# THE SWM280 MANAGED SWITCH FOR UNIVERSITY NETWORK MANAGEMENT

## HIGHLIGHTS

✓ Modern university faculties require reliable and segmented wireless connectivity to support thousands of students, staff members, and digital devices spread across expansive campus environments.

✓ The SWM280 is a high-performance managed switch at the core of the network, delivering power, data, and advanced configuration capabilities with full support for VLANs, fibre uplinks, and PoE+.

✓ Combined with the TAP200 wireless access points and the RUTM59 5G router, this managed switch ensures seamless coverage, uninterrupted internet access, and streamlined large-scale network.

✓ Remote Management for all network devices is ensured with Teltonika's Remote Management System (RMS).

## THE CHALLENGE – LARGE-SCALE NETWORK CONNECTIVITY

Modern university faculties rely heavily on uninterrupted, high-speed wired and wireless connectivity to sustain daily academic life. This digital backbone must support everything from lecture streaming and digital libraries to research equipment and visitor access.

A faculty's Wi-Fi system must not only offer comprehensive wireless coverage throughout large physical spaces like lecture halls, libraries, laboratories, and hallways, but it must also accommodate various user groups by supporting multiple SSIDs and isolated VLANs for students, staff, and devices.

However, managing this type of infrastructure with dozens of wireless access points, varying user demands, and increasing amounts of connected equipment, the complexity of maintaining and segmenting a network becomes a significant strain on IT resources. This is especially true when remote configuration, real-time monitoring, and power delivery must be managed simultaneously.

To build a future-proof network, what's needed is a managed switch that doesn't just distribute power and data, but also enables smart, scalable, and centrally managed networking for an entire academic facility.

# TOPOLOGY
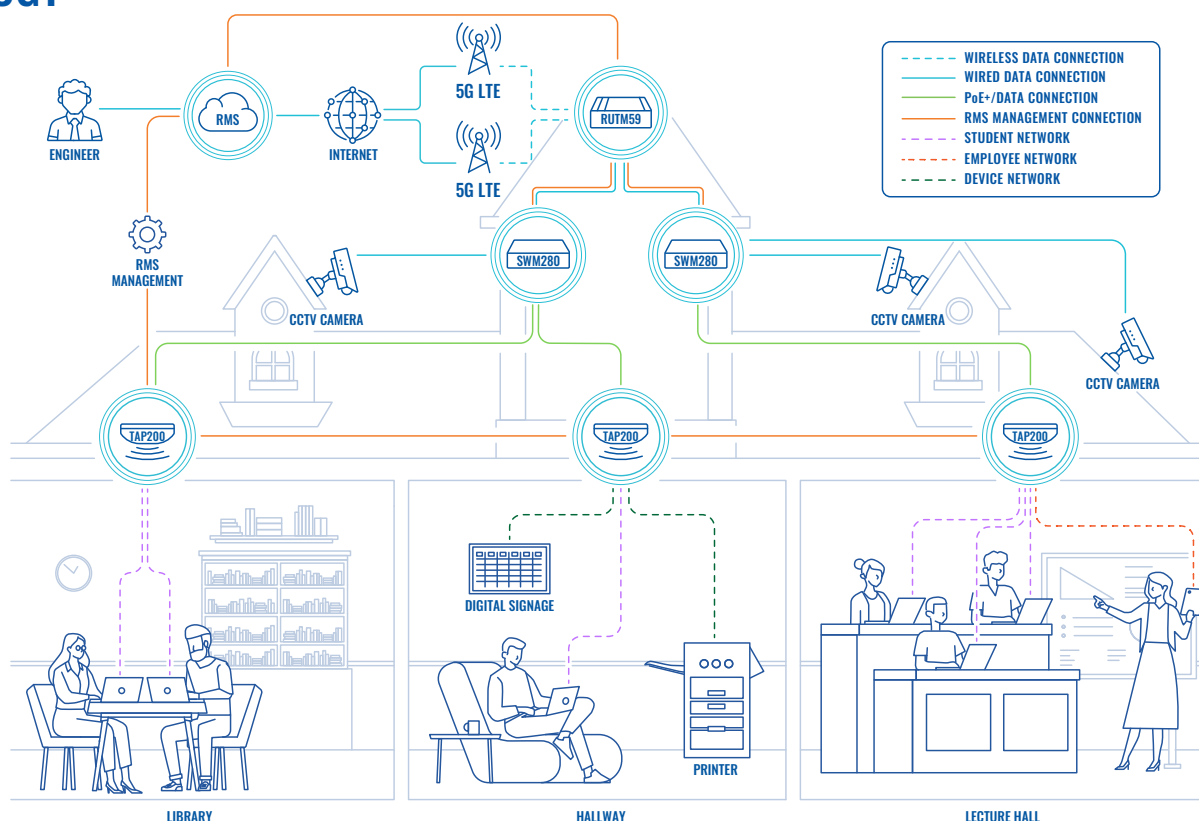


# THE SOLUTION – STREAMLINED NETWORK WITH SWM280 MANAGED SWITCHES, ACCESS POINTS & 5G ROUTER

At the heart of this university's wireless infrastructure lies SWM280 powerful managed switches, perfect for large-scale network distribution, equipped with 12 Gigabit Ethernet ports, 12 PoE+ ports, and 4 SFP ports. Each of the 12 PoE+ ports are capable of delivering up to 30 W each, with a total power budget of 300 W – more than enough to power a full fleet of TAP200 access points and CCTV cameras installed throughout the faculty.

The RUTM59 5G router provides internet access to make this IoT solution possible. This 5G router is located in the main server room and then connected to the managed switches to deliver connectivity, the coverage of which will extended throughout the campus by using the fleet of access points.

Strategically placed in lecture halls, hallways, and study areas, these access points benefit from centralised power delivery and network connectivity through the SWM280's PoE+ capabilities. As a result, deployment is streamlined without the need for separate electrical wiring.

The university's network is logically segmented into three distinct groups. A student network ensures that learners can access educational platforms, learning resources, and communication tools without interfering with administrative or operational data streams. A separate employee network connects staff and faculty members to sensitive institutional systems and files, prioritizing security and bandwidth availability.

Meanwhile, a dedicated device network ensures reliable connectivity for critical hardware across the faculty, including CCTV surveillance cameras, digital signage screens, and a shared printer.

This segmentation is configured and managed directly through the SWM280, which supports VLAN setup and isolation features that guarantee security and traffic efficiency across all network layers with Teltonika's Remote Management System (RMS). Through RMS Management you can access devices connected to the managed switches. With it, you not only provide internet access but also manage the entire infrastructure, including printers, IoT devices, and CCTV cameras.

Are you ready to enhance your large-scale network IoT solution? Reach out to us today and order your sample!