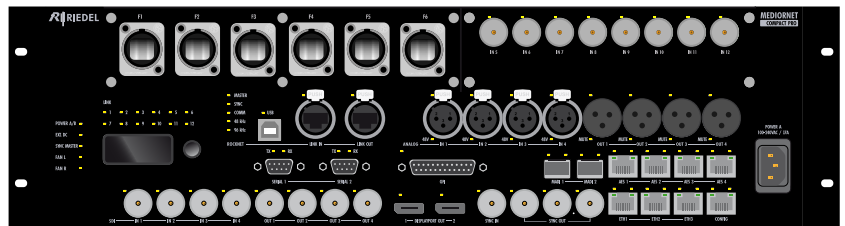


MediorNet MN-Compact PRO

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

| | | | |
|----------------|---|-----------------|---|
| MADI | 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 | Ethernet | 1000BASE-T, 100BASE-T (full duplex only), 10BASE-T (full duplex only) RFC 2544 Compliant Jumbo Packet Support |
| AES | 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 | Serial | 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) |
| RockNet | Direct Connection of RockNet Digital Audio Network | | |

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

| | | | |
|--------------------|--|--|--|
| SDI-Video | 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) | | |

| | | | |
|---------------------------------|------------------------------|------------------|--|
| Analog Audio Mic/Line In | | | |
| 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 | | |

| | | | |
|-------------------------------|---|--|--|
| Sync Reference Formats | 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 | | |
|-------------------------------|---|--|--|

| | | | |
|---|------------------------------|--|--|
| GPI In | | | |
| Galvanically Isolated Opto-Coupler Inputs | | | |
| Isolation Voltage | 500 Vdc | | |
| Maximum Voltage | 30 Vdc | | |
| Input Current | 5 mA @ 5 Vdc, 10 mA @ 24 Vdc | | |

Outputs

| | | | |
|------------------|--|--|--|
| SDI-Video | 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 | | |

| | | | |
|---------------------|--|--|--|
| Display Port | Max. Supported Resolution 1920x1080@60Hz | | |
|---------------------|--|--|--|

| | | | |
|------------------------------|-----------------|---------------|--|
| Analog Audio Line Out | | | |
| 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 | | |

| | | | |
|-------------------------------|--|--|--|
| Sync Reference Formats | 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 | | |
|-------------------------------|--|--|--|

| | | | |
|--|---------|--|--|
| GPI Out | | | |
| 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 | |
| | 360 μs + 500 μs : 860 μs | 96 kHz sample rate | with sample rate converter + standard latency |
| | 646 μs + 500 μs : 1146 μs | 48 kHz sample rate | |
| Analog Audio Delay | 323 μs + 500 μs : 823 μs | 96 kHz sample rate | A/D converting + standard latency |
| | 625 μs + 500 μs : 1125 μs | 48 kHz sample rate | |
| | 313 μs + 500 μs : 813 μs | 96 kHz sample rate | D/A converting + standard latency |
| | | 48 kHz sample rate | |
| Ethernet | 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 | | |