



Success Story

Zykel Wireless Solution Upgrades Turkish Factory's Network to Increase Connectivity Quality and Work Efficiency



Manufacturing



Sadal
Agricultural
Machinery



Turkey



Zykel
Wireless
Solution

Overview

Challenges

- The existing WiFi infrastructure could not provide connectivity for the entire site that covers a large area of 4,439 m²
- The storage area within the factory has metal racks that may affect signal quality
- The network needed to support multiple areas such as factory, warehouse, and office
- The WiFi service quality throughout the facility needed improvement

Results

- Futureproof, easy-to-manage flexible network infrastructure to meet the current and potential upcoming needs
- Agile traffic control for unified network applications
- Fast and uninterrupted internet over a wide area throughout the property

Solution

- Zykel Wireless Solution

"We preferred Zykel Networks and Fonetsan Information Technologies because of their professionalism and experience in digital transformation projects. Our priority was to increase the quality of the WiFi service. The new end-to-end network solution met our needs in terms of budgetary and technological infrastructure. The installation was completed quickly. We are happy to have a data communication infrastructure that can manage all devices on a single platform and in line with the latest technology and future innovations. Zykel and Fonetsan Information Technologies were with us at every stage of the project. Thank you for your support."

Bora Turan
Financial and Administrative Affairs Manager,
SADAL TARIM MAKİNELERİ DIŞ TİCARET A.Ş.

Background

SADAL Agricultural Machinery Foreign Trade. Inc. was established in 1995 and is the sole distributor of STIHL, LÖWE, and BARBIERI in Turkey, with 650 authorized dealers and service points. At present, the company supplies more than 100 wide-ranging products. Aiming to take the lead in the market and further strengthen its loyalty among customers, SADAL decided to join the digital transformation revolution. For this, the company needed a stronger network infrastructure that would provide better coverage, can be easily managed, and is future-ready for possible expansion.



Challenges

Sadal Agricultural Machinery has a 4.499-m² factory, including the shelf system in the mezzanine of the warehouse. The access points that Sadal Agricultural Machinery had in place were insufficient for providing enough bandwidth needed now. The company wanted to establish a wireless network over a wider area and provide seamless WiFi services to the factory, warehouse, and office. The warehouse has a high ceiling that allows the most efficient use of the shelf system.

Another thing to consider was the metal structure of the shelves that could affect the network quality.

The employees faced difficulty in connecting handheld terminals in the factory. Also, there was no controller in the infrastructure to manage the network devices better. Therefore, they decided that it was necessary to improve the existing infrastructure.

Solutions and Benefits

Zyxel **NXC2500 Wireless LAN Controller** was deployed to enable centralized, effective WLAN control, allowing the administrator to have easy configuration and better management of network devices. The intelligent controller supports AP planning, deployment, monitoring, and maintenance while offering management, authentication, and guest access.

WAC6103D-I 802.11ac Dual-Radio Dual-Optimized Antenna 3x3 Access Point is a high-performance 802.11ac access point, featuring a dual-optimized antenna that provides switchable signal patterns to reduce inter-floor interference. The product also features load balancing and smart-client steering that has significantly improved communication quality. With the centralized management platform, the administrator can monitor the AP's status to ensure stable operation.

Zyxel **GS1920-24HPv2 24-Port GbE Smart Managed Switch** provides flexibility, which is ideal for SMBs, with unique port combinations that futureproof the network. It offers the possibility to expand according to increasing business demands.

Zyxel's end-to-end network installation was completed in a short time. Thanks to the easy-to-use **Zyxel ONE Network (ZON) Utility**, the administrator can easily configure and manage switches and WiFi APs with just one click. The ZON utility greatly simplifies the setup process and allows the user to maintain the network in a single platform easily. Zyxel wireless solution not only solved the company's pain point but also built a stable and robust network structure and increased work efficiency throughout the facility.

Atilla Ceyhan, General Manager at Fonetsan Information Technologies, said, "In this project, Zyxel's top-notch switches and access points helped the company to successfully complete the installation and enabled smooth communication among different locations without using the wired structure."

With the new network in place, the company now has seamless connectivity, no matter in the office or the factory. Zyxel's solution revitalizes the company's network, allowing the company to not worry about network management and prepare well for digital transformation.

Products Used

NXC2500 • Wireless LAN Controller



- Auto provisioning and centralized management of up to 64 APs
- ZyXel Wireless Optimizer for easy planning, deployment, and maintenance
- Advanced ZyMesh technology for streamlined AP deployment and WLAN extension
- Enhanced RF management with auto healing
- Flexible traffic forwarding with tunnel and distributed modes
- Comprehensive guest network management and granular access control

WAC6103D-I • 802.11ac Dual-Radio Dual-Optimized Antenna 3x3 Access Point



- Dual-optimized antenna allows pattern optimization adapting to wall- or ceiling-mounted installation
- 3x3 802.11ac supports combined data rates of up to 1.75 Gbps
- NebulaFlex Pro allows users to switch among standalone, on-premises controller managed or intuitive Nebula cloud managed modes as needed
- Dual-image support for reliable WiFi connectivity
- ZyXel ONE Network for standalone AP management

GS1920-24HPv2 • 24-port GbE Smart Managed PoE Switch



- Up and running in minutes — supports NebulaFlex™ Technology to shift between standalone and License Free Nebula cloud flexibly
- Standalone: Easy management and setup with web-based GUI
- Nebula Cloud: Nebula allows simple deployment with agile network management
- Unique port combinations futureproof the network
- Smart fan design offers silent operations in your office
- Complies with IEEE 802.3at PoE Plus with a large PoE budget of 375W

About Zyxel Networks

Focused on innovation and customer-centricity, Zyxel has been connecting people to the Internet for over 30 years. Our ability to adapt and innovate with networking technology places us at the forefront of creating connectivity for business and home users. We're 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.

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