Architects & Engineers Specification

S-4000S Digital Snake System

Digital Snake

The digital audio transmission system (Digital Snake) shall be a modular system that can be configured in groups of 8 channels up to a maximum of 40 channels per transmission cable. The system shall consist of one Input or Stage Box Module, with XLR or AES/EBU inputs, as well as the option for multiple line-level “returns” or Outputs. It will also consist of at least one Output or Front-of-House (FOH) Module that will have line level outputs as well as the option for some line level inputs or returns.

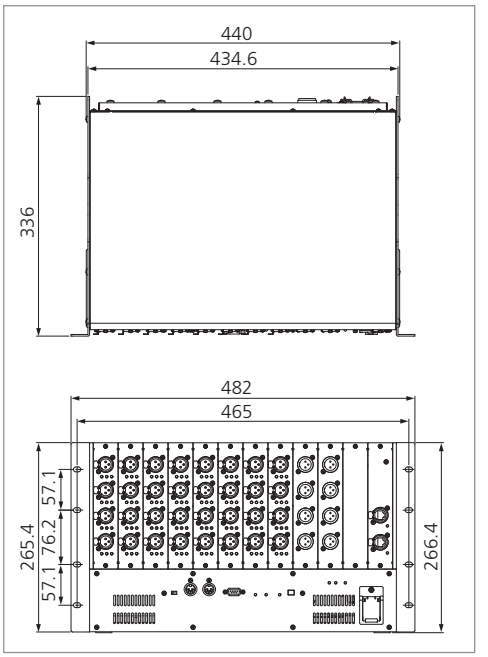
The modularity shall allow for different configurations of the Input Module or Stage Box including 40 inputs and 0 outputs, 32 inputs and 8 outputs, or 24 inputs and 16 outputs. The transmission cable between the Input or Stage Box Module and the Output or FOH Module(s) shall be a Cat5e or Cat6 cable.

The inputs shall be of very high quality and accept both line and microphone level inputs with individually selectable phantom power. The input gains or trims for the inputs as well as their phantom power settings, shall be remotely controllable from the Stage or FOH Module using either a hardware remote control unit or a computer. The gain level shall be controllable in 1 dB steps. The system shall also offer at least 10 preset memories of different configurations of the input gain and phantom power settings.

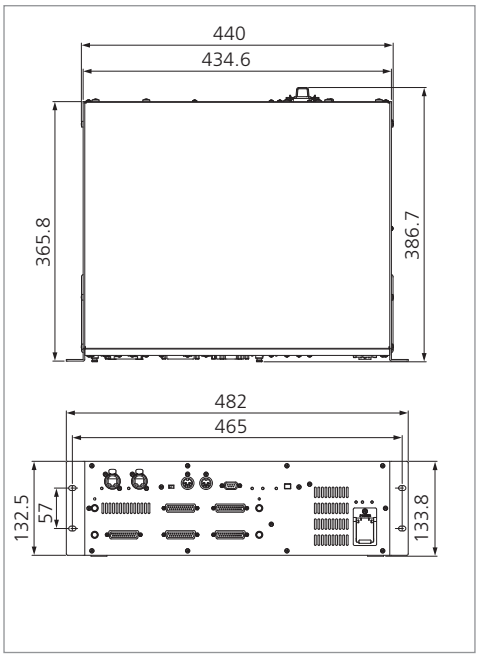
The audio protocol for a 40-channel system shall have a 96 kHz sampling rate, provide 24-bit audio, and have a protocol latency of 375 microseconds from the stage unit to the FOH unit. The system shall have redundant Ethernet ports allowing the connection of two Cat5e or Cat6 cables from the Input unit to the FOH unit. The system shall be designed to switch automatically from one cable to the other in the case of damage to one of the cables. The system shall allow the user to copy or “split” the input sources to several Output Modules using a fast gigabit Ethernet switching hub.

The system shall be the Roland S-4000S Digital Snake System.

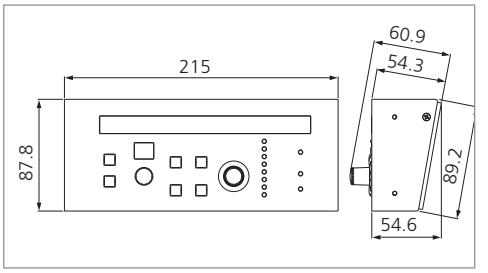
S-4000S-3208 Stage Unit Dimensions

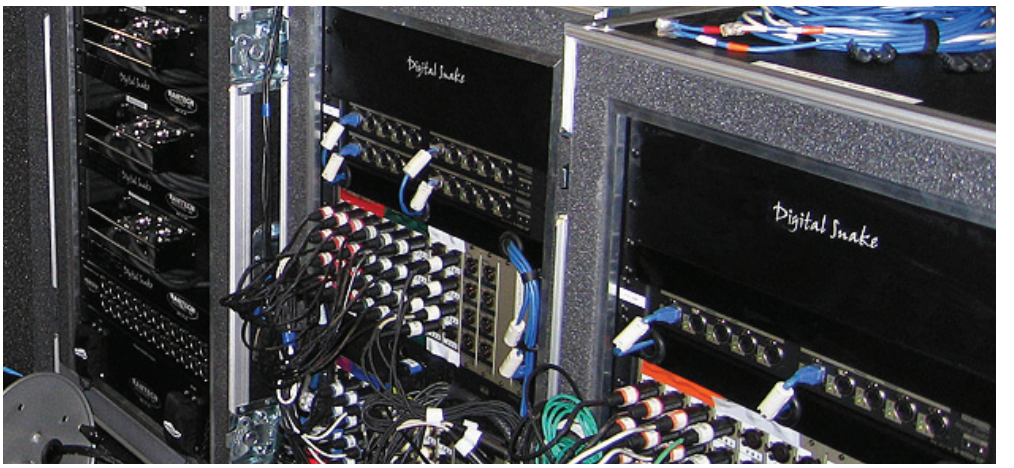


S-4000H FOH Unit Dimensions



S-4000R Remote Control Dimensions





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Architects & Engineers Specification

S-4000S Digital Snake System

Digital Snake

S-4000 Digital Snake System Main Specifications

S-4000S-3208 40CH I/O MODULAR RACK

Number of Channels	32 in 8 out
AD Conversion	Sample Rate: 96.0 kHz Signal Processing: 24 bit
DA Conversion	Sample Rate: 96.0 kHz Signal Processing: 24 bit
Frequency Response	-2 dB / +0 dB (@ +4 dBu, 20 Hz to 20 kHz)
Total Harmonic Distortion + Noise	0.05 % or less (Pad: On, Input Gain: +4 dBu, 22 to 20000 Hz)
Dynamic Range	110 dB
Cross Talk	-80 dB
Nominal Input Level	-65 to -10 dBu (PAD: Off) -45 to +10 dBu (PAD: On) (1 dB step, Max. +28 dBu)
PAD	20 dB On/Off
Input Impedance	20 k ohms
Nominal Output Level	+4 dBu, Max. +22 dBu
Output Impedance	150 ohms
Recommended Load Impedance	10 k ohms or greater
Residual Noise Level (IHF-A, typ.)	-90 dBu
Equivalent Input Noise Level (E.I.N.)	-128 dB
Network Latency	375 microseconds when using REAC cable only (AD - REAC - DA Latency: about 1.2 ms)

Connectors	Input: 32 (XLR type, balanced, phantom power, 4 ch input module Output: 8 (XLR type, balanced, 4 ch output module x 2) REAC: MAIN, BACKUP (RJ-45 EtherCon type) Remote Connector: 1 (RS-232C, DB-9 type) MIDI Connectors: IN, OUT (5-pin DIN type)
Indicator	EXT Indicator (External Power Supply Unit) INT Indicator REAC Indicator CTRL Indicator ALARM Indicator MUTE ALL OUTPUTS Indicator
AC Power Supply	AC 115 V, AC 117 V, AC 220 V, AC 230 V, AC 240 V (50/60 Hz)
DC Power Supply	+24 V (from optional external power supply unit : S-240P):
Power Consumption	130 W
Current Draw (for an optional external power supply unit; Model S-240P)	6 A
Phantom Power	+48 V / 14 mA (each input on SI-AD4, remote controlled)
Dimensions	482.0 (W) x 336.0 (D) x 266.4 (H) mm 19 (W) x 13-1/4 (D) x 10-1/2 (H) inches
Weight	17.0 kg, 37 lbs 8 oz
Operation Temperature	0 to +40 degrees Celsius +32 to +104 degrees Fahrenheit
Accessories	Power Cord, REAC cable (10 m, Cat5e crossover cable) Adhesive-backed number label sheets, REAC Connector Covers Ferrite Cores, Owner's Manual

* 0 dBu = 0.775 \



S-4000H 8X32 FOH UNIT

Number of Channels	8 in 32 out
AD Conversion	Sample Rate: 96.0 kHz Signal Processing: 24 bit
DA Conversion	Sample Rate: 96.0 kHz Signal Processing: 24 bit
Frequency Response	-2 dB / +0 dB (@ +4 dBu, 20 Hz to 20 kHz)
Total Harmonic Distortion + Noise	0.05 % or less (Input Gain: +4 dBu, 22 to 20000 Hz)
Dynamic Range	110 dB
Cross Talk	-80 dB
Nominal Input Level	+4 dBu, Max. +22 dBu
Input Impedance	30 k ohms
Nominal Output Level	+4 dBu, Max. +22 dBu
Output Impedance	600 ohms
Recommended Load Impedance	10 k ohms or greater
Residual Noise Level (IHF-A, typ.)	-90 dBu
Network Latency	375 microseconds when using REAC cable only (AD - REAC - DA Latency: about 1.2 ms)
Connectors	Input: 1 (DB-25 type, balanced, 8 channels) Output: 4 (DB-25 type, balanced, 32 channels each) REAC: MAIN, BACKUP (RJ-45 EtherCon type) Remote Connector: 1 (RS-232C, DB-9 type) MIDI Connectors: IN, OUT (5-pin DIN type)

Indicators	EXT Indicator (External Power Supply Unit) INT Indicator REAC Indicator CTRL Indicator ALARM Indicator MUTE ALL OUTPUTS Indicator
AC Power Supply	AC 115 V, AC 117 V, AC 220 V, AC 230 V, AC 240 V (50/60 Hz)
DC Power Supply	+24 V (from optional external power supply unit : S-240P):
Power Consumption	70 W
Current Draw (for an optional external power supply unit; Model S-240P)	6 A
Dimensions	482.0 (W) x 386.7 (D) x 133.0 (H) mm 19 (W) x 15-1/4 (D) x 5-1/4 (H) inches
Weight	9.4 kg, 20 lbs 12 oz
Operation Temperature	0 to +40 degrees Celsius +32 to +104 degrees Fahrenheit
Accessories	Power Cord, REAC Connector Covers, Ferrite Cores, Connector Guard, Screws for Connector Guard Installation Manual

* 0 dBu = 0.775 \



S-4000R REMOTE CONTROL UNIT

Connector	Remote Connector: 1 (RS-232C, DB-9 type)
Indicators	CLIP Indicators, SIG Indicators, POWER Indicator, REAC Indicator, CTRL Indicator, Level Meter
Power Supply	Supplied from connected device. (S-4000S, S-4000H; through the remote cable)
Dimensions	215.0 (W) x 87.0 (D) x 54.6 (H) mm, 8-1/2 (W) x 3-7/16 (D) x 2-3/16 (H) inches
Weight	0.8 kg, 1 lb 13 oz
Operation Temperature	0 to +40 degrees celsius, +32 to +104 degrees Fahrenheit
Accessories	Remote Cable (3 m), Rack Mount Brackets, Installation Manual



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