Enhancing Public Wi-Fi at Miaoli Tongxiao Beach

Celebrating the Sand Sculptures Art Festival with PRISM

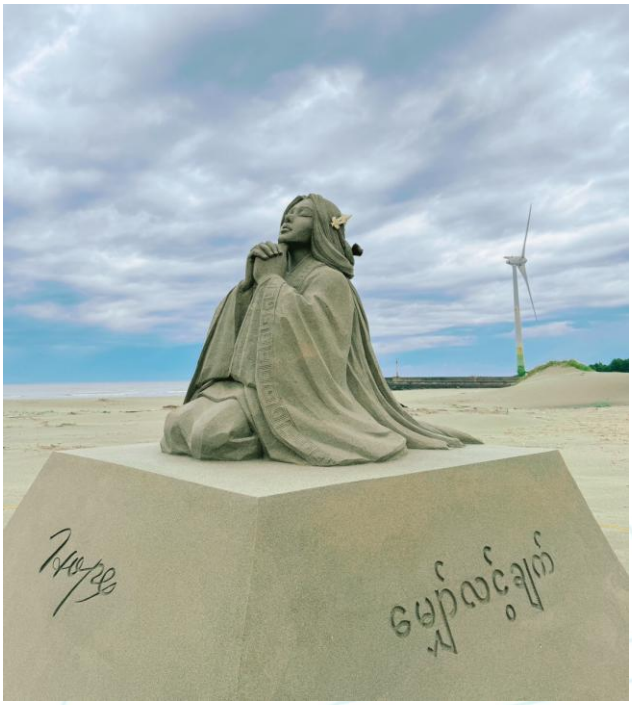
BACKGROUND STORY

Object: Tongxiao Sand Sculpture Art Festival
Location: Tongxiao Beach, Miaoli Taiwan

Miaoli Tongxiao Beach is the largest seaside park in Taiwan. The coastline features vast stretches of smooth, pristine, white sand, creating a stunning contrast with the deep blue sea.

In preparation for the 2025 Tongxiao Sand Sculpture Art Festival—a signature summer event showcasing 23 sculptures by artists from eight countries, including ncluding Taiwan, Ukraine, India, Canada, Japan, Malaysia and Mongolia, ect., the Miaoli County Government launched a public Wi-Fi infrastructure project to accommodate the anticipated surge in visitor traffic.

Beyond the festival, the wireless network was designed as a long-term digital infrastructure, enhancing tourism services and ensuring continuous, high-quality connectivity for visitors.



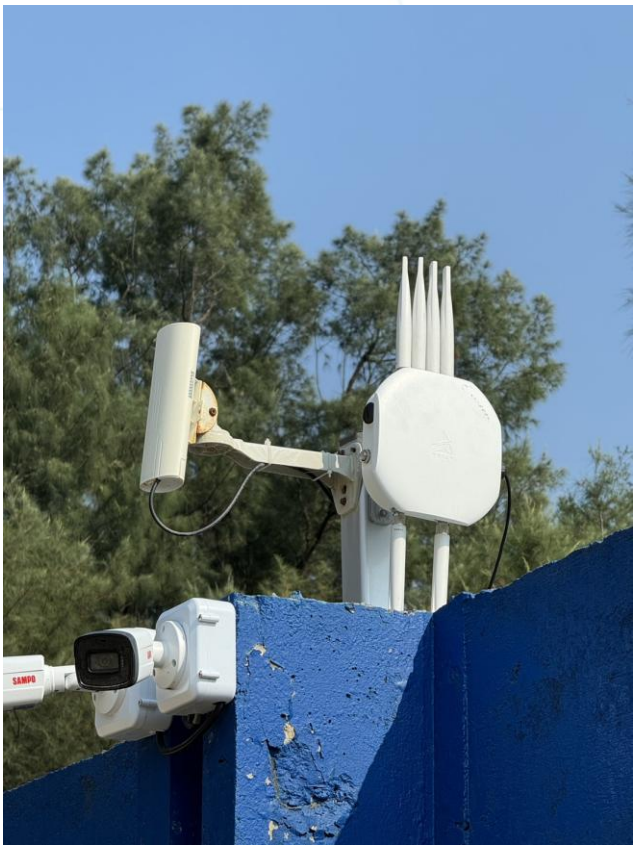
REQUIREMENTS AND CHALLENGES

The deployment faced several technical and environmental challenges. The Tongxiao Beach spans over 14 hectares, posing significant challenges in terms of power supply and network cabling.

In addition, the equipment needed to withstand harsh coastal conditions—including salt-laden

air, high humidity, windblown sand, and intense UV exposure—while ensuring seamless wireless roaming and high throughput during peak usage. The project demanded a solution that combined ruggedized hardware with scalable, flexible wireless architecture.

PRISM SOLUTIONS



To meet these requirements, PRISM deployed a resilient and intelligent wireless solution using the following products:

- Prism MO10 Wi-Fi 6 AX6600 Tri-Radio Mesh Router
- MX100 PrismX™ Controller BOX

Leveraging mesh technology, Prism Wi-Fi enabled full-site wireless coverage without the need for extensive cabling. The MO10 Outdoor Access Point were strategically installed on smart poles, which also integrated smart surveillance cameras, LED streetlights, digital signage, and broadcast systems—creating a multi-functional smart park infrastructure.

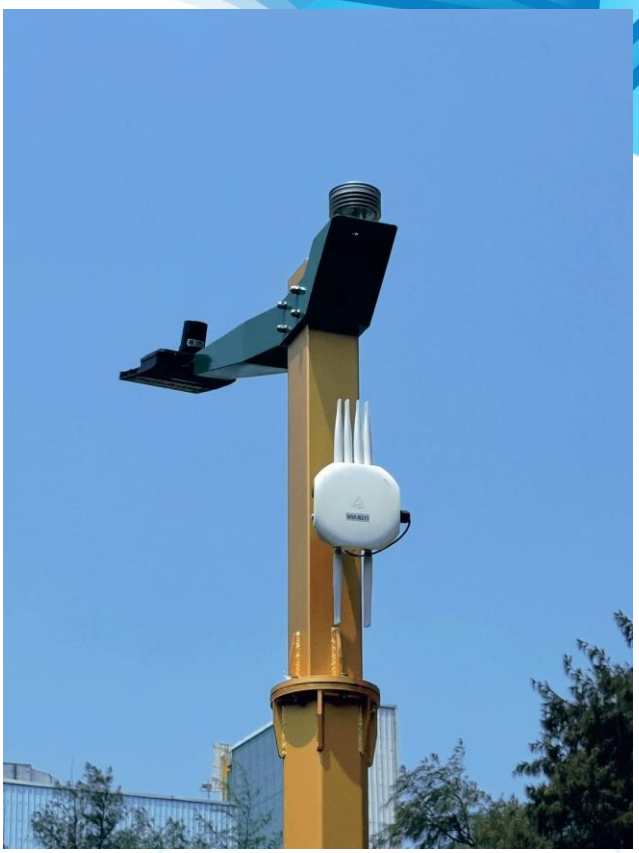
A captive portal authentication system was implemented, directing users to the official Miaoli County landing page upon connecting. This not only secured public access but also provided a digital platform for government announcements and tourism promotions.

The MX100 PrismX Controller offered centralized management, enabling IT teams to monitor network performance, traffic loads, and device status remotely—eliminating the need for on-site troubleshooting.

CONCLUSION

The Prism MO10 Outdoor Access Point, with its IP68 rating and anti-corrosion design, proved ideal for harsh outdoor conditions, delivering consistent performance throughout the event and beyond.

The customizable captive portal offered flexibility for various use cases and public engagement strategies.



Additionally, the PrismX Controller allows IT administrators to remotely monitor network health and usage metrics.

On the opening day of the festival, the system supported over 17,000 visitors with reliable, high-speed internet access, demonstrating PRISM's capability in large-scale outdoor deployments.

The success of this project highlights how PRISM solutions can transform public spaces into smart, connected environments—balancing resilience, scalability, and user-centric design.

For further details and case studies, visit www.prismwifi.com

*The seller is 3J IOT TECHNOLOGY CO., LTD.