

Unified GPON Network and Surveillance Solution for Hotel Turia Valencia

Project Scope

168 rooms & common areas, including reception, hallways, dining room, and gym

Customer Profile

Name: Hotel Turia Valencia
Industry: Hospitality
Location: Avenida de Menéndez Pidal, 15, 46009 Valencia, Spain

Solutions

Network:

- SG6428XHP ×4
- DS-P7001-08 ×2
- EAP723 ×56
- EAP615GP-Wall ×170
- SG2210MP ×12 with XM60A modules
- OC300 ×1

Surveillance:

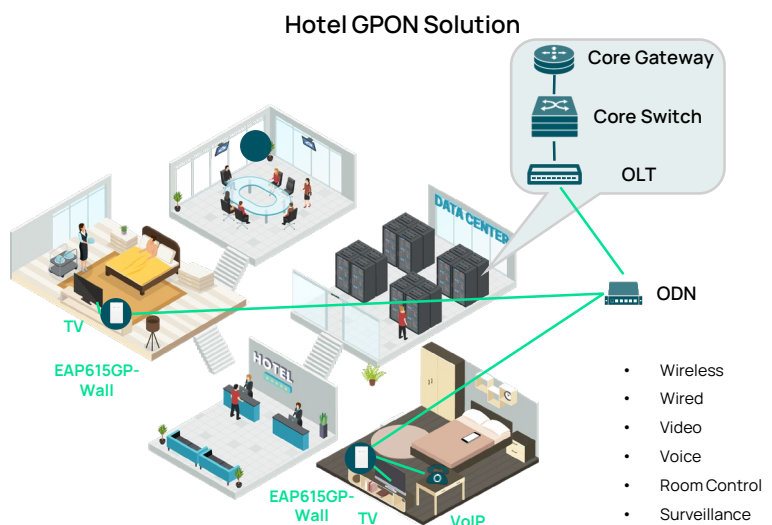
- NVR4064H NVR ×1
- VIGI C485 ×16
- VIGI C445 ×42
- VIGI Cloud VMS

Hotel Turia Valencia, located in central Valencia, Spain, has significantly upgraded its network and security infrastructure using Omada and VIGI GPON solutions. The hotel now offers enhanced digital services for its guests and a safer environment for everyone.

The Omada GPON Solution Provides High-Performance PtMP Connection

With 168 rooms, Hotel Turia needed to satisfy connectivity needs of every customer. Today's guests not only want internet access, but also a stable, fast, and secure connection for all their devices.

To meet this requirement, the Omada GPON (Gigabit Passive Optical Network) solution was adopted to offer a point-to-multipoint (PtMP) structure and efficient broadband access solutions, which seamlessly meet a business network's requirements, especially for MDUs like hotels.



Implemented by integrator Hercam with pre-sales support from TP-Link Spain, the solution was designed and deployed in collaboration with Vaecom for connectivity and security infrastructure.

The DS-P7001-08 Optical Line Terminal (OLT) features eight PON ports at 2.5 Gbps each, supporting a split ratio of up to 1:128 per port. However, in hospitality environments, a split ratio of up to 1:32 per port is common to optimize performance. It also features 10 Gbps SFP+ uplink ports, ensuring high-speed, high-capacity uplink connections.

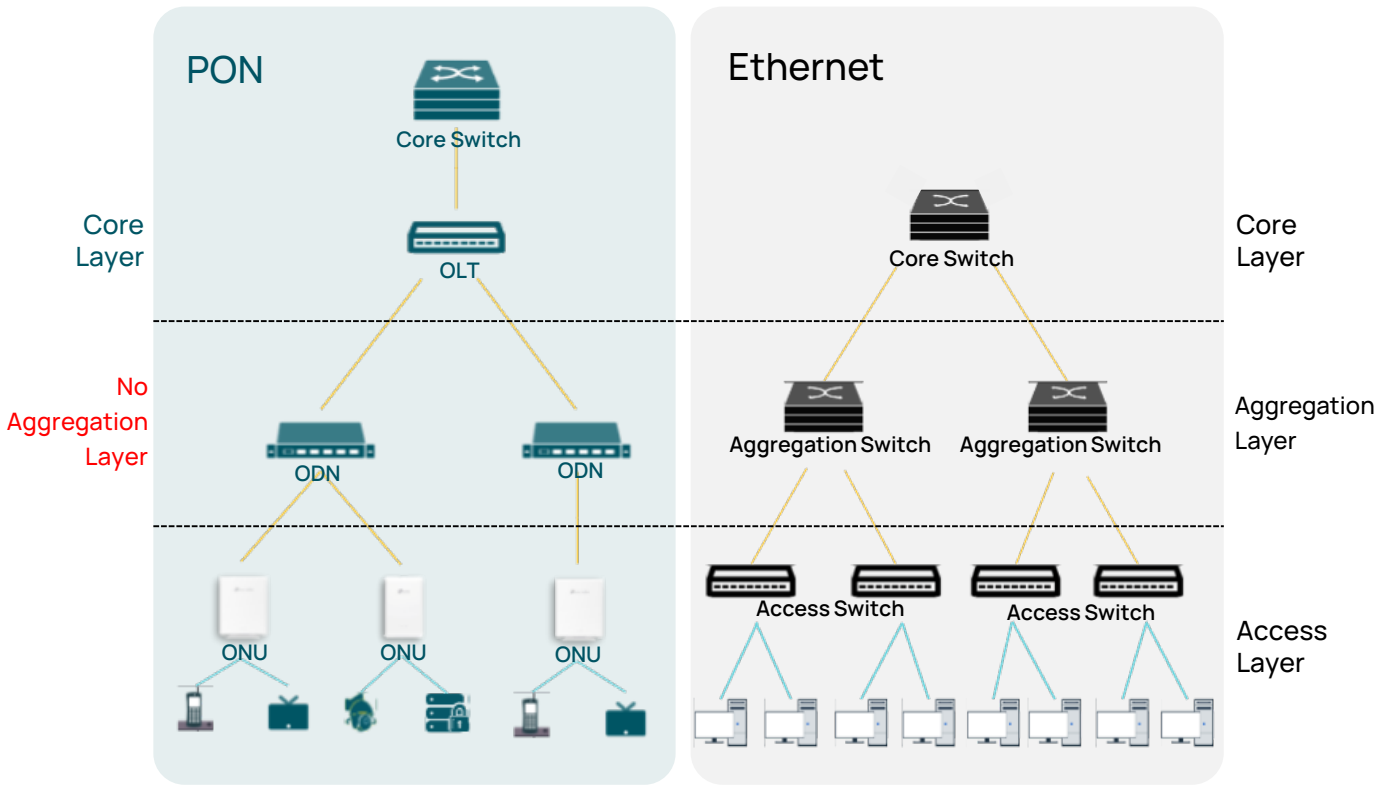
The SG2210MP switches are also responsible for GPON network distribution, providing PoE+ power and Gigabit connectivity for ceiling-mounted access points, such as EAP723 and CCTV video surveillance devices. The XM60A modules are SFP ONU transceivers that allow GPON connectivity to extend to any switch, facilitating network installation and expansion.

EAP615GP-Wall is a Wi-Fi 6 (802.11ax) wall access

point with combined speeds of up to 1775 Mbps (574 Mbps on 2.4 GHz and 1201 Mbps on 5 GHz). Equipped with two Gigabit Ethernet ports, it can connect wired devices such as IPTV or personal computers, ensuring smooth user experience. It also includes an RJ-11 port for analog telephony, facilitating the integration of in-room voice services. Implemented on a GPON network, it provides an FTTR (Fiber to the Room) experience, allowing guests to enjoy a high-performance fiber optic connection similar to the one they would receive at home.

Compared with Ethernet network structures, the GPON solution cuts down the tiers from 3 to 2 without the Aggregation Layer, which means no aggregation switch, fewer devices, less labor, and lower maintenance complexity. The deployment is made more flexible as the Optical Distribution Network (OND or Splitter) requires no power supply. And the fiber transmission is capable of multi-service like wireless, wired, video, voice, room control, surveillance, and more. All these benefits are ideal for the hotel scenario and meet the essential needs of Hotel Turia.

PON vs. Ethernet



Omada Wi-Fi 7 APs Enhance Guest Experience in High User Density Areas

Featuring state-of-the-art Wi-Fi 7 (802.11be) technology, the EAP723 access point is ideal for areas with high user density, providing high connection speeds of up to 3600 Mbps (2882 Mbps on the 5 GHz band and 688 Mbps on the 2.4 GHz band) and lower latency.

A key feature of Wi-Fi 7 technology is Multi-Link Operation (MLO), which allows devices to connect to multiple bands or channels simultaneously, improving stability and reducing latency in common areas like Hotel Turia Valencia's dining room.

Equipped with a 2.5G Ethernet port supporting 802.3at PoE, it offers installation flexibility to take

full advantage of Wi-Fi 7 capabilities and improves guest experience to the greatest extent.

Omada Controller Centralized Control Simplifies Operation & Management

OC300 is a hardware controller that facilitates centralized control of the entire Omada network. It enables real-time network monitoring, configuration, and optimization from a single interface, simplifying management and improving the hotel's operational efficiency.

This infrastructure ensures that Hotel Turia Valencia offers its guests a high-quality, fast, and secure connectivity experience adapted to the ever-growing use of entertainment and work devices and applications.

"Our goal was to enhance the guest experience and ensure the safety of our staff and guests. With this renovation, we can say we're on par with the best facilities in the industry."

—David Cámara, Project Manager at Hercam

High Resolution and Advanced Features for 24/7 Security Monitoring

VIGI provides a range of pixel options tailored to diverse scenarios, such as VIGI C485 with 4K resolution, ensuring no detail goes unnoticed—perfect for perimeter security. With IP67 weatherproof and IK10 vandal-proof ratings, VIGI cameras are built for both indoor and outdoor use, enabling 24/7 protection for the whole hotel.

Additionally, VIGI cameras have multiple advanced features to fulfill all surveillance requirements, improving the efficiency of hotel management:

- People and Vehicle Analytics: Auto-detects and classifies people and vehicle movement for faster event searches.
- Active Defense: Deters invaders with powerful sounds and white lights
- Smart Detection: Real-time alerts for abnormal activities, enabling staff to respond swiftly to potential threats.

Easily Manage Devices with Powerful and Competitive VIGI NVRs

With 64-channel live view and 16-channel simultaneous playback, VIGI NVR4064H excels in hospitality scenarios, enabling effortless management of VIGI cameras for continuous, efficient surveillance.

With four SATA interfaces supporting up to 16 TB per drive, its large capacity and intelligent storage technology reduce costs while ensuring 24/7 office protection.

Unified Hotel Surveillance and Network Management on One Platform

The integration of NVRs and cameras with VIGI Cloud VMS, TP-Link's cloud-based video management platform, enables security personnel to remotely monitor and manage all CCTV cameras from anywhere with internet access. Backed by enterprise-grade encryption, the platform ensures robust data protection at all times.

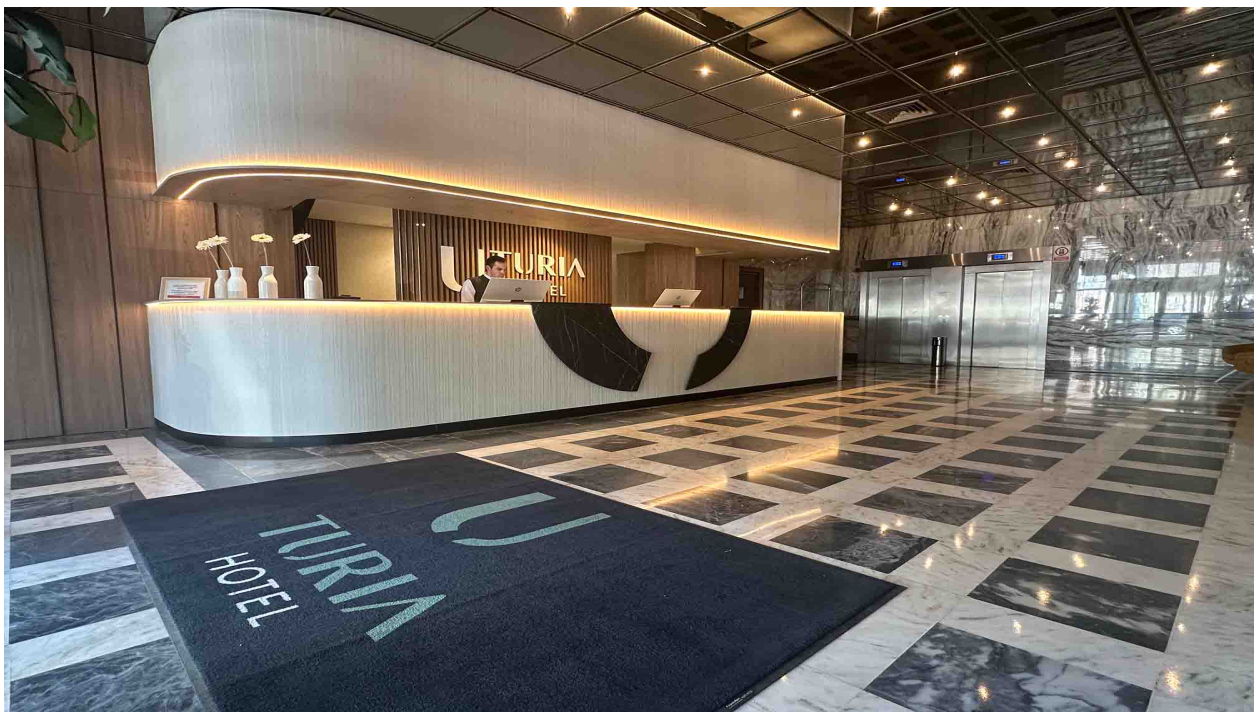
This unified TP-Link solution elevates both guest experience and security at Hotel Turia Valencia, delivering seamless connectivity alongside an intelligent, user-friendly surveillance system.

Furthermore, integration with Omada Central consolidates network and video surveillance management onto a single platform, streamlining hotel operations while supporting scalable growth without substantial additional investment.

Seamless Hotel Upgrade: Zero-Disruption Installation

To ensure the installation of new network services would not disrupt the hotel's daily operations, integrator Hercam—with support from TP-Link Spain and in collaboration with Vaecom—developed a carefully phased deployment plan. This approach optimized installation times, minimized downtime, and guaranteed a seamless transition with no significant impact on guest services. Through meticulous planning and efficient execution, the hotel enhanced its connectivity and security without interruption, delivering an improved guest experience in record time. The fully integrated solution is also inherently scalable, allowing for future expansion without costly infrastructure upgrades or service disruptions.

Hotel Turia Valencia



Topology

