



DPA-Q Series (8-channel)

DPA-8K8Q | DPA-4K8Q

Eight-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 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

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 input (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 and one relay within Q-SYS for further control and integration of other third-party peripherals.

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 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 Series network amplifiers replace equipment taking up as much as four times the rack space.

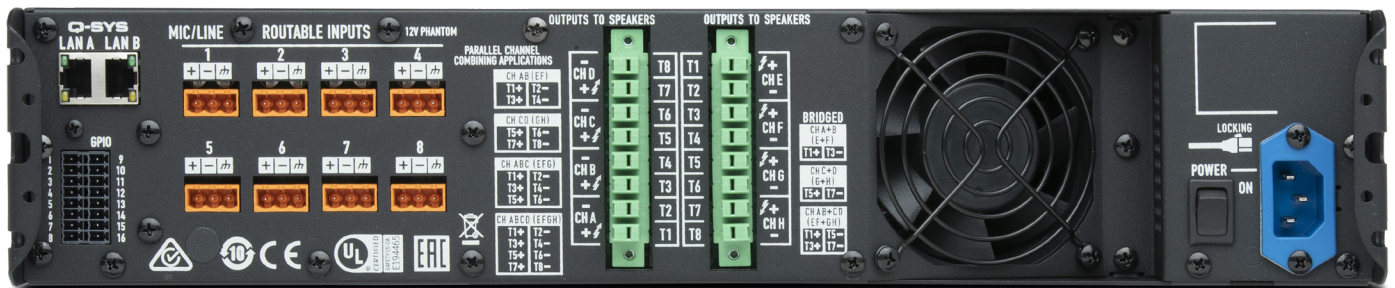
DPA-Q Series (8-channel) Specifications

	DPA-4K8Q	DPA-8K8Q	
	Max / FlexAmp	Max / FlexAmp	
8 Independent Channels A, B, C, D, E, F, G, H	70 V	500 W / 1000 W	850 W / 1250 W
	100 V	500 W / 1000 W	850 W / 1250 W
	8 Ω	500 W / 1000 W	850 W / 1250 W
	4 Ω	500 W / 1000 W	1000 W / 1500 W
	2 Ω	500 W / 1000 W	600 W / 1200 W
2 Channels Combined in BTL Bridge A+B or C+D or E+F or G+H Doubles Voltage	140 V	1400 W / 1500 W	1800 W / 2000 W
	200 V	1400 W / 1500 W	1800 W / 2000 W
	8 Ω	1000 W / 1500 W	2000 W / 3000 W
	4 Ω	1200 W / 1400 W	1600 W / 1700 W
	2 Ω	NR*	NR*
2 Channels Combined in Parallel AB or CD or EF or GH Doubles Current	70 V	1000 W / 1500 W	1800 W / 2000 W
	100 V	1000 W / 1500 W	1100 W / 2000 W
	8 Ω	1000 W / 1000 W	1100 W / 1250 W
	4 Ω	1000 W / 1250 W	1800 W / 2400 W
	2 Ω	1000 W / 1500 W	2000 W / 2500 W
3 Channels Combined in Parallel ABC or EFG Triples Current	8 Ω	1000 W / 1000 W	1100 W / 1250 W
	4 Ω	1500 W / 1500 W	1800 W / 2000 W
	2 Ω	1500 W / 1500 W	2500 W / 2500 W
4 Channels Combined in Bridged/Parallel AB+CD, EF+GH Doubles Current and Voltage	8 Ω	2000 W / 2500 W	3600 W / 4000 W
	4 Ω	2000 W / 3000 W	4500 W / 5000 W
	2 Ω	NR*	NR*
4 Channels Combined in Parallel ABCD or EFGH Quadruples Current	8 Ω	1000 W / 1000 W	1000 W / 1200 W
	4 Ω	2000 W / 2000 W	2000 W / 2400 W
	2 Ω	2000 W / 2500 W	4000 W / 4000 W
	1 Ω	2000 W / 3000 W	3000 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-4K8Q | DPA-8K8Q

DPA-Q Series (8-channel) Specifications

	DPA-4K8Q	DPA-8K8
Power Supply - Maximum Power Output	4,000 W	8,000 W
Typical distortion		
8 Ω	0.02 - 0.05%	0.02 - 0.05%
4 Ω	0.04 - 0.1%	0.04 - 0.1%
Maximum distortion		
4 Ω - 8 Ω	1.0%	1.0%
Frequency response (8 Ω)	20 Hz - 20 kHz +/- 0.3 dB	20 Hz - 20 kHz +/- 0.3 dB
Noise		
Unweighted output unmuted	>101 dB	>101 dB
Weighted output muted	>104 dB	>104 dB
Gain (1.2 V setting)	35 dB	38 dB
Damping factor	>100	>100
Input impedance	>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
	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 (IEC C-14)	
Input connectors		
DPA-4K8Q & DPA-8K8Q	3-pin Euro (green) and Q-LAN Network connectivity	
DPA-4K8Qn & DPA-8K8Qn	Q-LAN Network connectivity only	
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	
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)
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 B (conducted and radiated emissions)	
Carton contents	IEC Cable, quick start guide, Euro (green) connectors	



DPA-4K8Q

