



EnGenius Cloud Wi-Fi 6 Deployment

EnGenius Cloud Wi-Fi 6 Deployment Helps Taipei 2020 Countdown Party Bring in the New Year

New Year Party | Taipei, Taiwan

The EnGenius Cloud solution was successfully used as the infrastructure for one of the largest Wi-Fi 6 deployments at the Taipei 101 2020 New Year's Eve party in Taiwan. The event's promoters expected 20,000 attendees in a 108,000-square-foot space and needed Wi-Fi coverage that could handle a massive number of concurrent users at any time.

System integrator Interwave Information Corp. employed EnGenius Cloud to provide better and more connection options for devices in this high-density environment. EnGenius Cloud's full support for Wi-Fi 6 provided up to 30% more throughput speed for more concurrent users and devices, and provided Interwave with real-time control, configuration, and monitoring in a serverless cloud architecture.

The Need: Reliable, Flexible, and Scalable Wi-Fi 6 Deployment to Handle a High-Traffic, High-Visibility Media Event

"Big events" can be big fun and big news. Celebrity performances, multimedia displays, huge crowds – all contribute to the celebration experience. And what fun is a celebration these days without sharing it on social media? Tweeting, Instagramming, posting, videos, photos – all get uploaded to social software and shared out to family, friends, and the world.

This was the issue faced by the planners of the 2020 Taipei 101 New Year's Eve party. The event, held at Taipei Government Civic Plaza, is the first celebration of the New Year in the world and features a light show, fireworks, a massive stage, and major Asian pop acts such as Mayday, Super Junior-D&E, Rainie Yang, and Wu Tsing-Fong. Part of the mission of the event planners was providing a means for attendees to easily and immediately share their excitement using their mobile devices. If attendees can't access social media and are prevented from sharing the amazing event, that's all anybody is going to talk about.

The plaza at Taipei 101 is a public area used for normal daily traffic. This meant the installation needed to be expertly deployed and thoroughly tested immediately before the event, and quickly broken down after the event was over.

At past events at the Taipei 101 plaza, it was difficult to provide participants with high performance internet access. Relying on local cellular service can be hit or miss, as speeds and connectivity can be greatly affected by the number of devices connecting and the types of traffic being using.

With 20,000 people expected in one location for this event, oftentimes local cellular service isn't provisioned to scale quickly enough to handle the massive numbers of connections and high-throughput traffic.



108,000

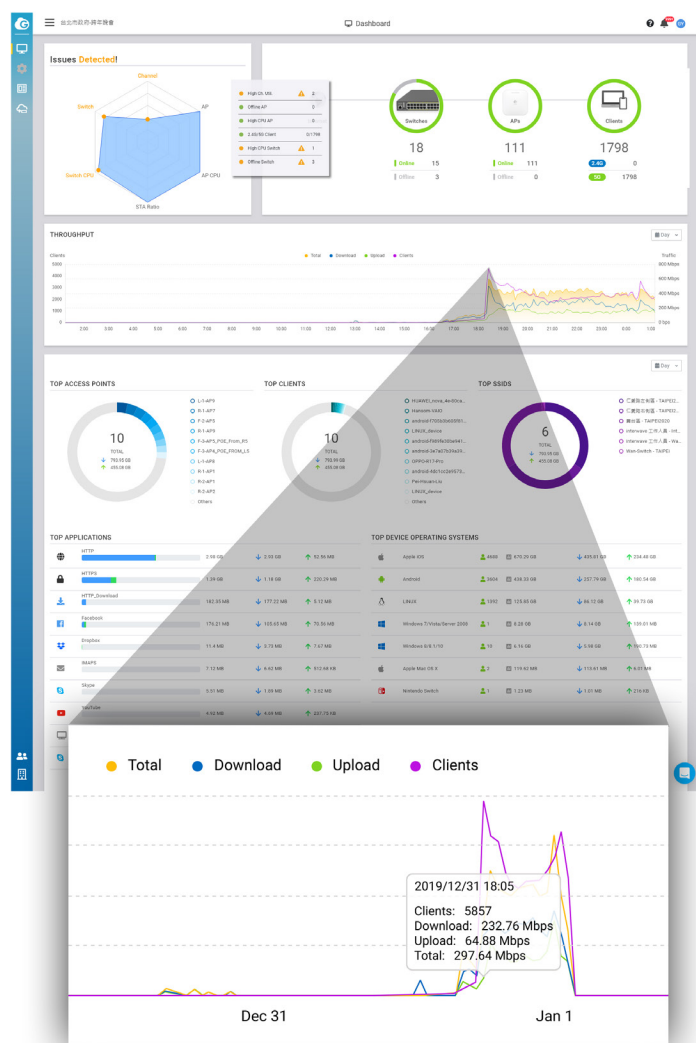
Square Feet Area

20,000+

People

5,857

Concurrent Users
at Peak



What was the best solution? A Wi-Fi network.

A solid, high-performance Wi-Fi 6 network that can accommodate the number of people and – much more importantly – the number of devices and generated traffic without a loss of throughput and availability is a crucial component of any big event like the Taipei 101 2020 New Year's Eve celebration. Fortunately for the event producers, EnGenius had the solution they needed.

The Solution: EnGenius Cloud Hardware and Software

The event producers had to make sure that attendees were able to access the free Wi-Fi without performance or availability issues. EnGenius was there to meet their needs. Interwave used EnGenius Cloud hardware and software to cover the 108,000 square feet plaza and meet connection and bandwidth needs of 20,000 attendees. It had to support this large crowd from the start time of 6:00 pm to the end of the event at 1:00 am – and be able to scale up as the crowd (and Wi-Fi network connected devices) got larger with more concurrent users the closer the evening got to midnight.

Along with the increase in users, there were two peak use times: the start of famous local act Mayday, and the start of the New Year countdown. During the countdown, connectivity reached nearly 6000 concurrent clients on the network. At the height of use, many APs got over 130 clients per APs, but CPU utilization remained less than 30%.

"The EnGenius Cloud solution demonstrates how the latest Wi-Fi 6 technology improves performance and connection availability for medium to large enterprise deployments," said a site engineer at Interwave. "It easily handled 20,000 people over a 108,000 square-foot area with upwards of 6,000 concurrent users." EnGenius cloud-managed Wi-Fi provides simplicity and security for any deployment. EnGenius Cloud's quick installation and configuration provides reliable performance, predictive analysis and real-time insights to enable companies to focus on growing their business.

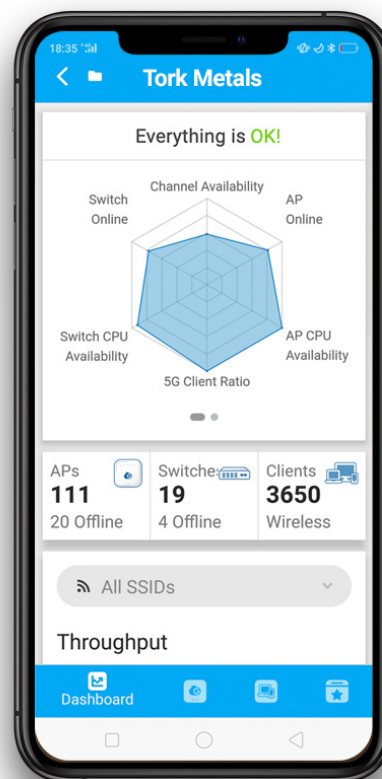
EnGenius wireless access points are dependable and fully support new Wi-Fi 6 performance, connection, and security standards – an important point for a crowded media event with thousands of devices connecting and using high-traffic apps like live streaming. Interwave could also rely on EnGenius support for any assistance it might need for network setup and during the event. Interwave physically built the site four days before the event by deploying up to nine access points (APs) on ten light poles around the plaza. The APs were connected to several EnGenius power over Ethernet (PoE) switches.

Unboxing and adding any EnGenius device to the EnGenius Cloud solution is a simple process, and devices require no configuration once added. All of the devices were plug-and-play, and configurations could be applied using EnGenius Cloud. This made setting up the plaza network quick and easy.

“EnGenius Cloud was easy to deploy under tight deadlines. Providing Wi-Fi 6 to 20,000 users in a public space is a big job, and the EnGenius Cloud solution simplified the deployment and management process so we could focus on how best to provide performance and availability,” said the Interwave site engineer. The Taipei solution included 111 EnGenius Cloud Wi-Fi 6 (11ax) APs (60 4x4 802.11ax units and 51 2x2 802.11ax units) and EnGenius Cloud PoE switches deployed throughout the plaza. System integrator Interwave used the EnGenius Cloud solution to configure and provision the network. To help with designing the deployment, the event planners used EnGenius ezWiFi Planner software. ezWiFi Planner provides physical site modeling and heat maps to show optimized connection coverage and availability before setting up the Wi-Fi network. Interwave used ezWiFi Planner to simulate interference and changes in the environment by modulating the transmission power and channel assignment. Using the EnGenius Cloud solution, Wi-Fi network admins could easily compare statistics such as port density, power consumption, or throughput across access points and switches. They could also rely on EnGenius Cloud to monitor and manage the deployment in real time from any location.

The Result: EnGenius Cloud Provided a Stable and Reliable Wi-Fi Deployment that Met the Needs of the Taipei 101 2020 New Year's Celebration

Both Interwave and the 2020 New Year's Eve Taipei 101 producers were pleased with the EnGenius Cloud Wi-Fi solution deployment performance. There was no downtime during the celebration, and throughput and availability were not compromised even at peak attendance. At the moment of the countdown – the point where everybody wants to stream the event live – EnGenius Cloud access points were stable and running at nearly 6,000 concurrent clients connected to the Wi-Fi network.



EnGenius Cloud single-pane-of-glass visualization software allowed Interwave to watch the event remotely while monitoring the number of clients, the throughput, the CPU utilization, and other network statistics in real time. Depending on the moment and needs, they could change the configuration accordingly and apply it to specific APs or all 111 at one time, as needed. The LED locator function and photo's per AP were also incredibly helpful in identifying a specific AP among several at one specific location.

Interwave was very happy with the EnGenius Cloud dashboard, where they could monitor real-time statistics such as the number of clients and bandwidth used, and adjust the Wi-Fi network configuration as needed to meet the performance requirements of attendees.

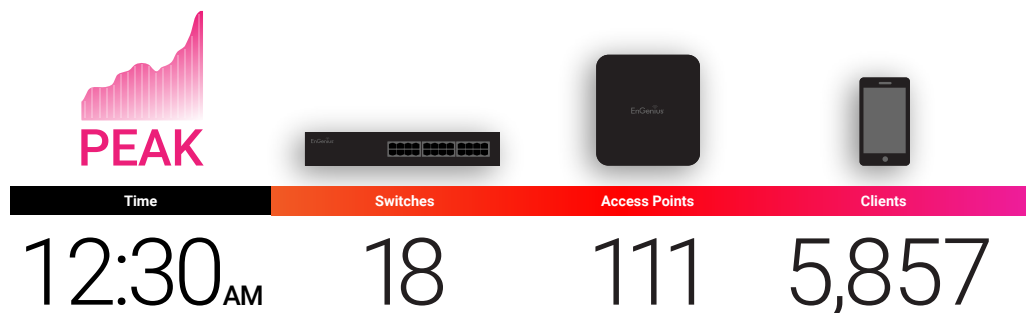
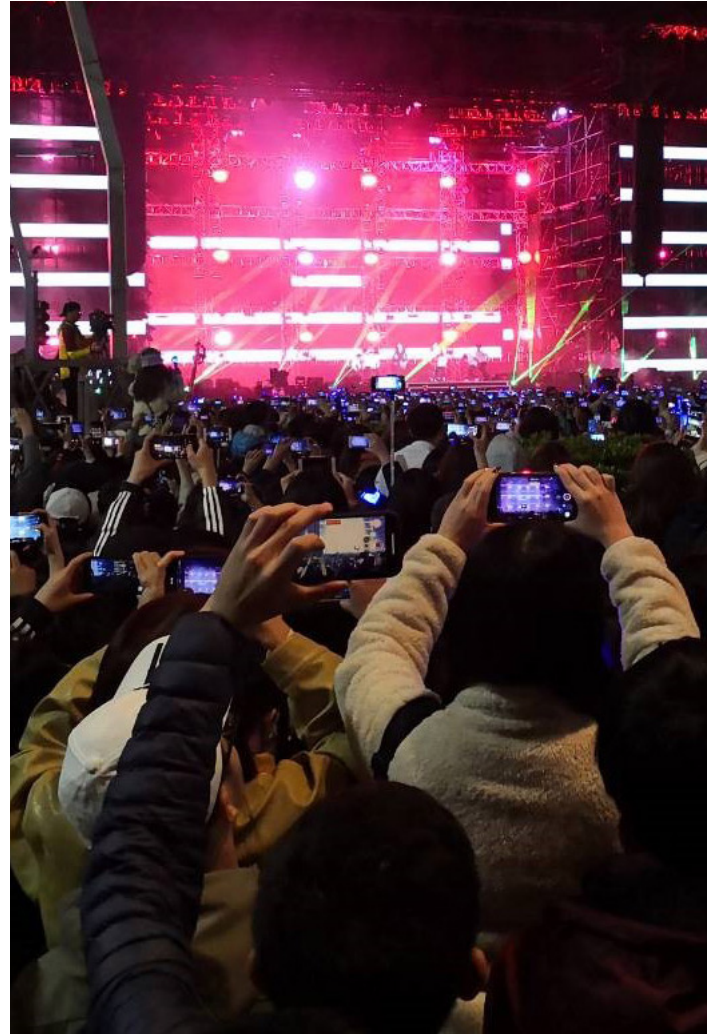
“With the EnGenius Cloud solution, we could remotely monitor and manage our large Wi-Fi 6 network deployment in real time,” said the Interwave site engineer. “This means we could address issues and configure the network on the fly to improve performance and meet the requirements of our attendees immediately.”

With EnGenius' real-time software monitoring in the cloud, the integrator could tell that the 111 Wi-Fi 6 AP's used less than 30% of the available CPU, demonstrating the power of the new Wi-Fi 6 standard in handling both Wi-Fi 6 and legacy devices that connected to the network.

"The spectacular results of the Taipei New Year's Eve event unequivocally demonstrate how the EnGenius Cloud solution supports complex Wi-Fi 6 scenarios," said Bryan Slayman, Product Line Manager for EnGenius. "Interwave used EnGenius Cloud to quickly set up and support a large event with nearly 6,000 simultaneous online users running bandwidth-heavy traffic, with high performance and excellent user experience. EnGenius Cloud provides enterprise-class Wi-Fi equipment and software so that any business or event can guarantee superior wireless deployments."

Bringing in the New Year with Success with EnGenius Cloud

Using the EnGenius Wi-Fi Cloud solution, the 2020 New Year's Eve Taipei 101 event planners and the system integrator Interwave were able to guarantee the Wi-Fi needs of 20,000 attendees. They provided the performance and availability their guests needed, even at the evenings peak, and helped start the New Year with success. EnGenius Cloud's single-pane-of-glass, real-time central monitoring gave Interwave high network visibility so that they could guarantee performance, connectivity, and a very successful New Year's celebration.



EnGenius®

EnGenius Technologies | 1580 Scenic Ave. Costa Mesa, CA 92626

Email: partners@engeniustech.com | Website: engeniustech.com

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