QSC

CX-Q Series (4-channel)

CX-Q 8K4 | CX-Q 4K4 | CX-Q 2K4

Four-channel network amplifiers for the Q-SYS Ecosystem

Features

- Seamless Q-SYS Ecosystem integration with audio transport and control via standard gigabit Ethernet protocols and hardware

- Capable of providing up to 8,000 W of power

- Low-Z, 70 V and 100 V direct drive available on all channels

- Hybrid circuit topology mixing the robustness of the PL380 PowerLight™ amplifier platform with new high-voltage, high-current output devices

- FlexAmp™ allows for asymmetric power distribution across amplifier channels

- Flexible Amplifier Summing Technology™ optimizes for either higher voltage loads (up to 200 Vrms output) or high current loads (up to 35 A)

- PowerLight universal switchmode power supply with PFC for highest efficiency; improved audio performance, and low weight

- Routable mic/line inputs provide additional on-ramps into the Q-SYS Ecosystem

- Touch-proof Euroblock loudspeaker connections

- Eight configurable, bi-directional GPIO connections

- Automatic energy saving modes ensure that the amplifier will draw the minimum amount of AC power while still providing outstanding audio quality

CX-Q Series network amplifiers combine the QSC legacy of robust power amplifiers, advancements in high-efficiency output devices and native network transport, control and monitoring capabilities of the Q-SYS Ecosystem.

Native Q-SYS Integration

CX-Q Series amplifiers are fully native components of the Q-SYS audio, video and control Ecosystem. Like all Q-SYS peripherals, CX-Q Series amplifiers offer simple drag-and-drop integration into your Q-SYS design, enabling network routing, advanced processing (including Intrinsic Correction™ custom voicings for QSC loudspeakers) and control. This expedites the installation process and provides superior system performance far beyond that of third-party amplifier solutions.

It also means that the Q-SYS Ecosystem can manage the fault protection and notification for these amplifiers. If for any reason an amplifier goes offline or has a fault, the Q-SYS system can alert the operator and ensure the system retains its integrity.

Legacy of Power Redefined

CX-Q Series network amplifiers use a 5th generation high-efficiency, Class-D hybrid powertrain design built upon the dependable PL380 PowerLight™ amplifier platform. The new design offers both high voltage and high current operation with excellent audio quality and thermal performance.

Channel Power Flexibility

CX-Q Series network amplifiers combine two technologies that provide extreme flexibility in output deployment. **FlexAmp™** allows for asymmetric output channel loading by drawing from large power reserves and distributing customized output power levels per channel. **FAST** (Flexible Summing Amplifier Technology™) allows channels to be combined in bridge mode, parallel mode or bridge/parallel mode to deliver either higher voltage loads (up to 200 Vrms output) or higher current loads (up to 35 A).

Collectively, these technologies decrease system cost by reducing wasted power and channels, while ultimately removing the need to specify multiple amplifiers with different power ratings in a multi-zone installation.

Each model supports a wide variety of loudspeaker systems by featuring Low-Z, 70 V and 100 V direct drive on all channels.

I/O Features

Each amplifier also offers four channels of mic/line inputs (with +12 V phantom power) directly on the back of the amplifier that act as Q-SYS on-ramps in addition to its amplification duties. Additionally, eight bi-directional GPIO ports allow for further control and integration of other third-party peripherals within Q-SYS.

Power & Space Efficiency

CX-Q Series also features fully active Power Factor Correction (PFC) which aligns the supply current waveform with the AC mains voltage waveform. PFC enables these amplifiers to draw current from the wall in a more efficient and controlled manner.
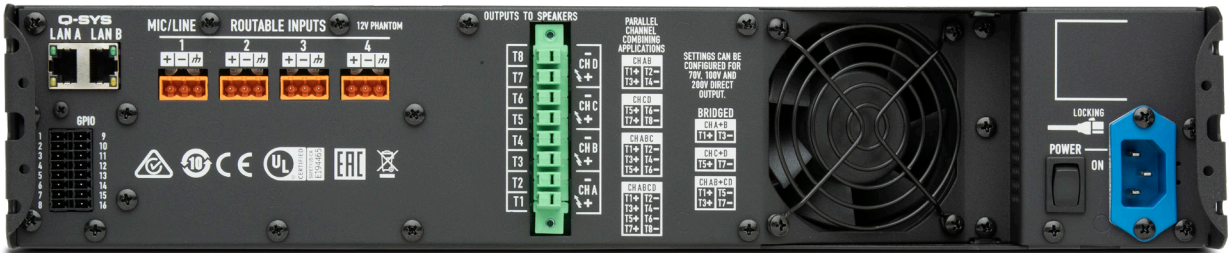
This series also incorporates several energy conservation and efficiency strategies, including a unique multi-stage sleep mode that saves energy when possible without sacrificing performance.

With four channels of amplification addressable from the network in just 2RU and four channels of mic/line inputs, the CX-Q Series network amplifiers replace equipment taking up as much as four times the rack space.

CX-Q Series (4-channel) Specifications

		CX-Q 2K4	CX-Q 4K4	CX-Q 8K4
		Max Power	Max Power	Max Power
4 Independent Channels A, B, C, D	70 V	700 W	1000 W	1250 W
	100 V	700 W	1000 W	1250 W
	16 Ω	350 W	500 W	625 W
	8 Ω	700 W	1000 W	1250 W
	4 Ω	800 W	1500 W	2400 W
	2 Ω	600 W	800 W	2750 W
2 Channels Combined in BTL Bridged A+B or C+D Doubles Voltage	140 V	1500 W	2000 W	2400 W
	200 V	1500 W	2000 W	2400 W
	8 Ω	1500 W	3000 W	4000 W
	4 Ω	1400 W	1700 W	5000 W
	2 Ω	NR*	NR*	3000 W
2 Channels Combined in Parallel AB or CD Doubles Current	70 V	1400 W	2000 W	2400 W
	100 V	1400 W	2000 W	2400 W
	8 Ω	800 W	1000 W	1250 W
	4 Ω	1250 W	2000 W	2400 W
	2 Ω	1500 W	2500 W	4000 W
3 Channels Combined in Parallel ABC Triples Current	8 Ω	800 W	1000 W	1250 W
	4 Ω	1250 W	2000 W	2400 W
	2 Ω	1500 W	3000 W	4500 W
4 Channels Combined in Bridged/Parallel AB+CD Doubles Current and Voltage	8 Ω	2500 W	3500 W	4200 W
	4 Ω	3000 W	4000 W	7000 W
	2 Ω	NR*	NR*	8000 W
4 Channels Combined in Parallel ABCD Quadruples Current	8 Ω	800 W	1000 W	1250 W
	4 Ω	1250 W	2000 W	2500 W
	2 Ω	1700 W	4000 W	5000 W
	1 Ω	2500 W	4000 W	7000 W

NR*: Not Recommended due to excessive current draw

Max Power: 20 ms 1 kHz sine wave burst, single channel driven

CX-Q 8K4 | CX-Q 4K4 | CX-Q 2K4

CX-Q Series (4-channel) Specifications

	CX-Q 2K4	CX-Q 4K4	CX-Q 8K4
Power Supply - Maximum Power Output	2,000 W	4,000 W	8,000 W
Typical Distortion			
8Ω	0.02 - 0.05%	0.02 - 0.05%	0.02 - 0.05%
4Ω	0.04 - 0.1%	0.04 - 0.1%	0.04 - 0.1%
Maximum Distortion			
4 Ω - 8 Ω	1.0%	1.0%	1.0%
Frequency Response (8 Ω)	20 Hz - 20 kHz +0.2 dB / -0.7 dB	20 Hz - 20 kHz +0.2 dB / -0.7 dB	20 Hz - 20 kHz +0.2 dB / -0.7 dB
Noise			
Unweighted output unmuted	>102 dB	>102 dB	>102 dB
Weighted output muted	>106 dB	>106 dB	>106 dB
Gain (1.2 V setting)	33 dB	35 dB	38 dB
Damping factor	>100	>100	>150
Input impedance	>8k balanced and >4k unbalanced	>8k balanced and >4k unbalanced	>8k balanced and >4k unbalanced
Input Sensitivity			
Continuously variable:	Vrms 1.23 mV to 17.35 V	Vrms 1.23 mV to 17.35 V	Vrms 1.23 mV to 17.35 V
	dBu -56 to 27	dBu -56 to 27	dBu -56 to 27
	dBv -58.2 to 24.8	dBv -58.2 to 24.8	dBv -58.2 to 24.8
Controls and indicators (front)	Power • Channel MUTE buttons • Channel SELECT buttons • Channel Input Signal and CLIP LED Indicators Channel Output and LIMIT LED meters • NEXT, PREV, ID buttons • Control knob		
Controls and indicators (rear)	AC Power Disconnect (IEC C-14)		
Input connectors			
CX-Q 2K4, CX-Q 4K4, CX-Q 8K4	3-pin Euro (green) and Q-LAN Network connectivity		
Output connectors	8-pin Euro (green)		
Amplifier and load protection	Short circuit, open circuit, over current, over voltage, thermal, RF, DC fault shutdown, active inrush limiting, on/off muting		
AC power input	Universal power supply 100 - 240 VAC, 50 - 60 Hz with active PFC		
Dimensions (HWD)	3.5 in x 19 in x 16 in (89 mm x 482 mm x 406 mm)	3.5 in x 19 in x 16 in (89 mm x 482 mm x 406 mm)	3.5 in x 19 in x 16 in (89 mm x 482 mm x 406 mm)
Weight, Net / Shipping	23 lb (10.4 kg) / 27 (12.2 kg)	25 lb (11.3 kg) / 29 lb (13.2 kg)	26 lb (11.8kg) / 30 lb (13.6kg)
Agency approvals	UL, CE, RoHS/WEEE compliant, FCC Class B (conducted and radiated emissions)		
Carton contents	IEC power cord (locking), Euro (green) connectors, quick start guide		

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