CEN-RGBHVHB12X8

12x8 High-Bandwidth RGB Matrix Switcher

- *Ultra high-bandwidth 12 x 8 matrix switcher*
- *800 MHz video bandwidth (-3dB)*
- *Incredibly wide response and low crosstalk*
- *Stereo audio signal routing with breakaway*
- *Audio DSP with volume, tone, and graphic EQ*
- *Paging mode with automatic ducking*
- *Professional balanced audio inputs and outputs*
- *Audio input level compensation*
- *Video input sync detection*
- *Video-follow-sync switching technology*
- *Adjustable video and audio blanking*
- *Selectable input sync impedance on all inputs*
- *LCD front panel for easy setup and standalone operation*
- *Crestron® system integration via Cresnet® or Ethernet*
- *Very low power consumption and a quiet fanless design*
- *3-space rack mountable*

Crestron® High-Bandwidth RGB Matrix Switchers deliver extreme performance for the most demanding presentation environments. With class-leading 800 MHz bandwidth, low-crosstalk, and super wide response, the CEN-RGBHVHB12X8 easily surpasses any requirement for high-performance, high-resolution analog video and computer signal routing. Factor in its enhanced audio DSP, very low power consumption, and native Crestron system integration and you've got a solid winner for all your analog video and audio signal routing applications.

800 MHz Bandwidth Matrix Router

The CEN-RGBHVHB12X8 is capable of routing up to 12 computer or video sources to up to 8 display devices. Its five matrix levels accommodate any combination of analog RGBHV, HD/component, S-Video and composite signals. Ultra high-bandwidth and wide response ensure optimum performance for every signal as part of any AV system. Sync impedances for each input are selectable from the front panel or software to accommodate both short and long cable runs.

Glitch-free Switching

Video-follow-sync switching ensures a smooth transition when selecting between non-synchronous sources. Adjustable blanking allows each display device time to lock to the new sync signal before displaying the video image whenever a new source is selected.

Sync Detection

Sync detection on each H and V input measures the sync rates of every RGBHV source and allows their values to be viewed on the front panel display, control system touch screen, or through Fusion RV® software.

Audio Routing & DSP

Professional audio signal processing affords enhanced, high-performance audio routing and control, potentially eliminating the need for additional audio components. Each stereo output features real-time controllable volume, bass, treble, and mute controls, plus 5-band EQ with customizable presets. Programmable input level compensation helps ensure compatibility with a wide range of pro and semi-pro sources. Automatic blanking achieves a pop-free transition when switching between sources, while audio breakaway capability allows the routing of audio signals to follow video or be switched independently. The entire audio signal path has been designed from the ground up to deliver ultra quiet, distortion-free sound quality — whether feeding sensitive amplifiers, assistive listening devices, or recording and broadcast equipment.

Paging Mode

Built-in page override functionality simplifies system design, employing automatic mixing and ducking for a single audio paging source. When set to Paging Mode, an audio signal at Input Channel 12 will automatically be distributed to every output while the signals currently routed to each output are attenuated or "ducked" to allow the paging signal to be heard. The sensitivity and ducking amount are fully adjustable for smooth paging behavior and a natural transition back to the previous audio state.

Full-featured Front Panel

The CEN-RGBHVHB12X8 is fully operable out-of-the-box for use as a standalone switcher. Featuring an informative LCD display, quick-adjust knob, and quick access buttons, the front panel supports essential switcher operation without requiring a computer or control system. Advanced setup is available through Crestron Toolbox™ software. All signal routing, input impedances, and audio settings are stored in non-volatile memory onboard the switcher.

Customizable label strips are provided on the front panel for clear designation of its inputs and outputs using Crestron Engraver software or standard 3/8" tape labels. Names may also be entered through software to appear on the LCD display during operation. For security, the front panel controls can be password protected or locked out.

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CEN-RGBHVHB12X8 – Rear View

Crestron System Integration

Via Cresnet® or high-speed Ethernet, Crestron switchers offer the ultimate in control system integration. System programmers are provided access to every switcher function without deciphering cryptic protocols, facilitating the development of custom user controls and integration with other equipment. Up to 32 routing presets can be saved onboard for instant recall. Integration with a Crestron Control System also provides the gateway to complete enterprise management using Crestron Fusion™ software.

SPECIFICATIONS

Video/RGB

Switcher: 12x8(x5) matrix video-follow-sync switching, adjustable blanking, sync detection, sync regeneration, front panel selectable sync input termination
Signal Types: RGB, composite, S-Video, and component video (does not transcode)
Formats: RGBHV, RGBS, RGsB, YUV, NTSC, PAL, HD up to 1080i/1080p
Horizontal Frequency: 10 to 200 kHz
Vertical Frequency: 20 to 200 Hz
Gain: 0dB (75 ohms terminated)
Bandwidth: 800 MHz (-3dB)
Blanking Time: Adjustable 0 to 10 seconds, 0.5 second steps
Sync Rise/Fall Time: 2 ns maximum

Audio

Switcher: 12x8 stereo matrix switching; adjustable blanking; audio breakaway; input gain compensation; 8-channel stereo DSP w/5-band graphic EQ, volume, bass, treble, and mute control; paging mode (signal at Input 12 momentarily mixes with or overrides the current selected input at every output w/adjustable sensitivity and ducking behavior)
Signal Types: balanced and unbalanced stereo analog line-level

Typical of 12 stereo inputs:
Analog-To-Digital Conversion: 24-bit 48 kHz
Input Compensation: ±10.0 dB per input

Input 12 only, Paging Mode:
Mix Input Level: 0 to 100%
Sensing Threshold: -80 to 0 dB
Sensing Attack Time: 1 to 250 ms
Sensing Hold Time: 1 to 2000 ms
Ducking Depth: 0 to 80 dB attenuation
Ducking Release Time: 1 to 1000 ms per dB of recovery

Typical of 8 stereo outputs:
Digital-To-Analog Conversion: 24-bit 48 kHz
Frequency Response: 20 Hz to 20 kHz ±0.5 dB
THD + Noise: 0.005%
S/N Ratio: >104dB @ full output, A-weighted
Stereo Separation: >104dB
Output Channel Separation: >100dB
Blanking Time: Adjustable 0 to 10 seconds, 0.5 second steps
Output Volume Level Control: -80.0 to +20.0 dB, adjustable from 0% to 100% plus mute
Bass Control: ±15.0 dB
Treble Control: ±15.0 dB
EQ Mode: 5-band graphic EQ
GEQ Center Frequencies: 63, 200, 550, 2k, 12k Hz
GEQ Gain: ±12.0 dB per band

Communications

Ethernet: For control and console, 10/100 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, DHCP
Cresnet®: For control and console, Cresnet slave
USB: USB client for computer console

Connectors – Video

IN 1 – 12: (12) sets of (5) BNC female;
RGB, component, S-Video, or composite video inputs;
Formats: RGBHV, RGBS, RGsB, YUV, YPbPr, Y/C, NTSC, PAL;
RGB Input Level: 1 Vp-p with ±0.5 VDC offset maximum;
RGB Input Impedance: 75 Ohms nominal;

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Sync Input Types: RGBHV, RGBS[1], RGsB[1], YPbPr[1];
Sync Input Level: 3 to 5 Vp-p;
Sync Input Impedance: 75 or 510 Ohms, independently selectable for H and V per input;
Sync Detection: Reports discrete H and V signal presence and sync rates per input

OUT 1 – 8: (8) sets of (5) BNC female;
RGB, component, S-Video, or composite video outputs;
Formats: Same as selected input;
RGB Output Level: Same as selected input;
RGB Output Impedance: 75 Ohms nominal;
Sync Output Type: Same as selected input;
Sync Output Level: 5 Vp-p

Connectors – Audio

INPUT 1 – 12: (12) 5-pin 3.5mm detachable terminal blocks;
Balanced/unbalanced stereo line-level inputs;
Maximum Input Level: 4 Vrms balanced, 2 Vrms unbalanced;
Input Impedance: 24k Ohms balanced, 12k Ohms unbalanced;
Note: Input #12 may be configured for "Paging" mode

OUTPUT 1 – 8: (8) 5-pin 3.5mm detachable terminal blocks;
Balanced/unbalanced stereo line-level outputs;
Maximum Output Level: 4 Vrms balanced, 2 Vrms unbalanced;
Output Impedance: 200 Ohms balanced, 100 Ohms unbalanced

Connectors – Control & Power

LAN: (1) 8-wire RJ45 female;
10Base-T/100Base-TX Ethernet port

NET: (1) 4-pin 3.5mm detachable terminal block;
Cresnet slave port, connects to Cresnet control network;
Does not draw power from the network

G: (1) 6-32 screw, chassis ground lug

100-240V~50/60Hz 1A MAX: (1) IEC 60320 C14 main power inlet;
Mates with removable power cord (included)

COMPUTER (front): (1) USB Type B female;
USB computer console port (6 ft cable included)

LCD Display

Green LCD alphanumeric, adjustable backlight, 2 lines x 20 characters per line; Displays inputs/outputs by name, scan rates, audio settings, IP configuration and setup menus

Controls & Indicators

SOFTKEYS: (4) pushbuttons for execution of LCD driven functions
HW-R: (1) recessed miniature pushbutton for hardware reset, reboots the switcher
CLEAR: (1) pushbutton and red LED, clears all matrix routing
VIEW: (1) pushbutton and red LED, toggles VIEW mode on/off
TAKE: (1) pushbutton and red LED, executes routing
MENU: (1) pushbutton, steps menu back one level
ENTER: (1) pushbutton, executes highlighted menu or value
A: (1) pushbutton & red LED, selects audio routing view
V: (1) pushbutton & red LED, selects video routing view
SYNC: (1) pushbutton & red LED, displays input sync rate
Quick-Adjust Knob: (1) continuous turn rotary encoder, adjusts menu parameters
IN 1 – 12: (12) pushbuttons and red LEDs, select input to be routed
OUT 1 – 8: (8) pushbuttons and red LEDs, select output destination(s)
LAN (rear): (1) green and (1) amber LEDs, green indicates Ethernet link status, amber indicates Ethernet activity

Power Requirements

Main Power: 1 Amp maximum @ 100-240 Volts AC, 50/60 Hz
Power Consumption: 30 Watts maximum
Cresnet Power Usage: none

Environmental

Temperature: 32° to 104°F (0° to 40°C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: 102 BTU/Hr maximum

Enclosure

Chassis: Metal, matte black finish, convection cooled, vented sides
Faceplate: Metal, matte black finish with polycarbonate label overlay
Mounting: Freestanding or 3U 19-inch rack-mountable (adhesive feet and rack ears included)

Dimensions

Height: 5.20 in (133 mm) without feet
Width: 17.03 in (433 mm);
19.00 in (483 mm) with ears
Depth: 13.13 in (334 mm)

Weight

14.5 lb (6.58 kg)

MODELS & ACCESSORIES

Available Models

CEN-RGBHVHB12X8: 12x8 High-Bandwidth RGB Matrix Switcher

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Notes:

1. Sync detection reports discrete H and V signals only.

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

The specific patents that cover Crestron products are listed online at: patents.crestron.com.

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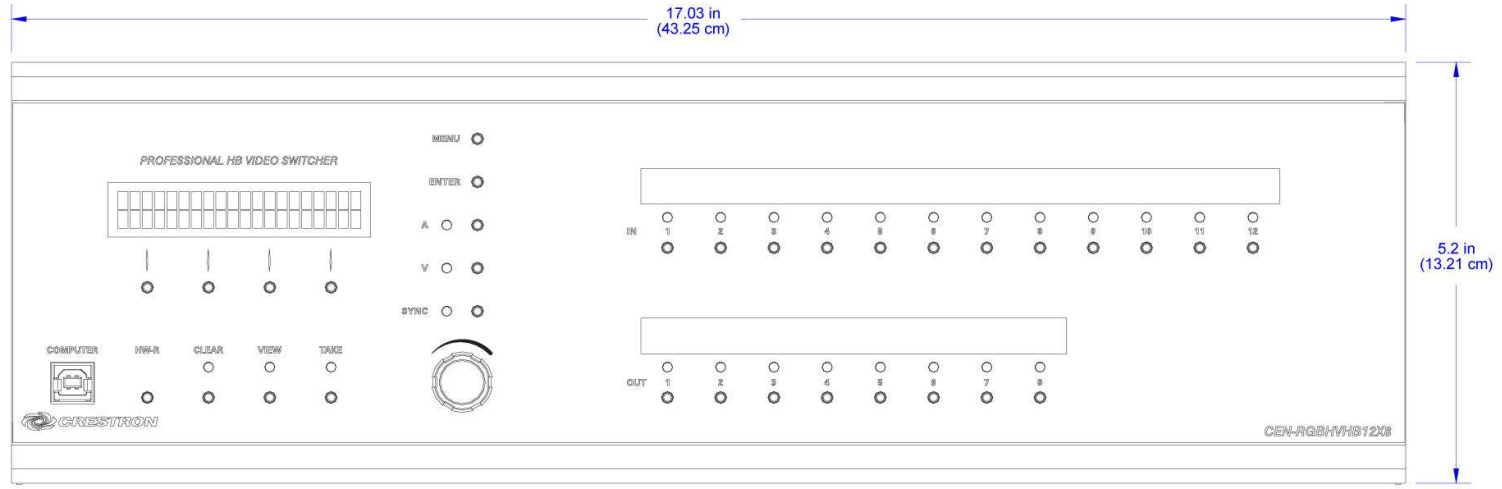

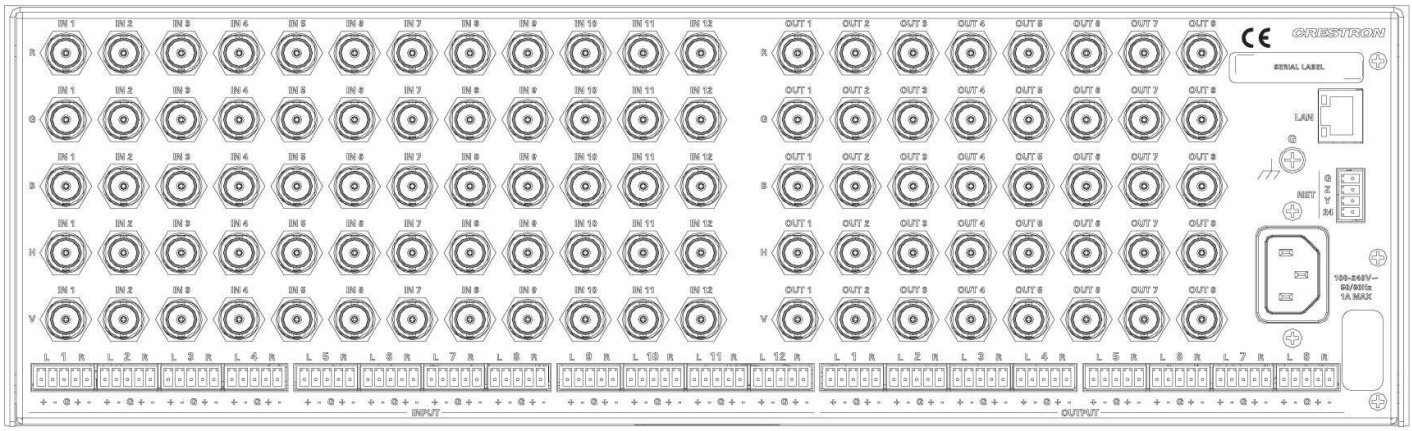

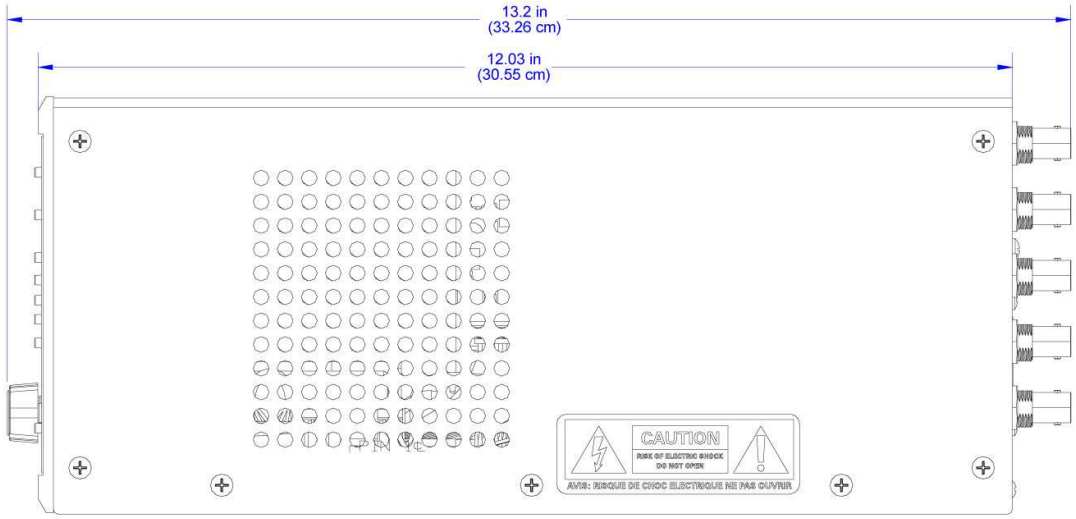

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