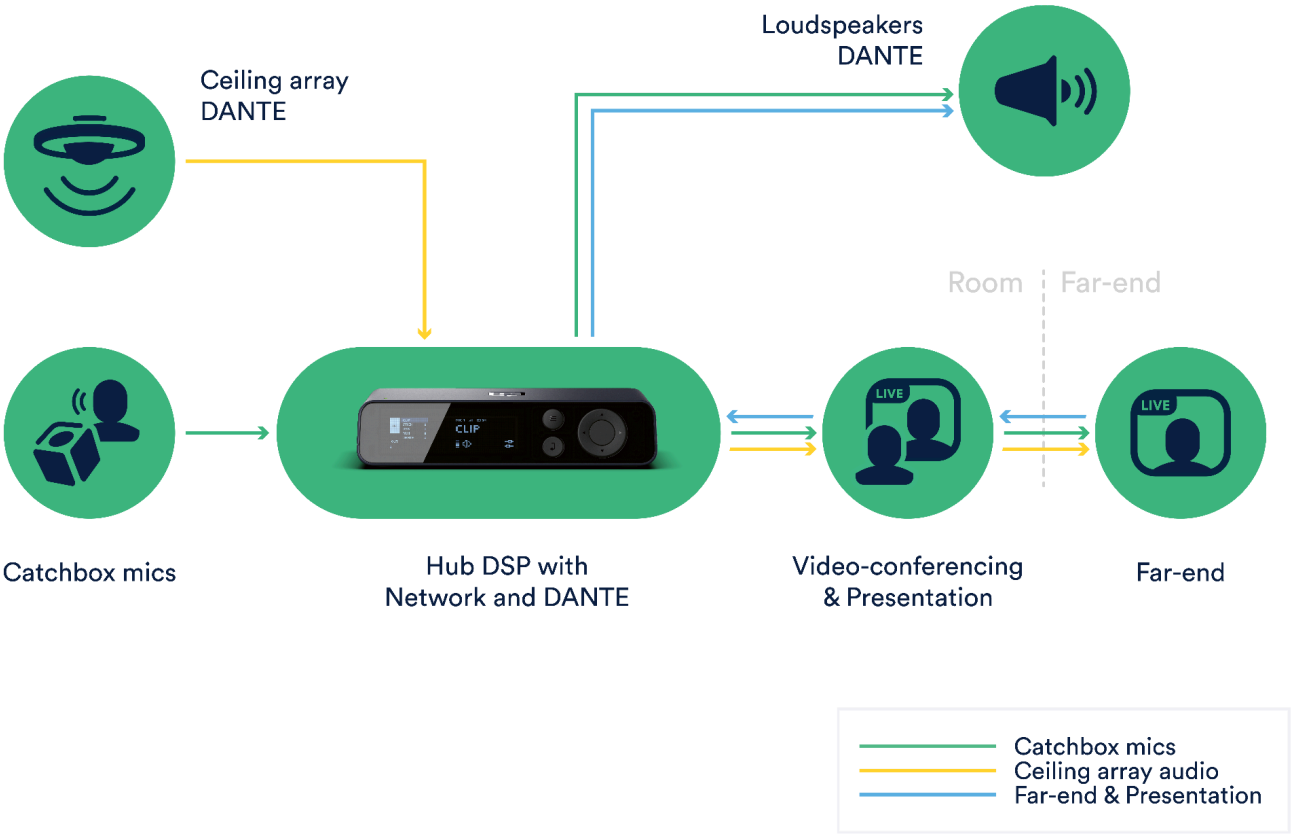
Technical Setup Scenario

Catchbox Plus for video-conferencing with ceiling microphone and loudspeakers over DANTE

What will you get?

- All audio flows mixed and managed from Catchbox Hub DSP
- Catchbox mic audio and far-end audio amplified in the room
- Catchbox mic audio and ceiling array audio automixed and sent to far-end
- Ceiling array and loudspeaker audio transport over DANTE



What will you need?

- Catchbox Plus system with Networking Module
- DANTE audio network infrastructure
- Video-conferencing computer (USB Audio connection to Hub DSP)
- Ceiling array and loudspeakers (DANTE connection to Hub DSP)

Step-by-step instructions

1. **Ensure all Catchbox mics are paired with the Hub.**

   1.1. In most cases, the mics are pre-paired before shipping. However, if pairing is required, follow the instructions in this Knowledge Base article.

2. **Connect the cables**

   2.1. USB - connect Catchbox Hub DSP to your video-conferencing computer using the included USB-C cable. It'll provide power to the Hub DSP and send two-way audio to the computer.

   2.2. Network cable - connect Catchbox Hub DSP's network port to your DANTE network. If PoE is enabled on your network switch, it is automatically set as a primary power source in Catchbox Hub.

3. **Configure your Catchbox Hub DSP**

   3.1. Set Hub DSP to operate in "Speakerphone mode". It'll set USB audio to be recognized as both "Microphone" and "Loudspeaker" on the video-conferencing computer.

   GLOBAL SETTINGS → SYSTEM → USB DEVICE MODE →SPEAKERPHONE

3.2. Configure DANTE IN 1 port to MICROPHONE MODE

IN → DANTE → DANTE 1 → CHANNEL SETTINGS → MICROPHONE MODE

3.3. Configure audio mix for video-conference on USB OUT

OUT → MIXOUT → USB OUT → CHANNEL SETTINGS → MIX CONFIGURATION →
→ MIC1–4 → ENABLED
→ DANTE IN CH 1 → ENABLED

NB! Disable all other signals.

3.4. Configure audio mix for loudspeakers on MIXOUT 3-PIN

Note: Even MIXOUT 3-PIN output is not used, this configuration step is necessary for Feedback Suppression algorithm to be applied on Dante outputs.

OUT → MIXOUT → 3-PIN → CHANNEL SETTINGS → MIX CONFIGURATION
→ MIC 1–4 → ENABLED
→ USB IN → ENABLED

NB! Disable all other signals.

3.5. Configure audio mix for ceiling array's AEC reference signal on DANTE_OUT 1

OUT → DANTE → CH1 → CHANNEL SETTINGS → MIX CONFIGURATION → USB_IN → ENABLED

NB! Disable all other signals.

3.6. Clone 3-PIN audio mix for Dante-enabled loudspeakers on DANTE_OUT 2 and 3

OUT → DANTE → CH2 → CHANNEL SETTINGS →
→ CHANNEL CLONING → ENABLED
→ CLONING SOURCE → 3PIN LEFT

OUT → DANTE → CH3 → CHANNEL SETTINGS →
→ CHANNEL CLONING → ENABLED,
→ CLONING SOURCE → 3PIN RIGHT

4. Configure your DANTE network

4.1. Access Hub's network settings in

GLOBAL SETTINGS → NETWORK

5. Route signals in your DANTE Controller

5.1. Route Catchbox Transmitter CH1 to the ceiling microphone's input AEC reference channel

5.2. Route the ceiling microphone's Transmitter channel to Catchbox Receiver CH1

5.3. Route Catchbox Transmitter CH2 to your Left loudspeaker

5.4. Route Catchbox Transmitter CH3 to your Right loudspeaker

6. Configure your video-conferencing computer

6.1. In the computer's audio settings select "Catchbox Hub DSP" as a source of "Microphone" and "Loudspeaker" (depending on the OS).

6.2. In the video-conferencing platform's audio settings select "Catchbox Hub DSP" as a source of "Microphone" and "Loudspeaker" (depending on the platform).

Wiring and mix diagram