Audio/video routing innovations that simplify your workflows.

The NVISION CR6400 Series compact router from Grass Valley, a Belden Brand, fits 64 inputs and 64 outputs in a slim 2 RU frame and is an ideal choice for small facilities, trucks, stadiums or any location that is space-constrained such as editing suites, post-production and playout facilities. The robust matrix supports its 64-squared matrix thanks to the introduction of DIN connectors rather than the typical BNC connectors.

Initially available in two versions — 64x64 3G-SDI and 64x64 stereo async AES utility router — these durable and ultra-reliable routers contain hot swappable modules for easy serviceability and are tested for performance from 0–45°C (32–113°F).

Both of these 64 square routers can be fitted with a local control panel, the CP6464, a 2 RU, 64 button control panel, which connects seamlessly to the front of the router. These control panels can also be fitted on the 2 RU RP32 for remote panel control.

The space-saving nature of the CR6400 Series provides the power and flexibility of a larger, enterprise-class router. Owners of the new CR6400 series get the reliability and advanced technology the NVISION name is known for and the flexibility to fit into even the most complex workflows, integrating easily with multiviewers, signal processing platforms and master control switchers.

The NVISION CR6400 Series compact routers join a wide range of 8x8 to 32x32 compact routers now expanded to 64x64, providing freedom to choose the perfect solution for any application.
NVISION CR6400 Series Digital Router Series

**KEY FEATURES**

- DIN connectors
- High-density 64x64 matrix in 2 RU
- Optional, redundant power supply
- Broadcast quality components for superior signal performance
- Rugged design to smoothly handle both movement and temperature extremes
- Local control panel option, CP6464, mounts to the front of the router or can be used for remote access using an RP32
  - Operates with or without external control system
- Field serviceable modules are hot swappable
- Crosspoint card
- Input and output cards
- Operates with or without external control system

**SPECIFICATIONS**

**Electrical**

- DC power: External power supply: 2 VDC ± 10%, 5A
- Power consumption: 77W max (CR6464-3G-SDI router) 55W max (CR6464-AES router)
- Dimensions: Height: 88.1 mm (3.47 in.), fits EIA 2 RU (88.9 mm / 3.50 in.) Width: 482.6 mm (19.0 in.) Depth: 258.6 ±0.25mm (10.18 ±0.01 in.), enclosure extended ground screw
- Weight: 6.94 kg (15.3 lbs.) with 4 I/O cards, without control panel 6.94 kg (15.3 lbs.) with 4 I/O cards, without control panel

**Connectors**

- Power: 2 connectors, DIN 4
- Ethernet: 1 connector, 10/100BaseT, RJ-45 jack
- RS-422: 1 connector, 9-pin D type, usage determined by software, SMPTE 207M
- Video reference: 2 connectors, BNC, 75Ω
- Optional control panel: Two 2x60 connectors
- Removable module: 4 I/O card slots at rear 1 crosspoint card slot at rear 1 control card slot at rear 1 fan module removable at the front I/O module types: SDI, AES
- Grounding terminal: Copper, accepts 14–6 AWG

**CR6400 Power Supply**

- AC power: 120–240 VAC, 50–60 Hz, up to 2.0A
- DC power: 48 VDC, 160W max, 3.34A max
- Ripple and Noise: <240 mVp-p
- Efficiency: Typically 94%
- Weight: 0.66 kg (1.45 lbs.)
- Regulatory: UL listed and CE compliant.

**CR Series Digital Video Specifications**

1. Input & output impedance: 75Ω
   - > 400 m, Belden 1694A or equivalent, 270 Mb/s SD-SDI
   - > 150 m, Belden 1694A or equivalent, near 1.5 Gb/s HD-SDI
   - > 100 m, Belden 1694A or equivalent, near 3.0 Gb/s 3G-SDI

2. SDI Specification Detail
   - 3G-SDI Autoclocking: 270 Mb/s, and 3G-SDI Auto re-clocking: 270 Mb/s, and 3G-SDI Specification Detail
   - Cable equalization: up to 150m Belden 1694A or equivalent cable, at 1.483 Gb/s and 1.485 Gb/s, and 400m at 143–540 Mb/s
   - Input return loss: > 15 dB, 5 MHz to 1.5 GHz
   - Output level: 800mV pp ± 10%
   - Output offset: 0VDC ± 0.5V
   - Output rise/fall time: < 270 ps (20% to 80%)
   - Output overshoot: < 10% of amplitude
   - Output jitter: < 0.2 UI p-p
   - Output return loss: > 15 dB, 5 MHz to 1.5 GHz

3. HD-SDI Specification Detail
   - SD-SDI Data rates: up to 1.5 Gb/s, automatic bypass for other rates
   - Input & output impedance: 75Ω
   - Cable equalization: up to 300m Belden 1694A or equivalent cable
   - Input return loss: > 15 dB, 5 MHz to 1.5 GHz
   - Output level: 800mV pp ± 10%
   - Output offset: 0VDC ± 0.5V
   - Output rise/fall time: < 135 ps
   - Output overshoot: < 10% of amplitude
   - Output timing jitter: < 0.2 UI p-p
   - Output alignment jitter: < 0.3 UI at 100 kHz
   - Output return loss: > 10 dB, 1.5 GHz to 3.0 GHz

**Digital Audio (AES)**

- Signal inputs: AES3id (2 mono channels per input)
- Sample rate: 32 kHz–192 kHz
- Input level: 1 Vp-p nominal into 75Ω
- Input range: 200 mVp-p to 3 Vp-p into 75Ω
- Input return loss: <–25 dB, from 100 kHz to 6 MHz
- Input connectors: DIN, 75Ω
- Signal outputs: AES3id (2 mono channels per input)
- Sample rate: Async, 32 kHz–192 kHz, sync, 48 kHz
- Output level: 1 Vp-p ±10% into 75Ω
- Output offset: 0.0 VDC ±50 mVDC, AC coupled
- Output rise/fall time: 4 ns–8 ns
- Output jitter: < 1 ns, in synchronous mode
- Output return loss: <–25 dB, from 100 kHz to 6 MHz
- Output-to-output isolation: >40 dB, from 100 kHz to 6 MHz
- Output connectors: DIN 1.0/2.3

**ORDERING**

- CR6464-3GIG 64x64 single link 3G HD serial video router, 2 RU
- CR6464-AES 64x64 async AES digital audio router, 75Ω, 2 RU
- CP6464 XY button panel for 2 RU 64x64
- CRPS1 Redundant power supply for RP32
- CRPS2 Redundant power supply for 64x64 compact routers, 160W
- CR-FA1 Compact router speed control, fan module – spare
- RP32* Remote panel expansion kit for 2 RU

*B The RP32 will be used as the remote control panel base unit to mount the CP6464 for remote control.

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