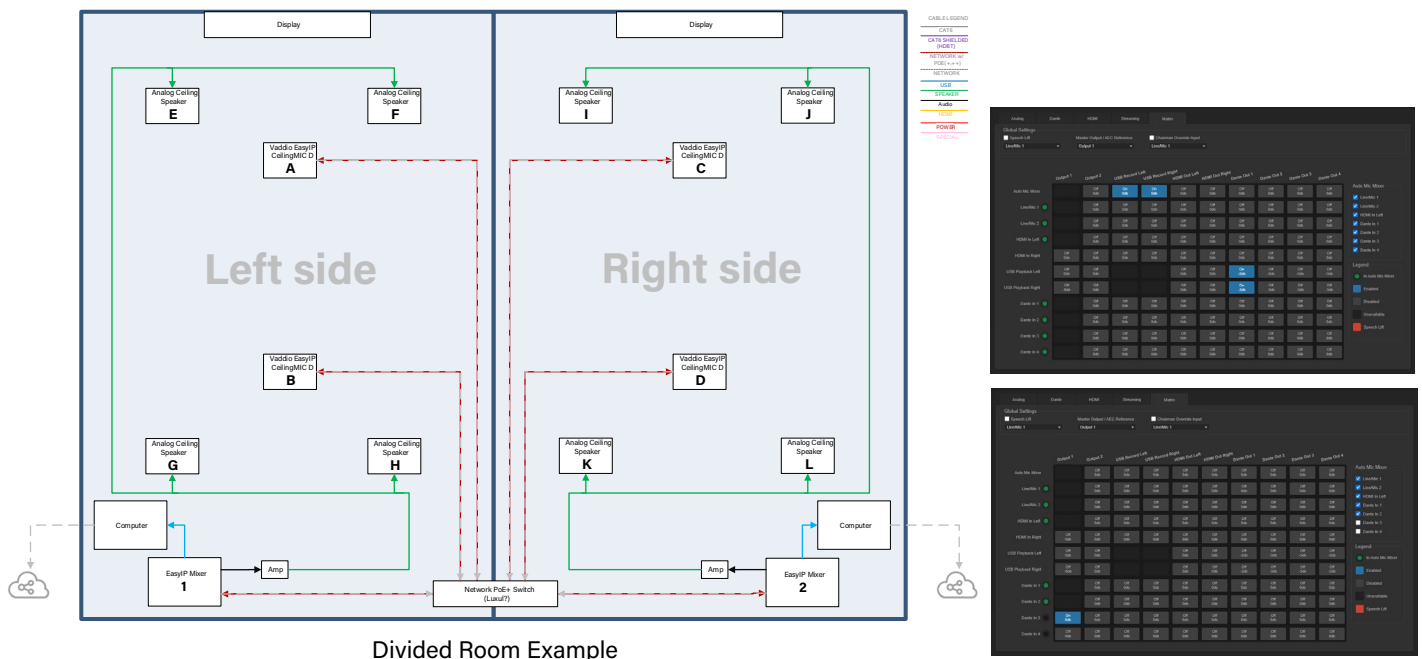


# How to Set Up Dante Networked Audio in Partitioned Classrooms and Multi-Purpose Spaces



The ability to pair and route multiple video and audio sources within the EasyIP product line has allowed AV integrators ultimate flexibility. A common request is to have a divide/combine room configuration with 4 Dante microphones without requiring accessing the Dante Controller program once the system is commissioned and in place.

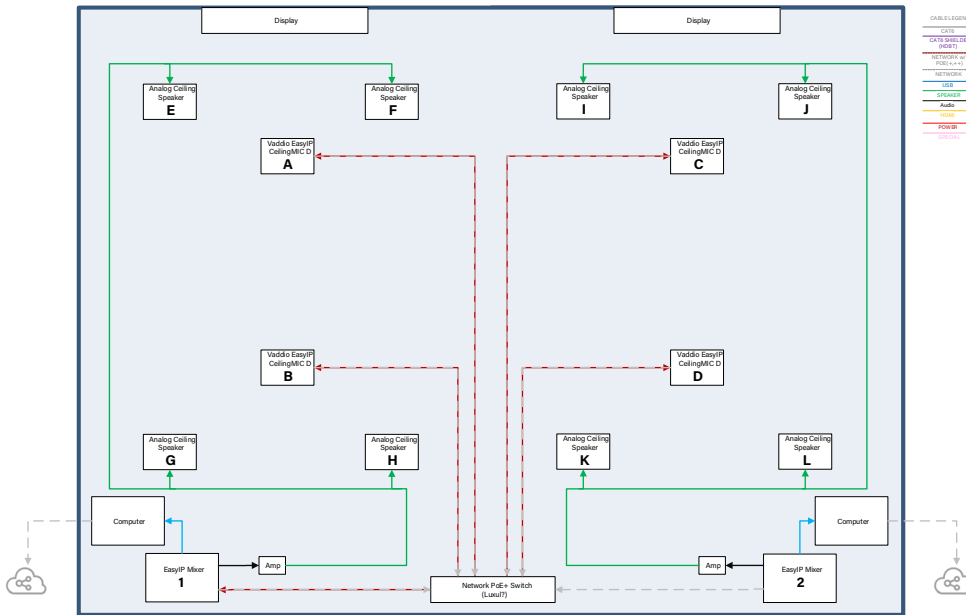
The following diagrams and tips are outlined to assist in designing connections and flows so end users can rely on proper echo-cancellation and seamless videoconferencing experiences.



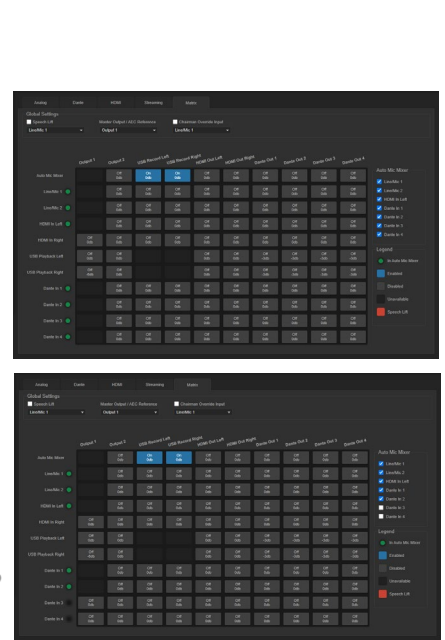
When the room is combined, all four Dante Mics are routed to Mixer 1, far end USB audio is routed to analog output 1 (which travels to the amp, then speakers E, F, G, and H, etc.) and it is also routed to Dante output 1, which is connected on the Dante Controller to Dante input 3 on Mixer 2. Mixer 2 then routes Dante input 3 to its analog output 1 (which goes to its amp, and then speakers I, J, K, and L, etc.). Dante output 1 is also multicast to the microphone's AEC reference. (Routing Mixer 1's conferencing audio to Mixer 2 when the room is combined could also be accomplished with an analog connection, but this uses less cabling).

When the room is divided, as seen in the diagram on the next page, a macro is used on both units to change their audio matrix routing. Mixer 1 mutes Dante inputs 3 and 4 (which are microphones C and D on the other side) and disconnects USB Playback left and right from Dante output 1 in its audio matrix. Mixer 2 mutes Dante input 3 so it no longer gets routed to the amp and speakers on its side of the room. In this configuration both Mixers are locally echo cancelling their individual Dante 1 and 2 inputs.

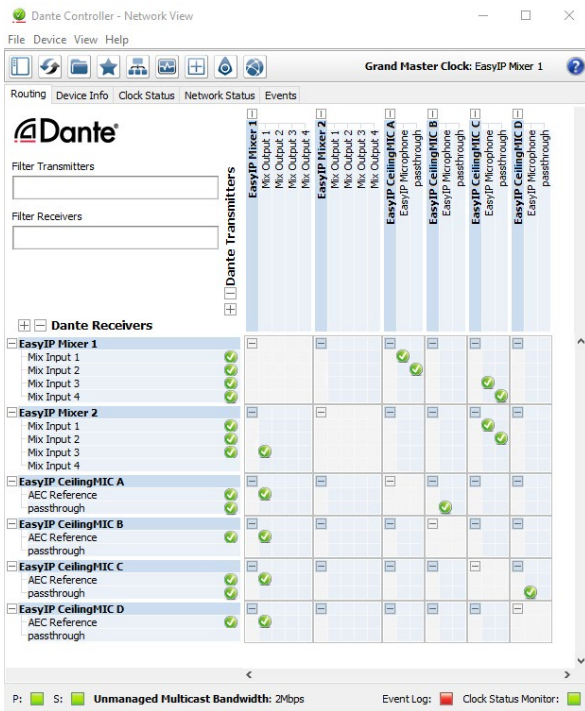
A separate set of macros return the Mixers to their previous states when the room is once again combined.



Combined Room Example



## Important Restrictions for Successful Deployment:



**Example Dante Controller setup in the described scenario.**

When the room is combined, there must be a 'main' mixer that is only used for all 4 microphones, due to the nature of the AEC reference and the number of Dante flows available on the units. Routing all 4 microphones to one mixer consumes all of its Dante input flows, and microphone AEC input only accepts a multicast from one mixer. The only way to reroute the reference from the other mixer to the microphones is with the Dante Controller. Also, a Dante output on this main mixer must be routed to the 4 mics for the AEC reference, so this consumes one of the two Dante output flows on this unit.

The AEC reference multicast out to the mics has to be used when 4 mics are in the space, because the EasyIP Mixer is locally echo cancelling Dante inputs 1 and 2 (so this rule would also apply if there were only 3 mics in the space).

You may also notice that the way the mics are daisy chained together is important, as mics C and D must be connected (D through C's passthrough channel) because that lets Mixer 2 only consume a single Dante input flow for the two mics, allowing for the additional input flow from Mixer 1 so all of the speakers can play the conferencing audio from one unit. If C were passing through A and D through B that would not be possible.

The combinations and designs including the EasyIP Mixer, EasyIP Cameras and EasyIP and Dante audio products are endless. The Applications Engineering team is available to support with design questions. Email: AV.Solutions@legrand.com



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