

ROCKNET 100 Series

RockNet 100 is the cost effective solution to enter the world of RockNet digital audio networks. Based on the renowned RockNet 300 technology, RockNet 100 provides the same digital audio quality and ease of use with a reduced number of 80 channels. Of course all RockNet 100 devices are compatible with the RockNet 300 series.

RockNet 100's rugged steel enclosure is made for heavy-duty road use and offers the distinct advantage of magnetic shielding. All connectors are gold plated. The circuit design is streamlined to ultra low noise and minimum distortion to meet the highest demands in audio quality.

The RN.101.IO provides 16 microphone/line input and 8 line output channels on XLR connectors, while the RN.102.IO provides 8 microphone/line inputs and 16 line outputs.

The circuit design is optimized to maximize audio quality. The mic pre-amps are similar to the highly acclaimed 300 series pre-amps and the converters are characterized by high definition and wide dynamic range based on proprietary technology.



Any input channel of the RockNet 100 interfaces can be remotely controlled by digital mixing consoles or the RockWorks PC/Mac software:

- pre-amp gain adjustable between -6dB and +66dB in 1dB steps
- select 48V phantom power (with auto-mute)
- mute channel

Each output channel can be controlled by the RockWorks software: output level adjustable between -9dBu and +24dBu in 1dB steps..

ROCKNET 100 – Features

- » Cost-effective digital snake/audio network solution
- » 80 channels via locking EtherCon RJ45 cables
- » Network redundancy
- » Simple user interface – no computer required
- » Remote control
- » Superb audio quality

RN.101.IO Microphone / Line Input & Line Output

The RN.101.IO provides 16 line/microphone inputs (with 48V phantom power) and 8 line output channels on XLR connectors. The circuit design is optimized to maximize audio quality. The mic preamps are similar to the highly acclaimed 300 series preamps.

RN.102.IO Line Output & Microphone / Line Input

The RN.102.IO provides 16 output channels and 8 line/microphone input (with 48V phantom power) on XLR connectors. The circuit design is optimized to maximize audio quality.

RN.141.MY Yamaha Console Interface

The RN.141.MY card fits into a single MY card expansion slot of various Yamaha products and gives access to 16 input and 16 output channels. A wordclock input and output is available to the host product via the backplane connector. By using the RN.141.MY the respective Yamaha product becomes a part of the RockNet network. Remote control is supported by either a 9-pin connector or via the backplane (for LS9 consoles). The card is compatible with Yamaha DM1000, DM2000, DME24N, DME64N, LS9-16, LS9-32, M7CL, PM5D, PM5D RH, TX4n, TX5n and TX6n host devices.

General Network Specifications

Audio Data Rate	2 x 184.32 Mbit/s (redundant ring)	
Ancillary Data Rate	10 Mbit/s sustained data rate	
Number of Nodes	1 .. 99	
Sample Rate	48 kHz, 96 kHz	+ / - 10 ppm (internal) + / - 80 ppm (external lock range)
Number of Channels	160 @ 24 Bit / 48 kHz	
	80 @ 24 Bit / 96 kHz	
	120 @ 32 Bit / 48 kHz	
	60 @ 32 Bit / 96 kHz	
Delay	400 µs D In - D Out @ 48 kHz	maximum system size (99 network devices within 10 km system perimeter)
	850 µs A In - A Out @ 48 kHz	
Cable Length	150 m CAT5e Cable	max. distance between two network devices (depending on cable quality)
	2 km Multi Mode Fiber	
	20 km Single Mode Fiber	
Wordclock In	TTL / 75 Ω BNC Connector	
Wordclock Out	TTL / 75 Ω BNC Connector	
USB Port	USB 1.1 / 2.0 compatible	
Ethernet Port	10 BaseT / 100 BaseT	
Operating Temperature	0 .. 50° C	32 .. 122° F
Power Requirements	100 .. 240 VAC	47 .. 63 Hz

General Dimension and Specifications

Operating Temperature	32 .. 122° F	0 .. 50° C
Power Requirements	100 .. 240 VAC	47 .. 63 Hz
Power Consumption	25 W	
Dimensions (W x H x D)	19" x 1.75" x 7.9"	483 x 44 x 200 mm
Weight	6.6 lbs	3.0 kg

RN.301.MI Microphone / Line Input Interface

Gain Range	-6 .. 66 dB	150 Ω Source
Gain Step	1 dB	+/- 1 dB
Sensitivity	+30 dBu .. -42 dBu	Max. before clip
Max. Input Level	+30 dBu	
Input Impedance	5.5 kΩ	
Phantom Power	+48 V	
Mute	selectable per channel	
Equivalent Input Noise (EIN)	-127 dBu	@ Gain 66 dB
	-151 dBFS	150 Ω Source, 20 kHz BW
	-122 dBu	@ Gain > 30 dB
Dynamic Range	119 dB	@ Gain = -6 dB 150 Ω Source, "A" weighted

Frequency Response	-0.1 dB	20 Hz .. 20 kHz	@ FS = 48 kHz
Common Mode Rejection	> 100 dB	@ 50 Hz-15 kHz	150 Ω Source, > 40 dB Gain
Crosstalk	< -130 dB	@ 15 kHz	adjacent channels
Total Harmonic Distortion	0.006 %	@ 66 dB Gain	Full scale, 100 Hz-10 kHz 150 Ω Source, 20 kHz BW
Delay	420 µs		@ FS = 48 kHz

RN.302.LO Line Output Interface

Max. Output Level	+24 dBu	+/- 0.2 dB	@ digital full scale, 600 Ω load
Output Level Range	-9 .. +24 dBu		
Output Impedance	< 1 Ω		
Impedance Imbalance	< 1 %		
Mute	selectable per channel		
Noise	-94 dBu	@ +24 dBu Out	"A" weighted
Dynamic Range	119 dB		
Crosstalk	< -130 dB	@ 15 kHz	adjacent channels

Frequency Response	-0.1 dB	20 Hz .. 20 kHz	@ FS = 48 kHz
	-0.5 dB	20 Hz .. 40 kHz	@ FS = 96 kHz
Total Harmonic Distortion	< 0.001%	@ +24 dBu Out	100 Hz - 10 kHz
	< 0.002%	@ + 4 dBu Out	600 Ω Load, 20 kHz BW
Resolution	24 Bit		
Sample Rate	48 kHz, 96 kHz*		
Delay	330 µs		@ FS = 48 kHz

RN.331.DD / RN.332.DO / RN.335.DI Digital Interfaces

Input Format	AES3
Input Impedance	110 Ω
Min. Input Level	200 mVpp
Sample Rate	48 kHz, 96 kHz
Resolution	24 Bit
Signal Delay	150 µs
Level Indicators	Signal, Clip
Mute	selectable per channel

Output Format	AES3
Output Impedance	110 Ω
Output Level	> 5 Vpp @ no load
Sample Rate	48 kHz, 96 kHz
Resolution	24 Bit
Signal Delay	150 µs
Level Indicators	Signal, Clip
Mute	selectable per channel

RN.334.MD RockNet MADI Interface

Input Format	AES10 (MADI)	
Electrical Inputs	Input Impedance	75 Ω
	Min. Input Level	200 mVpp
Optical Inputs	Wavelength / Fiber Type	1.300nm MM/GI
	Connector	Duplex LC (SFP Module*)
Frame Format (Channels per Frame)	56 Ch, 64 Ch	@ 48 kHz
	28 Ch, 32 Ch	@ 96 kHz
Interface Priority	selectable (electrical/optical)	
Sample Rate	48 kHz, 96 kHz	
Resolution	24 Bit	
Signal Delay	125 μs	

Output Format	AES10 (MADI)	
Electrical Outputs	Output Impedance	75 Ω
	Output Level	600 mVpp
Optical Outputs	Wavelength / Fiber Type	1.300nm MM/GI
	Connector	Duplex LC (SFP Module*)
Frame Format (Channels per Frame)	56 Ch, 64 Ch	@ 48 kHz
	28 Ch, 32 Ch	@ 96 kHz
Sample Rate	48 kHz, 96 kHz	
Resolution	24 Bit	
Signal Delay	125 μs	

*SFPs need to be purchased separately.

RN.341.MY Yamaha Interface Card

Number of Channels	16 Inputs, 16 Outputs	
Resolution	24 Bit	
Sample Rate	48 kHz, 96 kHz	
Remote Control Interface	RS-422, AD8HR protocol compatible	
USB Port	USB 1.1 / 2.0 compatible	
Ethernet Port	10 BaseT / 100 BaseT	
Operating Temperature	0 .. 50° C	32 .. 122° F

RN.343.VI Soundcraft Studer Interface Card

Number of Channels	64 Inputs, 64 Outputs	
Resolution	24 Bit	
Sample Rate	48 kHz, 96 kHz	
Wordclock	Wordclock In/Out	
USB Port	USB 1.1 / 2.0 compatible	
Ethernet Port	10 BaseT / 100 BaseT	
Operating Temperature	0 .. 50° C	32 .. 122° F

RN.101.IO & RN.102.IO Microphone Pre-amp / Line Output

Inputs

Gain Range	-6 .. 66 dB	150 Ω Source
Gain Step	1 dB	+/- 1dB
Sensitivity	+30 dBu .. -42 dBu	Max. before clip
Max. Input Level	+30 dBu	
Input Impedance	5.5 kΩ	
Phantom Power	+48 V selectable per channel	
Equivalent Input Noise (EIN)	-127 dBu	@ Gain 66 dB
	-151 dBFS	150 Ω Source, 20 kHz BW
	-121 dBu	@ Gain > 30 dB
Dynamic Range	114 dB	@ Gain = -6 dB
Frequency Response	-0.1 dB	20 Hz .. 20 kHz
Common Mode Rejection	> 100 dB	@ 50 Hz-15 kHz
Crosstalk	< -120 dB	@ 15 kHz
Total Harmonic Distortion	0.006 %	@ 66 dB Gain
Delay	420 μs	@ FS = 48 kHz

Outputs

Max. Output Level	+24 dBu	+/- 0.2 dB	@ digital full scale, 600 Ω load
Output Level Range	-9 .. +24 dBu		
Output Impedance	< 1 Ω		
Impedance Imbalance	< 1%		
Noise	-90 dBu	@ +24 dBu Out	„A“ weighted
Dynamic Range	114 dB		
Frequency Response	- 0.1 dB	20 Hz .. 20 kHz	@ FS = 48 kHz
Crosstalk	< -120 dB	@ 15 kHz	adjacent channels
Total Harmonic Distortion	< 0.001%	@ +24 dBu Out	
	< 0.002%	@ + 4 dBu Out	100 Hz - 10 kHz; 600 Ω Load, 20 kHz BW
Resolution	24 Bit		
Delay	330 μs		@ FS = 48 kHz

Overall

Operating Temperature	32 .. 122° F	0 .. 50° C
Power Requirements	100 .. 240 VAC	47 .. 63 Hz
Power Consumption	45 VA	
Dimensions (W x H x D)	19" x 5.25" x 3.5"	483 x 133 x 90mm
Weight	7.7 lbs	3.5 kg