

Q-SYS Core 110f

Network + Analog I/O Processor (v2)

KEY FEATURES

- 128 × 128 network audio channels
- 16 × 16 USB audio channels
- 24 channels of analog I/O,
- Including 8 configurable Flex channels
- Supports up to 32 × 32 channels of Software-based Dante (8 × 8 included)
- Supports up to four (4) Q-SYS NM-T1 tabletop microphones
- Multiple instance VoIP lines
- Single POTS telephone line
- 3 year warranty



The Q-SYS™ Core 110f processor provides a solution for small, single room projects up to the largest Enterprise scale deployments. Q-SYS is a cloud-manageable audio, video, and control platform that provides the system integrator and end-user a unified software design tool and feature set suitable for projects of any scale. The continuity of Q-SYS 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: video conference bridging, 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 offers 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 × 8 analog audio I/O, the Core 110f features a software definable bank of 8 balanced analog audio Flex channels, a unique Q-SYS 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 plus additional specialized I/O such as VoIP, POTS, Internal Media Playback/Recording HDD and USB.

The Q-SYS Core 110f supports a class leading USB audio device port connection that enables the processor to appear in a Microsoft Windows or Mac OS host operating system simultaneously as both a USB audio and video device. The USB device port (B type) implementation supports up to 16×16 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. It can also act as a video bridge for Q-SYS conference camera streams. In addition to the USB device port, the Core 110f provides 4 USB Host ports (A type) which enable the Core to host external USB devices.

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:** 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 suite of conferencing technology applications built and owned by Q-SYS 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.

KEY FEATURES

- 128 x 128 channels of Q-LAN™ network audio in single channel streams
- Includes 8 x 8 Software-based Dante channels (licensable up to 32 x 32)
- 24 channels of analog I/O, including 8 configurable Flex channels
- Up to 16 assignable and routeable AEC processor instances
- Supports up to four (4) Q-SYS NM-T1 network tabletop microphones
- Dual Gigabit Ethernet ports with assignable application resources offering any combination of VoIP, Q-LAN Control, Q-LAN audio or network redundancy
- USB AV bridging (16 x 16 audio + Q-SYS camera support)
- 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 4 VoIP Softphone instances in addition to the onboard POTS telephone interface
- CE marked, UL listed, and RoHS compliant
- 3-year warranty



PROCESSING

Processor	Intel 64-bit architecture
Audio processing	32-bit floating point
Q-LAN network audio transport	32-bit floating point

INPUTS

Input Frequency Response 20 Hz to 20 kHz @ +21dBu	+0.05% / -0.5%
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)	< -121 dB
Input to Input Crosstalk @1 kHz	> 110 dB typical, 90 dB max
Input Dynamic Range @ +21 dBu Sensitivity @ +10 dBu Sensitivity @ -10 dBu Sensitivity @ -39 dBu Sensitivity	> 109.5 dB > 106.4 dB > 104.6 dB > 104.6 dB
Input Common Mode Noise Rejection @ +21 dBu Sensitivity @ +10 dBu Sensitivity @ -10 dBu Sensitivity @ -39 dBu Sensitivity	50.7 dB 56.5 dB 73.2 dB 63.2 dB
Input Impedance (balanced)	5k Ω nominal
Input Sensitivity Range (1dB Steps)	-39 dBu min to +21 dBu max
Phantom Power	+48 V DC, 10 mA per input max
Sampling Rate	48 kHz
A/D – D/A Converters	24-bit

OUTPUTS

Output Frequency Response 20 Hz to 20 kHz @ all settings	+0.2 / -0.5 dB
Output THD	0.003%, +10 dBu max output level
Output Crosstalk @1kHz	> 100 dB typical, 90 dB max
Output Dynamic Range	> 108 dB
Output Impedance (balanced)	220 Ω
Output Level Range: (1dB Steps)	-39 dBu min to +21 dBu max

USB INPUTS & OUTPUTS

USB-B	
Bit depth	16 bit
Channel count	Up to 16 x 16
Sample rate	48 kHz

ENVIRONMENTAL & SAFETY

Power consumption	60 W typical, 120 W max
BTU/Heat load	205 BTU/Hour
Operating temperature range	32° - 122° F (0° - 50° C)
Storage temperature range	-4° - 158° F (-20° - 70° C)
Relative humidity	5% to 85% RH, non-condensing
Regulatory	Part 15B (USA), FCC part 68 / TIA-968-B (USA), JATE (Japan), AS/ACIF S002 (Australia), PTC200 (New Zealand), ES203 021 (Europe), ANATEL Resolution 473 (Brazil), NOM-151-SCTI (Mexico), PSTN01 (Taiwan), Industry Canada CS-03 (Canada), CE marked (Europe), UL and C-UL listed (USA & Canada), RCM (Australia), EAC (Eurasian Customs Union) & RoHS Directive (Europe)

PHYSICAL

Product dimensions (L x W x H)	1.75 × 19.0 × 11.12 in (44 × 483 × 282.5 mm)
Product weight	11 lb (5.0 kg)
Shipping carton dimensions (L x W x H)	6.0 × 23 × 14 in (152 × 584 × 365 mm)
Shipping weight	12.4 lb (5.6 kg)