Paralleling analog audio outputs for redundancy

Most Q-SYS core processors and peripherals in mission-critical applications can easily be set up with redundant backup units so the system continues to function even if the original device fails.

Redundancy with the COL4 card

The COL4 card is a Q-SYS I/O card that has four balanced line-level analog audio outputs, each on a three-pin “Euro-style” connector.

The system may involve analog audio outputs that must switch over if a core processor fails; this can be done easily using two or more COL4 line-level audio output cards. These cards have muting relays on the outputs so the outputs of one can simply be connected in parallel with the corresponding outputs of the redundant one. The COL4 can be installed in the enterprise core processor models and the integrated ones, as well as I/O peripherals like the I/O Frame.

About using Q-SYS Unified core processors

The built-in outputs of the Core 110f processor have no muting relays. Therefore, if any output is connected in parallel with an output of another Core 110f, there is no isolation between the respective output circuits. As a result, the outputs on the dead or unused core processor will load down the active outputs and reduce signal levels by about 6 dB. We do not recommend connecting outputs in parallel because of this loading.

Instead, if you need redundant analog audio outputs you should use COL4 cards installed in two or more I/O Frame units.
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