



CASE STUDY

Airport Hotel Near London Is Now a Conference Destination Thanks to New Wi-Fi

“Good enough” is simply not good enough anymore. Hotel guests expect Wi-Fi to perform as well as it does at their home or office. If not, they will not come back. An airport hotel near London had 802.11n Wi-Fi that outlived its value, and it was becoming a problem. Connectivity was slow, and coverage was poor. By upgrading to Wi-Fi 6E technology from Taran and Cambium Networks, the hotel boosted throughput from 1.5 Mbps to 180 Mbps, increased coverage from 10% to 100% and saved 60% of the cost of competitive solutions.

Guests are now receiving a high-quality experience. Returning guests notice better coverage and higher speeds across the property – even before they enter the front door. Since the upgrade, the hotel has hosted multiple conferences with 200+ guests and has not received any complaints about the wireless, its availability or performance. The hotel is now a destination for conferences.

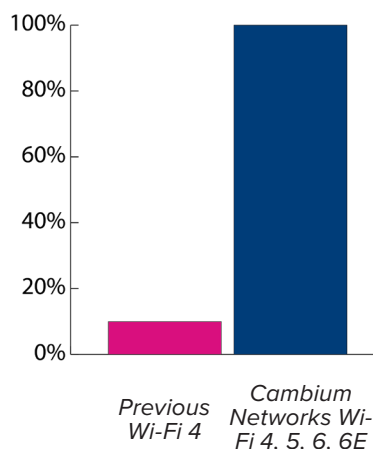
“With the installation of improved Wi-Fi in the conference areas, the hotel has experienced a significant upsurge in interest for hosting events.”

- Alex Huxham, Technical Director, Taran Microsystems

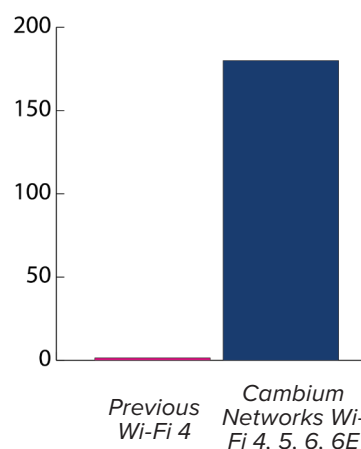


TARAN
MICROSYSTEMS

Wi-Fi Coverage



Throughput (Mbps)





Complete Hotel Venue Coverage

- 350 guest rooms, four floors
- 20,000-square-foot ballroom / meeting rooms
 - Maximum ballroom configuration of 10,000 square feet
 - 35 meeting rooms
 - Pre-function meeting zone
- Mezzanine restaurant, lobby, two bars, on-site spa
- Front entry
- Outdoor dining terrace

The Challenge

Originally designed to support business travellers using laptops to read email, the 2.4 GHz 802.11n standalone access points simply did not support the current demand. Guests complained about speeds and connectivity across the property. No one sat in any of the communal areas, restaurants or bars because there was no wireless connectivity.

The system needed to be upgraded without disrupting ongoing operations.

The Solution

The new technology was implemented as an overlay on the existing system within three days. When installation was complete, the overlay provided a complete side-by-side comparison.

Across the hotel, the Wi-Fi has an average of 400 active users with peaks of approximately 900 users.

- **Guest room Wi-Fi:** Every other room has an XV2-22H Wi-Fi 6 Wall Plate access point



The Cambium Wi-Fi was easy to

plan, and installation and provisioning was fast and efficient. The support we received helped us make a very tight deadline..."

- Alex Huxham, Technical Director, Taran Microsystems

- **Hotel corridor:** XV2-2 Wi-Fi 6 indoor access points
- **Reception, lobby and restaurant:** XE3-4 Wi-Fi 6E high-density indoor access points
- **Meeting rooms, event center, pre-function area:** XE3-4 Wi-Fi 6E high-density indoor access points
- **Back loading dock:** XV2-2T0 outdoor Wi-Fi 6 access points
- **Ethernet switch infrastructure:** cnMatrix™ EX2052-P 48 port PoE switches were deployed to replace the ageing switch infrastructure and to deliver seamless connectivity across the hotel property
- **Centralised cloud management:** The cnMaestro™ management system makes it easy to provision, monitor and manage the entire network



The Results

“The solution delivered a hundred-fold increase in speed and performance,” says Alex Huxham. “That’s a powerful statistic, but what it means to guests is that they can upload their iCloud photos, they can call families on WhatsApp and do their work without even thinking about the Wi-Fi. Just like at home and work. That is what guests want.”

There is complete coverage in guest rooms and hotel locations:

	Pre-Upgrade Wi-Fi Stats	Post-Upgrade Wi-Fi Stats
Wi-Fi Coverage	~10% @ -65dBm (lobby, bar)	100% @ -65dBm (lobby, bar)
Throughput	1.5 Mbps (restaurant)	~180 Mbps (restaurant)
Device Support	Wi-Fi 4	Wi-Fi 4, 5, 6, 6E

Hospitality Applications Supported Include:

- Guest Wi-Fi
- Order processing in restaurant
- Future IoT applications, including thermostats, locks, TV services, heating and cooling, and video security

Even distribution of auto-RF channel distribution: This spreads out the bandwidth instead of clustering all of the traffic on a small number of channels.

Guest room coverage: Wi-Fi 4/5/6 in dual bands available in all rooms.

- **6 GHz Wi-Fi enabled:** Supporting 6 GHz devices when they do appear.
- **Excellent client signal-to-noise ratio (SNR):**
 - 96% > 20dB (target 95%)
 - 91% > 25dB (target 85%)
 - 74% > 30dB (target 75%)
- **Low co-channel interference in 5 GHz frequency band:**
 - 6 radios > -75 dBm
 - 2 radios per channel > -75 dBm



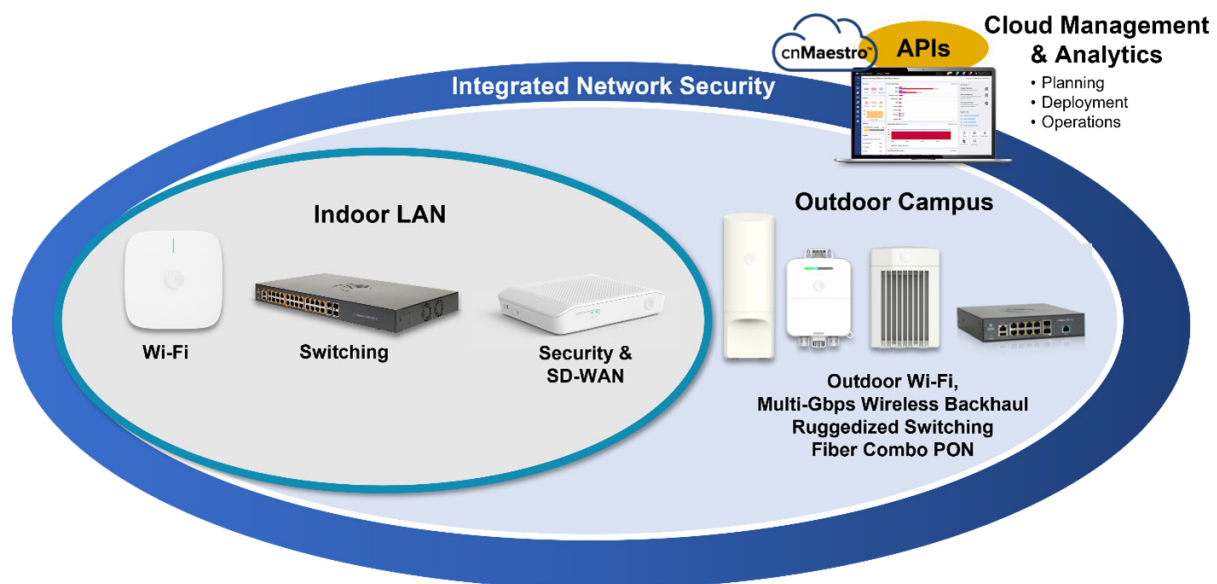
Next Steps

There are plans for a more extensive implementation in each room involving the installation of a dedicated access point and the integration of Zigbee technology. This advancement will allow for the seamless operation of various functions, including door locks, mood lighting, TV services, and even AI cameras, all facilitated through the access points, which have networking capabilities built in. Furthermore, the property is also considering the incorporation of two-way cameras and two-way audio systems, both connected to the Wi-Fi infrastructure, as part of the next phase of improvements and implementations.

Cambium's ONE Network

ONE Network enables excellent online experiences with fewer resources and IT personnel. Enterprises, managed service providers, broadband service providers, and government agencies can shift to managing the network holistically, freeing up IT resources to focus on their business and specific applications.

Our broadband fabric weaves together numerous networking standards and reduces complexities, helping network operators create purpose-built, reliable networks that are cost efficient and secure.



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 deliver connectivity that just works.