



QXD-5K

4-Channel 5000W Power Amplifier
with DSP and Network Capability



The QXD-5K is a high-powered, 2RU, 4 x 1250W Class-D amplifier designed for performance-critical installations. It delivers up to 2500W per channel in bridged mode and supports 70V/100V operation.

Built on UMAC™ Class-D architecture, this amplifier offers exceptional dynamic range, ultra-low distortion, and highly efficient power delivery. It includes an integrated 32bit/96kHz DSP for precise signal management, featuring FIR and IIR filters, peak and RMS limiters, and onboard Quest speaker presets.

For control, a high-resolution TFT display and LED-illuminated encoder are available on the front panel. Network control and GPIO are accessible via the RJ45 port, allowing for remote management and integration into broader AV systems.

The amplifier features Neutrik speakON® outputs and powerCON® mains connections for professional-grade reliability. Optional Dante™/AES67 expansion adds network audio capability, enabling flexible system integration in complex AV environments.

KEY SPECIFICATIONS

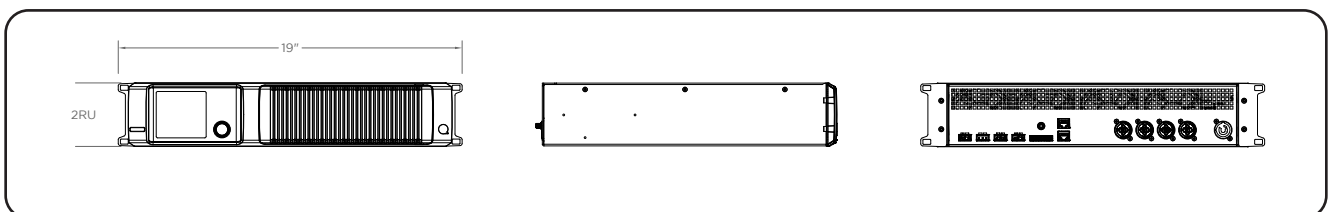
Channels	4 x 750W (Low-Z), 2 x 2500W (Bridged), 2 x 1500W (70V/100V)
DSP	32bit/96kHz FIR/IIR Filters, Limiters, Speaker Libraries
Mounting	2RU Rack
Control	RJ45 & GPIO, Front TFT Display
Options	Dante™/AES67 Expansion Card

SPECIFICATIONS



NORMAL OPERATION (PEAK)										
POWER	Load	Total Power	8Ω	4Ω	70V	100V	8Ω	4Ω	70V	100V
		Maximum Dynamic Power (@1kHz, 1% THD)	5000W	4 x 400W	4 x 750W	N/A	N/A	2x 1500W	2x 2500W	2x 1200W
NORMAL OPERATION (RMS)										
POWER	Load	Total Power	8Ω	4Ω	70V	100V	8Ω	4Ω	70V	100V
		Maximum Continuous Power (@1kHz, 1% THD)	5000W	4 x 400W	4 x 750W	N/A	N/A	2x 1500W	2x 2500W	2x 1200W
I/O	OUTPUT CIRCUITRY				UMAC™ Class-D - full bandwidth PWM modulator with ultra-low distortion					
	OUTPUT CHANNELS				Four Speaker Level Output via Neutrik speakON® connectors					
	INPUT CHANNELS				Four Balanced Line Level Inputs via 3-pin Euroblock/Phoenix connector with 5.08mm pitch and screw-lock					
	INPUT SENSITIVITY (ANALOG)				-10dbv, +4dbu, +12dbu & +28dbu					
	DEFAULT GAIN				25dB					
	FREQUENCY RESPONSE				20Hz - 20kHz (±0.25dB), 4Hz - 40kHz (-3dB)					
	TOTAL HARMONIC DISTORTION				< 0.008% (1kHz, 5W, 8Ω load)					
	DYNAMIC RANGE				> 108dBA					
	MAXIMUM INPUT LEVEL				+28dBu					
	INPUT IMPEDANCE				10kΩ Unbalanced, 20kΩ Balanced					
C	LATENCY				<350μs, flat setup					
	CONTROLS AND INDICATORS (FRONT)				High-Resolution TFT Display with Rotary Encoder with LED Halo					
	CONTROLS AND INDICATORS (REAR)				N/A					
	CONTROL AND MONITORING				RJ45 & GPIO					
	DIGITAL SIGNAL PROCESSING				32bit/96kHz with FIR/IIR Filters, Peak and RMS Limiters, Digital Delay & Custom Quest Speaker Libraries					
P	PROTECTION CIRCUITS				Thermal Protection, Over-Current Protection, DC Protection, HF Protection					
	MAINS POWER INPUT				Universal Mains, 100-240VAC, 50-60Hz					
	MAINS CONNECTOR				Neutrik powerCON®					
	POWER CONSUMPTION - STANDBY				<0.5W					
	POWER CONSUMPTION - IDLE				28W					
H	POWER CONSUMPTION - 1/8TH POWER / 8Ω Load				260W					
	POWER CONSUMPTION - 1/3RD POWER / 8Ω Load				650W					
	HEAT GENERATED - STANDBY				1.7BTU/hr / 1.7kJ per hour					
	HEAT GENERATED - 1/8TH POWER / 8Ω Load				205BTU/hr / 214kJ per hour					
	COOLING				Fan-Forced Air Cooling - User-Selectable Temperature-Dependent Control Curves					
S	FAN NOISE				36dB(A) (Anechoic Chamber, @ 1m)					
	RACK SIZE				2RU					
	DIMENSIONS (W x H x D)				482 x 88 x 415mm (19" x 3.5" x 16.4")					
	WEIGHT				10.2kg (22.5lbs)					
	SHIPPING DIMENSIONS (W x H x D)				610 x 135 x 550mm (24" x 5.3" x 21.6")					
A	SHIPPING WEIGHT				12kg (26.5lbs)					
	ACCESSORIES (INCLUDED)				Mains Cable, Euroblock/Phoenix Plugs, Wi-Fi Antenna					
	ACCESSORIES (AVAILABLE SEPARATELY)				None					
OPTIONS				Dante® Expansion Card (additional 4 inputs, Dante® AoIP, AES67 compatible)						

*Quest Engineering reserves the right to make changes in specifications, or products without prior notice.



QXD-5K

The amplifier shall be a four-channel Class D power amplifier employing UMAC™ full-bandwidth PWM modulation with ultra-low distortion. The amplifier shall provide a maximum dynamic and continuous power output of 4×750 W into 4 ohms and 4×400 W into 8 ohms. In bridged-mono mode, the amplifier shall deliver 2×2500 W into 4 ohms, 2×1500 W into 8 ohms, 2×1200 W into 70 V lines, and 2×1500 W into 100 V lines.

Frequency response shall be 20 Hz to 20 kHz (± 0.25 dB), with a -3 dB bandwidth from 4 Hz to 40 kHz. Total harmonic distortion shall be less than 0.008% (1 kHz, 5 W, 8-ohm load). The amplifier shall provide a dynamic range greater than 108 dBA, a maximum input level of +28 dBu, and an input impedance of 10 k Ω unbalanced or 20 k Ω balanced. Default voltage gain shall be 25 dB. Latency shall be less than 350 μ s under flat DSP conditions.

Input connections shall consist of four analogue balanced line-level inputs via 3-pin Euroblock/Phoenix connectors with 5.08 mm pitch and screw-lock. Output connections shall be via four Neutrik speakON® connectors.

Front panel controls shall include a high-resolution TFT display with an encoder featuring an LED halo. Control and monitoring interfaces shall include RJ45 and GPIO. Digital signal processing shall operate at 32-bit/96 kHz and include FIR/IIR filters, peak and RMS limiters, and access to custom Quest speaker libraries. Protection circuits shall include thermal, over-current, DC, and high-frequency protection.

The amplifier shall operate on universal mains voltage, 100-240 V AC, 50/60 Hz, with a Neutrik powerCON® mains connector. Power consumption shall not exceed 0.5 W (standby), 28 W (idle), 260 W (1/8 power, 8-ohm load), or 650 W (1/3 power, 8-ohm load). Cooling shall be provided by temperature-dependent fan-forced air cooling. Fan noise shall not exceed 36 dB(A) at 1 metre under anechoic conditions.

The amplifier shall occupy 2RU of vertical rack space.

Physical dimensions shall be 482 mm (W) \times 88 mm (H) \times 415 mm (D). Shipping dimensions shall be 610 mm (W) \times 135 mm (H) \times 550 mm (D). Net weight shall be 10.2 kg; shipping weight shall be 12 kg.

The amplifier shall be supplied with mains cable, Euroblock connectors, and Wi-Fi antenna. Optional accessories shall include rear rack ears and a Dante® expansion card (providing an additional 4 inputs with Dante® AoIP and AES67 compatibility). The amplifier shall be the Quest QXD-5K.

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