

General Specifications

Sampling Frequency	Internal	44.1kHz 48kHz	
	External	44.1kHz +4.1667%, +0.1%, -0.1%, -4.0%	±200ppm
		48kHz +4.1667%, +0.1%, -0.1%, -4.0%	±200ppm
Signal Delays	Less than 2.5ms, INPUT to OMNI OUT, Fs= 48kHz		
Fader	100mm motorized, Resolution=1024steps +10dB to -138dB, -∞dB all faders		
Frequency Response	+0.5, -1.5dB 20Hz-20kHz, refer to +4dBu output @1kHz INPUT to OMNI OUT		
Total Harmonic Distortion *3	Less than 0.05% 20Hz-20kHz@+4dBu into 600Ω INPUT to OMNI OUT, Input Gain= Min.		
Hum & Noise *4	-128dBu typ., Equivalent Input Noise, Input Gain= Max., -88dBu, Residual output noise, ST master off		
Dynamic Range	112dB typ., DA Converter, 108dB typ., INPUT to OMNI OUT, Input Gain= Min.		
Crosstalk@1kHz	-100dB *1, adjacent INPUT/OMNI OUT channels, Input Gain= Min.		
Dimensions (WxHxD) and Net Weight	QL5: 828mm x 272mm x 563mm (32.6in x 10.7in x 22.2in), 21.8kg (48.1lb) QL1: 468mm x 272mm x 562mm (18.4in x 10.7in x 22.1in), 14.7kg (32.4lb)		
Power Requirements (in watts)	QL5: 200W QL1: 135W		
Power Requirements (in volts,Hz)	100-240V 50/60Hz		
Temperature Range	Operating temperature range: 0 - 40°C, Storage temperature range: -20 - 60°C		
Included Accessories	Owner's Manual, dust cover (QL5 only), power cord, DVS license sheet		
Optional Accessories	Rackmount kit RK1 (QL1 only), Mini-YGDAI cards *2, Gooseneck Lamp LA1L, Nuendo Live		

*1. A 22kHz, 30dB/Oct filter is used to measure crosstalk.

*2. For more information about Mini-YGDAI card support, refer to the Yamaha pro audio website.
<http://www.yamahaproaudio.com/>

*3. An 80kHz, 18dB/Oct filter is used to measure total harmonic distortion.

*4. An A-Weight filter is used to measure hum & noise.

Input/Output Specifications

Analog input specifications

Input Connectors	GAIN	Input Impedance	Source Impedance	Input Level			Connector
				Sensitivity *1	Nominal	Max. before clip	
INPUT 1-32 *6	+66dB	7.5 kΩ	50-600 Ω Mics & 600 Ω Lines	-82dBu (61.6μV)	-62dBu (0.616mV)	-42dBu (6.16mV)	XLR-3-31 type (Balanced) *2
	-6dB			-10dBu (245mV)	+10dBu (2.45V)	+30dBu (24.5V)	

*1. The sensitivity is the input level required for output at +4dBu (1.23V) or at the defined level when all the faders and level controllers are set to the maximum value.

*2. XLR-3-31 connectors are balanced jacks (1=GND, 2=HOT, 3=COLD).

*3. 0dBu=0.775 Vrms for all specifications.

*4. All the AD converters use 24-bit linear/128-times oversampling.

*5. The INPUT connectors have +48V DC (phantom power) jacks, each of which can be turned on/off individually from the console software.

*6. QL1: INPUT1-16

Analog output specifications

Output Connectors	Output Impedance	Load Impedance	Maximum Output Level *5	Output Level		Connector
				Defined Level	Maximum Non-Clip Level	
OMNI OUT 1-16 *7	75 Ω	600 Ω Lines	+24dB (default)	+4dBu (1.23V)	vt+24dBu (12.3V)	XLR-3-32 type (Balanced) *1
			+18dB	-2dBu (616mV)	+18dBu (6.16V)	
PHONES	15 Ω	8 Ω Phones	-	75mW *6	150mW	Stereo Phone Jack (TRS) (Unbalanced) *2
		40 Ω Phones	-	65mW *6	150mW	

*1. XLR-3-32 connectors are balanced jacks (1=GND, 2=HOT, 3=COLD).

*2. The PHONES connectors for stereo headphones are balanced jacks (Tip=LEFT, Ring=RIGHT, Sleeve= GND).

*3. 0 dBu=0.775 Vrms for all specifications.

*4. All the DA converters use 24-bit linear/128-times oversampling.

*5. The console has an internal switch for toggling the maximum output level.

*6. This is a value measured with the PHONES LEVEL knob set to 10 dB below the maximum position.

*7. QL1: OMNI OUT 1-8

Digital input/output specifications

Connectors	Format	Data length	Level	Audio	Connector
Primary/Secondary	Dante	24bit or 32bit	1000Base-T	64ch Input/64ch Output@48kHz *1	EtherCON Cat5e

*1. QL1: 32ch Input/32ch Output@48kHz

Digital output specifications

Connectors	Format	Data length	Level	Connector
DIGITAL OUT	AES/EBU	AES/EBU Professional Use	24bit	RS422
				XLR-3-32 type (Balanced) *1

*1. XLR-3-32 connectors are balanced jacks (1=GND, 2=HOT, 3=COLD).

I/O SLOT (1-2) specifications

Each I/O Slot accepts a Mini-YGDAI card.

Only Slot 1 has a serial interface.

Control I/O specifications

Connectors	Format	Level	Connector
MIDI	IN	MIDI	DIN Connector 5P
	OUT	MIDI	DIN Connector 5P
WORDCLOCK	IN	-	BNC Connector
	OUT	TTL/75 Ω terminated	BNC Connector
GPI (5IN/5OUT)		-	D Sub Connector 15P(Female) *1
NETWORK		IEEE802.3	10BASE-T/100Base-TX
LAMP (QL5: x 2, QL1: x 1)		-	RJ-45
USB HOST		0V-12V	XLR-4-31 type *2
		USB 2.0	USB A Connector (Female)

*1. Input pin: TTL level, w/ internal pull-up (47kΩ) Output pin: Open drain output (Vmax=12V, maximum sink current/pin=-75mA) Power supply pin: Output voltage Vp=5V, Max. output current=300mA

*2. 4 pin=+12V, 3 pin=GND, Lamp nominal power: 5W, Brightness (voltage) can be adjusted from the software.