QSC™

Q-SYS CORE 110f

Flex Channel DSP

Features

- 128 x 128 channels of Q-LAN network audio in single channel streams

- Up to 24 configurable analog audio I/O

- 8 mic/line level analog audio inputs

- 8 line level analog audio outputs

- 8 Flex Channel mic/line level analog audio Inputs or Outputs

- Up to 16 assignable and routeable AEC processor instances

- Dual Gigabit Ethernet ports with assignable application resources offering any combination of VoIP, Q-LAN Control, Q-LAN audio or network redundancy

- Up to 16 x 16 channels of digital audio in and out via software definable USB instances advertised to the host operating system

- 16 General Purpose Inputs (GPI) x 16 General Purpose Outputs (GPO)

- Internal Universal Power Supply plus 12 Volt DC External Power Supply input for redundancy or non-mains power supply sources

- Single software platform for system configuration, control and monitoring via Q-SYS Designer software over Ethernet with support for static or Auto/DHCP TCP/IP addressing

- POTS telephone interface via a standard RJ-11 connector

- Supports up to 8 VoIP Softphone instances in addition to the onboard POTS telephone interface

- Fully compatible with all existing and future Q-SYS accessories such as IO-FRAMES, Paging Stations, and Touch Screen Control Surfaces running Q-SYS UCI.

- CE marked, UL listed, and RoHS compliant

- Covered by QSC Systems 3-year warranty

The Q-SYS CORE 110f is the latest addition to the Q-SYS CORE family, providing a solution for small, single room projects up to the largest Enterprise scale deployments. QSC's software based DSP platform Q-SYS, gives the systems integrator and end user a unified software design tool and feature set suitable for projects of any scale. The continuity of the Q-SYS software based DSP platform is unique within the competitor space and allows the Q-SYS CORE 110f to leverage all the features that are available across the entire Q-SYS platform to be used in the following applications; acoustic echo canceling (AEC) and sound reinforcement in small to large meeting or multipurpose rooms, sound reinforcement in performance venues such as house of worship and theater, background music systems, wide area paging in airports, convention centers and hospitals.

The Q-SYS CORE 110f is a multipurpose software based digital audio signal processor with a total of 8 balanced analog microphone / line level audio inputs and 8 balanced analog microphone / line level audio outputs. In addition to the fixed 8 x 8 analog audio I/O, the CORE 110f features a software definable bank of 8 balanced analog audio Input / Output FlexChannels, a unique QSC innovation, where each channel can be independently configured during design or run time as either a microphone / line level input or a microphone / line level output. As such, the CORE 110f offers class leading 24 analog I/O density in one rack space plus additional specialized I/O such as VoIP, POTS, Internal Media Playback / Recording HDD and USB; all included in one chassis SKU.

The Q-SYS CORE 110f supports class leading USB audio Device port connections that enable the processor to appear in the host operating system simultaneously as both a USB Audio and Communications resource. Additional USB Host ports provide connectivity to external USB devices such as USB enabled microphones and future Q-SYS peripheral products. The USB implementation supports up to 16 x 16 digital audio channels in a flexible, design time configuration environment that can advertise as multiple virtual USB device instances to the host operating system concurrently, over a single physical USB connection.

Benefits

- **Class leading I/O:** Q-SYS CORE 110f has 24 Analog I/O + USB, POTS and VoIP simultaneously in a single rack space and one SKU, offering the best cost to I/O ratio in a single chassis product available on the market from any manufacturer.

- **Flex Channels:** Nearly all the flexibility of a card based DSP solution without the cost and inconvenience of multiple SKU's and custom parts ordering.

- **Unified Software Platform:** The integrator or specifier has a single training investment in one software design tool rather than needing to learn several platforms to scale from small to large systems or support different applications.

- **Industry leading hardware design:** Future proof investment in standards based software and computer technology running on Intel processors.

- **Industry first, Software based DSP:** Q-SYS Q-LARITY Suite of Conferencing Technology applications built and owned by QSC from the ground up allowing for continued refinement.

  o Software Based routable AEC; no additional hardware needed
  o SIP Softphones offering multiple instances per Q-SYS CORE; no additional hardware needed
  o Gain Sharing and Gating Automixers

- **True IT Software Integration:** The Core 110f provides more than just networked audio integration and is not just another hardware DSP. Q-SYS is primarily a software platform that offers greater software integration functionality such as native support for LDAP contact server integration, SNMP monitoring, SIP Softphones, and software based routable AEC implementation; it truly is a next generation AV/IT product that is free of the fixed hardware limitations seen in competing products.

	Q-SYS CORE 110f
Input Frequency Response 20Hz to 20kHz @ +21dBu	+0.05dB/-0.5dB
Input THD+N @ 1KHz @ +21 dBu Sensitivity & +21 dBu input @ +21 dBu Sensitivity & +10 dBu input @ +10 dBu Sensitivity & +8 dBu input @ -10 dBu Sensitivity & -10.5 dBu input @ -39 dBu Sensitivity & -39.5 dBu input	< 0.1% < 0.0015% < 0.0007% < 0.0006% < 0.007%
EIN (no weighting, 20Hz to 20kHz)	< -121dB
Input to Input Crosstalk @1kHz	>110dB Typical, 90dB Max
Input Dynamic Range @ +21 dBu Sensitivity @ +10 dBu Sensitivity @ -10 dBu Sensitivity @ -39 dBu Sensitivity	> 109.5dB > 106.4dB > 104.6dB > 104.6dB
Input Common Mode Noise Rejection @ +21 dBu Sensitivity @ +10 dBu Sensitivity @ -10 dBu Sensitivity @ -39 dBu Sensitivity	50.7 56.5 73.2 63.2
Input Impedance (balanced)	5K Ohms Nominal
Input Sensitivity Range (1dB Steps)	-39 dBu min to +21 dBu max
Phantom Power	+48v DC, 10mA per input max
Sampling Rate	48kHz
A/D – D/A Converters	24-bit
Overall Dimensions/Weight	Device Height: 1.75 inches (44 mm) Device Width: 19.0 inches (483 mm)
Output Frequency Response 20Hz to 20kHz @ all settings	+0.2/-0.5 dB
Output THD	0.003%, +10 dBu Max output level
Output Crosstalk @1kHz	>100dB Typical, 90dB max
Output Dynamic Range	>108dB
USB B Bit Depth Number of Channels Sample Rate	Selectable 16-bit, 24-bit up to 16x16 48kHz
Output Impedance (balanced)	220 Ohms
Output Level Range: (1dB Steps)	-39 dBu min to +21 dBu max
Power Consumption	60 watts, typical. 120 watts max
BTU / Heat load:	205 BTU/Hour
Compliance	FCC Part 15B (USA), FCC Part 68 (USA), Industry Canada CS-03 (Canada), CE marked (Europe), UL and C-UL listed (USA & Canada), RCM (Australia), EAC (Eurasian Customs Union) and RoHS Directive (Europe)

Specifications subject to change without notice.

Q-SYS CORE 110f Spec Sheet 06/04/2015

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