# Q-SYS Core 110f

KEY FEATURES

- 128 x 128 network audio channels
- 16 x 16 USB audio channels
- 24 channels of analog I/O, including 8 configurable Flex channels
- Supports up to 32 x 32 channels of Software-based Dante (8 x 8 included)
- 16 x 16 GPIO logic ports
- Multiple instance VoIP lines
- Single POTS telephone line
- 3 year warranty

works with Google Meet

Certified for Microsoft Teams

## Q-SYS Core 110f

Network + Analog I/O Processor

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 software-based DSP platform that provides 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 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: 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 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 8x8 analog audio I/O, the Core 110f features a software definable bank of 8 balanced analog audio Flex channels, 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 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 16x16 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 tox the USB device port, the Core 110f provides 6 USB Host ports (A type) which enable the Core to host external USB devices and future Q-SYS peripheral products.

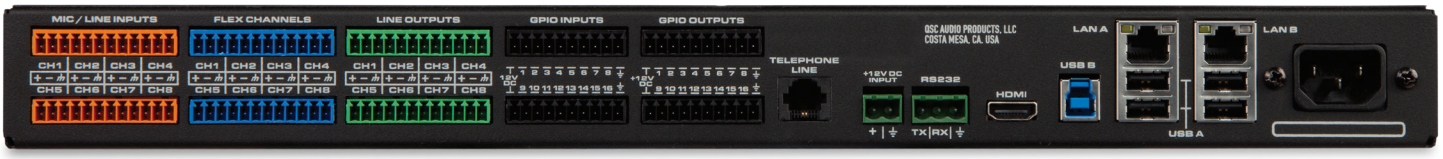
# Q-SYS Core 110f

## 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 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.

## KEY FEATURES

- 128 x 128 channels of Q-LAN™ network audio in single channel streams
- 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 16x16 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 4 VoIP Softphone instances in addition to the onboard POTS telephone interface
- Fully compatible with all existing and future Q-SYS accessories such as IO peripherals, paging stations, and touch screen controllers running Q-SYS user control interfaces
- CE marked, UL listed, and RoHS compliant
- Covered by QSC Systems 3-year warranty

# Q-SYS Core 110f

## INPUTS

| | |
|---|---|
| **Input Frequency Response** | |
| 20 Hz to 20 kHz @ +21dBu | +0.05% / -0.5% |
| **Input THD+N @ 1KHz** | |
| @ +21 dBu Sensitivity & +21 dBu input | < 0.1% |
| @ +21 dBu Sensitivity & +10 dBu input | < 0.0015% |
| @ +10 dBu Sensitivity & +8 dBu input | < 0.0007% |
| @ -10 dBu Sensitivity & -10.5 dBu input | < 0.0006% |
| @ -39 dBu Sensitivity & -39.5 dBu input | < 0.007% |
| **EIN (no weighting, 20Hz to 20kHz)** | < -12 dB |
| **Input to Input Crosstalk @1 kHz** | > 110 dB typical, 90 dB max |
| **Input Dynamic Range** | |
| @ +21 dBu Sensitivity | > 109.5 dB |
| @ +10 dBu Sensitivity | > 106.4 dB |
| @ -10 dBu Sensitivity | > 104.6 dB |
| @ -39 dBu Sensitivity | > 104.6 dB |
| **Input Common Mode Noise Rejection** | |
| @ +21 dBu Sensitivity | 50.7 dB |
| @ +10 dBu Sensitivity | 56.5 dB |
| @ -10 dBu Sensitivity | 73.2 dB |
| @ -39 dBu Sensitivity | 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 |
| Number of Channels | up to 16x16 |
| Sample Rate | 48 kHz |
| **Product Dimensions (HWD)** | 1.75 x 19.0 x 11.12 in (44 x 483 x 282.5 mm) |
| **Shipping Dimensions (HWD)** | 6.0 x 23 x 14 in (152 x 584 x 365 mm) |
| **Power Consumption** | 60 W typical, 120 W max |
| **BTU/Heat load:** | 205 BTU/Hour |
| **Net Weight** | 11 lb (5.0 kg) |
| **Shipping Weight** | 12.4 lb (5.6 kg) |
| **Compliance** | 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) |