ARCHITECTS & ENGINEERS SPECIFICATIONS - Q-SYS Core 5200

The System Processor shall be a fully integrated audio, video and control processor intended for use in centralized processing deployment architecture designs. The System Processor shall leverage the Dell R730XL Server Platform utilizing Intel® Xeon® processors running a real-time Linux operating system developed by QSC, LLC. The system shall operate natively on a standard gigabit Ethernet infrastructure available from a broad range of network infrastructure manufacturers, employing DiffServ quality of service, IEEE 1588-2008 (PTPv2) precision time protocol, IP audio and video transport with floating point format data representation for audio. The system shall not require IEEE 802.1AS, IEEE 802.1Qat or IEEE 802.1Qav support on the network infrastructure to function. The overall system latency from analog input to synchronized analog outputs anywhere on the network shall be fixed at 3.167ms. The system shall also be able to achieve an overall system latency of 3.167ms over Layer-3 routed network infrastructure without any additional hardware, software or connection services between subnets.

The system processor shall manage external control interfaces such as Touchscreen Controllers, Paging Stations, Networked Audio I/O Expanders, Network Connected Amplifiers, AV-to-USB Bridging interfaces and IP based PTZ Conference Room Cameras. The System Processor shall include a built-in SSD for Media File storage with a minimum size of 960Gb.

The system processor shall natively offer a minimum network channel capacity of 512 input channels and 512 output channels with each stream being configurable as either native Q-LAN networked audio format or AES67 formatted audio streams. The system processor shall offer up to 256 channels of built-in Acoustic Echo Cancelation that can be configured via software for 100ms, 200ms, 300ms or 400ms Tail Length as well as up to 64 softphone instances using the built-in network interface ports.

The rear panel shall offer Q-Sys Networking: LAN A RJ45 1000 Mbps only, LAN B: RJ45 1000 Mbps only, AUX LAN A: 10/100/1000 Mbps, AUX LAN B: 10/100/1000 Mbps. The system processor shall offer as standard a pair of dual-redundant, hot swappable AC Mains power supply modules. One RJ45 connection for the Dell iDRAC (Dell Remote Access Controller) port for low-level hardware diagnostics.

The system processor shall store a design that shall be comprised of audio, video and control components, wiring, links, text, and graphics on a single or multiple schematic pages. Designs shall include any of the following audio DSP, video, test and measurement components, control components, and layout components: Acoustic Echo Cancellers, Audio Players, Audio Streaming components, Crossfaders, Crossovers, Delay components, Auto Gain control elements, Compressors, Gates, Duckers, Expanders, Ambient Noise Compensators, Limiters, Gain blocks, Graphic Equalizers, Parametric Equalizers, FIR Filters, All-Pass Filters, Band-Pass Filters, Band-Stop Filters, High-Pass Filters, Low-Pass Filters, FIR High-Pass filters, FIR Low-Pass Filters, Dual-Shelf Equalizers, Notch Filters, Meters, Matrix Mixers, Gain-Sharing Automatic Mixers, Gated Automatic Mixers, Signal Routers, Public Address Routers, Room Combiners, Signal Presence Meters, Tone Generators, Tone and Noise Generators, Dual Trace FFT Measurement Modules, Real Time Analyzers, Signal Injectors, Signal Probes, Logic, Value and Position control functions, Lua scripting components, Command Buttons and Triggers, Camera Router, USB Audio Bridge, USB Video Bridge.

The system processor shall be 2RU with an enclosure measuring 3.44” x 17.49” x 26.92” (8.73cm x 44.40 cm x 68.40cm)

The device shall be the QSC Q-Sys Core 5200.