



## Cathedral livestreams Sunday Mass

Panasonic AW-HN40 PTZ camera system at Liverpool Metropolitan Cathedral used to live stream.

### Challenge

To live stream Sunday mass to a remote congregation of 5,000+.

### Solution

A solution using two Panasonic AW-HN40 PTZ cameras with optical zoom capability and ND|HX output.

“ The Cathedral finds it an easy solution to work with and they have an audience of more than 5,000 people per week for Sunday Mass. ”

Tim Robinson, Adlib Installation Project Manager.



With the coronavirus pandemic and continued social distancing restricting worshippers attending mass at Liverpool Metropolitan Cathedral, they turned to sound, light and visual solutions provider, Adlib, and Panasonic for an innovative live streaming camera solution.

The largest Catholic cathedral in England, the Metropolitan Cathedral was built in the 1960s and plays an important part in the life of the city of Liverpool and Merseyside.

Adlib has a longstanding relationship with the Cathedral, supplying AV equipment for events held at the venue throughout the year. Following the success of a temporary solution they set up using a Panasonic camcorder in the immediate aftermath of the lockdown, the Cathedral now asked Adlib to recommend a permanent solution. As an Panasonic partner, Adlib is able to provide and install a full range of Panasonic projectors, displays and remote camera solutions on a permanent or rental basis at a moment's notice.

"The Cathedral finds it an easy solution to work with and they have been getting an audience of more than 5,000 people per week for Sunday Mass," explained Tim Robinson, Adlib Installation Project Manager.

After a site visit, Adlib recommended Panasonic AW-HN40 PTZ cameras be permanently installed as a discreet, easy to use and professional quality system. "We took a Panasonic PTZ camera from our hire stock and were able to demonstrate the positions in which the cameras could be installed and the images the congregation would see," said Tim. "Initially, there was some concern that the cameras would be too conspicuous but this demo quickly showed that the cameras were very discreet and their availability in both white and black to suit different parts of the Cathedral made them blend in even better. Ultimately, the Dean and his staff were so taken with the shots we could get from a central position, they asked that the camera be installed in an ideal location that we never would have thought possible."

The optical zoom capability of the cameras was particularly important for the installation. A single Panasonic PTZ camera has the flexibility to be used for a wide shot that shows off the entire Cathedral, or an extreme close up of the Priest or readers, using a selection of pre-set camera movements. The second camera is similarly versatile, being used for wide shots of the Choir, close-ups of the Organist and a variety of shots looking into the Chapel of the Blessed Sacrament.

### **Streamlined installation**

Adlib could have installed the PTZ cameras using SDI or HDBaseT distribution, but recommended native NDI|HX cameras. As the Cathedral does not require extensive production switching, the implementation of an NDI-based workflow means the camera feeds can go straight into Open Broadcaster Software (OBS) for the host stream, and enable basic switching within the platform.

The choice of NDI|HX also provides the Cathedral with the future opportunity for the Organist to monitor proceedings using the cameras, via a free-of-charge NDI Viewer app, rather than the previous solution comprising a small mirror. This can be achieved without the requirement for a matrix system or additional hardware installed to split the video stream, saving complexity and expense.



### Effective audio

Clear audio for broadcast is achieved by tapping into the Cathedral's existing audio system. A mono mixdown from the Public Address system provides a direct audio signal from all existing microphones within the Cathedral. Adlib then added two DPA 4098 microphones to capture ambient sound from the congregation, together with another stereo pair to pick up the organ and the Choir. These are mixed with the direct feed to provide a stereo output for broadcast.

The stereo output is converted into Dante, which is fed via an ethernet connection into the same network switch as the PTZ cameras with their NDI|HX ethernet connections. The computer used to host OBS for the live stream also has a Dante Virtual Soundcard installed, meaning that only a single network cable is required to the computer from the network switch.

### Single-cable operation

The single-cable operation means that video, audio, control and power can all be provided through the Power over Ethernet (PoE+) feature which makes installation of the cameras significantly easier.

"Given the prominent position of the main camera, it was essential that the installation is as discreet as possible. Running multiple cables in large trunking would have been out of the question. The fact that the camera has only one cable going to it means that the installation is incredibly neat." said Tim.

There is also flexibility. With the networked system, it is relatively straightforward for the control position to be moved as required. The installed cameras can also be used by visiting productions as part of a larger, scaled up system using an NDI-based workflow.

The new system has been so successful that the Cathedral now plans to live stream more services to its socially distanced congregation.

Katie Lucas, the Cathedral's Event Manager, concluded: "The system is so easy to use. We're not technically-minded, however we managed to stream our first Mass all by ourselves, with a member of the Adlib team sitting next to us, just in case!"