

LARGE-SCALE CLASSROOM DEPLOYMENT ON A STANDARD NETWORK

University of Central Oklahoma

University of Central Oklahoma Continues a Legacy of Innovation with Q-SYS

📍 Edmond, OK

Founded in 1890, the [University of Central Oklahoma](#) (UCO) has a long history as one of the state's oldest institutions of higher learning. That being said, they're no strangers to innovation. From being the first major university in Oklahoma to be one hundred percent powered by wind energy, to recently electing their first female president, UCO embraces a legacy of pushing boundaries. And when the university AV team faced their own challenge with an ambitious audio, visual and control timeline, they tackled it head-on.



“ **Q-SYS not only offered a suite of solutions that fit our requirements and budget, they also worked with us to successfully deploy within a very tight timeline.** ”

Caleb Howard

Audio Visual Design Engineer, University of Central Oklahoma

Challenges

The University's commitment to their 14,000 students was proven when UCO Leadership approved a campus-wide upgrade of their classroom audio, visual and control infrastructures. In preparing to meet the needs of the incoming student body, UCO themselves would need to transform with the start of term quickly approaching. "We had less than a month to bring video conferencing capabilities to over 100 classrooms in fifteen different campus buildings. A large portion of these spaces had no pre-existing AV control system. We were looking for solutions to standardize deployment but allow for flexibility in how these classrooms would be used. It was also important for everything to be on the UCO network for management and monitoring," explained Caleb Howard, Audio Visual Design Engineer of University of Central Oklahoma. "[Q-SYS](#) not only offered a suite of solutions that fit our requirements and budget, they also worked with us to successfully deploy within a very tight timeline."



Standardization

They needed to create a consistent classroom deployment for long-term scaling objectives – namely uniform training and increased adoption and support.



Platform Independence

In every classroom, it was a necessity to accommodate a variety of teaching styles and web conferencing solutions run through dedicated room PCs.



Standard Network

They required a system equipped with monitoring and support that ran on their centralized IT network rather than a separate AV network.



Solutions

Standard Deployment & Network

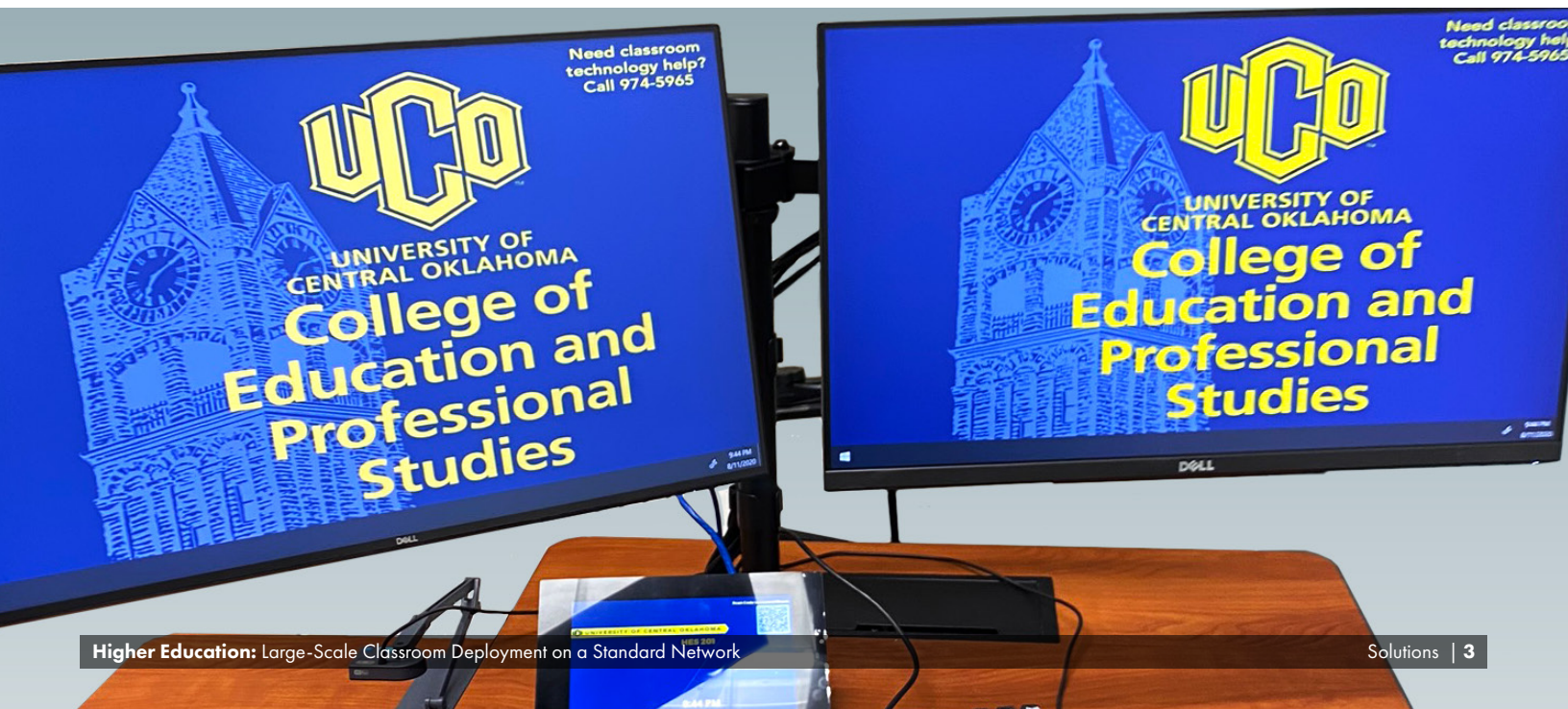
Previously the AV team worked within a patchwork of systems. The campus upgrade afforded them the opportunity to standardize their infrastructures, starting with leveraging a building-wide Q-SYS Core processor for each targeted space. In larger facilities, such as their School of Business, the team chose the Q-SYS Core 510i processor (now available as the updated [Q-SYS Core 610](#)) to control over a dozen classrooms. For smaller installations they selected the [Q-SYS Core 110f processor](#), which has its focus on small-to-medium spaces. Both Q-SYS Core processor tiers leverage Q-SYS OS, allowing them to operate on the same software while presenting a single learning curve, regardless of the Core's size or complexity. Both Cores also operate on a standard network using standard IT protocols, allowing the team to meet the requirement of running on the existing UCO network.

A Great Experience, Remote or In-person

The team worked toward creating predictable, reliable infrastructures within each of UCO's colleges. The streamlining allowed for deeper education of staff on how to use the system, and ultimately a smoother learning experience for students. Part of this enhanced experience meant the addition of [Q-SYS NV Series Video Endpoints](#) at the lectern and projector. With dual HDMI connections to the Room PC and the third HDMI input available for a laptop, presenters can select which screen to stream to the

classroom projector while also connecting room audio via USB to their video conferencing platform of choice. This dual-monitor streaming is accomplished without additional control processors, bridges or programming. As well, the system allows faculty to freely select their preferred videoconferencing application, without being locked into a prescriptive soft codec solution. The addition of a second NV-32-H at the room displays allowed a streamlined installation by eliminating dedicated AV cabling and relying on standard network infrastructure. This system supports both faculty in using the system and support staff in troubleshooting.

Quality of sound for each of the new classrooms is maintained through ceiling-mounted [AcousticCoverage Series loudspeakers](#), and is supported by a [SPA Series power amplifier](#). Both Cores also utilize Dante networked audio for the microphones, either through a [Q-SYS Dante bridge card](#) for the Core 510i processor, or by [Software-Based Dante™ feature license](#) for the Core 110f. To bring a more dynamic experience to remote students, the team employed third-party tracking cameras. Utilizing a [Q-SYS Scripting Engine feature license](#) on each Core, the team was able to easily integrate network-based third party device control and create a dynamic viewing experience for distance learners.



Solutions

A Touch of Something Special

A key component to ensuring faculty success within the updated classroom was building and deploying clear, understandable user control interfaces (UCI). The team elected to add a [Q-SYS Touch Screen Controllers](#) to each room. With this, faculty are presented with two choices: they can interact directly with the UCI through the touchscreen, which was deployed using the [UCI Editor](#) feature license, or they can scan a QR code from the main screen to access controls via their preferred device. Either choice provides control of room projectors, cameras, video routing, as well as audio elements such as volume and mute.

Clearer Visibility, Faster Resolution

Despite the ticking clock, the UCO team recognized the need to make time to also implement standardized audio, visual and control protocols. To do this, they leaned on [Q-SYS Reflect Enterprise Manager](#). This addition has leveled up their monitoring and status visibility, but also their classroom delivery support. Now issues are made apparent before faculty is even aware and troubleshooting with on-site technicians in the event of power outages or other offline events is drastically accelerated.



Solutions











Crossing the Finish Line

With a mountain of work yet to be done and the start of semester drawing ever closer, there was significant pressure to deploy on time. To lend a hand, Q-SYS worked with the AV team and developed a solution for expediting deployment. “One aspect that made this the coolest project I’ve ever been a part of was the collaboration with Q-SYS,” stated Caleb. “They worked with me in depth and built us a structured Q-SYS Designer template file for our multiple AV Integrators to use. With it they were able to quickly deploy and configure these classrooms with the same look and feel – completing all in around two weeks.”

With faculty training complete and the dust barely settled, the semester began with students piling into classrooms – either in-person or online. The UCO AV team had succeeded, and their efforts have subsequently been recognized. Shortly thereafter, University of Central Oklahoma was listed as [one of the top institutions in the state in their ability to offer a quality education under any conceivable scenario](#): in-classroom, online, and a blend of each format. Q-SYS is honored to have been a part of the latest (but by no means last) stage of UCO innovation.



Q-SYS Equipment List

Model	Pcs Used	Description	Image
Q-SYS Core 510i processor (now available as the updated Q-SYS Core 610)	7 Systems (14 Cores)	Q-SYS Core processor 256 x 256 network channels 8 onboard I/O card slots for configurable I/O	
Core 110f	3 Systems (6 Cores)	Q-SYS Core processor 128 x 128 network channels 24 local audio channels	
AC-C6T	256	Q-SYS AcousticCoverage™ Series Loudspeaker 6.5" Ceiling mount loudspeaker	
SPA2-60	64	Q-SYS SPA Series Power Amplifier 2 Channel	
NV-32-H	120	Q-SYS NV Series network video endpoint 3 x 2 HDMI I/O	
TSC-80W-G2-BK	64	Q-SYS TSC Series touch screen controller 8.0" (203 mm) screen dimension	
UCI Editor	20	Q-SYS feature license Create and deploy custom UCI without any programming experience	
CDN64	14	Q-SYS Dante Bridge Card 64 x 64	
Software-Based Dante™	6	Q-SYS feature license Integrate Dante™ network audio without the need for additional hardware	
Q-SYS Scripting Engine	20	Q-SYS feature license	



Q-SYS is a globally recognized manufacturer of audio, video and control (AV&C) solutions for huddle rooms to stadiums—and everything in between. Our systems make it easy for your team to design and integrate flexible, scalable solutions and deliver the native IT integration and standards-based technology your customers expect.

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