Connect Your Sanctuary and Church Building to the Internet

A direct connection to your router is best

If you are going to Live Stream your worship service you will need a strong reliable signal to the internet. We highly recommend that you find a way to feed a direct line with Ethernet cable from your internet router into your sanctuary. The Ethernet cable will be connected to your streaming computer or encoder device. (note: some mixers stream directly to the internet without the use of a computer.) This type of a connection will give you your most reliable connection to the internet with the fastest speeds, making it the best for a giving you a consistent, reliable live stream. No connection is perfect, however, and you may still lose connection to your live streaming software. *(Note: Some software solutions, including YouTube may require that you start your live stream over again. If you have used an automatic streaming key, you will then have to generate a new key and your viewers will not be able to find your live stream. Therefor it is recommended that you not give people a direct URL to find your specific stream. Instead direct them to your home YouTube channel where they can find any new live stream.)*

We Need Wi-Fi in our sanctuary

While a direct connection is best for live streaming, many congregations want Wi-Fi available in their sanctuaries. Keep in mind that if you connect your streaming computer to Wi-Fi, it is more likely to drop your live stream, and if you have a number of devices actively connected, your signal strength could suffer. The most likely scenario however, is that you are connected to Wi-Fi trying to live stream and many others our connected to the Wi-Fi at the same time but not actively using it. In this case your stream may work flawlessly. During worship most people will not be actively using the internet. However, during a meeting many people could be potentially being checking email (not heavy internet usage), downloading (heavy internet usage), or checking the live stream (heavy usage).   If your tech team checks the health of your stream while you are live streaming worship, you will put more strain on your Wi-Fi system. Some routers limit the number of devices that can be connected at one time. A common number is 50 devices at one time. However, Wi-Fi mesh systems will allow you to stream up to 200 devices at one time.

The Best Wi-Fi System ? Mesh Wi-Fi

Some churches may want to hire a professional to install a mesh system and they will have their own recommendations. However, here is a do-it–yourself option.

One of the best Wi-Fi solutions for your sanctuary is the Google - Nest Wife AC2200 Mesh System

$349. (also available with other vendors). This system has 3 components and can replace your router. It will also allow many more add on satellites. The ability to add on satellites will give you the opportunity to spread Wi-Fi throughout your building.

Next best Wi-Fi option - Install an access point (a good option if you are connecting directly to your router and want to add Wi-Fi to the Sanctuary at the same time.

Installing an access point in your sanctuary can give you more flexibility. With this solution, you can connect your streaming device directly to your router and add Wi-Fi for sanctuary users at the same time. This system will require an Access Point such as the NETGEAR Dual Band 802.11ac Wireless Access Point (WAC104) $72.   It will also require a gigabit Ethernet switch such as the TP-Link - TL-SG105 5 Port Gigabit Ethernet Network Switch $16. This system will require you to connect the Network switch directly to your router with Ethernet cable. After that, your connect your access point and your streaming device to the switch with two Ethernet cables. Now you have a direct connection to the internet for your streaming device and a reliable Wi-Fi device available for people in the sanctuary.   In addition, you can add other devices to the internet if need be.

Wi-Fi extenders? The least desirable solution

Wi-Fi extenders can extend a Wi-Fi signal into the sanctuary and work off your Wi-Fi router.   The work best when you can find a sweet spot for placement. If they are too far away from the router, they may not work well. The are easy to install however and just require you to plug them into a wall socket.   It is possible to lose connection with them however.   Here is one such device, NETTEC BOOST $50.

Even Better than extenders *(for those who have a difficult time connecting an Ethernet cable from your router to sanctuary.)*

Another solution that is even better than the extender may not work in every sanctuary. That is because it uses your electrical system to send an internet signal straight from your router. The reason if may not work in every sanctuary is because churches may often have multiple additions to their building. When the church has added rooms, fellowship halls, educational wings etc., they may all have had their own electrical box installed, and those boxes may not be connected to the same box as your router. If your sanctuary electrical system is, however, connected to the same electrical box as your router, you can connect a NETGEAR PowerLINE $85. This system allows you to connect the transmitter to the router by ethernet. The internet signal is then sent to the receiver through the electrical wires. From there an Ethernet cable can connect to your streaming device and wireless access point. The NETGEAR Powerline 1000 Mbps WiFi, 802.11ac, 1 Gigabit Port $146 does the same thing as the Powerline but also adds WiFi capability eliminating the need for a WiFi access point.