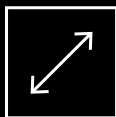


/ Engineered Sound® Wireless Case Study

# State legislature's technology upgrade creates clear audio for hybrid meetings



Scalable Up to 96 Simultaneous  
Usable Channels per Room



All-Day Operation  
On a Full Charge



Automatic DECT-Based  
Frequency Management



Dante Audio  
Output

- **Industry:** Government
- **Location:** New Mexico
- **Client:** State of New Mexico
- **Project:** New Mexico State Legislature
- **Project participants:** Audio-Technica, The Farm AV, AVI-SPL
- **Solution:** [Audio-Technica Engineered Sound® \(ES\) Wireless](#)



## / The New Mexico State Legislature **The Client**

The New Mexico State Legislature had been getting a lot of life out of their legacy technologies. But once the pandemic hit—like so many other government agencies—their communication needs changed. As an existing client, the state asked AVI-SPL to help upgrade room technologies in the legislature to ensure that essential government business could continue.

## / Outdated Audio **The Challenge**

The state legislature was due to upgrade some older technology around the same time that the pandemic spurred a need for new remote communication capabilities. They needed additional video displays, new cameras, and the ability to broadcast, stream, and record for the public. Perhaps most importantly, they needed the ability to fully include remote participants. That required exceptionally clear audio, which meant more microphones and echo cancellation capabilities.

AVI-SPL knew microphone quality was critical to an echo-free audio experience with remote participants, and they had to make audio decisions for different sizes of rooms with varied numbers of participants. From small galleries to large committee rooms, the spaces could accommodate from around 50 to up to 250.

The challenge was to make sure the audio was clear for both in-room and remote participants. Early in the pandemic, a temporary solution was to feed audio into the room in a one-way stream. Remote participants appeared on a mobile monitor, but they were not easy to hear. Audio and visual capabilities were not integrated, and hybrid meetings created echo issues.

“bringing Audio-Technica in to support us, that was amazing”

— Glen Martinez  
AVI-SPL Senior Account  
Manager for New Mexico

## / Over 100 Channels of Audio-Technica ESW **The Solution**

Legislative discussions around making laws and allocating budgets are important to the state and its constituents. There's also not a big visual component to legislative meetings, so the audio is especially crucial. AVI-SPL chose Audio-Technica Engineered Sound® (ES) Wireless to include and engage constituents and the public even when they're not in the building.

The project started with a couple of pilot rooms that didn't need high DECT channel density, so AVI-SPL used another solution. However, as the team developed the project, they knew committee rooms would require numerous wireless microphones and realized they required a solution that would accommodate a high level of audio channel density.



Engineered Sound® Wireless System

The integration team determined that Audio-Technica's ES Wireless solution had the right capabilities. A manufacturer rep at The Farm AV sent a demo system so AVI-SPL could validate their design.

Adam Babb, Southwest Engineering Supervisor at AVI-SPL, said, “They were able to send us equipment—I think they overnighted it. In a couple of days, we were able to take that up to the job site where we were already working on other spaces and conduct the wireless survey, which was really important to the success of the project.”

The partnership with The Farm AV was integral in helping to complete the remaining 11 rooms – Over 100 Channels of Wireless – using the Audio-Technica ES Wireless solution. Glen Martinez, AVI-SPL Senior Account Manager for New Mexico, explained, “Having people like The Farm AV, specifically like Dana Sanders Nickel [Regional Territory Manager for The Farm AV], to help us push forward and get all these things lined up and bringing Audio-Technica in to support us, that was amazing. So hats off to Dana for helping us get it all set up.”



## / New Mexico State Legislature The Installations

The Engineered Sound Wireless System installation included the following components per room:

### System Receivers

ESW-R4180DAN 8-Channel Receiver  
Quantity: 2

### Table Microphones

ESW-T4107 Desk Stand Transmitters incorporating  
ES925 MicroLine®  
Quantity: 6

### Handheld Microphones

ESW-T4102 Handheld Transmitters with C510 Cardioid  
Dynamic Capsules  
Quantity: 2

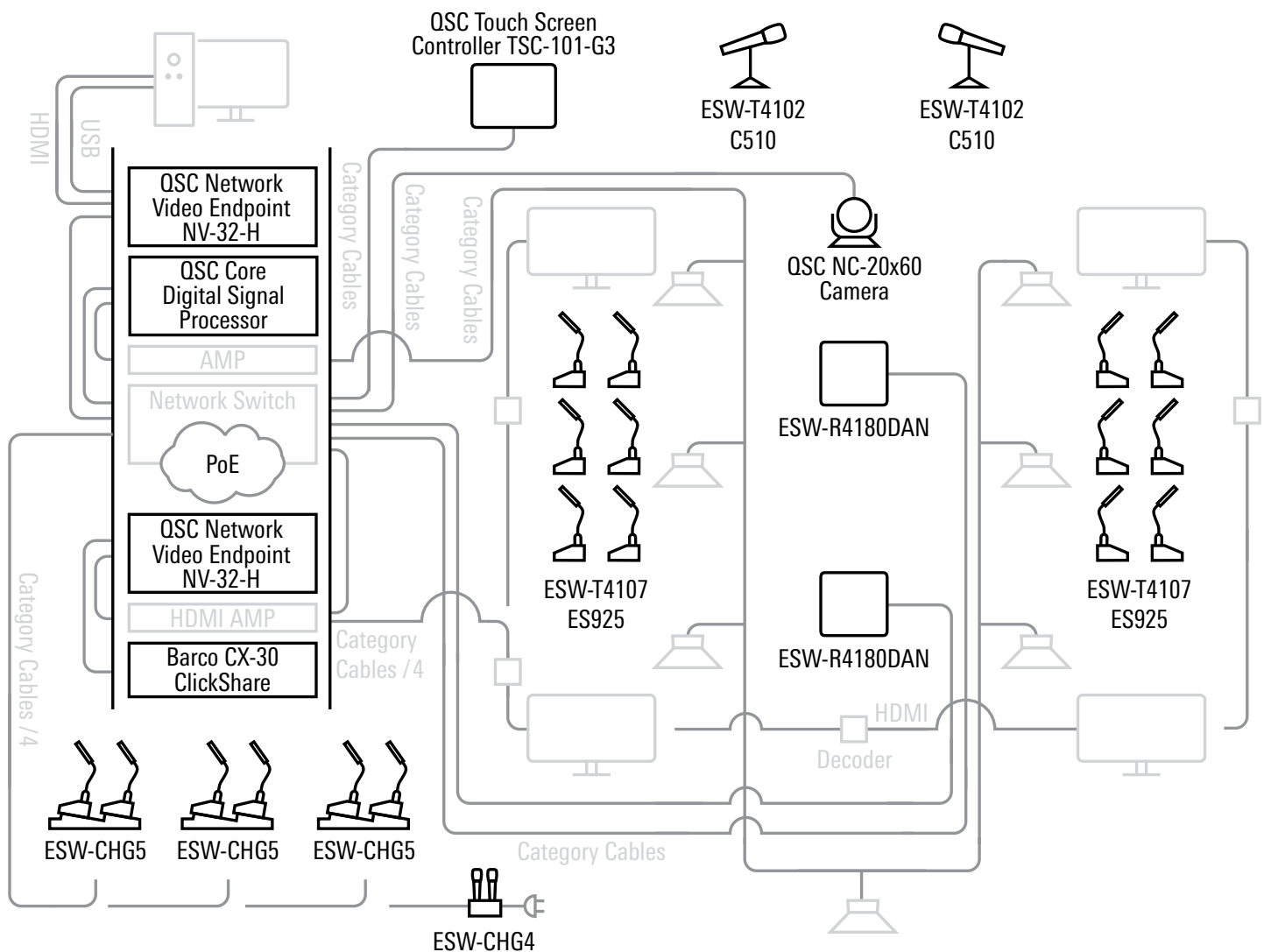
### Transmitter Charging Stations

ESW-CHG4 Two-bay Charger for Handheld Transmitters  
Quantity: 1

ESW-CHG5 Four-bay Charging Station for desk stand transmitters  
Quantity: 3

### Other System Components

QSC TSC-101-G3 Touchscreen Controller  
QSC NV-32-H NetworkVideo Endpoint(x2)  
QSC Core Digital Signal Processor  
QSC NC-20x60 Camera  
Netgear GSM4230 PoE+ Switch  
Barco CX-30 ClickShare







## / A DECT Wireless System The Technologies

Although Audio-Technica's ES Wireless was fairly new to the market, AVI-SPL had used it in a few smaller applications but not at this scale. AVI-SPL's teams were familiar with the user interfaces and how the solution and high-density channel settings worked.



With up to 96 simultaneous channels, Audio-Technica's ES Wireless supports high-density environments. The scalable system simplifies wireless microphone use with features like automatic frequency coordination and best-in-class battery life.



## / Remote Meetings and Clear Audio The Impact

While the technologies haven't yet been used during a full legislative session, the initial results are positive. The room's new solution is scalable and easy to use, but most importantly, it provides clear audio for meeting participants.

Additionally, legislative workers have access to more spaces for hybrid meetings. Before the upgrade, users needed to schedule rooms around the availability of the technology. Now, with remote functionality in all rooms, they can have more meetings that run more efficiently.



The technologies and industry partnerships helped make the project a success. Jessica Maestas, AVI-SPL Project Manager, said, "Being able to get the equipment as fast as we did was key to some of the small successes throughout a project like this with the customer. That really allowed us to have positive feedback from them from the get-go."

"Audio-Technica really just came through for us and helped us meet those timelines and expectations for the customer," Jessica added. "So I would say it's a win."

"Audio-Technica really just  
came through for us."

— Jacob Struble  
CCPs main contact at Sight  
and Sound and oversaw the Project



/ ESW-R4180DAN

## 8-Channel Receiver



/ ESW-T4106

## Desk Stand Transmitter



/ ESW-T4107

## Desk Stand Transmitter



/ Desk Stand Transmitter + ES925 Gooseneck + Elemen

## Available Desk Stand Configurations





/ ESW-T4101

## Body-Pack Transmitter



/ ESW-T4102/C510

## Handheld Transmitter



/ ESW-CHG4

## Two-Bay Body-Pack and Handheld Charging Station



/ ESW-CHG5

## Four-Bay Desk Stand and Boundary Charging Station

