

Omada Delivers **Reliable Wi-Fi 7 Connectivity** for USIM Residential College in Malaysia

Project Scope

Provide reliable connectivity across 18 office and 20 hostel blocks

Customer Profile

Name: USIM

Industry: Education

Location: Malaysia

Challenges

- Poor coverage and capacity from outdated APs
- Unstable connectivity disrupting academic activities
- High O&M burden due to fragmented network management

Solutions

- **Access Points**
EAP723 × 704
- **Switches**
SG3428XPP-M2 × 70
SG3210XHP-M2 × 3
- **Controllers**
OC400 × 3

Universiti Sains Islam Malaysia (USIM) is a premier public institution committed to integrating theology and values with reason and science, serving a vibrant academic community of thousands of students and faculty members.

However, USIM Residential College faced significant challenges with its legacy infrastructure, where outdated hardware led to chronic signal instability and frequent disconnects.

To overcome these hurdles and elevate the networking experience, USIM embarked on a comprehensive network overhaul, deploying an integrated Omada solution including Wi-Fi 7 APs, PoE switches, and centralized management, to transition into a fully digitized, modern campus environment.

Embracing Wi-Fi 7 for a Giant Leap in High-Speed, Low-Latency Wireless Performance

To eliminate signal congestion in crowded dormitories, USIM deployed 704 Omada EAP723 Wi-Fi 7 access points. This next-generation wireless environment leverages advanced Wi-Fi 7 features to mitigate interference, ensuring peak performance even during high-traffic evening hours.

Furthermore, the integration of seamless roaming ensures students and faculty maintain stable, high-speed connectivity as they move across the campus, fostering a truly mobile and modern educational experience.

Whether for large-scale digital learning or collaborative research, the new network provides the massive capacity needed for an uninterrupted experience across campus residence blocks.

High-Capacity Switching for Massive Traffic with PoE Switches

To unlock the full potential of Wi-Fi 7, USIM implemented a congestion-free backbone using SG3428XPP-M2 and SG3210XHP-M2 switches. Featuring 2.5 Gbps access ports and 10G SFP+ uplinks, the network effortlessly provides a reliable and scalable foundation, enabling the university to maintain peak network efficiency for all academic and administrative operations.

Integrated PoE support also delivers power and data through a single cable, significantly reducing deployment costs and installation complexity.

Streamlining Network Management for Large-Scale Housing

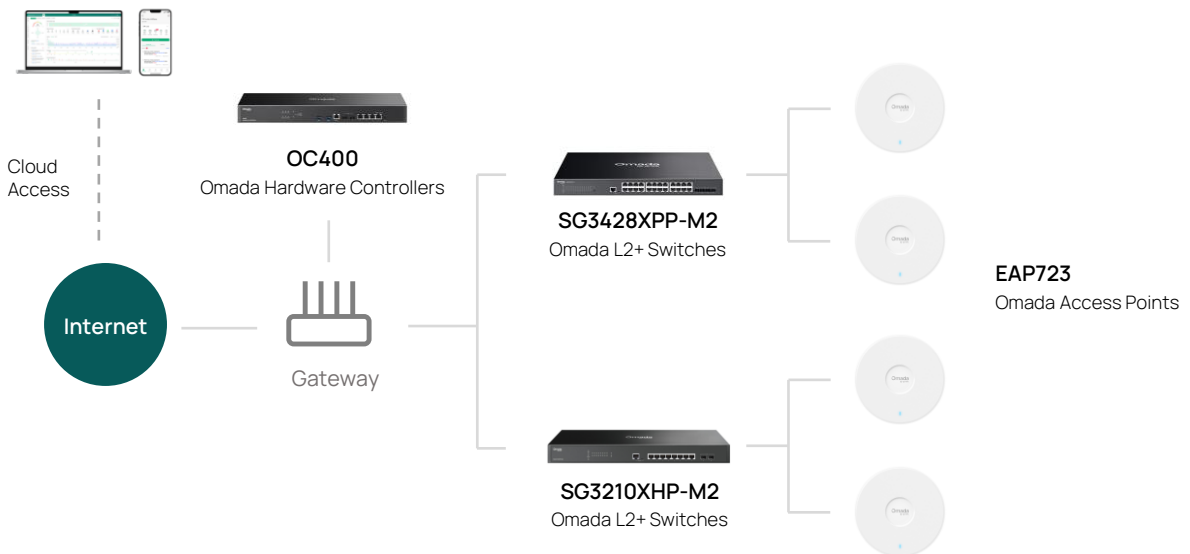
Managing a sprawling network across multiple residential blocks is a major challenge. USIM utilized three Omada OC400 enterprise-grade controllers to unify the management of all APs and switches into a single interface. This centralized

approach allows the ICT team to handle configurations, real-time monitoring, and troubleshooting from one dashboard via web or app, significantly reducing manual workload and downtime.

By shifting from reactive maintenance to proactive centralized control, USIM ensures a stable and highly efficient digital environment for the entire university.

Professional Service for Long-Term Reliability Eliminates All Concerns

Omada ensured a flawless transition through comprehensive professional support. The project began with a tailored Proof of Concept (POC) to validate the solution against USIM's specific dormitory requirements. With a dedicated localization team on standby and robust hardware warranty services, USIM is guaranteed expert after-sales care and timely maintenance, ensuring the network remains a reliable foundation for academic excellence.



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