QSC

8 Channel DPA-Q & DPA-Qn Series

DPA8.8Q | DPA8.8Qn | DPA8.4Q | DPA8.4Qn

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 8,000 W peak and 5,000 W continuous

- Flexible Amplifier Summing Technology™ (FAST) permits up to four channels to be combined for higher output power

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

- DPA-Q models offer mic/line inputs into the Q-SYS ecosystem while DPA-Qn models are "network input only" to reduce system cost. All models provide 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

The QSC eight channel DPA-Q and DPA-Qn Series amplifiers represent an advancement in amplifier technology coupled with outstanding integration capability as part of a Q-SYS system. DPA-Q and DPA-Qn provide efficient, robust and extraordinarily high fidelity power to drive multiple channels and configurations of loudspeakers – all with optimal energy and rack space efficiency. All models provide full Q-SYS capability with audio routing, processing and control. The amplifiers allow the user to configure and combine channels in various ways to drive a wide range of loudspeaker systems. These amplifiers not only provide the power and processing to make your system perform better, they also offer outstanding efficiency ensuring that energy costs will be kept to a minimum over the life of the installation.

Flexible Amplifier Summing

DPA-Q Series amplifiers feature Flexible Amplifier Summing Technology™ (FAST) that enables up to four channels to be combined higher output power.

Q-SYS Connectivity

The DPA-Q and DPA-Qn Series amplifiers are part of the Q-SYS Platform. They are true Q-SYS peripherals meaning that they can connect on a Q-LAN Layer-3 network with the capability to source and receive signals. The DPA-Q models offer eight channels of mic/line input directly on the back of the amplifier and act as Q-SYS on-ramps in addition to amplification. The DPA-Qn models are network input only to simplify system design and reduce system cost when additional input are not needed. Both models provide eight bi-directional GPIO ports within the Q-SYS Platform for further interfacing with other equipment.

Power & Space Efficiency

The DPA-Q and DPA-Qn Series eight channel amplifiers use QSC's fifth generation class-D power amplifier design, providing high voltage operation and offering outstanding audio quality and thermal performance. They benefit from the proven PowerLight power supply, with Power Factor Correction (PFC), which aligns the 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 resulting in incredible output power from a single standard AC breaker.

This series also incorporate several energy conservation and efficiency strategies, one of which is a unique multi-stage sleep mode that saves energy without sacrificing performance.

With eight channels of amplification addressable from the network in just 2RU and eight channels of mic/line inputs on the "Q" models, the DPA-Q amplifiers replace equipment taking up as much as three times the rack space.

Integration Simplicity

The Q-SYS Platform is a complete integrated system that encompasses everything from the audio input to loudspeaker output. As part of a Q-SYS system, the DPA-Q and DPA-Qn Series 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 not only because it allows for a "whole system" design philosophy, but Q-SYS also configures and manages all peripherals to ensure that all elements of the system are functioning correctly.
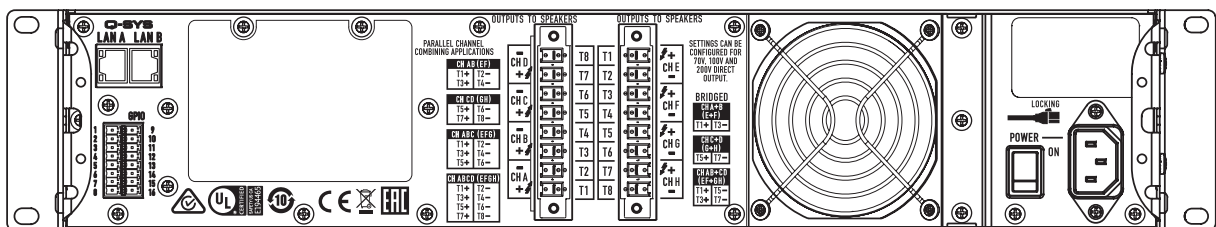
8-Channel DPA-Q Series Specifications

		DPA8.4Q / DPA8.4Qn	DPA8.8Q / DPA8.8Qn
		Max Power	Max Power
8 Independent Channels A, B, C, D, E, F, G, H	70 V	500 W	850 W
	100 V	500 W	850 W
	8Ω	500 W	850 W
	4Ω	500 W	1000 W
	2Ω	500 W	600 W
2 Channels Combined in BTL Bridge A+B or C+D or E+F or G+H Doubles Voltage	8Ω	**1000 W**	**2000 W**
	4Ω	NR	NR
	2Ω	NR	NR
2 Channels Combined in Parallel AB or CD or EF or GH Doubles Current	8Ω	1000 W	1100 W
	4Ω	**1000 W**	**1800 W**
	2Ω	**1000 W**	**2000 W**
3CH Combined in Parallel ABC or EFG Triples Current	8Ω	1000 W	1100 W
	4Ω	1500 W	1800 W
	2Ω	1500 W	2800 W
4CH Combined in Bridged/Parallel AB+CD Doubles Current and Voltage	8Ω	**2000 W**	**3600 W**
	4Ω	**2000 W**	**4500 W**
	2Ω	NR	NR
4CH Combined in Parallel ABCD or EFGH Quadruples Current	8Ω	1200 W	1200 W
	4Ω	2000 W	2200 W
	2Ω	**2000 W**	**4000 W**

NR **=** Not Recommended due to excessive current draw*

BOLD = *Optimal configuration for the load and channel count*
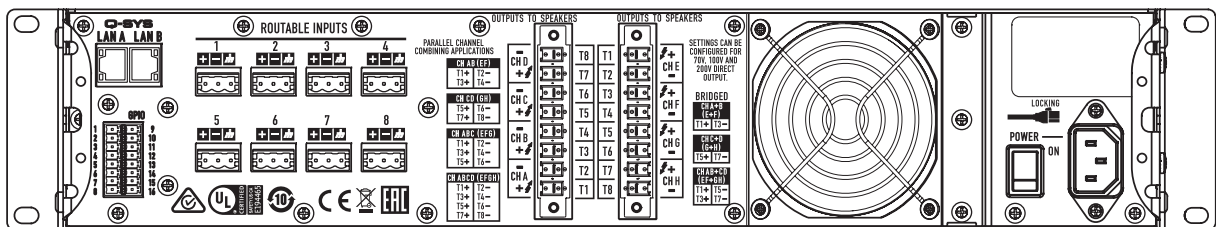
DPA8.4Q / DPA8.8Q

DPA8.4Qn / DPA8.8Qn

8-Channel DPA-Q Series Specifications

	DPA8.4Q / DPA8.4Qn	DPA8.8Q / DPA8.8Qn
Typical distortion		
8Ω	0.02 - 0.05%	0.02 - 0.05%
4Ω	0.04 - 0.1%	0.04 - 0.1%
Maximum distortion		
4Ω - 8Ω	1.0%	1.0%
Frequency response (8Ω)	20 Hz - 20 kHz +/- 0.3 dB	20 Hz - 20 kHz +/- 0.3 dB
Noise		
Unweighted output muted	>101 dB	>101 dB
Weighted output muted	>104 dB	>104 dB
Gain (1.2V setting)	38.4 dB	38.4 dB
Damping factor	>100	>100
Input impedance	>8k balanced and >4k unbalanced	>8k balanced and >4k unbalanced
Input Sensitivity		
Continuously variable:	Vrms 1.23mV to 17.35V	Vrms 1.23mV to 17.35V
	dBu -56 to 27	dBu -56 to 27
	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	
Input connectors		
DPA8.4Q & DPA8.8Q	3-pin Phoenix and Q-LAN Network connectivity	
DPA8.4Qn & DPA8.8Qn	Q-LAN Network connectivity only	
Output connectors	8-pin Phoenix	
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	
Dimensions (HWD)	3.5" x 19" x 16" (89mm x 482mm x 406mm)	3.5" x 19" x 16" (89mm x 482mm x 406mm)
Weight, net / shipping	25 lb (11.3 kg) / 29 lb (13.2 kg)	26 lb (11.8 kg) / 30 lb (13.6 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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