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Success Story

German Logistics Company Gets Reliable, State-of-the-Art Warehouse Network with Zyxel Wireless Solution

Logistics
INDUSTRY

Logistics Company
CUSTOMER

Germany
COUNTRY

Zyxel Wireless Solution
SOLUTION

Overview

Challenges

• Eliminates blind spots caused by radio interference
• Ensures high-throughput data transfers over long distances
• Delivers consistent wireless signal in interference-prone warehouse

Solution

• Zyxel Wireless Solution

Results

• Achieves dynamic, adaptive wireless connectivity
• Provides high-speed, stable data transfers at any distance
• Enables smooth and efficient network functionality
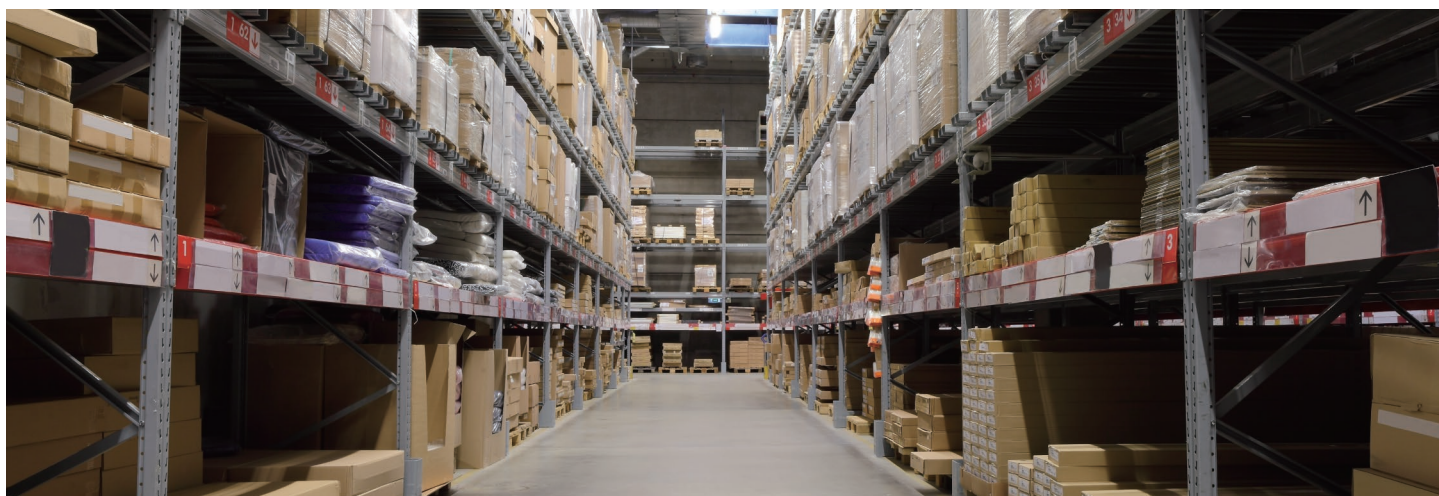
Summary

A German logistics company built a warehouse as part of its ambitious growth plan, but later realized that interference was preventing its wireless handhelds from communicating reliably with the merchandise management system. The company was eager to optimize the network environment to prevent the network disruption. Thanks to Zyxel's high-performance access points built with smart antenna technology and premium switches, the company now has efficient and smooth connectivity. Zyxel's solution guarantees the company's network is ready for the future.

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Background

A German logistics company decided to build a 20,000-square-meter warehouse with a mobile shelving system to store its fresh and frozen foods.
The state-of-the-art system is a critical part of the company's long-term growth strategy. To ensure reliable connectivity between its merchandise system and wireless handhelds, it was essential for the company to have an easy and flexible means of managing wireless devices and access points.

Challenges

The company faced a few hurdles before it could achieve its goal of a stable and high-speed wireless network. The warehouse storage system is mostly constructed of metal, and the stored foods contain water and are protected with aluminum foil. Metals such as aluminum can reflect radio waves and consequently interfere with wireless communication. The constantly changing lighting conditions in the warehouse could also cause network disruption. Therefore, the company was seeking a powerful, dynamic solution to cope with potential interference—and service disruptions that might negatively affect its business.

Solutions and Benefits

A systems integrator designed a tailor-made network for the logistics company with Zyxel's Smart Antenna access points and fiber-optic switches, ensuring higher effective throughput that's able to deliver a large amount of data over long distances.

The **WAC6503D-S** 802.11ac Dual Radio Smart Antenna 3x3 Access Point features smart antenna technology that can overcome co-channel interference and enhance the quality of wireless transmission. According to a study from the University of Brescia's Wireless Networking Group, WAC6503D-S outperformed competing products in a test of total aggregate throughput. Moreover, the rugged AP can maintain its powerful signal strength in the harshest conditions, delivering enterprise-level speed and performance regardless of user density or interference.

The logistics company also received premium Zyxel switches—the **XGS2210-28HP, XGS3700-24** and **XGS4600-32F**—that are designed for bandwidth-intensive applications and can handle the critical responsibilities of serving as the network backbone.

After quick and hassle-free installation, the logistics company's revamped network has performed flawlessly. Also, since the Zyxel products came with investment protection, it will be easy for the company to expand its network in the future—without the need to purchase additional equipment. The customer is ecstatic with the benefits that Zyxel's products have delivered and plans to stick with Zyxel for future projects in additional locations.

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Products Used

WAC6503D-S • 802.11ac Dual Radio Smart Antenna 3x3 Access Point

- Zyxel smart antenna with over 700 optimized antenna patterns for breakthrough performance anywhere
- Ideal for high-density and interference-laden indoor environments
- Advanced IEEE 802.11ac offers combined data rates of up to 1.75 Gbps
- Industry-leading Rx sensitivity as low as -102 dBm
- AP Flex™, DCS, and tool-less bracket design for streamlined deployment

XGS2210-28HP • 24-port GbE L2 Switch with 10GbE Uplink

- Physical stacking up to 2 units and 96 Gigabit ports
- Gigabit connectivity plus four (4) SFP+ ports
- VLAN communication through access switch by static routing feature
- Supports sFlow that analyzes client behavior
- Complies with IEEE 802.3at PoE Plus with high power budget up to 375 W

XGS3700-24 • 24-port GbE L2+ Switch with 10GbE Uplink

- Physical stacking up to 8 units and 384 Gigabit ports
- Four 10GbE SFP+ uplink flexibility
- Internal and hot-swappable power supply design
- PoE model supports IEEE 802.3at with high PoE power budget up to 1000W

XGS4600-32F • 28-Port Gigabit L3 Managed Switch with 4 SFP+ Uplinks

- Four built-in 10G SFP+ uplinks enable smooth, congestion-free data delivery for high-bandwidth applications
- Provides high bandwidth with true physical stacking of up to four units and 112 Gigabit ports
- New ID design with carbon fiber-style name plate delivers a modern look and feel
- High resiliency with redundant power supply units

XS3700-24 • 28-Port Gigabit L3 Managed Switch with 4 SFP+ Uplinks

- Flexible 10-GbE connectivity with 12 SFP+ ports, eight 10-G BASE-T ports, and four SFP+ combo ports
- Layer 2 Plus feature set equipped with static routing, policy-based routing, and VRRP
- No-single-point-of-failure hardware and software design
- Future-proofed with IPv6 support
- Comprehensive security features to ensure network availability

SFP10G-SR • SFP Plus Transceiver

- Duplex LC connector
- Temperature range 0°C to 70°C (32°F to 158°F)
- Uncooled 1310 nm DFB laser (FTLX1412D3BCL)
- Uncooled 850 nm VCSEL laser (FTLX8511D3)

About Zyxel

Focused on innovation and customer-centricity, Zyxel has been connecting people to the Internet for nearly 30 years. Our ability to adapt and innovate with networking technology places us at the forefront of creating connectivity for telcos and service providers, business and home users.
Zyxel is building the networks of tomorrow, unlocking potential, and meeting the needs of the modern workplace — powering people at work, life, and play.
Zyxel, Your Networking Ally.