



SYSTIMAX® Solutions

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Laura Chen
Regional Sales Director
Greater China,
CommScope Enterprise Solutions

CommScope Infrastructure Underpins Efficiency at Laigang Group Machinery Company's Flagship Facilities

New, 120 hectare Energy Control Center and R&D Center rely on SYSTIMAX® GigaSPEED® XL, TeraSPEED®, iPatch® and InstaPATCH® Solutions

Laigang is one of China's leading steel suppliers with the country's largest production facilities for H-section beams, gear steel and powder metallurgy products. Since it was founded in 1970, it has steadily increased steel output to current levels of more than 13 million tons of steel a year. In total, Laigang Group has 39,000 employees of whom 20,000 work in its iron and steel companies.

The company's growth is built on continuous efficiency improvement and, as part of this process, it has built a new, 120 hectare Energy Control Center and R&D Center.

Located in the Gangcheng District of Laiwu City in Shandong Province, the two centers' opening celebrated the company's 40th anniversary.

The project includes the main building, file center and data center in the Energy Control Center as well as advanced R&D facilities, so a high performance network infrastructure is vital. To provide this, the company looked for connectivity solutions that combined high data transmission performance with ease of installation and management.

Laigang managers studied the market and evaluated products from a number of suppliers. The study showed that solutions from CommScope's SYSTIMAX® portfolio were the best choice. This was the first time the company had specified solutions from the SYSTIMAX portfolio.

For connections within the Energy Control Center's three buildings, which have a total floor area of 70,600m², and the R&D Center with a phase I investment of USD 50M, Laigang chose the SYSTIMAX GigaSPEED® XL Solution. This copper cabling reliably exceeds the international Category 6 cabling standard even under adverse conditions.

In the main building, the GigaSPEED XL Solution serves 17 floors with an area of 44,900m². In each of the center's other two buildings, it serves five floors, providing data transmission speeds up to 1 Gb/s.

More than 7,000 GigaSPEED XL information outlets across the site are connected via 108 communication rooms. These rooms are linked with each other and to the data center via 6.6kms of SYSTIMAX TeraSPEED® fiber. This high performance, singlemode fiber operates over the full 1280 to 1625nm wavelength range. As a result, its useable waveband is 50 percent more than conventional singlemode fiber.

Within the communications rooms, Laigang specified the SYSTIMAX iPatch® intelligent infrastructure solution. This monitors copper and fiber connections in real-time, giving managers a clear, up-to-the-second view of the network physical layer and any changes made to network connections.

Advantages of the iPatch solution include improved network security, lower management costs and faster moves, adds and changes. It also maintains an up-to-the-minute network map and delivers instructions to technicians at the patch panel as they work on changes to the network.

The iPatch facilities, combined with the end-to-end reliability of the SYSTIMAX portfolio, makes operation of the center's network highly efficient. In addition, the performance of the solutions and their 20-year CommScope extended warranty promise many years' of service before replacement.

Laigang's long-term approach to network infrastructure reflects sustainability principles applied throughout the center. Architecture and the steel structure system used in the buildings minimize energy requirements during constructions and operation. Within the facilities, building management systems connected via the network minimize energy needed to heat and ventilate work areas.

The R&D Center houses nine development laboratories and a department for fundamental scientific research. These are engaged in technique simulation and optimization, quality improvement and cost reduction projects in areas including metal smelting, hot rolling, cold rolling and process control. In all cases, the emphasis is on reducing the amount of energy consumed and improving quality.

By continuously developing its technologies and meeting international quality standards, Laigang can satisfy market demand for high value-added products.

Among the company's quality certifications are ISO9002, ISO14001 (environmental management) and OHSAS18001 (occupational safety and health management).

CommScope and its BusinessPartners, working in close cooperation with the customer, completed the network infrastructure design for the two new centers. Local branches of CommScope BusinessPartners Taihao Technology and Citic Beijing Guoan Electronics then installed the cabling. This work had to meet tight schedules during harsh winter weather.

To save time, the installers used the SYSTIMAX InstaPATCH® Solution for fiber connections. This allowed them to make more than 90 connections in the time it takes to terminate one traditional fiber.

The project team also installed 360km of GigaSPEED XL UTP (Unshielded Twisted Pair) copper cabling together with 1.5kms of GigaSPEED XL FTP (Foiled Twisted Pair) cabling. Communications rooms were equipped with iPatch intelligent patch panels connected via 22 iPatch panel manager units.

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