

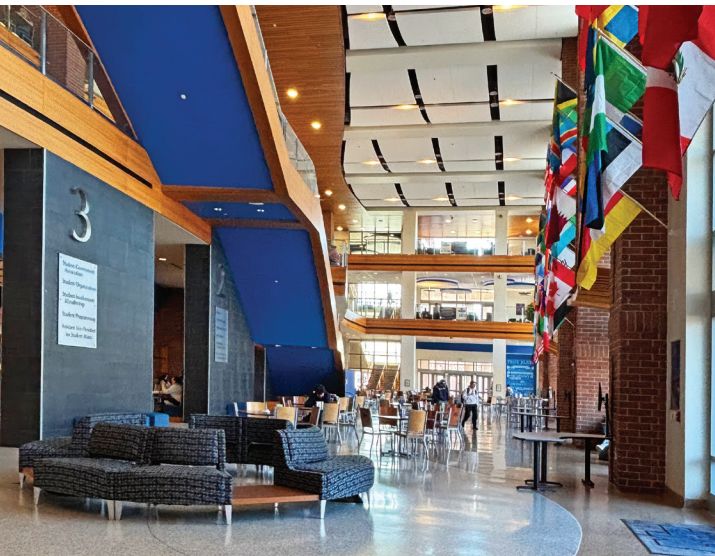


CASE STUDY

## Extron AV Technology Enhances the Esports Experience at MTSU's LEVEL↑Up Arena

**Extron**

Students walk through this door to get their fill of esports action at the LEVEL↑Up Esports Arena.



Student Union interior; LEVEL↑Up Esports Arena is on Level 2.

**“AV is pervasive in Student Union operations. That led Student Union staff to reinforce their AV technical knowledge. They take Extron training classes and meet with Extron Sales system engineers to get technical advice. In the LEVEL↑Up esports arena, Student Union staff performed AV hardware installation, bringing in the MTSU Classroom Technology specialists to perform final configuration and control system programming.”**

James Copeland  
Director-Classroom Technology  
Middle Tennessee State University

Middle Tennessee State University (MTSU), with an enrollment of more than 20,000 students and more than 300 majors and concentrations, is the largest locally governed university in Tennessee and the top producer of graduates for the Greater Nashville economy. It is recognized for its degree programs in music and music recording and is one of only a half dozen universities in the U.S. with a degree program in concrete industry management.

MTSU’s IT-AV technical support staff has long relied on Extron AV systems in hundreds of classrooms, conference rooms, and event spaces across their campus. In fact, their deep knowledge of Extron hardware and software led them to develop an imaginative TouchLink® Pro touchpanel [self-help user interface](#) that markedly reduced Helpdesk user assistance calls. They’ve helped other schools reap similar time and money saving benefits by freely sharing their user interface design with AV/IT peers through symposia and other channels. It’s not surprising that MTSU’s AV team once again turned to Extron when they were tasked to create the university’s first purpose-built esports arena at the Student Union.

## CHALLENGES

Dubbed the LEVEL↑Up Arena, the esports venue on the second floor of the [Student Union Building](#) is a first-class operation. It boasts 24 gaming PC stations for players, a coaching station, a two-person shoutcasting booth, a bevy of point-of-view (POV) cameras, large displays, web streaming capability, and a powerful sound system. Tying it all together is a flexible, scalable AV switching and distribution solution based on

Dual 86" displays on the wall behind players provide views of the game action to the audience.



NAV® Pro AV over IP, augmented by Extron streaming media processing, audio DSP processing, and audio amplification. It's all controlled by an IPCP Pro xi control processor reacting to user commands entered through an intuitive GUI on 10" TouchLink® Pro touchpanels.

## DESIGN SOLUTION

### NAV Pro AV over IP is a Standout Player in Esports Spaces

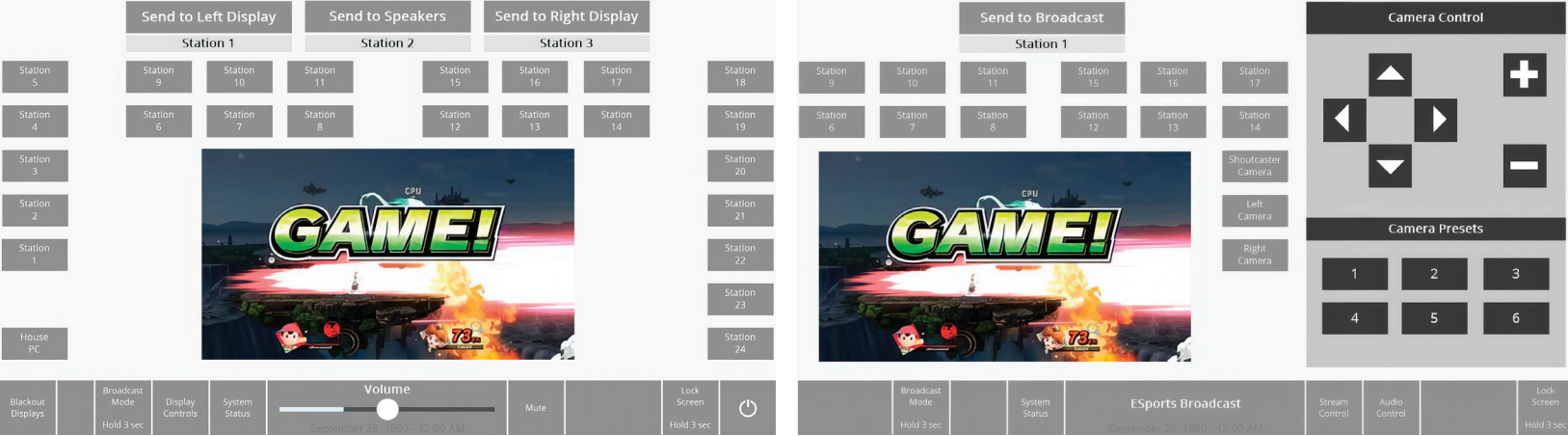
More and more esports venues are built on the NAV Pro AV over IP infrastructure platform. Why? Because NAV provides visually lossless distribution of 4K video over 1 Gbps Ethernet. It's easily scalable to accommodate as many AV sources and destinations as needed, present and future. And – extremely important to competitive esports – NAV provides near zero latency that ensures players reacting with lightning-fast reflexes maintain their competitive edge.

All of the AV content sources in the room connect to the AV over IP network through a total of 38 NAV E 121 compact encoders. That includes HDMI gaming display content coming from the 24 gaming PCs, HDMI POV content showing player and shoutcaster reactions captured by 13 PTZ cameras, and HDMI content from the coaching PC.

NAV SD 101 scaling decoders connect displays and other output devices to the AV over IP network. A pair of 86" 4K displays mounted on the front wall each receive HDMI content via their associated decoders. Decoders also feed HDMI to a display in the shoutcaster booth and to a pair of desktop coaching monitors. The coaching monitors can show content directly



Lowboy AV rack houses core AV system equipment.



Shown here are LEVELUp Esports Arena TouchLink Pro touchpanel operator interface GUIs for controlling in-room AV content distribution and for controlling AV content streaming broadcast distribution.

**“Extron AV technology is essential to creating the exciting and engaging vibe you feel when you enter the LEVELUp esports facility in the Student Union building. Extron assisted us from initial design to the final product.”**

Sadie Katie Hampton  
Assistant Director - University Center, MT Unions  
Middle Tennessee State University

from the coaching PC or from the AV over IP network, selected by an Extron HDMI switcher. Two decoders supply HDMI to a SMP 352 dual recording streaming media processor that can stream two channels simultaneously to the Internet for league competitions with other schools, while also recording both channels for later viewing.

### Great Sound Pumps Up the Excitement!

A DMP 128 Plus audio DSP processor with acoustic echo cancellation optimizes all audio sources in the arena. The coaching mic connects directly to a mic/line input of the DMP 128 Plus. All other audio sources are delivered via the AV over IP network to the DMP’s Dante/AES67 port. This includes gameplay sound from the player and coach PCs and play-by-play commentary from two shoutcasters who speak into headphone boom mics that feed into the AV over IP network via an AXI 44 AT Dante audio interface unit.

The DMP 128 Plus drives the room’s speakers through a 200 watt XPA® amplifier and also feeds the conditioned audio into the SMP 352 for streaming and recording.

### AV System Control

Users control the AV system from either the coaching station or the shoutcaster station. A 10" tabletop TouchLink Pro touchpanel is located at both stations. Users select AV sources and destinations, adjust sound volume, aim cameras, and perform other AV system actions through buttons and sliders on the touchpanel screen. The selected actions are implemented by an IPCP Pro xi control processor. The custom operator interface and AV system control rules were created by the MTSU AV system design team using Global Configurator® Plus and GUI Designer. Rounding out the AV control system is a NAVigator AV over IP system manager that provides a user-friendly browser-based interface for performing configuration and maintenance of the NAV Pro AV over IP network.

MTSU "Egoists" League of Legends Wings team brought home the Esports Club's first ever trophy, going 8-2 overall to win the bronze in NECC playoffs.



**“Our student staff that runs the LEVEL↑Up esports venue finds the Extron AV system super easy to use. They switch displays from player to player throughout the day, keeping the space feeling energized and exciting. When our college leadership came through for the first time, they were impressed; their eyes got wide, and jaws dropped. Student reaction is overwhelmingly positive.”**

Justin Reed  
Director-Event Coordination, MT Unions  
Middle Tennessee State University

## RESULTS

MTSU Esports is open to students and faculty, gamers and geeks alike, offering recreational and competitive programs. Popular games include League of Legends, Overwatch, Valorant, Rocket League, and Rainbow Six. Student organizations like the esports club provide students with opportunities to gain relevant experience in the fields they are working toward in their academic endeavors. MTSU offers courses and undergraduate degrees in esports-related fields such as [Video Game Design](#), [Animation](#), [Media and Entertainment](#), [Sports Journalism](#), [Leisure and Sport Management](#), and more. The school's proximity to Nashville's historic and vibrant music and media scene affords students great opportunities for internships and on-the-job experience that leads to fulfilling careers. Extron is proud of its longtime role as a provider of AV technology to MTSU, and glad to be a part of the LEVEL↑Up Esports Arena success story.

## MTSU ESPORTS VIDEO LINKS

[Click Here](#) to watch a report about "Creating an Esports Culture at MTSU," aired on MTSU's "Out of the Blue" video blog news program.

[Click Here](#) to watch an interview with MTSU's Richard Lewis, Media Arts Associate Professor and faculty advisor to the MTSU Esports Club, where he discusses the club's development, opportunities, and the importance of Esports within the academic environment.

**“For some time, MTSU’s esports enthusiasts competed from a computer lab in the Business and Aerospace building. When we were contemplating building a dedicated esports venue, we reached out to Extron, because they have a lot of experience in that area. They showed us examples at other schools and proposed a NAV Pro AV over IP design that was really flexible.”**

James Copeland  
Director-Classroom Technology  
Middle Tennessee State University

[Click Here](#) to listen to MTSU student shoutcasters deliver play-by-play commentary while watching the closing seconds of MTSU’s win over University of North Carolina Wilmington to become NECC Division 4-East Rocket League grand champions.

[Click Here](#) to check-out MTSU esports club’s real time and archived livestreams to Twitch.

[Click Here](#) for the MTSU esports club YouTube channel.

Photos and videos courtesy of Middle Tennessee State University

## FEATURED EXTRON PRODUCTS

Model	Description
NAV E 121	1G Pro AV over IP Compact Encoder - HDMI
NAV SD 101	1G Pro AV over IP Scaling Decoder - HDMI
NAVigator	Pro AV over IP System Manager
NAVigator LinkLicense	NAVigator 48 Endpoints Upgrade
SW2 HD 4K PLUS	4K/60 HDMI Switcher with Ethernet Monitoring and Control
SMP 352	Dual Recording H.264 Streaming Media Processor
DMP 128 Plus C AT	12x8 ProDSP Audio DSP Processor with AEC and Dante
AXI 44 AT	4 Input, 4 Output Dante Audio Interface
XPA 2001	Mono 70/100 V Amplifier - 200 Watts
IPCP Pro 255Q xi	IPCP Pro xi Quad Core Control Processor
TLP Pro 1025T	10" Tabletop TouchLink Pro Touchpanel
Global Configurator Plus and Global Configurator Professional	Powerful Configuration Software for AV Control Systems
GUI Designer	Free Design Software for User Interfaces

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