"NETGEAR equipment gives the church a solid, flexible and future-proof foundation for its AV needs both now and for years to come."

Chuck Garrett, Media Ministry Leader for the Church

**Company:**
Beltline Church of Christ

**Industry:**
Religious Organization

**Website:**
beltlinechurchofchrist.org

**Location:**
Alabama, USA

# Connecting a congregation - with an AV over IP backbone using NETGEAR M4300.

## BACKGROUND

In December 2018, at one of its busiest times of the year, the Beltline Church of Christ opened its doors to its congregation in its usual welcoming way, but this time there was a difference: this was the first time many of the church's members had seen its new, state-of-the-art audio-visual facilities. These ensure that every member of the congregation gets the best possible sound and visual quality, while the church has an AV communications system that is highly flexible and easy to use.
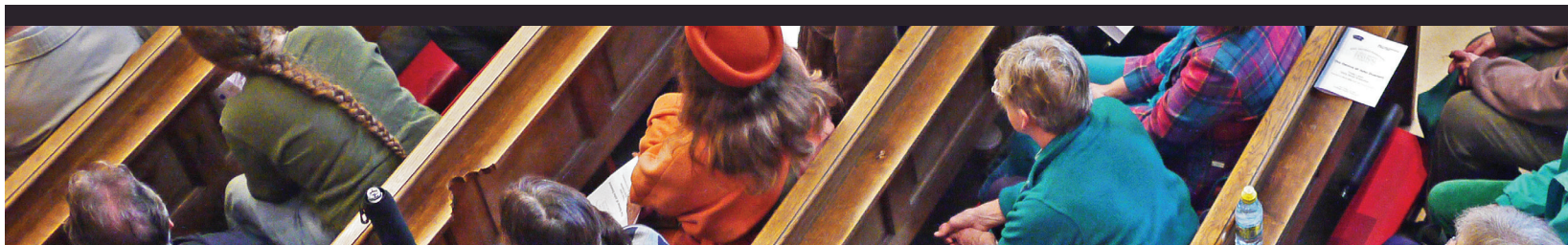
These advanced facilities may sound like a far cry from the church's early days in the last century, when two local women realized the need for a Sunday school for the children of Decatur and the surrounding area in Alabama; however, the new AV system continues that spirit, because it helps the church to maintain an efficient and inclusive community experience, everywhere. Importantly, it is easy to configure and manage, whether by the church's media team in the AV Booth or by the teachers in the new classrooms.

## THE CHALLENGE

The story starts with the church's decision in 2015 to remodel the 600+ person-capacity sanctuary and enhance its video projection solution. In 2017, an expansion plan was launched with the addition of a large overflow auditorium, separate classrooms, plus enhancements to the existing sanctuary's camera system. The sanctuary has two projection screens. The Overflow Room has three displays (one 90" and two 70"). There are currently six classrooms with displays (five with 70" and one with 60"). Additionally, four digital signage systems were added in the church's entrance area and hallways.

Connecting all these elements was important to ensure that members of the congregation have a great AV experience wherever they are; whether in the main auditorium, the overflow room, the classrooms, or the lobby area. In addition, the new AV system connecting all the new facilities had to be easy to manage without needing technical expertise and to be 100% reliable, adaptable and able to grow in the future, if necessary.

CASE STUDY:
Beltline Church of Christ

The church consulted with its existing supplier ENG AV, a highly expert local firm specializing in complete, end-to-end AV, network and surveillance solutions. ENG AV works with all types of organizations and has a strong track record of understanding the specific challenges and needs of houses-of-worship, educational, government, and other public-sector buildings.

Says Chuck Garrett, Media Ministry Leader for the church, "We'd already worked with ENG AV twice before. They are a good crew, ready to make modifications and to suggest new and better ways to do things."

## SOLUTION

When consulted on the project, Gary Boackle, the CEO and Founder of ENG AV, could immediately see that an AV-over-IP backbone network was the best solution for the Church. This solution gives the Church the flexibility it needs to create a single, seamless experience, with highly reliable AV quality throughout the site. "An AV-over-IP system means the team can route whatever they want to wherever they want. Using the custom-programmed touch panels and PC applications, video sources (including PCs, camera, wireless presentation systems, or other devices) can be viewed on any display and heard in any room they choose. Also, AV-over-IP solutions are more flexible to integrate, deploy and build upon. The scalability and reliability of AV-over-IP solutions is why I use them whenever I can."

A critical aspect of the project was making sure that the AV-over-IP network switches provided the professional-quality, performance, speed and reliability that the network backbone would need. Gary explains the reasons for choosing NETGEAR's M4300 series: "NETGEAR network switches were one of the recommended solutions by our AV-over-IP equipment supplier. My previous experience with NETGEAR and its solid reputation gave me the confidence to NETGEAR over the rest of the market. NETGEAR's switches were the best performance-price solutions, with solid reliability, flexibility and backbone speed required for this system."

Apart from robustness, the NETGEAR switches also had the features for which Gary was looking. "The AV-over-IP solution has a quick switching time from one source to another and was one of the very few that had wall plates for VGA and HDMI connections. Additionally, this solution supported high bandwidth 4K high definition formats. The NETGEAR switches support these features as well as the scalability and backplane speed needed for the future growth of the church."

The project started with one NETGEAR M4300 to support the addition of the new AV-over-IP components in the sanctuary and the overflow room. Six additional classrooms were added towards the end of 2018, each with a display, a wireless presentation system, and a VGA/HDMI wall plate. These network-based components required additional AV-over-IP encoders and decoders, which resulted in the need for an additional M4300. Says Gary Boackle, "Even though there are now multiple NETGEAR switches located in the church, they all act as one, single, solid IP backbone through the stacking feature built into the M4300 switches."

## RESULT

Installation of the AV-over-IP backbone started in Fall 2018, shortly after new data cabling was completed, and the December deadline for having most of the AV system in place was met as planned. Says Gary Boackle, "The implementation of the NETGEAR switches went smoothly from our perspective. NETGEAR's technical support was knowledgeable and helpful in confirming the switches were configured correctly for this application. Just a couple of changes were made to the M4300's configuration; the jumbo frame size to support the AV-over-IP solution and the enabling of the multiple switch stacking feature. Both of these changes were very straightforward. It's an example of how flexible the M4300 platform is, from adding additional switches to the backbone, through to the simple configuration changes required to support the AV-over-IP solution."

Adds Chuck Garrett, "The system is very configurable. Teachers love it. They find the system is simple to set up and use, and a lot of that is to do with the communications backbone part of the system. Also, from the central console in the AV Booth, I can easily manage and control the system, with features such as sending out messages to be displayed on different screens throughout the site, or centrally switching everything on or off at the beginning or end of the day, rather than having to go to each room."

As far as ENG AV is concerned, the church's new AV solution is a project of which it is proud and NETGEAR is delighted to have played a role in that achievement. "NETGEAR is a solid manufacturer with solid equipment. It is important that our customer can rely on the network backbone and I know that we can rely on NETGEAR. We are confident that the system we have installed, using NETGEAR equipment, gives the church a solid, flexible and future-proof foundation for its AV needs both now and for years to come."

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