



Q-SYS™ Core 8 Flex

I/O processor
for Cinema applications

Features

- 64 x 64 networked audio channels (Q-LAN / AES67)
- Eight on-board FLEX channels and GPIO
- 8 x AEC (acoustic echo cancellation) processors
- Up to 32 x 32 Dante audio channels (8 x 8 included)
- USB AV bridging (8 x 8 audio + Q-SYS camera support)
- External USB audio device host
- Supports up to 2 VoIP softphone instances
- Full featured Q-SYS Control engine
- Dual gigabit ethernet ports with assignable application resources offering any combination of VoIP, Q-LAN Control, Q-LAN audio or network redundancy
- Internal power supply
- 1U half-width, includes mounting hardware



Introducing the Q-SYS Core 8 Flex audio, video and control (AV&C) processor, which extends the applications of the Q-SYS Ecosystem throughout the Cinema complex, including 5.1/7.1 and immersive audio rooms, arcade gaming areas, background/foreground music for food service areas, event rooms, and much more. Built on the same foundational technology as the rest of the Q-SYS processor portfolio, including the best-in-class Q-SYS Core 110c, the Core 8 Flex is designed for applications with lower network channel capacity and/or targeted processing requirements.

Core 8 Flex offers onboard analog audio I/O and GPIO *plus* network AV&C processing, and like all Q-SYS Core processors, the Core 8 Flex delivers features and functionality at the software level, including acoustic echo cancellation (AEC), wide-area paging, video routing, and a full featured control engine without the need for dedicated control processors.

Onboard analog I/O plus network I/O

In addition to its 64 x 64 network audio I/O capacity, the Core 8 Flex offers eight on-board Flex channels and eight GPIO on-ramps to integrate analog audio and control devices into the Q-SYS Ecosystem.

Rightsized. Uncompromised.

Rather than deploying an AV&C processor with unused analog I/O that occupies a full rack space, Core 8 Flex offers a smaller, space-efficient solution with the right amount of analog I/O. However, it

does not compromise on functionality; instead it delivers a fully-integrated and customized Q-SYS experience. The Core 8 Flex brings all of the power and flexibility of the Q-SYS Ecosystem to even the smallest rooms within a multiplex at price point that's comparable to a conventional cinema processor. With 64 x 64 networked audio channels and eight onboard "flex" channels (configurable as either input or output) for analog connectivity, you can even use Core 8 Flex for small to medium sized immersive audio applications.

Choose either a single Core 8 Flex for each room in a multiplex, or choose to run several 5.1/7.1 rooms from one single Core 8 Flex.

Reduce complexity and improve scalability with the Q-SYS Ecosystem

The Q-SYS Core 8 Flex joins a growing Ecosystem of AV&C processors built on a flexible software foundation that delivers features and functionality without relying on dedicated, single-purpose hardware. Like all Q-SYS Cores, the Core 8 Flex let integrators take full advantage of the same Q-SYS software suite to design and configure systems, and end users can benefit from a more holistic user experience as a result of all native Q-SYS peripherals, and the system's ability to scale your system without having to rip-and-replace your configuration file.



Q-SYS Core 8 Flex Preliminary Specifications

Audio Inputs

Phantom power	+48 VDC, 10 mA per input max
---------------	------------------------------

A/D - D/A converters	24 bit
----------------------	--------

Sample rate	48 kHz
-------------	--------

Input frequency response

20 Hz to 20 kHz @ +24dBu	+0.05 dB / -0.5 dB
--------------------------	--------------------

Input THD+N @ 1kHz

@ +24 dBu sensitivity & +24 dBu input	< 0.1%
---------------------------------------	--------

@ +24 dBu sensitivity & +10 dBu input	< 0.0015%
---------------------------------------	-----------

@ +10 dBu sensitivity & +8 dBu input	< 0.001%
--------------------------------------	----------

@ -10 dBu sensitivity & -10.5 dBu input	< 0.001%
---	----------

@ -39 dBu sensitivity & -39.5 dBu input	< 0.007%
---	----------

Input to input crosstalk @ 1 kHz

@ +24 dBu sensitivity	110 dB typical, 90 dB Max
-----------------------	---------------------------

@ +10 dBu sensitivity	105 dB typical, 90 dB Max
-----------------------	---------------------------

@ -10 dBu sensitivity	100 dB typical, 90 dB Max
-----------------------	---------------------------

@ -39 dBu sensitivity	75 dB typical
-----------------------	---------------

Input dynamic range

@ +24 dBu sensitivity	> 109.5 dB
-----------------------	------------

@ +10 dBu sensitivity	> 106.4 dB
-----------------------	------------

@ -10 dBu sensitivity	> 104.6 dB
-----------------------	------------

Input common mode noise rejection

@ +24 dBu sensitivity	< 51, 20 Hz - 3 kHz
-----------------------	---------------------

	< 43, 20 Hz - 10 kHz
--	----------------------

	< 36, 20 Hz - 20 kHz
--	----------------------

@ +10 dBu sensitivity	< 57, 20 Hz - 3 kHz
-----------------------	---------------------

	< 47, 20 Hz - 10 kHz
--	----------------------

	< 41, 20 Hz - 20 kHz
--	----------------------

@ -10 dBu sensitivity	< 67, 20 Hz - 3 kHz
-----------------------	---------------------

	< 58, 20 Hz - 10 kHz
--	----------------------

	< 53, 20 Hz - 20 kHz
--	----------------------

@ -39 dBu sensitivity	< 60, 20 Hz - 3 kHz
-----------------------	---------------------

	< 54, 20 Hz - 10 kHz
--	----------------------

	< 50, 20 Hz - 20 kHz
--	----------------------

Input impedance (balanced)	7.2k Ω nominal
----------------------------	-----------------------

Input sensitivity range (1 dB steps)	-39 dBu minimum to +24 dBu maximum
--------------------------------------	------------------------------------

Q-SYS Core 8 Flex Preliminary Specifications

Audio Outputs

Output frequency response

20 Hz to 20 kHz @ all settings	+ 0.2 / -.5 dB
Output THD	0.005% typical, +24 dBu max output level
EIN (no weighting, 20 Hz to 20 kHz)	< -121 dB
Output crosstalk @ 1 kHz	> 100 dB typical, 90 dB max
Output dynamic range	> 108 dB
Output impedance (balanced)	332 Ω

Channel Capacity

Q-LAN channels	64 x 64
Dante channels	8 x 8 (included); up to 32 x 32 with optional license
AEC channels	8
WAN / media stream channels	12 x 12
Network peripherals	up to 32
Audio recording / playback	4 ch recording / 16 ch playback (expandable to 32 ch with optional license)

Control

RS-232	2 ports
GPIO	8 x 8

USB Inputs & Outputs

USB B or C (audio)

Bit depth	16 bit
Channel count	8 x 8
Sample Rate	48 kHz

USB audio device hosting Support for standard USB headset, speakerphone on USB type A connection (one device at a time)

Input

Sample rate	48k or 16k, mono
Resolution	8-bit, 16-bit, 24-bit, 32-bit, float
Format	little-endian, signed or unsigned

Output

Sample rate	48k only, stereo
Resolution	8-bit, 16-bit, 24-bit, 32-bit, float
Format	little-endian, signed or unsigned

Q-SYS Core 8 Flex Preliminary Specifications

Physical

Device dimensions (H x W x D) 1.72 x 8.66 x 11.28 in (43.6 x 220 x 286.6 mm)

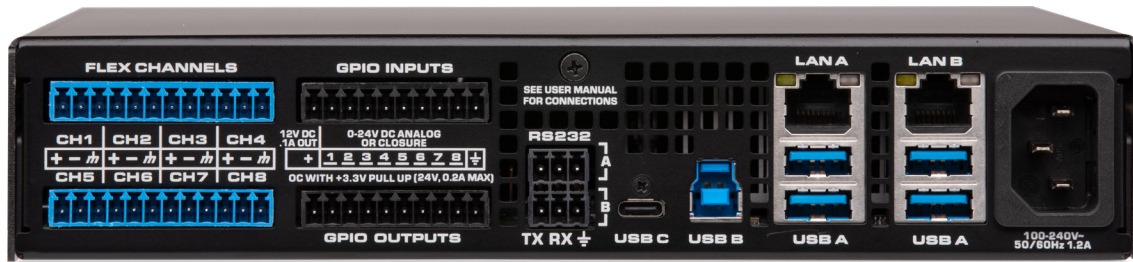
Shipping Dimensions (H x W x D) 3.1 x 13.3 x 15 in (79 x 337 x 381 mm)

Environmental & Safety

Power consumption 40 W typical

BTU/heat load 110 BTU/hour

Compliance	FCC Part 68 / TIA-968-B (USA) ES203 021, CE, RoHS (Europe), PTC200 (New Zealand) NOM-151-SCTI (Mexico) JATE (Japan)	UL and C-UL listed (USA & Canada) AC (Eurasian Customs Union) PSTN01 (Taiwan) Industry Canada CS-03 (Canada) AS/ACIF S002 and RCM (Australia) ANATEL Resolution 473 (Brazil)



1675 MacArthur Boulevard • Costa Mesa, CA 92626 • Ph: 800/854-4079 or 714/957-7100 • Fax: 714/754-6174

© 2020 QSC, LLC all rights reserved. QSC, Q-SYS and the QSC logo are registered trademarks of QSC, LLC in the U.S. Patent and Trademark office and other countries. All other trademarks are the property of their respective owners. Patents may apply or be pending.