Enabling a next-generation digital learning smart campus at IE Tower Madrid

"Thanks to CommScope in IE Tower, our emblematic building, all our students are wirelessly connected, the tower is sensorized, we have automation processes, and all this with a more than acceptable energy efficiency. A year after the inauguration, we now have the tools we need to continue developing and growing the project, because this is a dynamic thing. And with CommScope it's easy for us."

Alberto Moreno, networking and infrastructure manager
IE University

IE University in Madrid, Spain, is one of the world's leading international universities, and is recognized worldwide for its quality of teaching and learning.

In September 2021, IE University inaugurated IE Tower, a new vertical, technological and sustainable headquarters with a mission to promote education as the key to sustainable development. The new IE Tower is 180 meters high, with 35 floors providing over 50,000 square meters of dynamic, multi-use space for up to 6,000 students. IE Tower has been designed as a smart campus—a sustainable high-rise that minimizes environmental impact and leverages technology to provide state-of-the-art learning facilities.

Digital technology is central to the design of IE Tower. All classrooms are equipped with collaboration tools that enable virtual learning, and the project helps students experience technological immersion through virtual reality (VR) and artificial intelligence (AI). The tower is also home to a Venture Lab designed to accelerate the creation of startups, plus a FabLab to develop architecture and design projects. Progressive advancement using digital is key.

The challenge

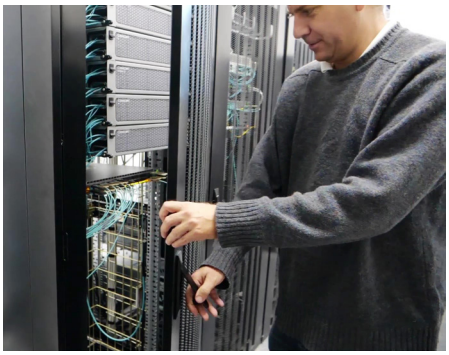
IE University was committed to making its new vertical campus a safe, secure hub for innovation and learning, with the latest technologies in place and always-on connectivity powering students' learning.

The new, state-of-the-art IE Tower facility was designed to have around 10,000 network points and needed to provide both indoor and outdoor connectivity in the shape of strong Wi-Fi and 3G, 4G and 5G-ready connectivity. IE Tower also needed an accurate management tool to help it control the infrastructure layer effectively.

The solution

CommScope was able to offer all the solutions needed by IE University to enable and power its smart campus network for all current and future needs. To meet the demands of IE Tower, CommScope specified:

- SYSTIMAX® Category 6A structured cabling
- imVision® automated infrastructure management system
- Powered fiber cable system
- ERA® digital distributed antenna system



The results

Security was a key concern of IE University in developing IE Tower. With more than 8,000 students from 140 different countries, it needed a tool that could provide network administrators with visibility into what's happening in the network physical layer. CommScope's imVision system enables IE Tower to monitor and record all changes in device connections and to receive alerts of any changes—particularly any unforeseen ones. The imVision system now connects and maps over 6,000 devices.

Around 12 kilometers of CommScope OM4 fiber and power over Ethernet (PoE) have been deployed to give IE Tower the Wi-Fi coverage and capacity it needs for hosting big outdoor events such as graduations and to bring PoE over longer distances.

The CommScope digital ERA DAS solution enables IE Tower to ensure cell phone coverage throughout the building—overcoming interference challenges and delivering capacity everywhere it is needed. It's a scalable solution that can grow with IE Tower's needs moving forward.

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