PLUG INTO ENHANCED STADIUM EXPANSION

Fountain-Fort Carson Trojan Arena

Trojan Arena Goes Big with the Q-SYS Platform

📍 Fountain, CO

The Trojan Arena at Fountain-Fort Carson High School exemplifies the "go big" attitude in sports venues. Stretching across more than 97,000 square feet, the Trojan Arena accommodates nearly 5,000 spectators. It hosts basketball and volleyball games, wrestling matches, assemblies and graduation ceremonies. Aside from sports, there are office spaces, a weight room, and multi-purpose areas. The true enchantment lies in the AV system that seamlessly connects the rooms throughout the entire space. With the Q-SYS system, audio and facility-wide control merge for a seamless experience. By embracing Q-SYS, they've truly embraced the spirit of "going big."

> ❝ **Q-SYS is a great solution. The venue is thrilled with the system, and we look forward to further expansions as the stadium evolves.** ❞
>
> **Ron Howard**
> *Principal Consultant, Eleven Tech Group*

Challenges

Creating a Multifunctional Event Center

Early in the design, the challenge was to transform the gymnasium into a multifunctional event center suitable for athletics, events, graduations, and qualifying for NCAA tournaments. Ron Howard, Principal Consultant at Eleven Tech Group, partnered with CRP Architects and Brown Note Productions. Howard stated, "Our mission was clear: to deliver on the client's needs, we needed to enhance audio and control systems, ensure user-friendly controls, and implement scalable, flexible solutions for future advancements. That's why we selected Q-SYS as the optimal solution. Plus, its real-time meters and intuitive interface sealed the deal, making it perfect for our needs."

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TECH GROUP

BROWN NOTE
PRODUCTIONS
INC

Solutions

Fully Committed to Q-SYS

Howard's design philosophy revolved around a distinctive mantra: "Every component in the design needed to integrate simply and effectively with Q-SYS. Everything had to work within the Q-SYS Ecosystem, enabling flexible communication and monitoring across a wide range of devices." The team deployed a redundant Q-SYS Core 510i (now updated to Core 610) processor for setup along with distributed network-based AV endpoints, such as amplifiers and audio I/O, throughout the facility.

User-Friendly Control

The primary function of the Q-SYS system was to create a user-friendly experience. The team deployed customized user control interfaces (UCI) via Q-SYS Touchscreen Controllers across the arena, enabling users to monitor audio levels and make adjustments on the fly. Additionally, the system integrates with Bluetooth, allowing users to pair their phones and play music via Attero Tech Wall interfaces.

Arena & Multipurpose Room Versatility

The multipurpose room is highly adaptable, functioning as a training room, classroom, or special event space. It features short-throw projectors, a Mersive Solstice Pod for wireless streaming, and digital signage displays. The Q-SYS Control Plugin for Mersive allows for configuration within Q-SYS of the Mersive Solstice Pods, allowing users to integrate Solstice controls into the Q-SYS user interface as their in-room AV controls, thereby simplifying the overall user experience. The Q-SYS NV-32-H Network Video Endpoint acts as a decoder to feed the two projectors. In the arena, the Q-SYS NV-32-H seamlessly integrates with the Daktronics video scoreboard, displaying content for games and special events. This feed can be broadcast on digital signage throughout the facility, including displays in the multipurpose room.
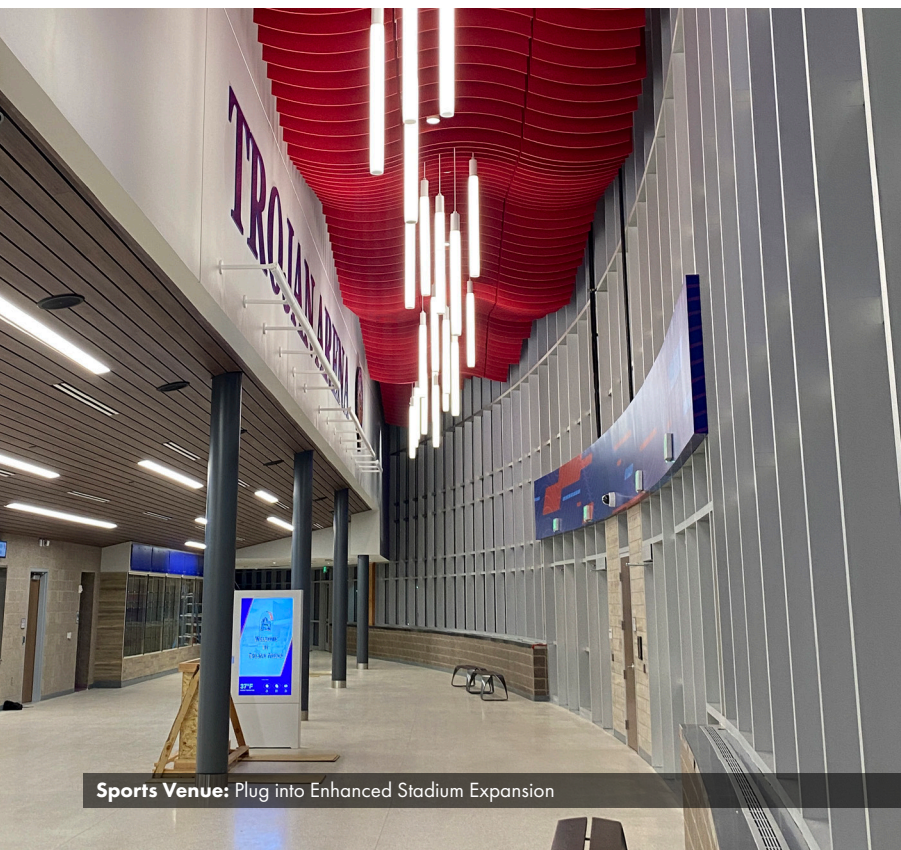
Solutions

Enhanced Safety and Communication

The secondary function of Q-SYS was its software-based paging, which allows for important announcements to be heard throughout the venue. Notably, the arena's main audio system was repurposed for voice announcements during fire alarms. By integrating Q-SYS, the arena achieved compliance with the NFPA 72 code without requiring a separate, expensive audio system. The Q-SYS solution also provided a redundant head end for DSP and enabled remote monitoring capabilities, crucial for the arena's safety strategy; with the design being reviewed and approved by the Fountain-Fort Carson Fire Marshal.

Furthermore, the arena added three Q-SYS Paging Stations in strategic locations: the concourse, coach's room, and multipurpose room. The concourse, equipped with significant digital signage and UL1470-certified Q-SYS AcousticDesign™ Series Loudspeakers, serves as a mustering station. These additional paging stations facilitate communication throughout the facility, including the ability to override program content during emergencies.

Third-Party Audio Accessibility

Howard continued to uphold the commitment to incorporating equipment compatible with Q-SYS Plug-Ins by including Sennheiser's MobileConnect Stations in the setup. These innovative stations offer assisted listening through Wi-Fi, significantly enhancing the audio experience for visitors. For individuals using hearing aids or Bluetooth-enabled smartphones, it's as simple as scanning a QR code to choose their desired location within the venue, such as the main arena. Once connected, they can stream high-quality audio directly to their headsets or hearing aids. This feature is a crucial asset in promoting accessibility and inclusivity, ensuring that everyone, regardless of hearing ability, can fully engage with events and activities within the arena.

Future Forward

The Trojan Arena truly embodies the "go big" spirit of sports venues. Its expansive size and cutting-edge AV system not only accommodates thousands of spectators but also delivers a seamless, user-friendly experience. By leveraging Q-SYS as the optimal solution, the team has created a versatile event center adaptable to any function. From wireless streaming to dynamic digital signage and advanced paging capabilities, Q-SYS has truly elevated the arena. As Howard aptly puts it, "Q-SYS is a great solution. The venue is thrilled with the system, and we look forward to further expansions as the arena evolves."
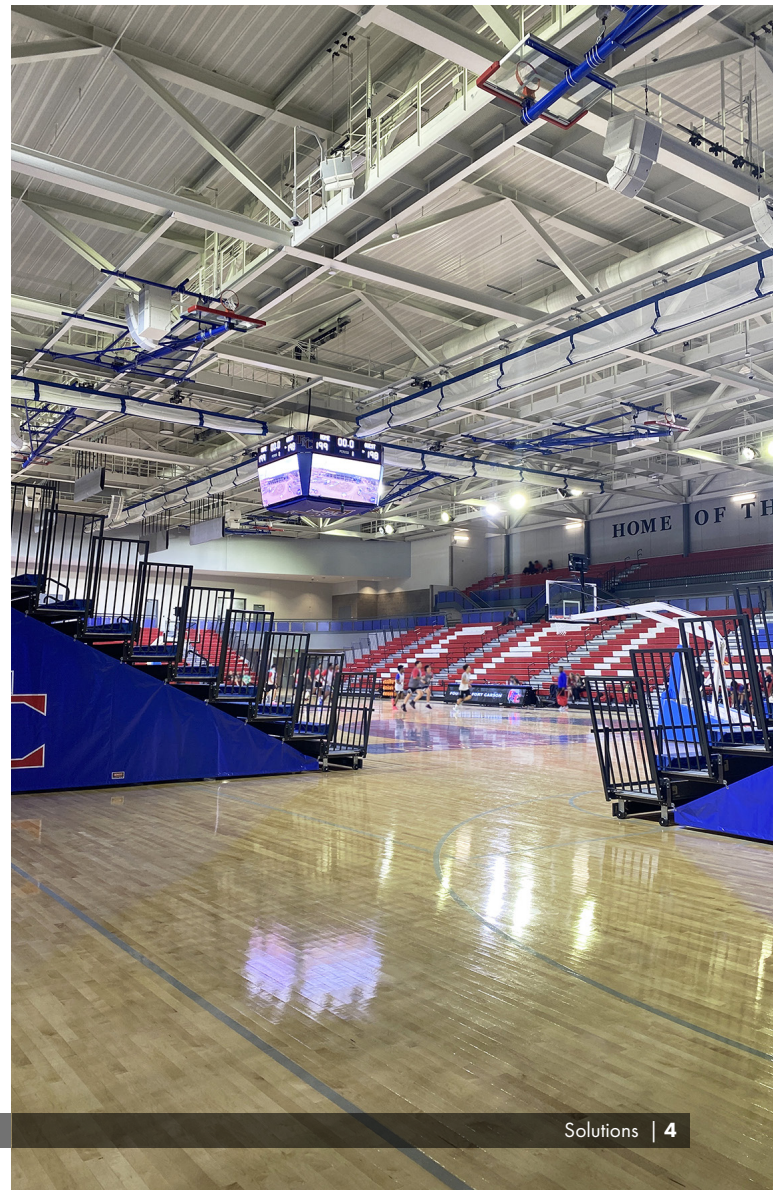
Q-SYS Equipment List

Model	Pcs Used	Description	Image
Core 510i (now updated to Core 610)	2	Q-SYS Integrated Core Software-based audio, video & control processor Network I/O: 256 x 256 Eight audio I/O card slots	
NV-32-H	4	Q-SYS NV Series network video endpoint 3 x 2 HDMI I/O	
I/O-8 Flex (now updated to QIO Series)	4	Q-SYS I/O network interface Eight Flex I/O channels allow for integration of analog audio devices into the Q-SYS network	
CX-Q 2K4	2	Q-SYS CX-Q Series Four-channel Q-SYS network amplifier with 4x mic/line inputs	
CX-Q 4K8	1	Q-SYS CX-Q Series Eight-channel Q-SYS network amplifier with 8x mic/line inputs	
TSC-116w-G2 (now updated as TSC Series G3)	2	Q-SYS Touch Screen Controller 11.6" (295 mm) screen dimension 1920 x 1200 resolution	
TSC-80w-G2 (now updated as TSC Series G3)	5	Q-SYS Touch Screen Controller 8" (203 mm) screen dimension 1280 x 800 resolution	

Q-SYS Equipment List

Model	Pcs Used	Description	Image
AD-C4T	40	AcousticCoverage™ Series Loudspeaker 4.5" Ceiling mount loudspeaker	
AD-C820	33	AcousticDesign™ Series Loudspeaker 8" High-power coaxial ceiling speaker	
AD-S10T	9	AcousticDesign™ Series Loudspeaker 10" Two-way surface speaker	
COL4	2	Four channels of balanced line-level analog output	
CDN64	4	Dante™ Audio Bridge Card 64x64 channels	
CIML4	2	Four channels of microphone/line-level analog audio input with 48V phantom power	
Attero Tech Axon C1	5	In-wall remote controller, OLED Display	
Attero Tech unD6IO-BT	3	Wall-mount network audio interface (Dante/AES67) 4 x 2 multi I/O with Bluetooth® audio	
Attero Tech Axon A4FLEX	1	Wall-mount network audio interface AES67 scalable mic/line connectivity	

Q-SYS Equipment List

Model	Pcs Used	Description	Image
PS-1650H (now updated to PS-TSCG3)	1	Q-SYS network page station paging peripheral for the Q-SYS Ecosystem	
Software-based Dante™	1	Q-SYS feature license Integrate Dante™ network audio without the need for additional hardware	
Q-SYS Scripting Engine	1	Q-SYS feature license Third-Party Control Plugins/Scripts Full Featured Scripting Component	
UCI Deployment License	1	Q-SYS software feature license Create and deploy custom UCI onto available control devices	

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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