



HELSINKI SM5 TRAINS

ON-BOARD SYSTEM FOR HELSINKI SM5 TRAINS IN FINLAND

THE CASE IN BRIEF

Stadler selected Teleste's On-Board System for Helsinki Sm5 trains in Finland in 2007. The system is comprised of the following modules: PIS, CCTV, Public Address, LED and TFT displays, phones and intercoms, Ethernet network, rear view, system interfaces and remote management functions.

In 2008, the first two Sm5 trains were delivered to the end customer, Pääkaupunkiseudun Junakalusto Oy, who is also the owner of the fleet. The company is a subsidiary of the cities of Helsinki, Espoo, Vantaa and Kauniainen and the VR Group. The units are leased to the Helsinki Regional Transport Authority (HSL), but VR operates the trains.

Sm5 trains are operating in the metropolitan area of Helsinki. The project is comprised of 32 commuter trains.

Currently, after options, the fleet contains altogether 81 trains.

The customer was looking for a modern, integrated and flexible on-board system to support the existing back office systems and to have capability to further develop new functionalities. They also wanted to have an effective maintenance process and streamlined multiple traction operations, for example automated coupling and uncoupling of train units. One of the targets was to improve work efficiency with more automated functionalities such as Driver Only Operations using camera views for door surveillance. Teleste's On-Board system is one of the first IP-based systems on the market.

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HELSINKI SM5 TRAINS CASE STUDY

Stadler,

a Swiss rolling stock manufacturer, has been building trains for 75 years. Stadler is headquartered in Bussnang in eastern Switzerland and has a workforce of over 7,600 based in various production, service and engineering locations across Switzerland, Germany, Spain, Poland, Hungary, the Czech Republic, Belarus and the United States.

Customer need

- Modern, integrated and flexible passenger information and CCTV system for Sm5 trains
- Support for existing back office systems
- New technology with an IP-based system enabling easier development of new functionalities
- Effective maintenance process
- Streamlined multiple traction operations: automated coupling and uncoupling of train units
- More automated functionalities to improve working efficiency – Driver Only Operations
- CCTV for security with versatile analysis tools (remote access to live view and recordings)
- Door surveillance for driver-only operations
- Real-time information solution with editable playlists and fleet management for media/content distribution
- User-friendly HMI
- Integration with third-party systems, for example ticketing and passenger counting systems
- Fleet management extended by remote capabilities, for example timetable updates and software upload

Solution to customer's need

- IP-based solution with intelligent network configuration
- Wireless LAN based on unit-to-unit communication and automatic multiple traction functionality
- Versatile functionality for public address triggered by route location (odometer, GPS), operator or external source
- High reliability crew and passenger call concept integrated into UIC and the train radio
- TFT displays for route view, announcement texts, customer-derived content such as video

Benefits achieved

- Easy creation of functional extensions such as ring-track operations, an interface for a new ticketing system, the possibility to present real-time information, display layout changes to support a new customer brand and driver-only operation.
- Capability to remotely operate the system

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