USE CASE

ABOUT ACKSYS

ACKSYS has been supporting industrial companies in the digital transformation of their factories for 40 years.
The WiFi and cellular connectivity solutions deployed by ACKSYS in the most demanding industrial environments ensure:

- Secure convergence of industrial (OT) and IT networks,
- Guaranteed mobility for people and machines (overhead cranes, mobile carts, etc.) under all circumstances,
- Enhanced remote monitoring and data feedback capabilities.

ENVIRONMENT

Client : One of the world's leading steel manufacturers

Location : Shanghai, Chine

About the client : This steel giant produces high-quality steel for the automotive and construction industries. Committed to innovation and sustainability, it invests in enhancing efficiency and reducing its environmental impact, influencing the global industry by setting new standards.

Equipped machinery : around forty overhead cranes

ACKSYS products installed :
1. RailBox series, secure industrial WiFi routers
2. Supervision environment: WaveManager, for continuous monitoring of the WiFi network and simplified remote maintenance
3. Expertise and on-site radio coverage study to ensure the proper functioning of the WiFi network

CHALLENGE

The company aimed to modernize and optimize its handling processes to ensure uninterrupted operation of its plants. Known for the quality of its products, it sought to:

- Increase production by 30%,
- Reduce costs (labor, energy, etc.),
- Enhance worker safety on the ground and in cabins.

In a demanding industrial environment, automating the overhead cranes was essential. Facing strong regional competition, ACKSYS Communications & Systems and Schneider Electric had to deliver a high-performance, 24/7 solution for continuous operation.

Challenging environment: temperatures up to +70°C, vibrations, crane synchronization over more than 350 meters, reduced visibility, high metal density, radio interference, dust, and industrial greases.

ACKSYS
COMMUNICATIONS & SYSTEMS

SOLUTION :

To meet the modernization and automation needs, Schneider Electric, in collaboration with ACKSYS Communications & Systems, designed an innovative and integrated solution. This includes M580 and M251 programmable logic controllers (PLCs), safety controllers, XBT human-machine interfaces (HMIs), Ethernet and safety I/Os, and variable speed drives. ACKSYS's RailBox WiFi access points, specifically designed for harsh environments, ensure reliable communication over a 350-meter range, facilitating control of the automated overhead cranes.

The solution meets the client's high-capacity wireless network requirements, allowing for the consolidation, isolation, and prioritization of all essential industrial data flows (SafeEthernet, Modbus TCP/IP, Ethernet IP, remote I/O, video streams). It ensures very high network availability to prevent service interruptions, enhance asset and personnel safety, and meet strict cybersecurity demands.

Thanks to this architecture, the company significantly increased production, improved safety by reducing human interventions, and lowered labor costs through automation. This project not only met but exceeded expectations, strengthening the client's position as a leader in the steel industry.

This success demonstrates how advanced technologies and strategic collaboration can turn industrial challenges into opportunities for innovation and growth.