



Cambium Networks™

CASE STUDY

# Delivering High-Density, High-Performance Wi-Fi for a Premier Collegiate Hackathon



## Customer Overview

LA Hacks is a large Southern California collegiate hackathon, hosted annually at UCLA's Pauley Pavilion. The 2025 event drew over 1,000 students from across the globe for a weekend of nonstop innovation, coding, workshops, and networking with leading sponsors such as Google, Amazon, and Snapchat. With up to 2,000 devices expected to compete for high bandwidth and low latency connections, LA Hacks required an enterprise-class Wi-Fi infrastructure capable of supporting simultaneous high-throughput tasks under tight conditions.

## Business Challenge

The nature of LA Hacks presents extreme network challenges:



**This deployment set a** new standard for technical infrastructure at UCLA-hosted events. The Cambium Wi-Fi 6 solution gave the participants an uninterrupted experience—even during bandwidth spikes”

- John Hutzler, Chief Operating Officer, Slice Wireless



## Wi-Fi Services and Features

- Client isolation to secure participant data
- Live metrics dashboard for instant diagnostics
- On-site spares for rapid recovery
- 24/7 Network Operations Center staffed by Cambium and Slice Wireless engineers

- **High Device Density:** An estimated 1,200+ concurrent Wi-Fi connections on laptops, phones, and tablets.
- **Bandwidth-Intensive Activities:** Real-time development involving virtual machines, cloud tools, video streaming, and live product demos.
- **Security Demands:** Thousands of personal devices on the same network required strong access control and client isolation to prevent misuse.
- **Reliability Needs:** The event could not afford downtime. Network performance had to remain consistent throughout the 36-hour competition.
- **Venue Constraints:** Signal interference and physical layout within the Pauley Pavilion required intelligent access point placement.

LA Hacks needed a solution that could scale instantly, offer enterprise-grade security and performance, and run with zero interruptions over three days.

## Technology Solution

Cambium Networks partnered with Slice Wireless Solutions to deliver a high-capacity, secure, and redundant wireless network tailored for LA Hacks 2025. The deployment strategy emphasized coverage, throughput, and reliability.

## Cambium Equipment Deployed:

The Cambium deployment showcased the high density XE5-8 access point, the highest capacity and only multi-radio 6GHz solution in the industry. The XE5-8 enabled continuous high bandwidth connections across hundreds of users per access point. The high capacity design reduced the number of access points required by at least 50%, saving significant deployment time, cabling and cost.

- **Access Points:**
  - XE5-8: Indoor 5-Radio 8x8/4x4 SDR Wi-Fi 6E APs with 5GbE uplink
  - XE3-4: Indoor 3-Radio 4x4/2x2 SDR Wi-Fi 6E APs with 2.5GbE uplink
- **Switching:**
  - cnMatrix EX2016M-P Intelligent PoE Switches
- **Management & Monitoring:**
  - cnMaestro™ cloud-based dashboard for real-time analytics and alerts
- **Design & Optimization:**
  - Pre-event load testing and RF planning using Ekahau tools
- **Network Design Highlights:**
  - 15 APs deployed, mounted at 10 feet to reduce interference
  - 15% signal overlap for seamless roaming
  - Dedicated 5GbE fiber circuit for backhaul
  - 10GbE fiber backbone for core switching



## Field Results

The deployment delivered exceptional performance throughout the three-day event:

- **Peak Concurrent Devices:** 1,150
- **Avg. Bandwidth/User:** 50 Mbps down / 30 Mbps up
- **Downtime:** 0
- **Trouble Tickets Logged:** 0
- **User Satisfaction Score:** Excellent

Key successes included the complete absence of service disruption, effective handling of network peaks, and robust isolation policies that prevented misuse or interference.



## Business Value

The successful deployment at LA Hacks 2025 demonstrates the real-world power of Cambium's ONE Network platform:

- **Operational Simplicity:** A unified management experience with cnMaestro reduced IT overhead and allowed real-time troubleshooting and performance tuning from a single pane of glass.
- **Scalability and Resilience:** Cambium's software-defined radios allowed the network to dynamically scale to meet high-density usage, keeping latency low and speeds high.

- **Enhanced User Experience:** Developers were able to focus entirely on innovation, not connectivity—boosting the quality and pace of project development.
- **Partner Efficiency:** Slice Wireless Solutions executed a flawless deployment and monitoring process, reinforcing Cambium's reputation as a high-performance, low-TCO solution provider for demanding event environments.

The success at LA Hacks has opened conversations with additional university and enterprise events to replicate this network architecture.

## The Power of Cambium's ONE Network

The Cambium ONE Network delivers a simplified, converged IT experience across Wi-Fi, switching, security, and WAN edge infrastructure. By unifying management under cnMaestro, IT teams gain intelligent automation, deep application visibility, and consistent performance optimization—all from a single cloud-managed platform. For LA Hacks, this meant robust performance at scale, quick deployment, and complete operational transparency.



### About Cambium Networks

Cambium Networks enables service providers, enterprises, industrial organizations, and governments to deliver exceptional digital experiences, and device connectivity, with compelling economics. Our ONE Network platform simplifies management of Cambium Networks' wired and wireless broadband and network edge technologies. Our customers can focus more resources on managing their business rather than the network. We make connectivity that just works.