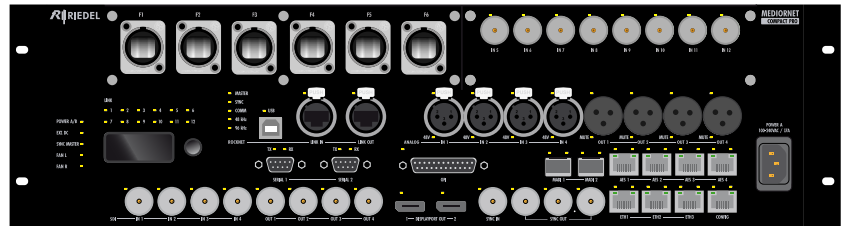


# MediorNet MN-Compact PRO

## MediorNet Compact The 50G Media Distribution Network

The MediorNet Compact system comprises three device versions: Basic, Plus and Pro. All units are economic solutions for small to medium sized Media Network applications and are fully compatible to all MediorNet devices. In large Media Network applications MediorNet Compact devices are recommended as Satellite Stage Boxes.



### Main System Characteristics

- Compact 3RU Design for rackmount and standalone applications
- Integrated Video, Audio and Data Router
- Slot for Option Boards
- Handles Multiple Redundant Sync References (Seamless Takeover)
- Built-in Backup Sync Reference
- Built-in VITC Generator (PAL, NTSC, NTSC-Df)
- Integrated Fiber Length and Optical Power Measurement
- Wide Range AC Power Supply Selectable Front or Rear
- 12V DC Input for Redundant Power Supply
- Temperature Monitoring and adaptive Fan Control
- 160 x 49 px colour OLED Display

### Video and Audio Processing Features

- Automatic Format Detection
- Frame Synchronizer and Framestore on all Video outputs
- 16 Channel Audio Embedder / De-Embedder
- Test Pattern Generator
- On Screen Display (OSD)
- System VITC Display
- Built-in Sample Rate Converter
- Audio and Video Delay Lines

### Signal Inputs and Outputs

- 4 SD/HD/3G-SDI Video Inputs
- 4 SD/HD/3G-SDI Video Outputs
- Up to 8 optional SD/HD/3G-SDI Video Ports
- 2 Display Port Outputs (parallel to Video Outputs 3 & 4)
- 4 Analog Audio Mic/Line Inputs
- 4 Analog Audio Line Outputs
- 4 AES3 Digital Audio Ports
- 2 MADI Digital Audio Ports (Optical)
- 3 Gigabit Ethernet Ports
- 2 Serial Interfaces (RS232 / 422 / 485 switchable)
- 10 GPI Ports (Input / Output switchable)
- 1 Sync Reference Input
- 3 Sync Reference Outputs
- RockNet Interface
- Different Fiber Connector Options: (Neutrik Quad, Neutrik Duo, LC, ST)
- Optional Neutrik Quad 25G with WDM connectivity
- Support of single-mode and multi-mode Optical Fibers

### Optional Modules

- 8 Channel SD/HD/3G-SDI Video Input Card
- 8 Channel SD/HD/3G-SDI Video Output Card (4 Channel SD/HD/3G-SDI, 4 Channel SD/HD-SDI)
- 4 Channel Input, 4 Channel Output SD/HD/3G-SDI Video I/O Card
- Prepared for further developments

### Technical Specifications

Bi-Directional Ports	
<b>MADI</b>	Multi Channel Digital Audio as per AES 10-2003 48 / 96 kHz Channel Modes 56/64 ch @ 48 kHz, 28/32 ch @ 96 kHz Resolution 24 Bit
<b>AES</b>	Digital Audio as per AES 3-2003 48 / 96 kHz Sample Rate Converter @ 48 kHz (User Selectable) Direct Connection of Artist Intercom Panels Resolution 24 Bit
<b>RockNet</b>	Direct Connection of RockNet Digital Audio Network
<b>Ethernet</b>	1000BASE-T, 100BASE-T (full duplex only), 10BASE-T (full duplex only) RFC 2544 Compliant Jumbo Packet Support
<b>Serial</b>	RS232, RS422, RS485 (User Switchable) Max. Supported Baud rate 115 kBaud User Switchable Port Type Master/Slave (DTE/DCE) Port Termination 120 Ohm (User Switchable)

#### DMX512 transfer via MediorNet (serial ports switched to RS-485 without termination)

DMX512 equipment output into MediorNet-Compact			MediorNet-Compact output into DMX512 equipment		
XLR3 / XLR5	Pin	SUB-D-9	SUB-D-9	Pin	XLR3 / XLR5
1	GND	6	6	GND	1
2	Data -	7	3	Data -	2
3	Data +	2	8	Data +	3

# MediorNet MN-Compact PRO

## Inputs

<b>SDI-Video</b>	75 Ω SD/HD/3G Serial Digital with embedded Audio (4 groups)		
Input Standards	1.5 Gbps HD-SDI SMPTE292M, 3 Gbps 3G-SDI SMPTE424M/425M Level A – mapping structure 1, SMPTE425M Level B 270 Mbps SD-SDI SMPTE259M, DVB-ASI SMPTE259M/EN50083		
Cable Equalization	> 230m @ 1,5Gbps, > 140m @ 3Gbps, >250m @ 270Mbps (Belden 1694A)		

<b>Analog Audio Mic/Line In</b>			
Gain Range	-6 .. 66 dB		150 Ω Source
Gain Step	1 dB		
Max. Input Level	+24 dBu		
Input Impedance	5.5 kΩ		
Phantom Power	+48 V selectable per channel		
Equivalent Input Noise	-127 dBu	@ Gain 66 dB	150 Ω Source, 20 kHz BW
Dynamic Range	114 dB	@ Gain = -6 dB	150 Ω Source, "A" weighted
Frequency Response	20 Hz .. 20 kHz	-0.1 dB	@ 48 kHz sample rate
Common Mode Rejection	> 100 dB	@ 50 Hz - 15 kHz	150 Ω Source, > 40 dB Gain
Crosstalk	< -120 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
Resolution	24 Bit A/D		

<b>Sync Reference Formats</b>	Blackburst NTSC/PAL (incl. VITC), Tri-Level 720p 50/59/60, Tri-Level 1080i 50/59/60, Tri-Level 1080p 23/24/25/29/30, Wordclock 48/96/192kHz		
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<b>GPI In</b>			
Galvanically Isolated Opto-Coupler Inputs			
Isolation Voltage	500 Vdc		
Maximum Voltage	30 Vdc		
Input Current	5 mA @ 5 Vdc, 10 mA @ 24 Vdc		

## Outputs

<b>SDI-Video</b>	75 Ω SD/HD/3G Serial Digital with embedded Audio (4 groups)		
Output Standards	1.5 Gbps HD-SDI SMPTE292M, 3 Gbps 3G-SDI SMPTE424M/425M Level A – mapping structure 1, SMPTE425M Level B 270 Mbps SD-SDI SMPTE259M, DVB-ASI SMPTE259M/EN50083		

<b>Display Port</b>	Max. Supported Resolution 1920x1080@60Hz		
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<b>Analog Audio Line Out</b>			
Max. Output Level	+18 dBu	+/- 0.2 dB	@ digital full scale, 600 Ω load
Output Impedance	< 1 Ω		
Noise	-90 dBu	@ +18 dBu Out	"A" weighted
Dynamic Range	114 dB		
Frequency Response	20 Hz .. 20 kHz	-0.1 dB	@ 48 kHz sample rate
Crosstalk	< -120 dB	@ 15 kHz	adjacent channels
Total Harmonic Distortion	< 0.001 %	@ +18 dBu Out	100 Hz - 10 kHz, 600 Ω Load, 20 kHz BW
	< 0.002 %	@ +4 dBu Out	
Resolution	24 Bit D/A		

<b>Sync Reference Formats</b>	Blackburst NTSC/PAL (incl. VITC), Tri-Level 720p 23/24/25/29/30/50/59/60, Tri-Level 1080i 50/59/60, Tri-Level 1080p 23/24/25/29/30, Wordclock 48/96/192kHz, VITC ON/OFF Selectable on Blackburst Outputs		
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<b>GPI Out</b>			
Galvanically Isolated Solid State Relay Output			
Isolation Voltage	500 Vdc		
Maximum Voltage	30 Vdc		
Maximum Current	100 mA		

## Transport Latencies

Video Transport Delay	Min. 150 μs, Max. 1 Frame + 150 μs (dependent on input phase)		FSY On (System Synchronous)
	500 μs		FSY Off (System Asynchronous)
	500 μs		Sync to Source (Asynchronous)
Digital Audio Delay	500 μs (standard latency, independent of Network size / frame amount)		without sample rate converter
	720 μs + 500 μs : 1220 μs	48 kHz sample rate	with sample rate converter + standard latency
	360 μs + 500 μs : 860 μs	96 kHz sample rate	
	646 μs + 500 μs : 1146 μs	48 kHz sample rate	A/D converting + standard latency
323 μs + 500 μs : 823 μs	96 kHz sample rate		
Analog Audio Delay	625 μs + 500 μs : 1125 μs	48 kHz sample rate	D/A converting + standard latency
	313 μs + 500 μs : 813 μs	96 kHz sample rate	
	60 μs + 10 μs per MN hop + optical delay on long fibers		64 Byte packet size
	220 μs + 10 μs per MN hop + optical delay on long fibers		9000 Byte packet size
Serial Data / GPI	93.75 μs + 10 μs per MN hop + optical delay on long fibers		

## Overall

Environmental Temperature	-5 °C to +40 °C (Non-condensing)		
Supply Voltage	100 – 240 VAC, 50 / 60 Hz		
	12 VDC ±10% (10.8 – 13.2 VDC)		
Power Consumption	80 W		
Cooling	2 Redundant Speed Controlled Fans, Left to Right Airflow		
Dimensions (w×h×d)	483 mm (19") × 133 mm (3 RU) × 241 mm		
Weight	8.2 kg		