

## Overview

Outstanding sound, innovative features, and extensive scalability in an innovative audio interface



Rear Panel

## Features

- Designed and constructed to bring out the full sonic potential of the Nuendo/Cubase DAW software.
- Three models: 16-channel analog, 16-channel digital, and 8-channel analog + 8-channel digital.
- Up to 24 bit/192 kHz hardware operation in the Nuage I/O units, with extremely low jitter and outstanding AD/DA resolution.
- True Integrated Monitoring™ reduces monitoring latency to well below the perception threshold.
- True Integrated Monitoring™ works flawlessly with Nuendo Control Room monitoring features, a 16 monitor bus cascade, and a 16x16 monitor matrix.
- Up to eight Nuage I/O units can be cascaded and provide a maximum of 128 channels.

## Specifications

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### General Specifications

<b>Sampling Frequency</b>	Internal	44.1kHz/48kHz/88.2kHz/96kHz/176.4kHz/192kHz	
	External	44.1kHz 1041675	±200ppm
		48kHz 1041675	±200ppm
		88.2kHz 1041675	±200ppm
		96kHz 1041675	±200ppm
		176.4kHz 1041675	±200ppm
		192kHz 1041675	±200ppm
<b>Frequency Response</b>	±0.5dB, 20Hz-20kHz, ref to the nominal output level @1kHz, Input&Output Gain: 0dB, Input level +4dBu (typ)		
<b>THD+N<sup>*1</sup></b>	Less than 0.005%, input to output, GAIN: 0dB		
<b>Dynamic Range</b>	120dB typ.,ADC 120dB typ.,DAC		
<b>Crosstalk@1kHz</b>	-100dB, CH1-16, adjacent inputs		
<b>Power Requirements (wattage)</b>	51W		
<b>Power Requirements (voltage and hertz)</b>	US/Canada: 120V 60Hz Japan: 100V 50/60Hz China: 110-240V 50/60Hz Korea: 220V 60Hz Other: 110-240V 50/60Hz		
<b>Dimensions (W x H x D)</b>	480mm x 88mm x 369 mm (18-7/8" x 3-1/2" x 14-1/2")		
<b>Net Weight</b>	6.7kg (14.1lbs)		
<b>Included Accessories</b>	Power cable, Ferrite core, Rubber stoppers (4), Operation Manual		

\*1 These characteristics are measured with A-weighting filter and/or 30kHz LPF.

## Specifications

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### Analog Input Characteristics

Input Terminal	Actual Load Impedance	For Use With Nominal	GAIN	Input level		Connector in Console
				Nominal	Max.before clip	
ANALOG INPUT	20k $\Omega$ (BAL)	150 $\Omega$ Lines	0dB	+4dBu (1.23 V)	+24dBu (12.28V)	D-SUB Connector 25P (Female)
			+12dB	-10dBV (0.32 V)	+10dBV (3.16V)	
	10k $\Omega$ (UNBAL)	600 $\Omega$ Lines	0dB	+4dBu (1.23 V)	+24dBu (12.28V)	D-SUB Connector 25P (Female)
			+12 dB	-10dBV (0.32 V)	+10dBV (3.16V)	

### Analog Output Characteristics

Output Terminal	Actual Source Impedance	For Use With Nominal	GAIN SW	Output level		Connector in Console
				Nominal	Max.before clip	
ANALOG OUTPUT	75 $\Omega$ (BAL)	10k $\Omega$ Lines	0dB	+4dBu (1.23 V)	+24dBu (12.28V)	D-SUB Connector 25P (Female)
			-6dB		+18dBu (6.16 V)	

### Digital I/O Characteristics

Terminal	Format	Data length	Level	Connector in Console
Primary/Secondary	Dante	24bit	1000Base-T	RJ-45 x 2
Cascade	-	32bit	LVDS*2	RJ-45 x 2

### Control I/O Characteristics

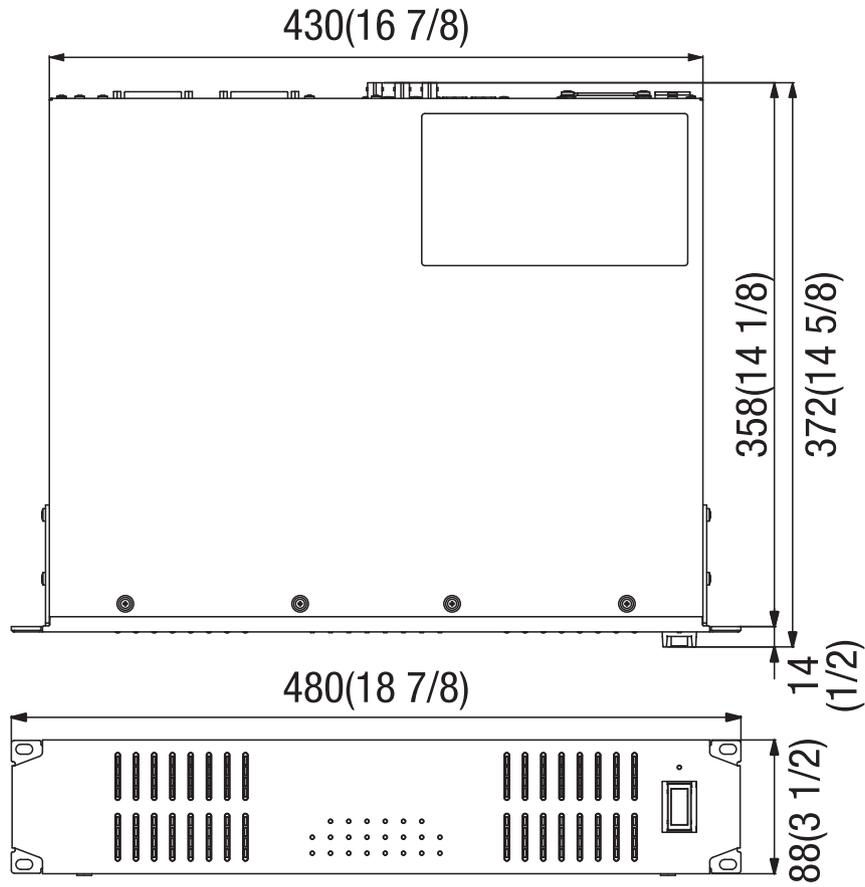
Terminal		Level	Connector in Console
WORD CLOCK	IN	TTL/75 $\Omega$ terminated	BNC Connector
	OUT	TTL/75 $\Omega$	BNC Connector
System Link Out		1.0 $\pm$ 0.2Vp-p/75 $\Omega$ *3	BNC Connector

\*2 Hi Speed CML

\*3 AES-3id

**Dimensions**

Unit: mm (inch)



## Architectural and Engineering Specifications

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The Yamaha Nio500-A16 shall be a Nuage I/O unit with 16 analog inputs and outputs for use with the Yamaha Nuage Advanced Production System. The Nio500-A16 shall have 24 bit/192 kHz hardware operation to ensure that the full performance of the Nuendo/Cubase DAW is utilized. The Nio500-A16 shall include JetPLL™ jitter reduction technology for low jitter and high AD/DA resolution. Advanced audio interface DSP hardware and “True Integrated Monitoring™” shall reduce monitoring latency to below the threshold of perception. True Integrated Monitoring™ shall be compatible with the Nuendo/Cubase Control Room monitoring. 32 monitor bus cascade and a 16 x 16 monitor matrix shall provide expandability and easy setup. Full 7.1 channel surround monitoring support shall be provided to take maximum advantage of the Nuendo DAW's advanced surround mixing capabilities. Built-in DSP based bass management, delay, and level adjustment functionality shall be included to facilitate surround monitoring setup for any studio. Dante audio networking technology shall be included for high-quality, ultra-low latency audio transmission via standard Ethernet cables and to allow easy setup. A secondary port shall support redundant audio network connections. It shall be possible to cascade up to eight Nuage I/O units to provide as many as 128 channels for large-scale systems (the analog Nio500-A16, digital Nio500-D16, and analog + digital Nio500-A8D8 can be combined as required). Dimensions shall be 480 (W) x 88 (H) x 369 (D) mm. Weight shall be 6.7 kg.

\*All information subject to change without notice.

\*All trademarks and registered trademarks are property of their respective owners.

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