

# Crestron CNX-PVID8X4

## Video Distribution Switcher

- > CAT5 balanced video distribution to 8 rooms
- > Combinable to support up to 32 rooms
- > Variable input configurations:
  - > 16 inputs – any type: YP<sub>B</sub>P<sub>R</sub>, S-Video, or composite
  - > 24 inputs – 8 composite, 8 S-Video/composite, & 8 YP<sub>B</sub>P<sub>R</sub>/S-Video/composite
  - > 32 inputs – 16 composite & 16 S-Video/composite
- > 16 coaxial digital audio inputs
- > Supports 1080i HDTV up to 500 feet over CAT5e
- > Built-in video signal sensing on every input
- > 8x4 RCA outputs included for conventional applications
- > Fully configurable in SystemBuilder software
- > Controllable via Cresnet communications

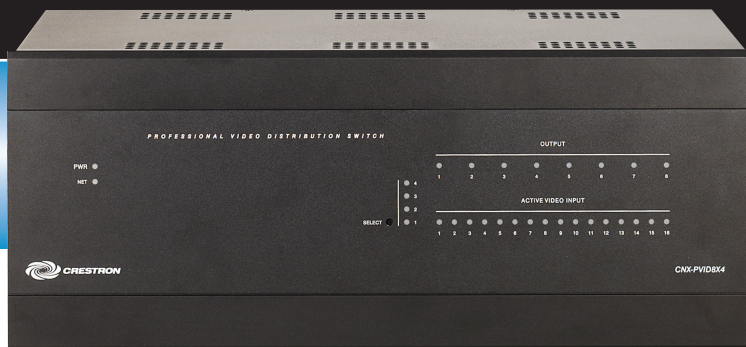
Distributing video in a home, office, bar, or restaurant used to mean one of two things – either modulate every video signal to a TV channel and suffer the low-grade picture quality, or pull a ton of bulky, expensive RG6 cable and wire it all up to a huge matrix router. Crestron's CNX-PVID8 video distribution switchers provide a better solution, combining the flexibility of several matrix routers with the simplicity of Crestron Home® CAT5 Video Distribution technology. Variable combinations of video, HDTV, and even digital audio signals are easily configured to route a rack full of high-end AV sources to television monitors, plasma displays, and video projectors throughout any facility.

**Up to 32 Sources x Up to 32 Rooms**—The CNX-PVID8X4 is a versatile video distribution switcher incorporating four 16 x 8 matrix switchers with Crestron's innovative CAT5 balanced interface in a compact 4-space rack mount chassis. The CNX-PVID8X4 is configurable to handle anywhere from 16 to 32 video inputs and distribute them to 8 remote room locations up to 750 feet away\* over inexpensive CAT5e cable. Up to four CNX-PVID8X4's may be combined to handle as many as 32 rooms\*\*. The inputs accept an assortment of composite, S-Video, and high-definition component sources, as well as digital audio.

**Crestron Home® CAT5 Balanced Video**—Crestron video distribution switchers are designed to provide maximum flexibility through the use of CAT5 balanced technology. Each CAT5 output port transmits up to four simultaneous signals based upon the selected input. For instance, a component signal utilizes the first, second, and third pairs to transmit the Y, P<sub>B</sub>, and P<sub>R</sub> components. Switching to an S-Video signal then utilizes just the first and second pairs to transmit S-Video's Y and C components. Composite utilizes only the first CAT5 pair. The fourth pair is ordinarily intended for digital audio, but may also be suitable for composite video in some installations.

To maximize the performance of video over CAT5, adjustable video compensation is employed on each of the three video pairs while the fourth pair is uncompensated.

**Configurable Inputs**—Out of the box, the four wire pairs of each CAT5 output correspond with the CNX-PVID8X4's four matrix levels. This configuration allows



any of 16 inputs to accept any type of video source. Additional configurations are made possible through a simple internal jumper modification, permitting alternate configurations with up to 32 inputs (16 composite + 16 S-Video or composite) or 24 inputs (8 composite + 8 S-Video/composite + 8 component/S-Video/composite). Each of these configurations also supports up to 16 coaxial type digital audio inputs using the fourth matrix level.

**Room Solution Boxes**—At each remote room location, one of Crestron's "Room Solution Boxes" must be connected to the local display device (television, plasma, etc.) to receive the CAT5 signal and serve as a local switcher. Models include the CNXRMC, CNXRMCCLV, and C2N-DAP8RC (each sold separately). The room solution box automatically routes the incoming video and digital audio signals to the appropriate inputs on the display device allowing the viewer to select any head end video source using a touchpanel, keypad or handheld remote. Operation is transparent to the end-user with all switching occurring smoothly under the command of the control system.

**Bidirectional Video**—Extending the system's capabilities even further, the CNXRMCCLV and C2N-DAP8RC boxes also support a "return" video signal over a second CAT5e cable allowing the signal from a local video source to be routed to the head-end for redistribution to other rooms. To enable this capability, one or more CNX-PBVR4 balanced video receivers must be included at the head end to convert the CAT5 return signals to standard RCA unbalanced, allowing each signal to be connected to any available input on the CNX-PVID8X4.

**Alternate Conventional Outputs**—In addition to the eight CAT5 outputs, the CNX-PVID8X4 also includes conventional RCA type unbalanced video outputs to allow for direct coaxial connections to video display devices. When using the unbalanced outputs, it should be observed that the CNX-PVID8X4 behaves like any other matrix or "system" switcher so that a separate output must be used for each type of video signal. In other words, routing composite, S-Video, and component signals to a single video projector without using a room solution box requires a total of three unbalanced video outputs. Also, the unbalanced outputs are functionally paralleled with the CAT5 outputs so that using a given unbalanced output might exclude the use of the corresponding CAT5 output for a given application.

**Built-in Video Sensing**—Video signal sensing on every input reports the presence of any active input signal to the control system to provide useful information about a device's power status, or to enable auto-switching capability.

**Cresnet® Control**—Crestron's video distribution switchers work together with any 2-Series control system to provide an extensively customizable video distribution solution. Crestron's SystemBuilder™ software can make system programming a quick and simple task for most applications. And for advanced, highly-custom applications, every matrix crosspoint is independently programmable through Crestron's SIMPL™ Windows and SIMPL+® programming software.

# Crestron CNX-PVID8X4 Video Distribution Switcher

## SPECIFICATIONS

### Video & Digital Audio

**Signal Types:** Component (YPbPr), S-Video (Y/C), or composite video; digital audio  
**Video/HDTV Formats:** 480i (NTSC), 576i (PAL), 480p, 576p, 720p, 1080i  
**Digital Audio Format:** S/PDIF coaxial  
**Bandwidth:** 100MHz (unbalanced)  
**Crosstalk:** -60dB

### Connectors

**INPUT 1 – 16:** (128) RCA female comprising (3) levels of (16) video inputs, and (1) level of (16) digital audio inputs, each with parallel loop-thru;

Configurable as:

- 16 inputs – any type: component, S-Video, or composite video + 16 digital audio
- 24 inputs – 8 composite, 8 S-Video/composite, 8 component/S-Video/composite, & 16 digital audio
- 32 inputs – 16 composite, 16 S-Video/composite, & 16 digital audio

Input Level: 1  $V_{P-P}$  nominal

Signal Sensing Threshold: 0.25  $V_{P-P}$

Connect to video/digital audio outputs of source devices or CNX-PBVR4, with loop-thru to additional CNX-PVID8X4\*\* or terminator (75 ohm terminators included)

**OUTPUT 1 – 8 (RCA):** (32) RCA female comprising (3) levels of (8) video outputs, and (1) level of (8) digital audio outputs;

Output Level: 1  $V_{P-P}$  nominal

Output Impedance: 75 ohms

Each output functionally paralleled with corresponding wire pair of respective CAT5 output

**OUTPUT 1 – 8 (CAT5):** (8) 8-pin RJ45 female, shielded, CAT5 balanced video output ports

Output Impedance: 100 ohms per pair

Connect to room solution boxes, touchpanels, or any "CH" CAT5 audio ports\*

**NET:** (1) 4-pin 5mm detachable terminal block

Cresnet slave port, connects to Cresnet control network

**G:** 6-32 screw, chassis ground lug

### Buttons & LED Indicators

**PWR:** (1) green LED, indicates 24 Volts DC power supplied from Cresnet control network

**NET:** (1) yellow LED, indicates communication with Cresnet system

**OUTPUT 1 – 8:** (8) red LED's, indicate if outputs are assigned an input

**ACTIVE VIDEO INPUT 1 – 16:** (16) red LED's, indicate presence of a video signal at a given input

**SELECT 1 – 4:** (1) miniature pushbutton and (4) red LED's, select which level's status is currently displayed

**SETUP (rear):** (1) red LED, used for touch-settable ID (TSID)

### Power Requirements

**Cresnet Power Usage:** 40 Watts (1.67 Amps @ 24 Volts DC)

### Environmental

**Temperature:** 41° to 104°F (5° to 40°C)

**Humidity:** 10% to 90% RH (non-condensing)

### Enclosure

Black metal, 4U 19-inch rack-mountable (rack ears included)

### Dimensions

**Height:** 7.06 in (17.93 cm), 6.97 in (17.70 cm) without feet

**Width:** 17.28 in (43.89 cm), 19.0 in (48.26 cm) with rack ears

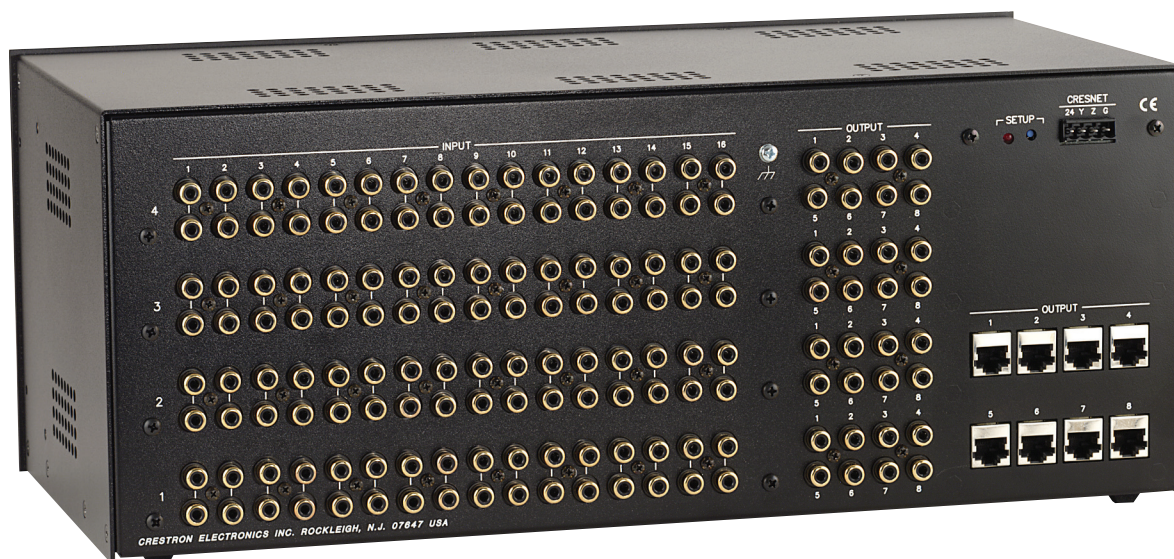
**Depth:** 8.67 in (22.02 cm)

### Weight

9.81 lbs (4.45 kg)

\* *Maximum CAT5 Distance: 500 feet for component, 750 feet for composite and S-Video*

\*\**Room outputs are expandable by cascading the inputs of multiple units using standard RCA interconnect cables. Crestron recommends cascading no more than four (4) units. However, the actual number of possible units in a system is virtually unlimited, although additional equipment may be necessary to maintain signal integrity. Contact Crestron for additional assistance.*



Rear View

## AVAILABLE ACCESSORIES

### CNX-PBVR4

CAT5 Balanced Video Receiver

### CNXRMC

Room Solution Box

### CNXRMCLV

Enhanced Room Solution Box

### C2N-DAP8RC

7.1 Surround Sound Processor and Room Solution Box