Cabling
Education Super Highway

Client:
Education Super Highway

Location:
San Francisco, California

The Challenge

Education Super Highway seeked a managed service provider to design, install, operate, and maintain a High Speed Internet Access Wi-Fi system for residential multi-dwelling unit (MDU) buildings.

The goal was to provide free Wi-Fi networks in residential buildings located in underserved areas through the the City of Oakland, where over 20% of the residents lack Internet access.

Our Solution

Our engineers went out and site-surveyed five (5) different residential apartment buildings to determine the requirements needed to run and install a low-cost Wi-Fi 6 environment. We were provided the following requirements:

- Wi-Fi coverage to 100% of units and common areas, e.g. the lobby, community rooms, hallways.etc.

- Wi-Fi coverage must be minimum of -65 dBm inside all living areas of each unit.

- A centralized cloud-based wireless controller and management system.

- All wireless access points must be minimum of 2x2:2, dual band (2.4 Ghz and 5Ghz).

- Each apartment unit's preferred bandwidth requirement of 100/100 Mbps, download and upload speeds.

- Must support multiple SSIDs for admin staff, tenants, guests, roaming throughout the property
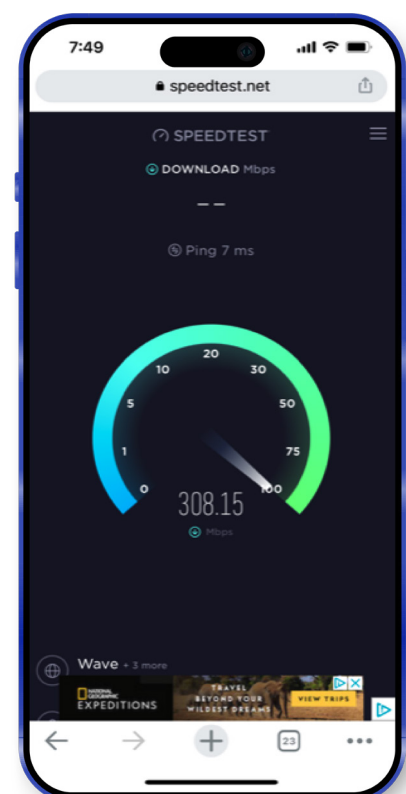
The Results

Accend's team site surveyed all properties and provided a heatmap covering all floors in all five (5) residential properties and determined over 98 Wi-Fi Access Points were required. Some properties had three to four floors, concrete walls, and included both indoor and outdoor Access Points.

Accend proposed the following equipment:

- CAT6 cables (both indoor and outdoor cables)

- TP-Link OC200 Omada Cloud Controller

- TP-Link JetStream 28-Port Gigabit L2+ Managed Switch with 24-port PoE+

- TP-Link EAP620 HD-V3 AX1800 Wi-Fi6 Access Point for Indoor

- TP-Link EAP-610 Outdoor AX1800 Wireless Dual-Band

- Tripp Lite Master-Power 6U Wall Mount Rack Enclosure Server Cabinet Wall Mount

- SRWCOMBO Replacement Combination Lock Wall Mount Rack Enclosure Cabinet (to secure the equipment)

⊘ We designed, installed, and configured all the above network equipment. All CAT6 cables were measured and terminated for all access points with proper cable length.

⊘ We configured all Wi-Fi SSIDs according to requirement and ensure the wireless speed were within the -65 dBm up to the residential unit.

⊘ Monitored and managed the TP-Link Controller and Wireless Access Points remotely 24x7.

Contact Us

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7:21

5G

SG3428MP POE SWITCH

TL-SG3428MP

Connected | 123d

Remaining PoE
314.00W

Throughput
↑ 137.02GB   ↓ 130.89GB

Ports

1 3 5 7 9 11 13 15 17 19

2 4 6 8 10 12 14 16 18 20

■ Disconnected   ■ 1000 Mbps   ■ 10/100 Mbps

⚡ PoE

EXIT

Put on
Your
Mask