



## SECURE COMMUNICATION WITHOUT BORDERS DUE TO INDUSTRIAL WIRELESS LAN AS A MANAGED SERVICE

Secure and high-performance wireless communication is a key element for digitalization in the industrial environment. In order to meet the high requirements for data communication, a future-oriented WLAN design and a 24x7 operating model are indispensable.

With the introduction of wireless LAN in the production environment (IWLAN), machines and devices become mobile in any room - a basis for a completely new dimension of flexibility and efficiency.

However, the industry's requirements for wireless communication networks go far beyond standard WLAN. Low latency, redundancy and real-time communication even under harsh conditions are often essential.

In addition, industrial applications place the highest demands on reliability and safety, because in addition to production performance, environmental aspects, health concerns or personal safety are often at stake.

### PROBLEM

The implementation and most effective operation of wireless local area networks in industry requires special attention to site monitoring, lifecycle management, cybersecurity, operations and collaboration. When planning and implementing IWLAN solutions, companies often face the following challenges:

- Overlapping wireless systems in the license-free frequency range (WiFi, Bluetooth, radar, IoT-specific protocols, proprietary)
- Lack of coverage/ WLAN planning/ conception (design for air-time)
- Implementations with significant security gaps or outdated security standards (Rogue AP, Rogue clients, P2P communication, lack of policies/regulations, lack of NAC)
- External sources of interference in the air interface (electric motor, microwave, high-voltage systems)
- Device form factor (temperature, humidity, vibration, mounting)
- Lack of know-how in the project planning and operation of the IWLAN solution
- Lack of focus on design of wireless terminals (outdated software/hardware, missing protocols, security gaps)
- Lack of a proactive 24x7 operations model and the required service management tools



## POTENTIAL CONSEQUENCES AND RISKS

### Insufficient scaling

- Geographical expansion of wireless coverage only with high effort (time, budget)
- Expansion of wireless performance only with high effort (time, budget)
- Expansion of the number of wireless clients only with high effort (time, budget)

### Urgent security issues

- Recording of data / data exfiltration
- Compromising of data / data falsification
- Sabotage (disruption of data transmission, data destruction)

### Insufficient reliability

- Device failures due to inappropriate device specifications (form factor)
- Performance problems (retransmissions, packet loss, WLAN configuration, bottlenecks, etc.)
- Poor WLAN stability depending on site location

### Lack of transparency

- Lack of monitoring tools for the respective wireless and security applications
- Lack of an operating concept and thus non-transparent service level agreements



## OUR SOLUTION

The smooth interaction of WLAN design, security and operation of the solution is essential for reliable and secure wireless communication in manufacturing and industrial environments. ENTIRETEC combines a dedicated portfolio of industrial wireless products with its 24x7 operational services and advanced service management tools to ensure the reliability, flexibility and efficiency of an industrial communication network.

### WLAN Design

sets basic standards for optimal WLAN coverage, comprehensive security and detailed component selection.

### Proof of Concept

enables a practice-oriented testing of the created WLAN design in an industrial environment.

### WLAN Planning

directly at the respective areas of operation/locations enables the precise planning of WLAN networks in the OT environment.

### Worldwide implementation

at all company sites with project management, global delivery services, configuration and implementation of the solution, etc.

### 24x7 operation of the WLAN infrastructure

as part of the Global Network Services via ENTIRETEC Service Platform.

### Development of software interfaces

for the efficient exchange of WLAN meta-information (location data, client status, etc.) and automated control of WLAN networks.

## VARIOUS APPLICATIONS, TAILOR-MADE SOLUTIONS

### Industry

The use of wireless technologies enables better management by tracking devices, more efficiency through automated monitoring and decreased costs e.g. through automated control of lighting, heating, cooling and power supply.

### Logistics

The logistics industry has many time-critical applications with participants moving freely in the field which need to communicate wirelessly with a controller - today a musthave for modern warehouses with wireless barcode scanners, forklift terminals and automated storage systems.

### Transport

Efficient transport connections between terminals or in large logistics centres require autonomous, self-driving vehicles. A wireless infrastructure is needed for car-to-car and car-to-infrastructure communication for traffic optimisation, tour coordination and vehicle condition monitoring.

## OUR SERVICE FEATURES

for the provision of a high-performance, secure and 24x7 available overall WLAN solution

- Inventory of the existing wireless environment
- Development of a custom-fit solution design/architecture
- Development of a service concept for 24x7 operation and service platform
- Wireless planning/ conception of the locations on the basis of central guidelines
- Implementation of the solution at the customer sites
- 24x7 operation of the WLAN environment according to ITIL and non-specific SLA



## YOUR ADVANTAGES

### ✓ State-of-the-art technologies

Use of modern, custom-fit wireless solutions in the industrial environment and accelerated implementation due to predefined processes/workflows

### ✓ Proactive 24x7 service operation

Operation of the solution via central Network Operation Centre (NOC) leads to low disruptions and high overall availability of the solution.

### ✓ Comprehensive security

Achievement of the highest security standards, taking corporate policies and security operation structures into account

### ✓ Full transparency

Worldwide access to all service-relevant information and important parameters of the network via the web-based service portal

ENTIRETEC is a global Managed Services Provider and specialist in network and security technologies. We support the global business strategies of our customers and business partners across all industries with highly available and secure IT solutions and combine them in a tailored manner to create future-proof answers for digitalization, mobility, cloud and IoT.