

# KOMPUTIKA

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## NEWSLETTER

Empowering Innovation | Enhancing Global Visibility | Advancing  
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AFFILIATION

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Network Device Switch - TP-LINK

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## FSKTM x TP LINK Shaping the First AI-Driven Wi-Fi 7

– By Prof. Dr. Siti Hafizah Ab Hamid, Pn. Nursyahirah Mamat Yasin, Pn. Haryati Masilan,  
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TP-Link Malaysia and Universiti Malaya (UM) have deployed the nation's first AI-driven Wi-Fi 7 network at the Faculty of Computer Science and Information Technology (FSKTM). The upgrade delivers ultra-high bandwidth, low latency, and stable connectivity to support AI teaching, data-driven research, cloud-based model training, and access to quantum computing platforms.

As the first public university in Malaysia to implement Wi-Fi 7, UM strengthens its digital infrastructure and ensures that FSKTM remains at the forefront of AI, quantum computing, and future-ready learning. Wi-Fi 7 at FSKTM is not just faster internet — it is the digital backbone enabling the faculty's next generation of AI innovation, quantum computing education, and high-performance research.



Network Device Switch

## Key Benefits & Features of the Deployment

- **Enhanced Learning & Teaching Experiences:** Students and lecturers gain seamless access to digital resources, AI platforms, quantum tools, and cloud applications, enhancing hybrid teaching and enabling richer, more interactive and future-ready learning experiences.
- **High-Capacity & Future-Ready Infrastructure:** Designed to handle increased network demand, Wi-Fi 7 ensures reliable connectivity during peak hours, large lectures, and lab activities.
- **Security & Reliability:** Advanced encryption and AI-based threat detection enhance cybersecurity, safeguarding academic and research data.
- **Campus-Wide Digital Enablement:** The implementation supports smart classroom technologies, IoT devices, and research labs, laying the groundwork for a fully connected, future-ready faculty. Each lecture hall 1 and 2 is now equipped with three units of the latest Access Points (APs), specifically designed to support high-density environments and simultaneous usage around 4184 students. Each AP can transmit data to the main network at speeds of up to 10 Gbps, preventing any network bottlenecks even when the lecture hall is at full capacity. It is designed for Lecture Halls of 400 students. Assuming an average usage of 50 Mbps per student, the total bandwidth required for 400 students using A.I. simultaneously is approximately 20 Gbps. With three APs installed, the lecture hall now provides an effective capacity of 15–18 Gbps, ensuring a smooth and uninterrupted digital learning experience. With this upgraded infrastructure, FSKTM is fully prepared to support A.I.-based learning activities, offering students a fast, stable, and reliable network environment.

The deployment of the Wi-Fi 7 infrastructure marks a transformative milestone for FSKTM, demonstrating its commitment to digital innovation, smart campus development, and world-class ICT education. This next-generation network supports a wide diversity of emerging student and research projects—including AI-driven solutions, quantum computing exploration, SDG-focused applications, fintech innovation, health and medical informatics, and many more.

This achievement reinforces UM's vision of a future-ready, globally competitive institution while positioning FSKTM as a national leader and regional trailblazer in technology-enabled

learning and research. Equipped with this cutting-edge connectivity, FSKTM is poised to empower the next generation of innovators and digital leaders shaping Malaysia's technological future.

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