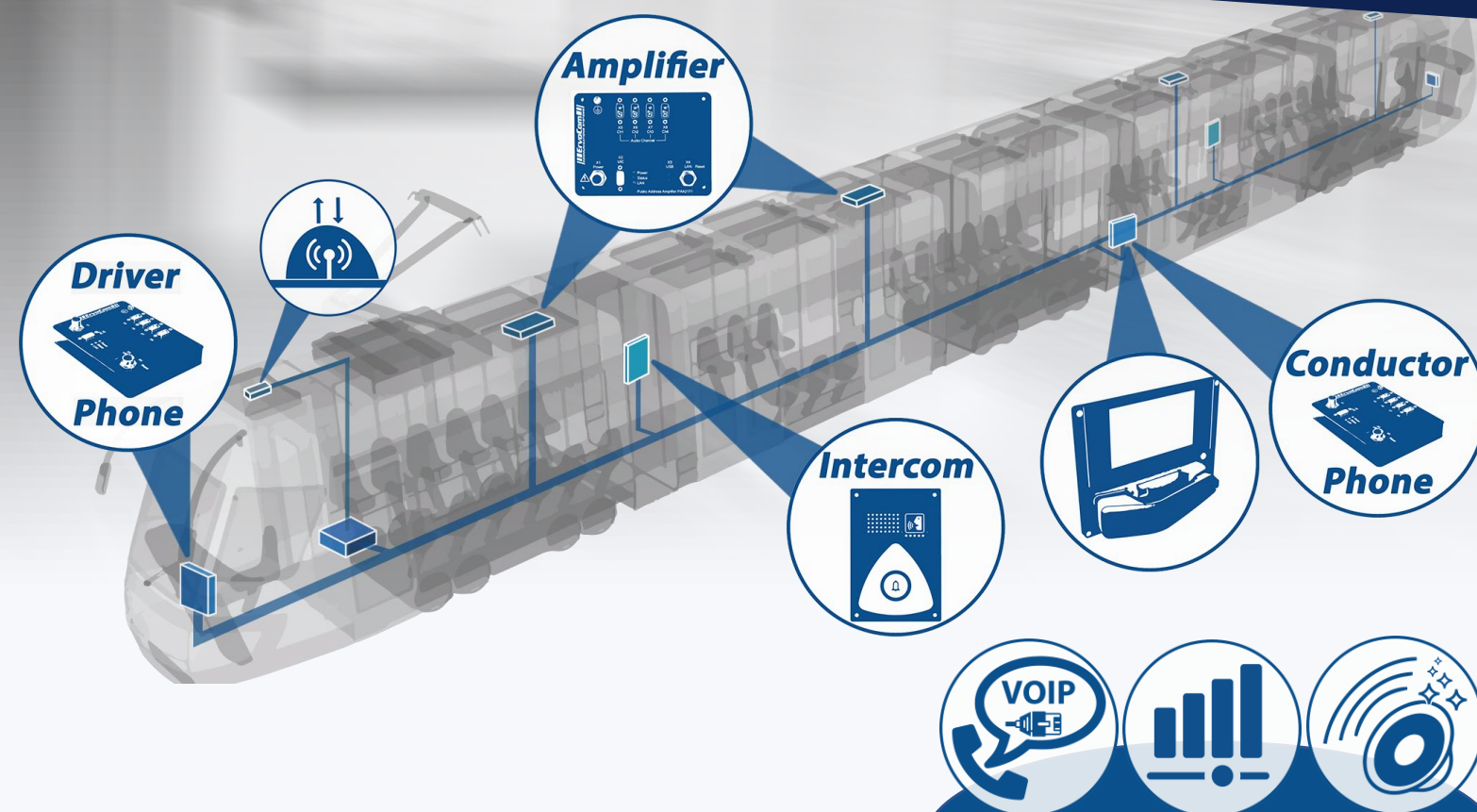
Middle East

- Marmary
- Bursaray
- Doha
- Lusail
- Baku

America

- Amtrak
- Caltrain
- DART
- SBCTA
- Toronto Finch-West
- TEXrail
- Metro Mexico City
- Cochabamba
- Metro Santiago de Chile

System



Audio Amplifier



PAA2171
Public Address Amplifier

The PAA2171 is a compact IP based audio amplifier with UIC as a fallback interface. The device is designed for announcement systems that require one amplifier per wagon.



PAA2191
Public Address Amplifier

The PAA2191 is a fully redundant IP amplifier with UIC as a fallback interface. The device is designed for wagon based announcement systems, which have to fulfil TSI LOC&PAS with one single device.



PAS2171
Public Address Amplifier

The PAS2171 is a digital high power audio amplifier for train-wide announcement concepts. The control takes place via Ethernet or UIC-558/568.

Intercom



FGSS2197
Passenger Intercom

The FGSS2197 is a compact SIP-based audio interface for communication between the passengers and train drivers or dispatchers. It fulfills the TSI PRM requirements.



HRSS2197
Call for Aid - Intercom

The HRSS2197 is a compact SIP-based call for aid device, which allows to establish an audio communication between the passengers and train drivers or dispatchers. It fulfills the TSI PRM requirements.



PICO22
Passenger Intercom

The PICO22 is a simple and compact communication interface between the passengers and the transport provider. The device is designed for light rail vehicles.

Conductor & Driver Phone



TAI2197
Train Attendant Intercom

The TAI2197 is a modern conductor phone with a 7-inch capacitive touch display for communicating via VOIP-SIP with passengers, train conductors and dispatchers.



TAI2207
Train Attendant Intercom

The TAI2207 is a versatile conductor phone with a 10.4-inch capacitive touch display for communicating via VOIP-SIP or UIC-558/568 with passengers, train conductors and dispatchers incl. PIS control functionalities.



uCOB2200
Universal Communication Box

The uCOB2200 is a compact conductor and driver telephone with various interfaces for audio accessories for communication to passengers and OCC. The devices can also be used as a VOIP-SIP - UIC gateway.