



Optimizing Network Efficiency for Cold Chain Logistics Company

Overview

With the growing trend of online shopping for fresh foods and an increased emphasis on food safety, the demand for cold chain logistics has risen significantly. The pandemic underscored the importance of cold chain equipment in logistics, especially for vaccine storage. In response, Chenmart International Corporation has implemented a smart cold chain warehouse management system, featuring Zyxel Networks' access points in its freezing storage facilities. By integrating these access points with PDA devices and other digital transmission systems, the company has advanced the digitalization of warehouse equipment, reduced labor costs, and enhanced warehouse management accuracy. This setup allows for convenient and immediate remote management, lowering risks and costs.

Challenges

Operating in extremely low temperatures presents several significant challenges for wireless communication systems. At temperatures as low as -20 degrees Celsius, wireless signals can experience noticeable attenuation, reducing their range and stability. This issue necessitates more powerful transmitters or additional signal relay devices to maintain effective communication. Additionally, the components and connectors of wireless access points may become damaged or fail due to freezing conditions, which can further degrade signal quality and stability. Conventional wireless access points are not typically designed to function in extremely cold environments, requiring specially designed models or additional insulation measures to ensure proper operation. To enhance network management efficiency, it's crucial to have solutions that allow for rapid identification and resolution of network issues using mobile devices like smartphones.

Customer

Chenmart International Corporation

Industry

Logistics

Location

Taichung, Taiwan

Partner

HONLUN

Customer Background

Chenmart International Corporation was established in 1989, initially focusing on manufacturing household fan components. The local supply chain advantages diminished as the industry shifted its manufacturing base outside Taiwan. In response to these changes, Chenmart proactively transitioned from manufacturing fan components to establishing a successful cold chain business. Anticipating future food safety concerns, Chenmart is among the first to introduce a system for tracking and recording temperatures throughout the supply chain.



Solutions

Temperature control is crucial for cold chain logistics, making temperature-proof access points essential for stable communication. To meet Chenmart's needs in this sector, Zyxel Networks' WAX655E access point was chosen as the preferred option. The installation at Chenmart's facilities was handled by Honglun, which has a team of certified technicians and a long-standing commitment to IoT and ICT integration. Over the past 30 years, Honglun has served over 1,000 SMBs.

The WAX655E access point features powerful wireless signal transmission capabilities to overcome signal attenuation in low temperatures. With its IP67 industry-grade weatherproofing, the WAX655E can operate in extreme temperatures ranging from -40°C to 65°C, ensuring high-quality and stable communication. Additionally, the WAX655E offers ultra-fast speeds of up to 5.4 Gbps and the latest WiFi 6 technology, making it a high-performance wireless network solution. The 2.5 Gbps PoE port's multi-gigabit performance supports the most demanding wireless network requirements.

The Nebula cloud networking solution provides flexible management options, allowing seamless switching between Nebula cloud management, controller management, and standalone modes. Distributors, managed service providers (MSPs), and network administrators can easily manage and monitor the WAX655E access points through the Nebula cloud platform, improving management efficiency and reducing IT risks and costs.

Product List



- WAX655E Outdoor Access Point

Results

By implementing Zyxel Networks' WAX655E access points, Chenmart enhanced warehouse digitalization, reduced labor costs, and improved management accuracy. The WAX655E's robust design ensures stable communication in extreme temperatures, while Nebula cloud networking facilitates efficient management, lowering risks and costs. Furthermore, the Nebula cloud platform offers direct technical support for configuration questions, with dedicated personnel available to respond, eliminating the hassle of phone communication or unreachable support.

- Reliable and high-speed wireless connectivity ensures optimal operational efficiency even in harsh environments
- Simplified and intuitive network interfaces enhances management efficiency via the cloud
- Responsive technical support provides peace of mind in network management

