NET MODULE

Unwired Networks GmbH – ODEG

Success Story – Wi-Fi expansion on regional trains

A project with our partner Unwired Networks for Ostdeutsche Eisenbahn GmbH (ODEG), which we were able to support with our hardware.

The Project

Unwired Networks took over the public Internet connection of the first regional trains of the ODEG in the Spree-Neisse network in 2018. Using VPN connections, eight Regional Trains of the Desiro Classic and Regioshuttle RS1 of the ODEG train fleet were connected to high-performance Internet. Rides in the network became more comfortable for passengers by digitising and modernizing. This is because the extended range of services enabled passengers to surf the Internet during the train journey. At the same time, the workforce and controlling also benefited from possible internal applications.

Subsequently, further regional trains of ODEG in the sub-net Westmecklenburg were equipped with WLAN. For nine Stadler Regioshuttles, Unwired Networks, in co-operation with NetModule and Antonics, supplied certified and preconfigured routers, access points, indoor and outdoor antennas. The installation could be realized by the ODEG own workshops according to the plans of Unwired.

«NetModule Hardware is the optimal platform for the Unwired cloud functions like passenger Wi-Fi, network management and application virtualization, that the project required. The high integration density and modularity of the NetModule platform reduced project complexity, maintenance and operating costs by integrating previously separate functions on one device.»

Alexander Szlezak
CEO
Unwired Networks GmbH

Requirements

In order for the project to be implemented as planned, the following requirements were made:

— Certified and preconfigured routers, access points, indoor and outdoor antennas

— Flexibility and customizability

— High quality, stability, and functionality

— Permanent monitoring function

— Remote access from the cloud

— Internet access combined with the retrieval of up-to-date route information while driving

— Modern background system

— Leverage synergy effects across subprojects

— Short implementation times

— Professional support

Solution

Based on customer requirements, circumstances and network conditions, the most suitable devices are always recommended. In this case, the NetModule web routers and access points of the NB3700 and the NB3800 series were used. The entire quality assurance and commissioning of the passenger Wi-Fi was carried out remotely via the Unwired Cloud (UWC). In addition to the internet access, it was also possible to retrieve up-to-date route information during the journey due to land interfaces to the ITCS DatNet of the partner ETC.
Further synergy effects were created by the virtualization of the ETC ITCS client via the Unwired Cloud Edge Computing platform on our built-in NetModule routers.

From a small project to a group solution
Unwired Networks incorporated the entire project management know-how and accumulated experience into the two projects of the railway net Spree-Neisse and Westmecklenburg. Both projects laid the foundation for a Group solution from which ODEG and all its sister companies can continue to benefit in the future. NetModule was able to make a valuable contribution to this.

Increasing complexity in the award of transport contracts and different operator constellations require flexible service providers and systems.
The components of the Unwired Cloud building block system as well as the accompanying services can be used flexibly, so that Unwired can meet the requirements placed to the operator at any time.

As a result, ODEG decided in December 2019, together with Unwired, to offer additional services to passengers on the Elbe-Spree net (lot 1 and 4) by December 2022, in order to drive digitalization in the vehicles. Here, the standardized complete solution with the following functions in existing and new vehicles is realized:

— Passenger Wi-Fi

— Offline passenger portal with customer-specific content

— Real-time route information with connection pre-registration

— Digital security concept: camera monitoring,

— Audio detection of incidents and silent alarm via passenger portal

— Customer feedback form

— Centrally managed background system and network infrastructure

Our NetModule routers were chosen in this project because of the quality, stability, functionality and modularity of the network components.