



## DPA-Q Series (new) (4-channel)

### DPA-8K4Q | DPA-4K4Q | DPA-2K4Q

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
- Hybrid circuit topology mixing the robustness of the PL380 PowerLight™ amplifier platform with new high-voltage 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
- “Q” models offer mic/line inputs into the Q-SYS Ecosystem
- Touch-proof Euroblock loudspeaker connections
- Eight bi-directional GPIO connections plus relay
- Automatic energy saving modes ensure that the amplifier will draw the minimum amount of AC power while still providing outstanding audio quality



DPA-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

DPA-Q Series amplifiers are fully native components of the Q-SYS audio, video and control Ecosystem. Like all Q-SYS peripherals, DPA-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

DPA-Q Series network amplifiers use a 5<sup>th</sup> 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

DPA-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. This can be especially useful for screen channel

speakers, delivering more power to the LF section compared to the higher efficiency HF section, and for immersive surround speakers, delivering more power to the object-based speakers that demand it during soundtrack playback. **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).

#### I/O Features

“Q” models offer eight 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. All models provide eight bi-directional GPIO ports plus one relay for further control and integration of other third-party peripherals within Q-SYS.

#### Power & Space Efficiency

DPA-Q Series also utilizes 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 on the “Q” models, the DPA-Q Series network amplifiers replace equipment taking up as much as four times the rack space.

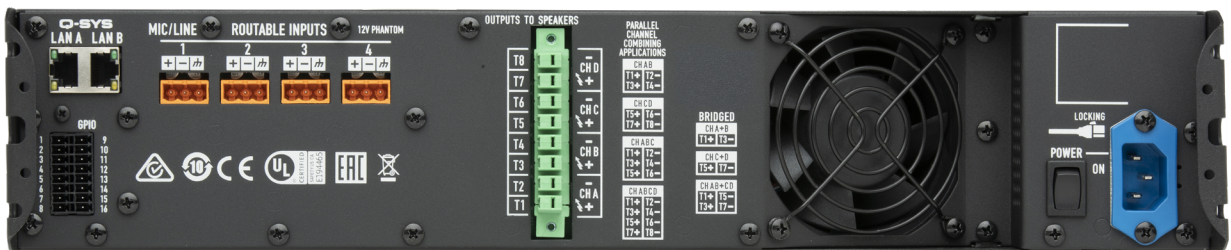
# DPA-Q Series (4-channel) Specifications

		DPA-2K4Q	DPA-4K4Q
4 Independent Channels A, B, C, D		Max / FlexAmp	Max / FlexAmp
	8 Ω	600 W / 800 W	900 W / 1000 W
	4 Ω	600 W / 800 W	1200 W / 1500 W
2 Channels BTL Bridged A+B or C+D Doubles Voltage	8 Ω	1300 W / 1500 W	2400 W / 3000 W
	4 Ω	NR*	NR*
	2 Ω	NR*	NR*
2 Channels Parallel AB or CD Doubles Current	8 Ω	500 W / 800 W	1000 W / 1000 W
	4 Ω	950 W / 1250 W	2000 W / 2000 W
	2 Ω	1200 W / 1500 W	2500 W / 2500 W
3 Channel Combined in Parallel ABC Triples Current	8 Ω	500 W / 800 W	1000 W / 1000 W
	4 Ω	950 W / 1250 W	2000 W / 2000 W
	2 Ω	1500 W / 1500 W	3000 W / 3000 W
1 Channel Bridged/Parallel AB+CD Doubles Current and Voltage	8 Ω	1600 W / 2500 W	3500 W / 3500 W
	4 Ω	2500 W / 3000 W	4000 W / 4000 W
	2 Ω	NR*	NR*
4 Channels Combined in Parallel ABCD Quadruples Current	8 Ω	500 W / 800 W	1000 W / 1000 W
	4 Ω	1000 W / 1250 W	2000 W / 2000 W
	2 Ω	1500 W / 1700 W	4000 W / 4000 W
	1 Ω	2000 W / 2500 W	4000 W / 4000 W

**NR\*:** Not Recommended due to excessive current draw

**Max Power:** 20 ms 1 kHz sine wave burst, all channels driven

**FlexAmp:** 20 ms 1kHz sine wave burst, single channel driven



DPA-8K4Q | DPA-4K4Q | DPA-2K4Q

# DPA-Q Series (4-channel) Specifications

## DPA-8K4Q

		Max / FlexAmp
4 Independent Channels A, B, C, D	8 $\Omega$	1250 W / 1250 W
	4 $\Omega$	2000 W / 2400 W
	2 $\Omega$	2000 W / 2750 W
2 Channels BTL Bridged A+B or C+D Doubles Voltage	8 $\Omega$	4000 W / 4500 W
	4 $\Omega$	NR*
	2 $\Omega$	NR*
2 Channels Parallel AB or CD Doubles Current	8 $\Omega$	1250 W / 1250 W
	4 $\Omega$	2400 W / 2400 W
	2 $\Omega$	4000 W / 5000 W
1 Channel (3 Channel Parallel) ABC Triples Current	8 $\Omega$	1250 W / 1250 W
	4 $\Omega$	2400 W / 2400 W
	2 $\Omega$	4000 W / 5000 W
1 Channel Bridged/Parallel AB+CD Doubles Current and Voltage	8 $\Omega$	5000 W / 5000 W
	4 $\Omega$	8000 W / 8000 W
	2 $\Omega$	NR*
1 Channel (4 Channel Parallel) ABCD Quadruples Current	8 $\Omega$	1250 W / 1250 W
	4 $\Omega$	2500 W / 2500 W
	2 $\Omega$	5000 W / 5000 W
	1 $\Omega$	8000 W / 8000 W

**NR\*:** Not Recommended due to excessive current draw

**Max Power:** 20 ms 1 kHz sine wave burst, all channels driven

**FlexAmp:** 20 ms 1kHz sine wave burst, single channel driven

Specifications are preliminary and are subject to change without notice.



DPA-8K4Q

# DPA-Q Series (4-channel) Specifications

	DPA-2K4Q	DPA-4K4Q	DPA-8K4Q
<b>Power Supply - Maximum Power Output</b>	2,000 W	4,000 W	8,000 W
<b>Typical Distortion</b>			
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%
<b>Maximum Distortion</b>			
4 Ω - 8 Ω	1.0%	1.0%	1.0%
<b>Frequency Response (8 Ω)</b>	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
<b>Noise</b>			
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
<b>Input Sensitivity</b>			
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
<b>Controls and indicators (front)</b>	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		
<b>Controls and indicators (rear)</b>	AC Power Disconnect (IEC C-14)		
<b>Input connectors</b>	3-pin Euro (green) and Q-LAN Network connectivity, GPIO		
DPA-2K4Q, DPA-4K4Q, DPA-8K4Q	Q-LAN Network connectivity only, GPIO		
DPA-2K4Qn, DPA-4K4Qn, DPA-8K4Qn;			
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		
<b>Dimensions (HWD)</b>	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)
<b>Weight, Net / Shipping</b>	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 cable, quick start guide, Euro (green) connectors		



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.

