



Empowering a Multi-College Campus with Reliable WiFi Connectivity

Overview

Under the South City education group umbrella, three institutes—Sivanath Sastri (morning), Heramba Chandra (afternoon), and Prafulla Chandra (evening)—operate from the same three-floor building. Despite serving different student communities at different times, all three faced a common challenge: unreliable WiFi that couldn't support the growing demand of students, faculty, and smart devices. Frequent drop-offs, poor coverage, and network congestion disrupted daily operations. Their existing access failed to deliver the speed, coverage, and stability required for modern academic and administrative needs. After a thorough evaluation of multiple leading brands and product trials, the colleges collectively chose Zyxel Networks' NWA50AX WiFi 6 Dual-Radio Access Points, recognized for their high performance, scalability, and cloud-based management. The primary goal was to create a seamless, high-speed wireless network across the campus that could support classrooms and administrative offices, as well as connected devices like smart TVs and other digital tools, while remaining cost-effective.

Challenges

Operating three separate colleges in a time-shared space presented unique connectivity obstacles. With thousands of students and staff cycling through the building each day, network congestion, dead zones, and poor device performance were persistent issues. Legacy access points struggled under the load of smart TVs, mobile devices, and academic tools. The institution also required an affordable solution capable of delivering robust coverage, secure access, and centralized management, all within a limited budget. To address these challenges, the colleges collaborated with a trusted partner, ADD System, who recommended Zyxel Networks' NWA50AX WiFi 6 Dual-Radio Access Points, designed to deliver fast, stable, and reliable wireless performance for dense user environments.

Solutions

Rising to the challenge, Zyxel deployed 12 NWA50AX WiFi 6 Dual-Radio APs, four on each floor, to blanket the entire building in robust WiFi 6 coverage.

Customer

South City College

Industry

Education

Location

Kolkata, India

Partner

ADD System

Customer Background

Located in South City and founded in the early 1950s, this educational building has served as a shared campus for three well-known colleges that operate in time-shared shifts throughout the day. Spanning around 1.5 acres and featuring a three-story structure, the campus welcomes thousands of students and faculty members each day. Known for its academic heritage, dynamic learning environment, and diverse student community, the campus plays a vital role in shaping future generations.



As Zyxel Networks' trusted partner in Kolkata, we are proud to represent a brand that consistently delivers reliable and scalable networking solutions. Supporting the South City education group in their campus-wide WiFi upgrade with the Zyxel NWA50AX WiFi 6 solution was a meaningful project for us. The seamless deployment, combined with Nebula's cloud management, has enhanced the digital experience for the colleges. It's fulfilling to see the positive impact of Zyxel's technology in transforming the campus into a fully connected, efficient environment."

Mr. Ananda Mohan Bera
ADD System

The NWA50AX delivers dual-band AX1800 performance with speeds up to 1.8 Gbps, enabling reliable connectivity in high-traffic areas. With support for MU-MIMO and OFDMA, the 4-stream WiFi 6 Dual-Radio access points efficiently manage multiple devices, reduce network congestion, and enhance overall user experience.

The NWA50AX access points also feature WPA3 security encryption, delivering enterprise-grade protection against unauthorized access, while flexible mounting options make the deployment adaptable to the building's infrastructure. Additionally, the devices' energy-efficient design and advanced thermal management ensure consistent 24/7 operation.

The entire deployment is managed via NebulaFlex, enabling a seamless transition between local and cloud management. With the Nebula mobile app, administrators can provision access, monitor devices, troubleshoot, and receive alerts, all from anywhere.

Product List



- NWA50AX WiFi 6 Access Point

Results

The transition to Zyxel Networks' WiFi 6 solution has significantly transformed the connectivity landscape for all three colleges. With strong, uninterrupted WiFi now available throughout the building, students, faculty, and staff benefit from high-speed, stable access that supports digital learning, smart device usage, and efficient administrative operations.

- Full WiFi coverage across all three floors for seamless connectivity
- Up to 70% improvement in network stability and speed
- 60% reduction in troubleshooting and configuration time with Nebula's centralized cloud management
- Scalable, cost-effective solution designed for future expansion and additional devices

