

Christian County Office Infill

Project Overview

This project provides a fully integrated audio-visual system designed to support high-quality presentation, distributed video, and clear speech reinforcement. The system will enable flexible content sharing from multiple input locations, consistent audio coverage, and intuitive user control throughout the space.

Video Display System

Four (4) 85-inch commercial-grade displays by Samsung will be installed to provide clear and visible presentation content throughout the room. Displays will be mounted at designated locations as indicated on project drawings and configured to present shared content, presentations, and other video sources.

Each display will be connected to a network-based AV distribution system, allowing any connected source to be routed to the displays.

Video Distribution System

The video system will utilize Crestron NVX AV-over-IP technology for flexible and scalable content distribution.

System components include:

- Two (2) NVX HDMI wall plate encoders for local source input at designated locations
- Four (4) NVX D20 decoders, one assigned to each display

This configuration allows users to connect HDMI sources (laptops, presentation devices, etc.) from two separate locations within the room and route content to either rooms displays or both. The AV-over-IP architecture supports high-resolution, low-latency video distribution and allows for future system expansion.

Audio System

The audio system will be designed to deliver clear, even, and intelligible sound throughout the space.

Key components include:

- Sonance professional flush-mounted ceiling speakers for uniform audio coverage
- A Blaze Audio Dante-enabled amplifier for efficient network-based audio distribution and speaker amplification
- A Q-SYS Core Nano DSP for audio processing, routing, and system control

The DSP will be configured to provide proper gain structure, equalization, dynamics processing, and feedback suppression to ensure optimal performance for both speech and program audio.

Microphone System

The system will include two (2) wireless microphone systems from Sennheiser to support presenters and participants.

- Microphones will be integrated into the DSP for mixing and processing
 - System will be configured for stable RF performance and minimal interference
 - Final microphone type (handheld or lavalier) will be coordinated with the client
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Control System

Two (2) wall-mounted Crestron MPC4 controllers will be installed at convenient locations within the room to provide intuitive system control.

Control functionality will include:

- Display power on/off (global or zoned as required)
- Source selection between the two HDMI input locations
- Volume control for program and microphone audio
- System mute

The control interface will be custom programmed for ease of use, ensuring consistent operation from either control location.

System Integration & Programming

The AV integrator will provide complete system configuration and programming, including:

- NVX encoder/decoder setup and video routing configuration
- DSP programming within the Q-SYS Core Nano
- Dante audio network configuration between DSP and amplifier
- Amplifier setup and speaker tuning
- Control system programming for both MPC4 controllers
- Coordination with the owner's IT/network team for proper VLAN and bandwidth requirements (if required)

Installation & Commissioning

The scope includes full installation and system commissioning:

- Installation of all equipment, cabling, and terminations
- Mounting of displays, speakers, and wall controllers
- System testing and verification of all signal paths
- Audio system tuning and optimization
- Final commissioning to ensure complete system functionality

Training & Documentation

Upon project completion, the integrator will provide:

- On-site user training covering system operation
- Basic troubleshooting procedures
- As-built documentation, including system diagrams and configuration summary

Summary

This system delivers a scalable, network-based AV solution that supports dual input locations, multi-display video distribution, high-quality audio reinforcement, and simple user control from multiple points in the room. The integration of Crestron NVX, Q-SYS DSP, and Dante-enabled amplification ensures a reliable, flexible, and future-ready platform.

List of Equipment

QTY	BRAND / MODEL	DESCRIPTION
2	Crestron / DM-NVX-E20-2G-W-T	DM NVX® 4K60 4:2:0 Network AV Encoder, Wall Plate, White
4	Crestron / DM-NVX-D20	DM NVX® 4K60 4:2:0 Network AV Decoder
2	Crestron / MPC4-102-B	4-Series® Media Presentation Controller 102
1	Q SYS / CORENANO	Q-SYS network I/O processor
6	Sonance / PS-C63RT	6" Professional Series In-Ceiling Loudspeaker
1	Sonance / PZC504D	POWERZONE CONNECT 504D DANTE
1	Sonance / MCH-888-001	RACK MOUNT KIT FOR POWERZONE SERIES - SINGLE OR DOUBLE RACK
1	Sennheiser / EW-DX-835-S-SET (R1-9)	Wireless microphone system with dynamic cardioid microphone
1	Netgear / GSM4230P-100NAS	24x1G PoE+ 300W 2x1G and 4xSFP Managed Switch
1	Wirepath / NST-CAT6-1000-BLK	Cat 6 550MHz Unshielded Wire - 1000 ft. Nest in Box (Black)
1	Wirepath / NST-162-500-WH	16-Gauge 2-Conductor Speaker Wire - 500 ft. Nest in Box (White)
4	Samsung / UN85U8000FFXZA	Samsung Crystal UN85U8000FF 85"" Smart LED-LCD TV - 4K UHD TV
4	Strong / SM-T-XL	Strong™ Mount Tilt - 47-90" Displays
1	Furman / M-8LX	15A Merit Series Power Conditioner w/Lights
1	Strong / SR-FS-SYSTEM-DC-15U	Strong® FS Series Rack System with DC Fans - 24" Depth 15U
1	Strong / SR-DRAWER-3U	Strong™ Lockable Rack Drawer 3U
1	Strong / SR-DRAWER-4U	Strong™ Lockable Rack Drawer 4U
2	Strong / SR-BLANK-1U	Strong™ Rack Blank Panel 1U
4	Arlington / CE1	Arlington™ Reversible Low-Voltage Entrance Plate
1	Arlington / CE2	Arlington™ Reversible Low-Voltage Entrance Plate