



## CXD-Q Series

### CXD4.2Q | CXD4.3Q | CXD4.5Q

Multi-Channel Network  
Processing Amplifiers

#### Features

- Seamless Q-SYS integration with audio transport and control via standard Gigabit Ethernet protocols and hardware
- Capable of providing up to 5,000 W continuous and 8,000 W peak with 70V / 100V direct drive on the CXD4.3Q and CXD4.5Q
- Flexible Amplifier Summing Technology™ (FAST) permits total amplifier power to be distributed across one, two, three or all four channels
- PowerLight universal switchmode power supply with PFC for highest efficiency, improved audio performance, and low weight.
- Mic/Line input Euroblock connectors and touch-proof Euroblock loudspeaker connections.
- Eight bi-directional GPIO connections that can be used for analog or digital inputs or outputs to/from Q-SYS
- Built-in energy saving modes ensure that the amplifier will draw the minimum amount of AC power while still providing outstanding audio quality
- Q-SYS technical support is available 24/7 - worldwide



The QSC CXD-Q Series represents a revolutionary advancement in amplifier technology and innovation, coupled with outstanding integration capability as part of a Q-SYS system. Designed specifically for the needs of integrators, CXD-Q provides efficient, robust and extraordinarily high fidelity power to drive multiple channels and configurations of loudspeakers – all with optimal energy and rack space efficiency. The CXD-Q Series consists of three powerful, four-channel amplifiers, each a Q-SYS peripheral enabling audio routing, processing, and control. Provided in the amps is the capability to configure and combine channels in various ways to drive a wide range of loudspeaker systems including 70V and 100V without the use of transformers. These amplifiers not only provide the power and processing make your system perform better, they offer outstanding efficiency ensuring that energy costs will be kept to a minimum over the life of the installation.

#### Flexible Amplifier Summing

CXD-Q amplifiers feature Flexible Amplifier Summing Technology™ (FAST) that actively, two, three or all four outputs. On the CXD4.3Q and CXD4.5Q, this power can also be used to drive 70V or 100V speaker lines directly from any one or all of the four outputs.

This flexibility allows CXD-Q Series amplifiers to drive (for example) two full-range surface mounted speakers along with a subwoofer and one 100V distributed speaker line; or a high-power subwoofer and a bi-amplified full-range loudspeaker; three 70V distributed speaker lines and a low impedance surface mount speaker line; or a single high-power channel driving monster subwoofers.

#### Q-SYS Connectivity

The CXD-Q amplifiers benefit from the strength of the Q-SYS platform. They are true Q-SYS peripherals meaning that they can connect on a Q-LAN Ethernet network and source and receive audio signals. In addition to the four Mic/Line input and output channels, the CXD-Q amplifiers offer eight bi-directional Q-SYS GPIO ports for further interfacing with other equipment. It also means that when the CXD-Q amps are in a Q-SYS design the Q-SYS Core manages the system design and amplifiers. If for any

reason an amplifier goes off-line or has a fault, the Core can alert the operator and ensure that system retains its integrity.

#### Power & Space Efficiency

CXD-Q Series amplifiers use QSC's next generation class-D power amp design in combination with a custom power stage utilizing a new output device. These purpose built MOSFET devices provide high voltage operation without needing a full bridge output and offer better audio quality and thermal performance due to co-location of the semiconductors.

CXD-Q amplifiers benefit from the proven PowerLight power supply, made even better with Power Factor Correction (PFC) that aligns the current waveform with the AC mains voltage waveform. PFC enables CXD-Q Series amps to draw current from the wall in a more efficient and controlled manner resulting in incredible power from a single standard AC breaker.

The CXD-Q amplifiers also incorporate several energy conservation and efficiency strategies. One such tool is the unique multi-stage sleep mode that saves energy when possible without sacrificing performance.

With four channels of Mic/Line input and four channels of amplification in just 2RU, the CXD-Q amplifiers replaces equipment taking up as much as three times the rack-space.

#### Integration Simplicity

Q-SYS is a complete integrated system that encompasses everything from the audio input to the output of the loudspeakers. As part of a Q-SYS system, the CXD-Q amplifiers are just some of the many peripherals that can be intuitively placed in a design and wired into the system. The centralized design maintains operational simplicity because not only does it allow for a "whole system" design philosophy, but the Q-SYS Core configures and manages all peripherals to ensure that all elements of the system are functioning correctly.

With the complete integration facilities provided by Q-SYS, and the power efficiency provided by the custom MOSFET and FAST, the CXD-Q amplifiers are perfect for nearly every installation application.

# CXD-Q Series Specifications

	CXD4.2Q		CXD4.3Q		CXD4.5Q	
		Peak		Peak		Peak
4 Independent Channels A, B, C, D	70 V	N/A		500 W		1000 W
	100 V	N/A		625 W		1250 W
	8Ω	500 W		900 W		1200 W
	4Ω	700 W		1400 W		2000 W
	2Ω	625 W		1200 W		1600 W
2 Channels BTL Bridged A+B or C+D Doubles Voltage	8Ω	<b>1200 W</b>		<b>2400 W</b>		<b>4000 W</b>
	4Ω	<b>1500 W</b>		NR*		NR*
	2Ω	NR*		NR*		NR*
2 Channels Parallel AB or CD Doubles Current	8Ω	500 W		1300 W		1250 W
	4Ω	950 W		<b>2000 W</b>		<b>2400 W</b>
	2Ω	<b>1200 W</b>		<b>2500 W</b>		<b>4000 W</b>
1 Channel 3CH Parallel ABC Triples Current	8Ω	500 W		1400 W		1400 W
	4Ω	950 W		2400 W		2500 W
	2Ω	1800 W		3500 W		4500 W
1 Channel Bridged/Parallel AB+CD Doubles Current and Voltage	8Ω	<b>1600 W</b>		<b>3500 W</b>		<b>4500 W</b>
	4Ω	<b>2500 W</b>		<b>5000 W</b>		<b>7500 W</b>
	2Ω	NR*		NR*		NR*
1 Channel 4CH Parallel ABCD Quadruples Current	8Ω	500 W		1400 W		1600 W
	4Ω	1000 W		3000 W		3000 W
	2Ω	<b>1700 W</b>		<b>5000 W</b>		<b>5300 W</b>

NR\* = Not Recommended due to excessive current draw

BOLD = Optimal configuration for the load and channel count

# CXD-Q Series Specifications

	CXD4.2Q	CXD4.3Q	CXD4.5Q
<b>Typical Distortion</b>			
8Ω	0.01 - 0.03%	0.01 - 0.03%	0.01 - 0.03%
4Ω	0.03 - 0.06%	0.03 - 0.06%	0.03 - 0.06%
<b>Maximum Distortion</b>			
4Ω - 8Ω	1.0%	1.0%	1.0%
<b>Frequency response (8Ω)</b>	20 Hz - 15 kHz +/- 0.2 dB 20 Hz - 20 kHz +0.2 dB / -0.7 dB	20 Hz - 15 kHz +/- 0.2 dB 20 Hz - 20 kHz +0.2 dB / -0.7 dB	20 Hz - 15 kHz +/- 0.2 dB 20 Hz - 20 kHz +0.2 dB / -0.7 dB
<b>Noise</b>			
Unweighted Output Unmuted	-101 dB	-101 dB	-101 dB
Weighted Output Muted	-109 dB	-109 dB	-109 dB
Gain (1.2V setting)	34.0 dB	38.4 dB	38.4 dB
Damping factor	>150	>150	>150
Input impedance	>10k, balanced or unbalanced	>10k, balanced or unbalanced	>10k, balanced or unbalanced
<b>Input Sensitivity</b>			
Continuously Variable:	Vrms 1.23mV to 17.35V dBu -56 to 27 dBv -58.2 to 24.8	Vrms 1.23mV to 17.35V dBu -56 to 27 dBv -58.2 to 24.8	Vrms 1.23mV to 17.35V dBu -56 to 27 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		
Input connectors	3-pin Phoenix		
Output connectors	8-pin Phoenix Speaker		
Amplifier and load protection	Short circuit, open circuit, thermal, RF protection. On/Off muting, DC fault shutdown, active inrush limiting		
AC Power Input	Universal Power Supply 100 - 240 VAC, 50 - 60 Hz		
<b>Dimensions (HWD)</b>	3.5" x 19" x 12" (89mm x 482mm x 305mm)	3.5" x 19" x 16" (89mm x 482mm x 406mm)	3.5" x 19" x 16" (89mm x 482mm x 406mm)
<b>Weight, Net / Shipping</b>	18.5 lb (8.4 kg) / 22 lb (10.0 kg)	21.0 lb (9.5 kg) / 25 lb (11.3 kg)	22.0 lb (10.0 kg) / 26 lb (11.8 kg)
Agency approvals	UL, CE, RoHS/WEEE compliant, FCC Class A (conducted and radiated emissions)		
Carton contents	IEC Cable, Quick Start Guide, Phoenix Connectors		

**Burst Power-** 20 ms 1 kHz sine burst, all channels driven  
**Continuous Power-** EIA 1 kHz 1% THD, all channels driven



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CXD4.5Q Spec Sheet 09/19/2016



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