

SAN JOSÉ MCENERY CONVENTION CENTER

Delivering robust Wi-Fi for Silicon Valley's premier tech events



Customer

San José McEnery Convention Center

Location

San José, CA

Key challenges:

- Increasing demands on Wi-Fi® performance for high-density events
- Enhance reliable signal coverage in newly expanded convention center spaces
- Interference from non-enterprise Wi-Fi access points (APs)
- Changing Wi-Fi expectations affecting revenue

A big draw for tech events

Located in the heart of Silicon Valley in San José's downtown core, the San José McEnery Convention Center boasts hundreds of varied events a year—from high-profile tech conferences and eSports gaming conventions to sold out industry tradeshows. Accessible via public transportation—and just a 10-minute drive from San José Mineta International Airport (SJC)—the

convention center adjoins the Hilton San José and San José Marriott, with a two-story hallway connecting the three entrances.

In 2013, the San José McEnery Convention Center underwent a \$130 million renovation that included a new Grand Ballroom, a revamped Executive Ballroom, more flexible meeting configurations, an outdoor plaza, and additional meeting and networking spaces. Today, the now 550,000-square-foot facility is the largest convention center in Silicon Valley, offering:

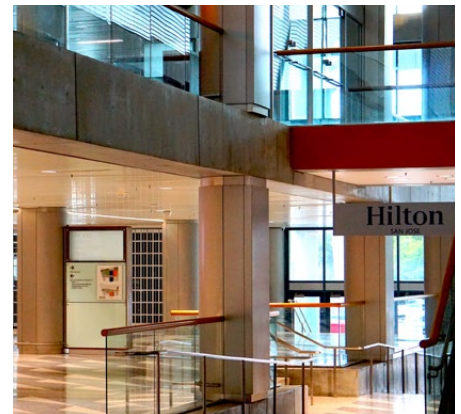
- 367,526 square feet of total convention space
- 165,000 square feet of contiguous exhibit space
- 35,194-square-foot Grand Ballroom and 22,000-square-foot Executive Ballroom, in addition to 3 exhibit halls
- 43 meeting rooms

Exceeding attendee expectations

After a competitive bid process, the city of San José partnered with RUCKUS Networks and SmartWave Technologies to meet its goal of delivering a free and ubiquitous Wi-Fi network that is seamlessly accessible from the airport throughout the heavily trafficked downtown core to the convention center. The San José McEnery Convention Center especially needed a robust Wi-Fi network to address attendees' increased expectations for a Silicon Valley experience.

With the need to attract business, support multiple devices per attendee, and allow thousands the ability to stream uninterrupted, San José McEnery Convention Center needed to address four key issues:

- Ensure consistent and reliable Wi-Fi performance



- Enhance Wi-Fi coverage and capacity for high-density usage
- Overcome signal propagation challenges in expansive, open areas
- Prevent loss of overall revenue due to changing Wi-Fi expectations

Timing and technology on their side

The planned construction to expand and update the San José McEnery Convention Center provided the perfect opportunity to upgrade the Wi-Fi technology and its supporting infrastructure. A comprehensive assessment was performed to determine the best RUCKUS® technology for upgrading the Wi-Fi and switching. The convention center already used CommScope® cabling and wiring, so adding RUCKUS APs and switches meant the entire place was run on CommScope infrastructure.

“We understood the challenges of deploying Wi-Fi in a large, high-density public space with limited available spectrum and channels and where there are high ceilings and no walls in the exhibit hall to segment signals,” says Walter Orell, EVP Engineering at SmartWave Technologies. “We proposed a fixed network architecture that leverages enterprise-class technologies from RUCKUS to overcome the challenges and easily modify Wi-Fi for

various events while ensuring bandwidth control and security across competing exhibitors on the tradeshow floor.”

Several RUCKUS technologies were vital to supporting the unique needs of the convention center:

- Enhanced signal gain and a four-fold increase in range with RUCKUS BeamFlex+® smart, directional antennas that dynamically focus Wi-Fi signals where needed
- Higher throughput with RUCKUS ChannelFly® software, which analyzes channel activity and dynamically selects the best and least congested Wi-Fi channels
- Improved performance in high-density environments, saturated with a mix of newer and legacy devices, via RUCKUS SmartCast™ sophisticated band balancing and automatic cell sizing to limit co-channel interference
- Adaptive antenna technology to adjust to changing RF patterns and modify broadcast patterns for consistent coverage
- Superior uplink capacity, space savings, scalability, and simplified deployment via stackable switches
- Seamless interoperability, security, and simplified centralized management of a unified wired and wireless network



Essential to the success of San José McEnery Convention Center's Wi-Fi is the public/private partnership between the city of San José, RUCKUS Networks, and leading wireless integrator SmartWave Technologies. As a four-time Partner of the Year Award Winner with RUCKUS, SmartWave knew how to best deploy the RUCKUS solution for optimum capacity and coverage in a high-density closed-spaced environment.

- Real-time signal performance and usage data analytics for network health monitoring and reporting

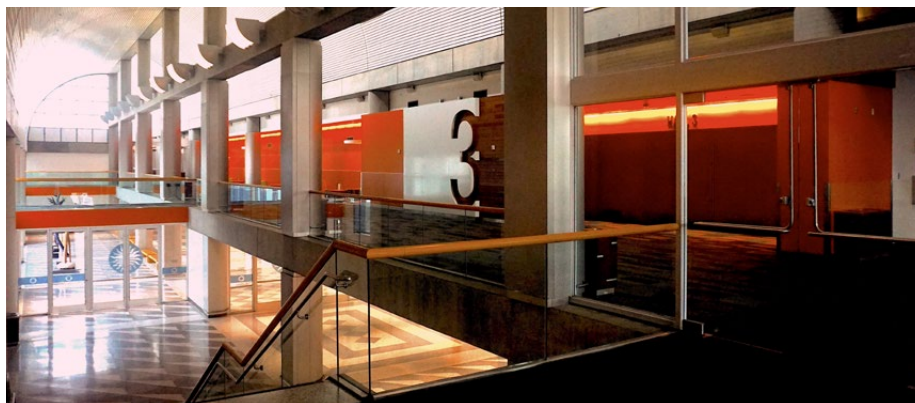
Key benefits of RUCKUS implementation:

- Up to four-fold increase in speed and range for seamless connectivity
- Real-time signal and usage data analytics, service assurance for proactive monitoring using RUCKUS AI™
- High-performance Wi-Fi supporting multi-gigabit experiences
- Increased technology revenue and client savings up to 10%
- Attracting more business and boosting revenue for the convention center

Surpassing the needs of the many

Through the partnership with SmartWave Technologies, San José McEnergy Convention Center deployed RUCKUS indoor Wi-Fi APs throughout meeting spaces and in the adjacent hotels to deliver a reliable, seamless, multi-gigabit experience to more clients in the widest available channels. Throughout the exhibition space, RUCKUS low-profile outdoor APs—which are specifically designed for crowded public venues—use internal high-gain directional antennas to direct coverage and extend range.

“Unlike other APs, where signals direct outwards above the crowd, the RUCKUS outdoor APs, deployed high up in the exhibit hall ceiling, direct signals down to deliver fast, reliable performance to the attendees,” explains Michael Nesbitt, RUCKUS account manager. “With direct coverage and automatic cell sizing, the convention center could deploy large



numbers of APs in close proximity without getting bogged down by co-channel interference.”

Multi-gigabit 2.5 Gbps Ethernet connections for the APs are seamlessly supported via RUCKUS ICX® stackable enterprise-class switches at the access layer to mitigate backhaul capacity bottlenecks. High-performance ICX aggregation and core stackable switches are geographically dispersed on opposite sides of the convention center and connected via redundant long-distance fiber links, delivering advanced multi-layer switching and routing on a multi-gigabit fiber backbone. RUCKUS APs are managed in SmartWave Cloud, using the RUCKUS virtual SmartZone™ controllers and combined with SmartWave’s management software to provide enhanced service.

“In an environment where users have different requirements from one event to another, the ability to set and push out policies to APs and switches from a single pane of glass was a significant benefit for the convention center. After an event, they can simply wipe the slate clean and set new policies for the next trade show,” explains Nesbitt. “Security is paramount when you have competing exhibitors on a trade-show floor. Centralized management of switches and APs also allows the convention center to set separate policies for dual

events, configure custom VLANs, or allocate customized bandwidth and airtime based on user SSIDs.”

The San José McEnergy Convention Center relies heavily on RUCKUS and SmartWave for monitoring the network’s overall health to ensure they are consistently meeting service-level agreements (SLAs). “In a convention center where Wi-Fi is a purchased resource, the ability to guarantee performance with real-time visibility is essential,” says Nesbitt. “We are testing the adoption of RUCKUS AI—the network analytics, service assurance, and business intelligence software—and it has shown early signs of success in troubleshooting and SLA management. It also provides reports that improve the performance, allowing the convention center to prohibit outside devices that can cause interference.”

The convention center’s converged wired and wireless network consists of the following:

- 173 RUCKUS indoor Wi-Fi APs
- 104 RUCKUS outdoor Wi-Fi APs
- 84 RUCKUS ICX switches for connecting APs at the access and aggregation layer
- RUCKUS SmartZone controller deployed in the cloud for managing all APs and switches

- RUCKUS AI for SLA management, capacity planning, proactive incident detection and remediation, and service assurance

A world-class technology experience

With high-capacity, reliable Wi-Fi backed by a state-of-the-art wired network, the San José McEnergy Convention Center provides industry-leading technology to show management, exhibitors, and attendees with shared or dedicated bandwidth up to 1 GbE. By expanding Wi-Fi throughout the convention center and the adjacent hotels, the City of San José achieved its single, ubiquitous network goal.

“Nowhere else in the nation are visitors able to get off a plane, drive four miles to downtown restaurants and hotels, and walk into the convention center—all while being connected to the most reliable, fastest Wi-Fi available,” says SmartWave’s Orell.

Following the RUCKUS deployment, the San José McEnergy Convention Center improved visitor experience and connectivity. Plus, they increased technology revenue by more than 10 times the highest revenue year with their previous provider. Team San José, an economic development organization for the city and the surrounding region that serves as the official destination marketing organization and visitors bureau under their travel brand, Visit San José, estimate that the deployment saved clients up to 10% in technology services..

“The San José McEnergy Convention Center welcomes over a million visitors annually, and now—as a result of the partnership between the city, RUCKUS, and SmartWave Technologies—all visitors to the convention center can experience some of the best technology you’d expect from the tech capital of the world,” said Khaled Tawfik, CIO for the City of San José and director of the

city’s IT department. “Conventions and exhibitions are an extremely competitive business, and offering proven, high-performance, reliable Wi-Fi attracts more business to the convention center, which in turn helps us generate more revenue for both the city and businesses across Downtown.”

With big-name tech events continuing to flock to the San José McEnergy Convention Center, the RUCKUS solution is clearly meeting the expectations of exhibitors and attendees. Following deployment, the convention center hosted a gaming and streaming conference. During the convention, a competitive tournament final was hosted, making it the second-largest online gaming event ever held at the time.

“If you want to try and ‘break’ a Wi-Fi network, invite 5,000 of your closest friends into a 10,000-square-foot room and do gaming,” remarks Al Brown, SmartWave CEO. “That is exactly what we did when the convention center hosted a large gaming and streaming conference, and the network performed flawlessly.”

About RUCKUS Networks

RUCKUS Networks builds and delivers purpose-driven networks that perform in the demanding environments of the industries we serve. Together with our network of trusted go-to-market partners, we empower our customers to deliver exceptional experiences to the guests, students, residents, citizens and employees who count on them.

www.ruckusnetworks.com

Visit our website or contact your local RUCKUS representative for more information.

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