



Success Story

ZyXEL Wi-Fi Solution Facilitates Rise in Productivity at Pacyga Furniture Factory in Poland

“The solution based on the ZyXEL devices enabled safe wireless networking for our employees, visitors and partners who visit our place. An access point with an NXC2500 controller enabled mobility and access from almost any corner of the place. With the network, the storage inventories and dispatching details can be updated instantly. The system is simple to administer and very effective. It accounts significantly for improvement of working conditions”.

Mr. Damian Pacyga

Pacyga furniture

Overview

Customer Name

Pacyga Furniture Plant

Customer Industry

Manufacturing

Challenges

Provide high-performance Wi-Fi to employees and visitors for data storage and monitoring

Solutions

- 802.11 a/b/g/n Unified Access Point
- 802.11 a/b/g/n Dual-Radio Business AP
- 8/24-port GbE L2 Switch
- 8/24 port GbE Smart Managed Switch

Benefits

- Able to save data on unloading and disposal in real time at available servers.
- Employees can monitor machinery and technological processes, including changes in parameters.
- Enables both employees and visitors to communicate through a reliable wireless network.

Challenges

Pacyga’s former network was inefficient, with both limited reception and functionality. The offices required a new wireless WLAN system as well as new network infrastructure to cover freight and storage areas. To facilitate a new wireless network, a separate LAN infrastructure was installed using new copper wires. A 6-Gigabit Ethernet network was created to include additional panels and sockets, reconstruction of existing distribution nodes, PPD, and server cabinet elements. Several transmission poles with specially selected antennae were erected in the freight and storage areas to ensure complete coverage.

Background

Pacyga, a Polish furniture manufacturer founded in 1991, currently employs more than 200 employees. Relying on modern machines and a fully automated production process, the small company continues to experience rapid growth that requires the acquisition of additional manufacturing facilities. Much of the upsurge in sales is the direct result of a fruitful relationship with Swedish furniture giant IKEA that began in 1993.

Solutions and Benefits

The basic requirement was to install a high-efficiency Wi-Fi network at Pacyga Co. The benefits of such a network include integrating mobile devices, laptops, scanners and PDAs into a campus-wide network allowing any employee to save data and monitor processes no matter where they are.

ZyXEL used 8 NWA5121-N access points to broadcast Wi-Fi signals in storage rooms and workshops. The external antennas design of NWA5121-N also covered external zones of freight and storage. As for the offices, exhibition and conference halls, 3 NWA5123-NI access points were used. The solution also called for two NWA3560-N access points in remote workshops, where neither fiber-optic nor copper networks were possible. The 5GHz radio frequency was used in wireless networks with two access points, while the 2.4GHz frequency was used for Wi-Fi outside.

With the use of the GS2200-24, GS2200-8HP, GS1910-24, GS1900-8HP, GS-1900-8 switches, the system was guaranteed to maintain fiber optic connectivity between distribution boxes as well as a dependable VLAN division, PoE for access points, and LAN for computers and machinery in both office and production areas.

Pacyga Co. was very satisfied with the work, with Mr. Damian Pacyga describing the new system as “simple to administer and very effective.”

Product Used



NWA5120 Series 802.11 a/b/g/n Unified Access Point

- 2-in-1 Standalone/Managed AP design
- Ceiling and wall mountable
- CAPWAP management Supported
- Plenum Rated housing
- Tx Beamforming and Rx Maximum Likelihood Demodulation (MLD)
- 2.4 GHz and 5 GHz concurrent dual-band (NWA5123-NI)
- High-performance RF technology: Tx Beamforming and Rx Maximum Likelihood Demodulation (MLD)



NWA3560-N 802.11 a/b/g/n Dual-Radio Business AP

- Higher bandwidth and superior performance with 802.11n
- 3-in-1 hybrid AP WLAN including AP controller mode, managed AP mode and standalone AP mode
- Brand new centralized graphic management interface for up to 24 WLAN APs
- Back-up redundancy supported to provide reliable connection service
- Secured tunnels for communication between controller and managed AP to prevent leaking of configurations
- Enterprise-class AP functionalities with comprehensive configuration interfaces.
- Built with Low Smoke, Zero Halogen (LSOH) materials for plenum rating for UL 2043 support



GS2200-8HP/24 **8/24 port GbE L2 Switch**

- Comprehensive L2 switching features
- 20/56 Gbps non-blocking switch fabric
- 2/4 dual-personality (RJ-45/SFP) GbE interfaces
- Port security and enhanced 802.1X port authentication
- MAC freeze and intrusion lock
- 8 IEEE 802.1p hardware priority queues
- WFQ, WRR and SPQ queuing algorithms
- IEEE 802.3at PoE Plus support (GS2200-8HP)
- IEEE 802.3af PoE support (GS2200-8HP)
- PoE power consumption mode for enhanced energy efficiency (GS2200-8HP)
- Dual-speed (100/1000 Mbps) fiber connectivity (GS2200-8HP)
- IPv6 Ready Logo approved



GS1910-24 **24-port GbE Smart Managed Switch**

- Advanced Smart GbE L2 ACL switching features
- 48 Gbps non-blocking switch fabric
- Supports IPv6
- Fanless design



GS1900-8/8HP **8-port GbE Smart Managed Switch**

- 10/100/1000 Mbps GbE ports
- Easy browser-based switch management
- Quick and easy set up wizard
- Advanced network error prevention features (loop protection, dual images, storm control, DoS and SSL)
- Fanless design
- Green Ethernet IEEE 802.3az support and intelligent ZyXEL green features
- High-power PoE support IEEE 802.3at (GS1900-8HP)



NXC2500 Wireless LAN Controller

- Centralized management for up to 64* APs
- ZyMesh mitigates complex, inconvenient cabling Wi-Fi deployments
- Client steering enhances efficiency of wireless spectrum utilization
- Auto healing maximizes Wi-Fi service availability
- Seamless integration with external AD, LDAP, RADIUS authentication
- Best investment protection with built-in RADIUS server

* Management of 64 APs is supported with firmware version V4.10 or above

About ZyXEL Communications

ZyXEL Communications Corp., founded in 1989 and headquartered in Taiwan, is the leading provider of complete broadband access solutions. As one of the early modem manufacturers, ZyXEL has gone through transformations in the fast-paced networking industry. Delivering cutting-edge communications innovations to more than 400,000 businesses and more than 100 million consumers throughout the world, today ZyXEL is one of the few companies in the world capable of offering complete networking solutions for Telcos, small to medium-sized businesses, and digital home users for a wide range of deployment scenarios. Telco solutions include Central Office Equipment, Customer Premise Equipment, Wired and Wireless Access Network Devices, and Carrier Switches. SMB and Enterprise solutions include Unified Security Gateways, LAN Switches, WLAN, and IP Telephony. Digital Home solutions include Network Connectivity Devices and Multimedia Solutions.

The company has 1000 employees and distributors in 70 countries, reaching more than 150 regional markets. The ZyXEL Communications Corp. includes 35 subsidiaries and sales offices and two research and development centers worldwide. For more information, visit the company's Website, <http://www.zyxel.com>.

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