



USE CASE

ABOUT ACKSYS

Over the past 40 years, ACKSYS Communications & Systems has acquired a solid know-how in designing and manufacturing industrial communication solutions (WiFi and cellular). Member of the ITxPT association and IRIS-certified, ACKSYS has been helping public transport players (operators and transport authorities) to digitalize their vehicle fleets (buses, trams, etc.) for almost 20 years: ACKSYS WiFi/4G/5G routers ensure truly connected mobility!

ENVIRONMENT

Customer : IDELIS

Location : Pau, France

About IDELIS : The Pau Béarn Pyrénées Mobilités area is distinguished by its high-performance public transport system, IDELIS, administered by SPL STAP. With a fleet of 107 buses, this network provides extensive coverage of Pau and the surrounding area, transporting over 9 million passengers a year. The BHNS line, linking the north and south of the city, is a key feature of this network. Free shuttles are available to facilitate travel in the city center. Thanks to flexible timetables and a varied range of services, IDELIS focuses on smooth travel, helping to reduce urban congestion and encourage sustainable modes of travel.

Vehicles : 8 Van Hool BHNS & 95 standard buses

ACKSYS product installed : AirWan range, industrial routers (cellular + WiFi)

CHALLENGE

Connect securely all on-board services of the IDELIS fleet to the PCC using AirWan routers.

The digitalization of transport has become a real challenge for operators, unions and organizing authorities alike. The main objectives are to ensure passenger safety and comfort, and to facilitate the operation of the urban network.

In this context, the on-board network is becoming a fully-fledged vehicle function, central to its smooth operation.

Accepting this strong trend and understanding what is at stake is becoming a must for transport players:

- Avoiding siloed networks (multiplication of on-board network equipment, and associated supply and maintenance costs),
- Connect all on-board services (CCTV, SAE, IV, Open Payment, passenger counting, VoIP, etc.) to the IDELIS PCC,
- Offer a secure, scalable solution,
- Maintain control over connectivity to accommodate all current and future on-board services.



IDELIS PAU RELIES ON ACKSYS :

Because the embedded network in each vehicle is an integral part of its IT network, IDELIS has chosen an ACKSYS AirWan solution:

- Resolutely secure (router authentication, data encryption, secure VPN tunnels, firmware integrity checks...)
- Specifically designed for urban transport (ECE R10 certification, ITxPT compliance, compactness and resistance to shock and vibration).

To ensure data transmission between each vehicle and the PCC, ACKSYS pools all flows using an AirWan router equipped with isolation and prioritization functions (routing, VLAN, QoS, etc.).

The roaming capabilities of AirWan routers (WiFi roaming < 30 ms) and its WiFi and cellular interfaces (automatic or piloted WiFi <-> 4G/5G switchover), ensure data transmission at all times, in the depot or in operation.

Its GPS function also contributes to real-time vehicle tracking.

Since IDELIS' business is above all passenger transport, and the router function is central to all information exchanges between the vehicles and the application servers on the ground, ACKSYS guarantees the daily operation of IDELIS buses thanks to the reliability of its AirWan routers:

- Routers guaranteed for 5 years,
- MTBF greater than the lifetime of the vehicles,
- No preventive maintenance required,
- WaveManager centralized administration and deployment software.

By integrating these routers, IDELIS has realized its vision of a reliable, high-performance in-vehicle IP network, while paving the way for a digital future for its fleet of vehicles.

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We were looking for a way to federate all embedded systems (open-payment, video-protection, SAE, IV...) needing access to a data stream in both 4G and WiFi. ACKSYS enabled us to explore this path further, and supported us with the loan of equipment to enable us to carry out real-life tests. This enabled us to confirm that the AirWan met our expectations in terms of interface, connectivity and on-board integration. What's even more important for us is the quality of our exchanges with the technical support team, who is always ready to listen, guide and advise us on the implementation and optimization of their equipment.

Sylvain MOTTET

Head of Low Voltage Division
Information Systems Department
IDELIS

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