

Unwired Networks GmbH

Success Story – NetModule Router enables WiFi and Infotainment for Trains

A project with our partner Unwired Networks and Abellio Mitteldeutschland.

The Project

Abellio Rail Mitteldeutschland operates the Dieselnetz Sachsen-Anhalt (DISA; diesel network Saxony-Anhalt), running 54 train sets of the Alstom Coradia LINT type. They went into operation at the timetable change in December 2018. The competent authority, NASA, required that the vehicles were equipped with a high performance passenger WiFi and infotainment portal. By implementing the DISA project, Abellio Deutschland GmbH wanted to create a group standard for on-board networks, WiFi and information systems in the vehicle.

Our partner Unwired Networks is a specialist for complete solutions consisting of hardware, Internet access & passenger WLAN or cloud gateways and has been commissioned with the implementation of this project. The newest router from NetModule was used here, because this wireless router is able to provide passengers with a stable Internet connection as well as network access for the train crew at the same time.



«The combination of Unwired Cloud and NetModule hardware is the complete solution for on-board networks and passenger WLAN. The quality and modularity of NetModule's network components is the ideal basis for demanding customer projects.»

Alexander Szlezak
CEO
Unwired Networks GmbH



Requirements

The result should be a complete solution for on-board networks and passenger WiFi.

- Universally applicable, high-performance cellular routers and access points with railway certification (EN50155) and storage for offline applications
- Robust and reliable train-country connection with 4 LTE uplinks
- Reliable access points for high number of concurrent users
- Comprehensive device management and monitoring in the cloud
- Extensibility in relation to future network applications in the vehicle
- Passenger Wi-Fi incl. content filter and bandwidth management
- Passenger entertainment and information portal with offline content & real-time route information

Solution

With the Unwired Cloud Unwired Networks automatically provides all required functions throughout the fleet. The system's quality assurance is in the hands of our partner. Unwired Networks cooperated with his customer and his partner NetModule to create a comprehensive concept of hardware, passenger WiFi, route information and entertainment portal, as well as network management.

The high-performance NetModule Router offers stable connections, has rail approval, is ITxPT compliant and thus offers a future-proof platform for use in local transport. In addition, it can be expanded individually.



With the Abellio Rail Information System the Unwired Cloud made it possible to roll out an overall solution in a consistent quality across all companies of the group with considerable time and cost savings. All functions created for the DISA project are thus available as a standard solution for existing and future networks of the group.

The advantage for the customer Abellio Rail Mitteldeutschland is that the Unwired solution combines several components in one complete package:

Passenger WiFi

- High-performance passenger WiFi
- Barrier-free internet access through a login portal without registration
- Data volume and bandwidth can be controlled per user

Solution

Passenger information and entertainment portal

- Current news as text and video, short stories, podcasts and eBooks
- Real-time route information with connection details
- Connection to the ITCS system of Abellio Rail Mitteldeutschland GmbH
- Automatic import of news and jobs from abellio.de

Network Management

- Central device management and monitoring
- Flexible network configuration via cloud
- Support for multiple local networks in the vehicle
- Bandwidth management for passenger WiFi

Failsafe network

- Parallel use of up to four mobile phone connections
- Fail-safe connection through transparent cable bundling

Certified hardware

- Hardware, such as routers, access points, cables, antennas with complete Unwired Cloud integration, certified to EN50155
- Installation requires no configuration
- Ongoing automatic software and security updates across the entire contract period

