

Success Story

CNC Leader's Network a Cut Above the Competition with Zyxel Wireless Solution



Manufacturing

INDUSTRY



CUSTOMER

MicroStep



COUNTRY

Slovakia



SOLUTIONS

Zyxel
Wireless
Solution

Overview

Challenges

- Network infrastructure unable to support latest production methods
- WiFi quality throughout office and production space is insufficient
- Technicians lack advanced management capabilities

Benefits

- Provided fast, stable WiFi throughout entire company headquarters
- Upgraded network infrastructure to support complex 3D design software
- Set up powerful controller for central management of access points

Solutions

- Zyxel Wireless Solution

"Our company's designers recently decided to produce cutting machines using SolidWorks 3D CAD. The complete 3D production process requires anywhere from 2 to 5 GB of data. Our team of 40 designers works around the clock to create 15 to 20 new machines per month. To maintain this high level of production, we decided to set up a 10G network with work stations running on fast SSD drives. It was an easy decision to partner with Zyxel on this project, as its price to performance ratio is simply better than the competition."

Peter Ivan,
IT Administrator, MicroStep, Ltd.

ZYXEL

Background

MicroStep is a manufacturer and supplier of CNC machines for cutting materials using plasma, laser, oxyfuel, waterjet, and high-speed spindles. In addition to machine production, MicroStep develops and supplies its own CAM (computer-aided manufacturing) software with specialized modules for a number of machine applications. Through an extensive network of authorized dealers and subsidiaries, more than 95 percent of MicroStep's production is exported to 54 foreign countries.



Challenges

When it began using state-of-the-art design and cutting software, MicroStep needed a more powerful and reliable network infrastructure for its computers, servers, and production machinery. It also decided to upgrade its wireless system to provide faster, seamless, and more

secure WiFi coverage throughout its office and production facility. The improvements to the network would allow MicroStep to gain greater control over its production capabilities and increase employee efficiency.

Solutions and Benefits

At the core of MicroStep's revamped network were Zyxel's **XS3700-24 and XGS3700-24/48 Gigabit managed switches**, which provide the power and resiliency that mission-critical applications require. Their redundancy architecture, no-single-point-of-failure design, and dual, internal power supply ensure non-stop business continuity in the event of malfunction. The XS3700's 10-Gigabit connectivity also offers impressive levels of scalability, which gave MicroStep the ability to expand or alter its network depending upon production demands.

Additionally, both switches take advantage of the Zyxel One Network (ZON) utility, which can relieve companies like MicroStep from having to micromanage the more repetitive network operations.

Zyxel **NWA5123-AC 802.11ac Dual-Radio access points** were installed, allowing staff to access WiFi simply and seamlessly through simultaneous 2.4 and 5GHz bands.

The ceiling and wall-mountable APs help provide complete signal coverage throughout Microstep's facility.

For easy integration, configuration, and maintenance of WiFi coverage, an **NXC2500 Wireless LAN Controller** was deployed, which provides centralized management for up to 64 APs. With valuable features such as client steering, auto healing, and dynamic channel selection, the versatile controller guarantees optimal WiFi quality and performance, especially if an access point temporarily loses functionality.

In the aftermath of the network overhaul, MicroStep was able to produce its state-of-the-art cutting machinery and CAM software. The BYOD network environment also had the added benefit of providing warehouse employees with the ability to operate the barcode scanner to track inventory—all thanks to the power, security, and convenience of a Zyxel network solution.

Products Used

XGS3700 • 24/48-port Gigabit L2+ Switch with 10G Uplink



- Full Layer 2 feature set with Layer 3 features including static routing, policy-based routing, VRRP, and ECMP support
- Four 10GbE SFP+ uplink flexibility
- Hot-swappable power supply
- Internal redundant power supply design
- Physical stacking up to 8 units and 384 Gigabit ports through 2 standard 10G SFP+ ports

XS3700-24 • 24-Port 10 Gigabit L2+ Switch



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

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 simplified 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

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

NWA5123-AC • 802.11ac Dual-Radio Unified Access Point



- Ceiling- and wall-mountable design with optimized RF performance
- 2-in-1 standalone/managed AP design
- CAPWAP management supported
- Enterprise-class 2x2 802.11ac AP supports combined data rates of up to 1,200 Mbps
- Simple, speedy deployment with APFlex™ and Zyxel One Network utilities

About Zyxel Communications

Focused on innovation and customer-centricity, Zyxel Communications 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.

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