



Market Segment:
Rolling Stock

Country of installation:
Denmark

Year of Installation:
2000 - ongoing016

End Customer:
**Hitachi STS
Midttrafik**

System Integrator:
Leonardo SPA

Solution:
Emergency communication

Key Products:
ECP - AA1

Key Technology:
**Ambient noise reduction
Automatic Volume Control**

Zenitel cuts through the noise on the Light Rail Transit

Zenitel delivers a dependable and dynamic Communication Solution for use in the event of an emergency.

The End Customer

The Light Rail Transit (LRT) system in Aarhus is the first of its kind in Denmark. It is designed to manage the growing passenger demand in the Danish city and provide citizens with an innovative, efficient, and sustainable transport system. The project's scope covers 14 km of newly constructed double-track light rail line that passes through the most densely populated part of the city, as well as the electrification of two existing rail connections north and southbound.

The Requirement

The client needed a high-quality passenger help point for their light rail that would function reliably during emergencies. The noise levels during peak hours made it challenging for train personnel to hear passengers, so the client sought a best-in-class option that would work effectively in all acoustic conditions. Design customization was also essential to ensure that the help point would blend with the train's aesthetics. Compliance with rail standards and norms was a key requirement, as with all onboard electronics systems.

The Solution

Zenitel, along with Leonardo SPA, partnered with Hitachi Rail STS to provide an emergency communication system onboard the train that delivers excellent audio quality in the face of

noisy environments, allowing drivers and operators to hear, be understood and communicate in real-time with passengers in distress. Zenitel made sure to strictly evaluate the rail certification process to ensure compliance with customer needs. The solution even includes a customizable passenger help point that seamlessly blends in with the train's aesthetics.

Zenitel's Automatic Volume Control (AVC) feature, which can be flexibly configured by the end-user, adjusts output volume levels dynamically to enable clear communication between drivers and passengers.

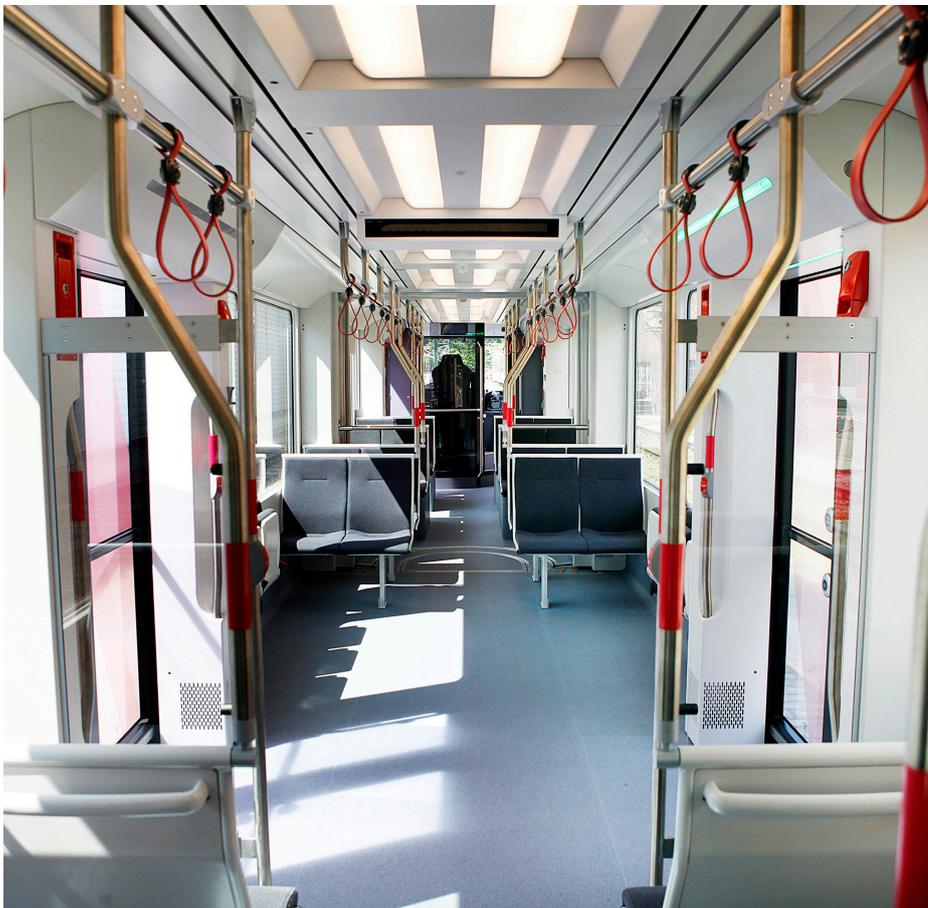
The Emergency Call Point includes advanced audio features such as Active Noise Cancellation, Automatic Gain Control, and Echo cancellation. These features further guarantee the solution's performance, regardless of the noise levels in the surrounding environment.

The Result

Zenitel's Emergency Call Points form the foundation of their communication solution inside the tram, providing exceptional audio performance that has enhanced the experience of drivers and passengers. Even

despite the vehicle noise, clear communication is possible thanks to Zenitel's Advanced Noise Cancellation, Automatic Volume Control, and Automatic Gain Control features.

The ability to listen to individual help points also enables security personnel to take pre-emptive measures in case of suspected security threats, such as vandalism.



Why Zenitel?

Zenitel is well positioned to drive the future of intelligent critical-communication solutions. Through our portfolio of IP products & solutions, with built-in intelligence and a focus on cybersecurity, we provide organizations with superior, scalable security and flexibility. Zenitel is the proven, preferred choice for environments requiring crystal-clear audio to ensure the protection of human life, property, assets and the management of critical activities. With interoperability at all levels, we seamlessly integrate with access control, video management and security platforms.