



Case Study | Princeton University

Connecting The New Lewis Center For The Arts: MCA Integrates Legacy DAS Systems with New DAS Systems Alongside Tescro to Ensure Comprehensive In-Building Wireless Coverage

OVERVIEW

Expanding DAS Infrastructure into Princeton's New Arts Complex

Princeton University's Lewis Center for the Arts, inaugurated in fall 2017, epitomizes the fusion of architectural beauty and functional design.

Named after Peter B. Lewis, a Princeton alumnus and former Charter Trustee who generously donated \$101 million in 2006, this 145,000-square-foot complex integrates three modern buildings around a central courtyard.

It serves as a dynamic venue for the university's Theater and Dance programs, the Department of Music, and Fellows in the Creative and Performing Arts.

During the planning phase, the IT team at Princeton identified the need

for a specialized wireless communications network to ensure comprehensive cellular coverage throughout the new center and its adjacent areas.

Building on their experience with Commscope's hybrid coax DAS solution implemented across the main campus, they sought a partner certified in multiple OEM technologies.

This partnership was crucial for integrating the new system with the existing campus-wide network, aiming to create a seamless and unified communications infrastructure to support the center's diverse array of artistic and academic activities.



Ensuring Comprehensive Coverage Across a New and Expansive Arts Complex

Deploying and Integrating Existing DAS Infrastructure with New Infrastructure

Superior Network Performance

Enhanced Voice Clarity and Cellular Coverage

Cost-Effective Implementation

System Flexibility and Scalability

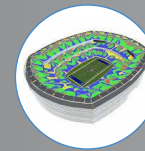
Compatibility Between New and Existing Solutions



Distributed Antenna System Integration



New Access Points, Servers, and Racks



iBwave RF Engineering and Design Services

“Princeton University faced a challenge in extending the current CommScope hybrid coax DAS into the new building. We presented the CommScope ION-E solution; they felt the Category 6A cabling matched well with their current cabling and they had the internal expertise to deploy the cabling. They decided to move ahead with the CommScope ION-E and to standardize on the platform for future DAS deployments on campus.” — Rick Youngbar, *Former MCA Vice President*

CHALLENGE

Integrating New and Existing DAS Infrastructure

Princeton University encountered significant challenges while planning to extend their existing CommScope hybrid coaxial Distributed Antenna System (DAS) into the newly constructed Lewis Center for the Arts.

The primary goal was to ensure that the new DAS seamlessly integrated with the old system, preserving the use of standardized cabling to align with the skill set of the current IT team. This consistency was crucial for maintaining the efficiency and effectiveness of the team’s ongoing operations and future maintenance.

The university required the system to support not only standard cellular communication but also public safety communications channels. This dual functionality was essential not only to enhance visitor experience but more importantly, to ensure the safety and security of students, staff, and guests in any emergency.

The solution had to be robust enough to handle high traffic during events and daily activities while providing uninterrupted service across both networks.

Additionally, the financial aspect of the project was a significant consideration. The solution needed to be cost-effective, fitting within the university’s budget constraints without compromising on the quality and reliability of the service.

Balancing these requirements—technical compatibility, safety priorities, and budgetary limits—posed a complex challenge in upgrading the wireless infrastructure at the Lewis Center for the Arts.

SOLUTION

Implementing a Unified Wireless Infrastructure

To address the connectivity challenges at the new Lewis Center for the Arts, MCA recommended the CommScope ION-E solution, which seamlessly integrated with Princeton University’s existing Category 6A cabling.

This compatibility and Princeton’s in-house expertise in deploying this type of cabling made the decision straightforward. The university chose to standardize on the CommScope ION-E platform for all future DAS deployments across the campus.

MCA worked closely with Princeton's Information Technology Office to design a solution utilizing the CommScope ION-E unified wireless infrastructure technology. To ensure a successful implementation, MCA partnered with TESSCO, who provided a comprehensive plan that included equipment procurement, financing, and project fulfillment support.

This plan was tailored to the Princeton teams needs, featuring customized shipping schedules and specialized financing terms to streamline the deployment process.

CommScope's ION-E system is built on a standard IT structured cabling architecture, which offers flexibility and scalability while simplifying maintenance and upgrades. This platform is adept at supporting enhanced cellular coverage and robust public safety communications, vital for emergency responsiveness. The sale of the ION-E platform to Princeton marked its first announced distribution through an American distributor, highlighting TESSCO's pivotal role in this groundbreaking project.



"We successfully navigated the complex challenges of technical compatibility, safety priorities, and budgetary constraints to upgrade the wireless infrastructure at the Lewis Center for the Arts."

"The ION-E is designed for projects exactly like this, where fiber and Ethernet cabling and their familiarity within IT organizations make it easier for deployment and future requirements."

Matt Melester
Senior Vice President | CommScope

"With the convergence of the internet and wireless, TESSCO is well positioned to support the ION-E platform for both cellular and public safety needs for the full DAS life-cycle from design to fulfillment."

Doug Dollenberg
Vice President | TESSCO Technologies

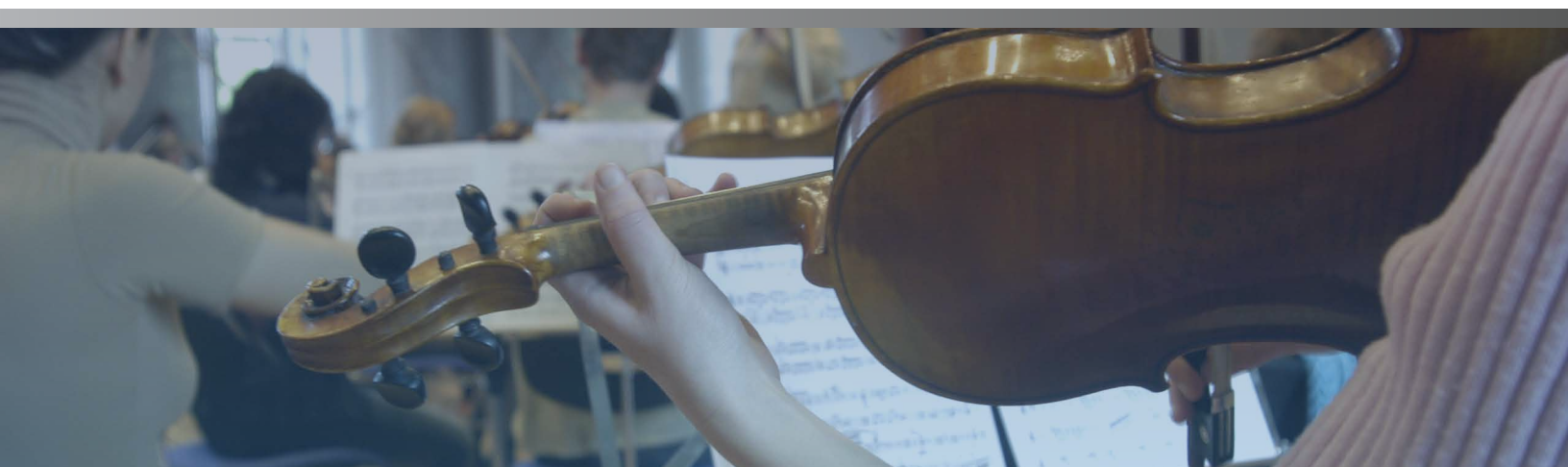
Our In-Building Wireless Team

20+ Years of Experience with 10,000 +Successful DAS Deployments

At MCA, our In-Building Wireless Solutions (IWS) team excels as a top-tier integrator of in-building and expansive campus wireless solutions.

We offer unparalleled engineering design, project management, implementation, commissioning, and maintenance services. Our expertise encompasses engineering and installing Commercial Distributed Antenna Systems (DAS), Private LTE/5G systems, Public Safety ERRCs, Wi-Fi, and both multi- and single-operator systems within diverse public and private venues.

Our team's deep knowledge and innovative approach empower us to design customized, future-ready solutions that effectively address our clients' wireless coverage and capacity requirements. Leveraging a carrier-neutral strategy, we deliver cutting-edge, multi-operator DAS networks for corporate offices, hospitals, universities, airports, shopping centers, and more throughout the United States.



About MCA

MCA is one of the largest and most trusted technology integrators in the United States, offering world-class voice, data, and security solutions that enhance the quality, safety, and productivity of customers, operations, and lives.

More than 65,000 customers trust MCA to provide carefully researched solutions for a safe, secure, and more efficient workplace. As your trusted advisor, we reduce the time and effort needed to research, install, and maintain the right solutions to make your workplace better.

Our team of certified professionals across the United States deliver a full suite of reliable technologies with a service-first approach. The MCA advantage is our extensive service portfolio to support the solution life-cycle from start to finish.

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The MCA logo is rendered in a white, sans-serif font. The letter 'C' is stylized with a blue circular graphic element inside it, consisting of a solid blue ring and a white center. The background of the entire page is a dark blue gradient with abstract white line art patterns, including a network of nodes and lines in the upper right and a grid-like pattern in the lower right.