

Case Study

Large Campus Wireless Solution

Environmental Industry Achieves
Stable Network Connection by FS
Campus Wireless Solution


FS large-scale campus network solution provides stable connections for the environmental protection industry, ensuring stable business operations and high wireless network coverage.

Environmental Industry Achieves Stable Network Connection by FS Campus Wireless Solution


Country

 United Kingdom


Industry

 Government

Network Type

 Large Campus Wireless Network

Solutions

 Enterprise WLAN Solution

Highlights

- Two S5850 switches at the core layer form a dual-active system with M-LAG to deliver load balancing.
- The S5860 series switches with stacking to support the access and expansion of a large number of devices.
- Airware cloud platform provides a centralised network management to simplify operation and maintenance.

Key Stats

- M-LAG aggregates multiple physical links to increase network bandwidth and avoid network congestion.
- Access layer with PoE switches with stacking to support future business expansion planning.
- AC+FIT AP networking, cross-VLAN L2/L3 roaming, to achieve a seamless wireless network in the campus.
- Portal authentication, WPA3 & MD5 encryption protection to improve enterprise data security.



Overview

This customer is a public-private partnership in the environmental protection industry. In recent years, their business has gradually expanded, resulting in the continuous expansion of the staff size. This situation caused them to face problems such as insufficient network coverage, performance degradation, and high latency throughout the office area. At the same time, the customer company also lacked professionals to provide solution support and other issues. Therefore, they urgently needed to optimise the internal network to support business development.

Challenges

As a participant in the British environmental protection industry, the customer has a strong sense of mission. Hence, the main considerations of them from a business perspective are scalability, manageability, and reliability. They also made it clear that there was a need for business implementation shortly and requested that the office network be improved as soon as possible.

Focusing on long-term planning needs, remote management of many terminal devices is very important. The customer has planned a 5-year subscription to our Airware management software, making this a crucial aspect of the partnership. On the other hand, ensuring the stability of the customer's multiple office building networks while providing a high-quality wireless network experience also means that network equipment must have high performance and reliability.

Solutions

Based on the networking mode and overall coverage scale provided by the customer, our technical team first evaluated the entire project and then designed a 100G network solution for the customer. Considering their layout, the technical team retained the conventional AC+FIT AP networking mode, which also facilitates centralised management and unified deployment, enables cross-VLAN L2/L3 roaming, and fully covers their wireless scenario.

This solution uses two S5850-48B8C switches as the core layer to form a dual-active system and uses M-LAG to achieve link redundancy. Then we choose S5860 series switches, such as S5860-24XB-U and S5860-48XMG-U as access devices, which support the POE++ power supply protocol and provide high-quality power supply networks. As to scalability, the solution stacks the 3410 series with S5860-20SQ switches. This connectivity method allows multiple network devices to be virtualized into a single logical device to simplify operations and network topology while enhancing network reliability and scalability.

Finally, the entire network device is equipped with the Airware cloud management platform to easily manage the network device remotely. The software also provides on-site survey, intelligent analysis, safety protection, and other functions, providing the customer with installation guidance, real-time troubleshooting, and optimisation. From a security perspective, the software has also passed Portal authorisation certification and supports protocols such as WPA3 and MD5 to ensure customer data encryption and privacy protection.

Case Study

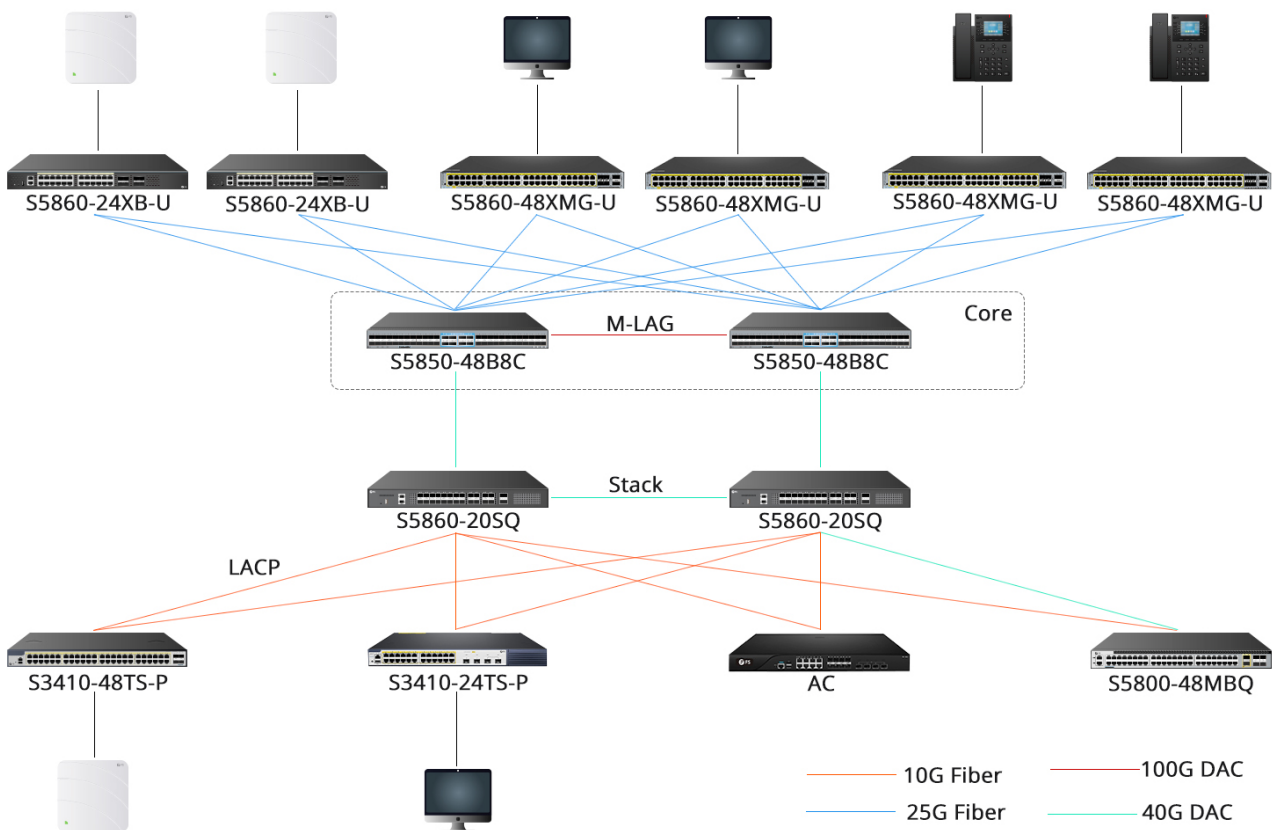
Large Campus Wireless Solution



Results

This customer has optimised the network to 100G core network speed and combined it with AC+FIT AP networking to achieve seamless roaming throughout the office network. In addition, M-LAG has improved link reliability to the device level, significantly increasing server bandwidth. This connectivity can effectively disperse real-time video transmission network traffic, avoid network congestion, and achieve network stability and reliability.

The access layer PoE equipment has provided a large number of access power supply ports, which fully has met the customer's existing terminal access needs and supported future expansion of customer services. The most critical thing was that they can manage and configure the device remotely through the Airware cloud management platform, which greatly improved maintenance efficiency and ensures corporate privacy and security.



Product List

Product	ID	FS P/N	Description
25G Switch	157444	S5850-48B8C	48-Port Ethernet L3 Switch, 48 x 25Gb SFP28, with 8 x 100Gb QSFP28, Support MPLS&MLAG
10G Switch	186775	S5860-48XMG-U	48-Port Ethernet L3 PoE++ Switch, 48 x 10GBASE-T/Multi-Gigabit Ports, 4 x 25Gb SFP28 Uplinks, with 2 x 40Gb QSFP+ Uplinks, Support Stacking, Broadcom Chip
10G Switch	108716	S5860-24XB-U	24-Port Ethernet L3 PoE++ Switch, 24 x 10GBASE-T/Multi-Gigabit, 4 x 10Gb SFP+, with 4 x 25Gb SFP28 Uplinks, Support Stacking, Broadcom Chip
Multi Switch	127672	S5800-48MBQ	48-Port Ethernet L3 Switch, 48 x 100M/1000M/2.5GBASE-T/Multi-Gigabit, with 4 x 25Gb SFP28 and 2 x 40Gb QSFP+, Support MPLS&MLAG
10G Switch	108710	S5860-20SQ	24-Port Ethernet L3 Switch, 20 x 10Gb SFP+, with 4 x 25Gb SFP28 and 2 x 40Gb QSFP+, Support Stacking, Broadcom Chip
1G Switch	115386	S3410-48TS-P	48-Port Gigabit Ethernet L2+ PoE+ Switch, 48 x PoE+ Ports @740W, with 2 x 10Gb SFP+ Uplinks and 2 x Combo SFP Ports, Stackable switch, Broadcom Chip
1G Switch	108718	S3410-24TS-P	24-Port Gigabit Ethernet L2+ PoE+ Switch, 24 x PoE+ Ports @740W, with 2 x 10Gb SFP+ Uplinks and 2 x Combo SFP Ports, Stackable Switch, Broadcom Chip



United Kingdom

Address: Unit 8, Urban Express Park, Union Way, Aston, Birmingham B6 7FH, United Kingdom

Tel: +44 (0)121 716 1755

Email: uk@fs.com

For more information, welcome to visit www.fs.com