CEN-RGBHV16X16

16x16 Wideband RGB Matrix Switcher

For a substitute, please see CEN-RGBHVHB16X16.

Crestron wideband matrix switchers are designed to provide flexible signal routing of high-res video and audio for the most demanding presentation environments. With extremely low crosstalk, 450MHz video bandwidth, professional balanced audio, and full Crestron control system integration, the CEN-RGBHV16X16 satisfies the demanding video requirements of corporate boardrooms and training centers, university lecture halls, high-tech houses of worship, command and control facilities, and live staging events.

High-Bandwidth Matrix Router
The CEN-RGBHV16X16 is a high-bandwidth matrix switcher capable of routing up to 16 computer or video sources to up to 16 display devices. Its five matrix levels accommodate any combination of analog RGBHV, HD/component, S-Video and composite signals. Proven flat response achieves optimum performance even at the highest bandwidth. Selectable sync impedance on every input helps accommodate varying cable lengths.

Glitch-free Switching
Video-follow-sync switching ensures a glitch-free transition when selecting between non-synchronous sources. Blanking time is independently adjustable per output from 0 to 10 seconds, allowing each display device time to lock to the new sync signal before displaying the video image whenever a new source is selected. A sync reference input is also provided to support vertical interval switching of genlocked sources.

Sync Detection
Video sync detection on each input measures the H and V sync rates of every RGB source and allows their values to be viewed on the front panel display, control system touchpanel, or RoomView® software.

Professional Stereo Audio Matrix
A 16 x 16 stereo audio matrix is also included, supporting both balanced and unbalanced signals. 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. Every output includes volume and mute control, providing multiple channels of real-time controllable audio signal distribution to feed multi-zone amplifiers, assistive listening, and recording equipment. Audio breakaway capability allows any audio input or output to be linked with its respective video channel, or switched independently.

Full-featured Front Panel
The CEN-RGBHV16X16 is fully operable out-of-the-box for use as a standalone switcher. Featuring an informative LCD display and quick-adjust knob, 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 and audio compensation 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.

Crestron System Integration
Via Cresnet or high-speed Ethernet, Crestron switchers offer the ultimate in control system integration with every function accessible through SIMPL or SystemBuilder™ without deciphering cryptic protocols. Up to 10 routing presets can be saved onboard the CEN-RGBHV16X16 for instant recall. Integration with any 2-Series Control System also provides the gateway to Crestron's RoomView® Asset Management Software
and e-Control®2 XPanel Solutions for remote monitoring and control.

> *16 x 16 high-bandwidth matrix switcher*

> *Low crosstalk | Incredibly flat response*

> *450MHz video bandwidth (-3dB)*

> *Professional balanced stereo audio*

> *Audio input level compensation*

> *Audio output volume and mute control*

> *Input sync detection | Genlock sync input*

> *Adjustable video and audio blanking*

> *Selectable input sync impedance*

> *Standalone operation | LCD-driven front control panel*

> *Cresnet or high-speed Ethernet communications*

> *Six-space rack mount installation*

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SPECIFICATIONS

Video/RGB

Switcher: 16x16(x5) crosspoint matrix, adjustable blanking, sync detection, selectable input termination, vertical interval switching using genlock input
Signal Types: RGB and composite, S-Video, or component video (does not transcode)
Video/HDTV Formats: NTSC or PAL, HDTV up to 1080i/1080p
RGB Formats: RGBHV, RGBS, RGsB, or YUV
Gain: 0dB (75 ohms terminated)
Bandwidth: 450MHz (-3dB) fully loaded
Blanking Time: Adjustable 0 to 10 seconds, 0.5 second steps
Crosstalk: ≤-65 dB @ 5 MHz, ≤-47 dB @ 100 MHz

Audio

Switcher: 16x16 stereo crosspoint matrix, input compensation, output volume and mute control, adjustable blanking, audio breakaway
Input Compensation: ±10dB in 0.5dB steps
Output Volume Control: -60dB to +20dB in 0.5dB steps
Blanking Time: Adjustable 0 to 10 seconds, 0.5 second steps
Frequency Response: 20Hz to 20kHz ±0.5dB

Ethernet

10/100BaseT, static IP or DHCP/DNS, auto-negotiating, auto-discovery, full/half duplex, TCP/IP, UDP/IP, CIP

Connectors - Audio

INPUTS 1 - 16: (16) 5-pin 3.5mm detachable terminal blocks;
Balanced/unbalanced stereo line-level inputs;
Maximum Input Level: 4 Vrms balanced, 2 Vrms unbalanced;
Input Impedance: 20k ohms balanced, 10k ohm unbalanced
OUTPUTS 1 - 16 : (16) 5-pin 3.5mm detachable terminal blocks;
Balanced/unbalanced stereo line-level outputs;
Maximum Output Level: 12 Vrms balanced, 6 Vrms unbalanced;
Output Impedance: 100 ohms balanced, 50 ohms unbalanced

Connectors - Video/RGB

VID REF IN: (2) BNC female;
Genlock sync reference input and loop-thru, unterminated
INPUTS 1 - 16: (16) sets of (5) BNC female, each set comprising (3) high-bandwidth video inputs plus (2) sync inputs;
Input Level: 0.2 to 5.0 Vp-p;
RGB Input Impedance: 75 ohms nominal;
Sync Input Impedance: 75 or 510 ohms, independently selectable for H and V per input;
Return Loss: < -30dB @ 5MHz;
Sync detection on every input connector
OUTPUTS 1 - 16 : (16) sets of (5) BNC female, each set comprising (3) high-bandwidth video outputs plus (2) sync outputs;
Output Level: 0.2 to 5.0 Vp-p;
Output Impedance: 75 ohms nominal;
Return Loss: < -30dB @ 5MHz

Connectors - Control & Power

NET: (1) 4-pin 3.5mm detachable terminal block;
Cresnet slave port, connects to Cresnet control network;
Does not draw power from the network
LAN: (1) 8-wire RJ45 with 2 LED indicators;
10/100BaseT Ethernet port;
Green LED indicates link status;
Yellow LED indicates Ethernet activity
100-240V~2.0A 50/60Hz: (1) IEC Socket, main power input;
Mates with removable power cord, included
FUSE: Dual fuse holder, main fuse;
Hot: 5mm x 20mm, 250V, 2.5A, time-lag;
Neutral: 5mm x 20mm, 250V, 10A, time-lag
G: (1) 6-32 screw, chassis ground lug
COMPUTER (front): (1) USB Type B female;
USB 1.1 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 levels, IP configuration and setup menus

Controls and Indicators

SOFTKEYS: (4) pushbuttons for activation of LCD driven functions and passcode entry
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 rates
Quick-Adjust Knob: (1) continuous turn rotary encoder, adjusts menu parameters
IN 1 - 16: (16) pushbuttons and red LEDs, select input to be routed
OUT 1 - 16 : (16) pushbuttons and red LEDs, select output destination
INPUT TERMINATORS (rear): (32) DIP switches, select input termination for each input, independently for H and V Sync

Power Requirements

Main Power: 2 Amps @ 100-240 Volts AC, 50/60 Hz
Cresnet Power Usage: none

Environmental

Temperature: 32° to 104°F (0° to 40°C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: Unloaded: 100 Watts or 345 BTU/Hr;
Loaded: 120 Watts or 410 BTU/Hr

Enclosure

Chassis: Steel, black matte powder coat finish, vented sides, fan-cooled
Faceplate: Extruded aluminum, black matte powder coat finish with polycarbonate label overlay
Mounting: Freestanding or 6U 19-inch rack-mountable (adhesive feet and rack ears included)

Dimensions

Height: 10.47 in (26.60 cm) without feet
Width: 17.28 in (43.90 cm);
19.0 in (48.26 cm) with ears
Depth: 19.35 in (49.15 cm)

Weight

40 lb (18.14 kg)

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17.28 in
(43.9 cm)

10.47 in
(26.6 cm)

20.68 in
(52.51 cm)

19.86 in
(50.45 cm)

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