

# Omada Powers High-Density Wi-Fi for a Leading K-12 School in the UAE

## Reliable Connectivity for Over 4,000 Students and Staff

### Project Scope

Delivers Seamless Wi-Fi Coverage:  
High-density campus-wide wireless networking.

Target Environment:  
Multi-phase K-12 campus facilities (Kindergarten to Grade 12).

Location:  
Sharjah, United Arab Emirates.

### Customer Profile

Name:  
Al Ma'arifa International Private School

Industry: Education

Capacity/Scale: ~3,300 to 4,000 students enrolled across 4 distinct academic blocks.

Website: [www.alarifa-intsch.ae](http://www.alarifa-intsch.ae)

### Challenge

Severe channel overlapping causing immense wireless interference.

Localized network choking and crashes due to strict concurrent-user limits on legacy access points.

High-density student areas dropping connection simultaneously.

### Solutions

EAP620 HD × 250

OC300 × 6

ER8411 × 6

SG3428XMP × 18

SG3452XP × 4

SM5110-LR

### Customer Overview

Located in Sharjah, UAE, Al Ma'arifa International Private School serves more than 4,000 students across four academic blocks. As digital learning became increasingly essential, the school required a scalable network capable of delivering uninterrupted connectivity across classrooms, administrative offices, and common areas.

### Business Challenge

- Wireless interference caused by channel overlap
- Network congestion during peak learning hours
- Frequent connectivity drops in high-density areas
- Limited scalability for future digital initiatives

### Omada Solution

- 250 units of EAP620 HD Wi-Fi 6 Access Points for seamless high-density wireless coverage
- Enterprise Routing & Switching Infrastructure powered by ER8411 routers and Omada-managed PoE switches
- Advanced VLAN Segmentation to optimize traffic flow and improve network performance
- Centralized Cloud Management through Omada OC300 SDN Controllers
- High-Speed Fiber Connectivity linking academic blocks for reliable data transmission

### Business Outcomes

- Consistent Wi-Fi coverage across six academic blocks
- Support for more than 4,000 concurrent users
- Reduced wireless interference and network congestion and enhanced the throughput
- Enhanced digital learning experience
- Centralized visibility and management of the entire network
- Scalable infrastructure ready for future expansion

## Key Benefits

### Seamless Campus-Wide Coverage:

Reliable Wi-Fi connectivity across all academic blocks.

### Built for High-Density Environments:

Supports thousands of simultaneous device connections.

### Optimized Network Efficiency:

Minimizes congestion and improves traffic management.

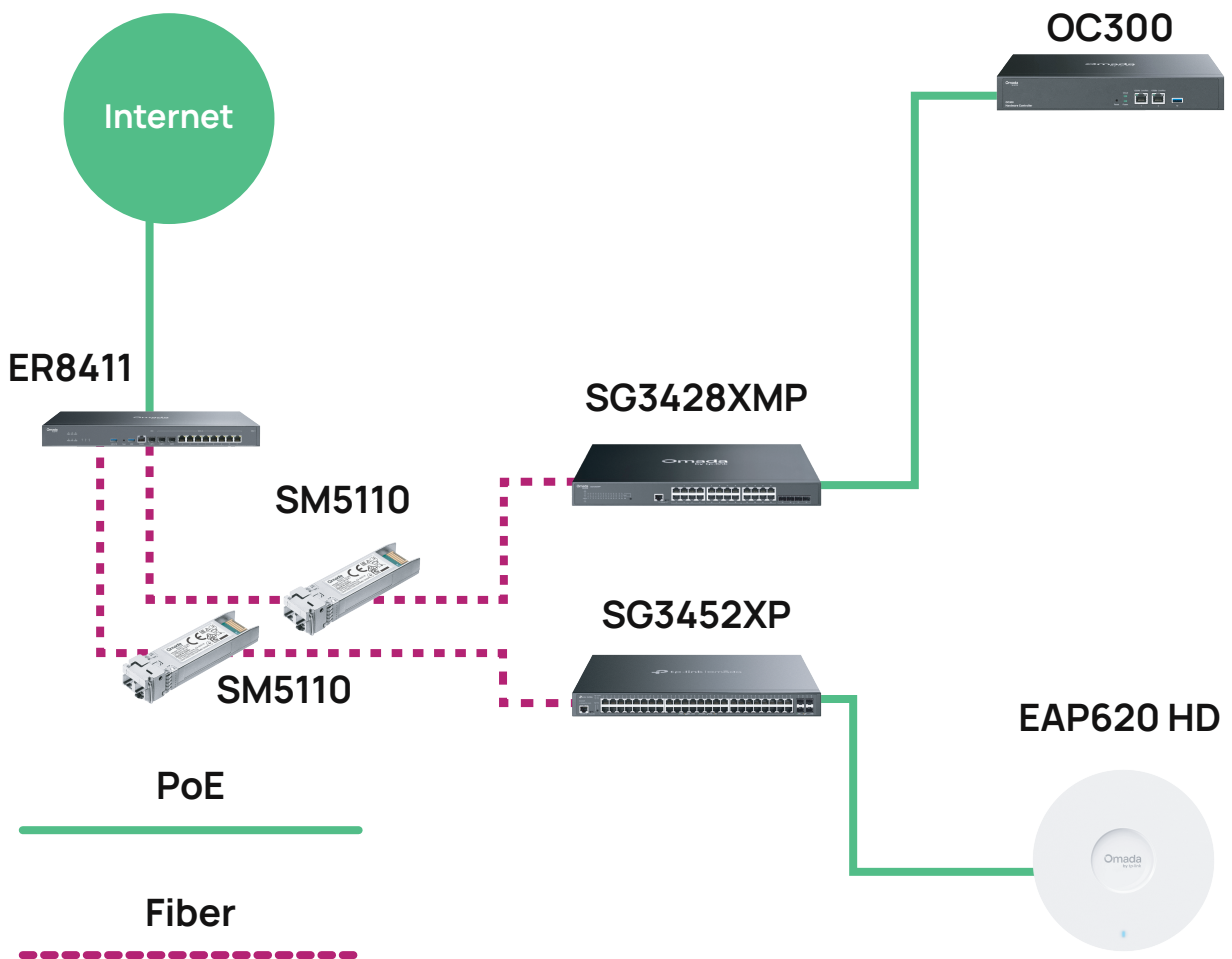
### Simplified Network Operations:

Enables remote monitoring, troubleshooting, and configuration.

### Future-Ready Infrastructure:

Scalable architecture designed for future growth.

## Topology



### Internal Notice Only:

No deployment site pictures are attached to this report as materials are classified for private, internal corporate use only.

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