

INTELLITECH VIDEO SWITCHER with Audio Extractor- IVS-168A



DESCRIPTION:

The INTELLITECH **IVS-168A 4K** are high performance HDMI matrix switchers for video signals at resolutions up to 4K. They support HDMI specifications, including data rates to 10.2 Gbps, Deep Color up to 12-bit, 3D, and HD lossless audio formats. DXP HD 4K Series matrix switchers incorporate Extron technologies such as SpeedSwitch[®], EDID Minder[®], and Key Minder[®] as well as HDMI equalization and output regeneration to ensure reliable system operation. In addition, digital audio can be de-embedded from any input and assigned to digital or analog stereo outputs for ease of integration. Available in fixed I/O sizes from 4x4 to 16x16, the **IVS-168A 4K** Series is ideal for applications that require reliable, high performance switching of HDMI video and audio signals between multiple sources and displays.

The **IVS-168A 4K** Series matrix switchers are designed for use with computers equipped with 4K graphics cards, media players and similar signal sources, as well as 4K native resolution displays. With a maximum data rate of 10.2 Gbps, the switchers support computer and video resolutions up to 4096x2160 @ 30 Hz with 8-bit color in 4:4:4 color space. In addition, these matrix switchers fully support 1080p/60 with 12-bit Deep Color. To maintain signal integrity, the matrix switchers feature automatic cable equalization on inputs and output reclocking to reshape and restore timing of the video signal at each HDMI output. These features combined with Extron Pro Series High Speed HDMI Cables allow longer 4K signal runs, reducing the need for additional signal conditioning equipment by compensating for weak source signals or signal loss on long cable runs. Additionally +5 VDC, 200 mA is available on the outputs for powering peripheral devices.

Flexible Audio Distribution:



Audio routing in the **IVS-168A 4K** Series is handled in two ways. Embedded digital audio from a source can be switched along with its corresponding video signal to any or all selected HDMI outputs. In addition, built-in audio de-embedders allow audio to be routed to discrete digital and analog audio outputs. The internal de-embedders eliminate the need for external HDMI audio extraction products, reducing the number of boxes in the AV system and system complexity and maintenance costs. For applications requiring digital audio distribution, the de-embedded audio is made available on S/PDIF outputs in its native two-channel or multi-channel Dolby® Digital or DTS format. For analog audio applications, the de-embedded signal is made available as line level stereo audio, on captive screw connectors. These audio outputs simplify integration with the local audio system.

Fast Reliable Switching:

For enhanced integration of HDMI-equipped sources and displays, the **IVS-168A 4K** Series features two Extron technologies: EDID Minder and Key Minder. EDID Minder automatically manages EDID communications, ensuring that all HDMI sources power up properly and reliably deliver content whether or not they are actively connected to the display devices through the matrix switcher. For HDMI signals with protected content, Key Minder authenticates and maintains continuous HDCP encryption between input and output devices to ensure quick and reliable switching in professional AV environments while enabling simultaneous distribution of a single source signal to one or more displays. If a signal from an HDCP-compliant source is routed to a non-compliant display, the switcher outputs a full-screen green signal, providing immediate visual confirmation that the protected content cannot be viewed on the selected display. With SpeedSwitch Technology, the **IVS-168A 4K** matrix switchers deliver exceptional, virtually instantaneous switching speeds for HDCP-encrypted content.

Easy Setup, Monitoring, and Control:

The matrix switchers also provide advanced system monitoring and control via the RS-232 and Ethernet ports. Global presets allow for simplified configuration changes and fast switching speed when using a separate control system to operate the matrix switcher. Front panel indicators provide visual feedback of routing, signal presence on all inputs and outputs, and the presence of HDCP-encrypted content on each input.

With I/O sizes up to 16x16, the **IVS-168A 4K** Series can provide AV signal switching for applications such as videowalls, command and control environments, emergency operations centers, and divisible meeting rooms, or for a centralized control room supporting adjacent classrooms. The **IVS-168A 4K** matrix switchers are ideal for a wide variety of professional AV installations where distribution of high resolution, digital video



signals is needed and a fully digital pathway is essential to maintain the highest possible image quality between multiple sources and displays.

Features:

- **Available in 4x4, 8x4, 8x8, 16x8, and 16x16 fixed I/O sizes**
- **Supports computer and video resolutions up to 4K**
- **Supported HDMI specification features include data rates up to 10.2 Gbps, Deep Color up to 12-bit, 3D, and HD lossless audio formats**
- **HDMI audio de-embedding with digital S/PDIF and analog stereo audio outputs** — The IVS-168A 4K Series can extract embedded HDMI two-channel LPCM audio to S/PDIF digital and analog audio outputs. It can also extract Dolby® or DTS® encoded bitstream audio to the S/PDIF outputs. The matrix switchers feature multiple sets of S/PDIF and analog outputs, supporting audio assignment from any HDMI input source.
- **HDCP compliant** — Ensures display of content-protected media and interoperability with other HDCP-compliant devices.
- **User-selectable HDCP authorization** — Allows individual inputs to appear HDCP compliant or non-HDCP compliant to the connected source, which is beneficial if the source automatically encrypts all content when connected to an HDCP-compliant device. Protected material is not passed in non-HDCP mode.
- **SpeedSwitch® Technology provides exceptional switching speed for HDCP-encrypted content**
- **Key Minder® continuously verifies HDCP compliance for quick, reliable switching** — Key Minder authenticates and maintains continuous HDCP encryption between input and output devices to ensure quick and reliable switching in professional AV environments, while enabling simultaneous distribution of a single source to one or more displays.
- **HDCP Visual Confirmation** — When HDCP-encrypted content is transmitted to a non-HDCP compliant display, a full-screen green signal is sent to the display for immediate visual confirmation that protected content cannot be viewed on that display.
- **Comprehensive EDID management** — Use PCS software to access EDID Minder for setting video input EDID, capturing EDID from connected displays, or uploading custom EDID files. Proper EDID management ensures that sources and displays are easily integrated into a system resulting in optimized system operation. Freely downloadable EDID Manager 2.0 software is available for advanced EDID editing and creating custom EDID files.
- **EDID Minder® automatically manages EDID communication between connected devices** — EDID Minder ensures that all sources power up properly and reliably output content for display.
- **Supports DDC transmission**

- **Automatic or manual color bit depth management** — Automatically adjusts color bit depth based on the display EDID, preventing color compatibility conflicts between source and display. Alternately, the color bit depth can be set manually for each output.
- **HDMI to DVI Interface Format Correction** — Automatically reformats HDMI source signals for output to a connected DVI display.
- **Automatic input cable equalization** — Actively conditions incoming HDMI signals to compensate for signal loss when using long cables, low quality cables, or source devices with poor HDMI signal output. 4K/30 signals are equalized to 50 feet (15.2 meters) when used with Extron HDMI Pro cables.
- **Automatic output reclocking** — Reshapes and restores timing of HDMI signals at each output, enabling transmission over long HDMI cables.
- **Provides +5 VDC, 200 mA power on the HDMI outputs for external peripheral devices**
- **Global presets** — Up to 32 frequently used I/O configurations may be saved and recalled from the front panel, Ethernet, or serial control. This time-saving feature allows I/O configurations to be set up and stored in memory for future use.
- **QS-FPC™ QuickSwitch Front Panel Controller** — Discrete buttons for each input and output allow for simple, intuitive operation.
- **View I/O mode** — Discrete LEDs or tri-color buttons for each input so users can easily view which inputs and outputs are actively connected for ease in troubleshooting.
- **Tri-color, backlit buttons - 16x8, 16x16 I/O** — Can be custom labeled for easy identification. The buttons illuminate red, green, or amber, depending on function, for ease of use in low-light environments.
- **Power Save Mode** — The unit can be placed in a low power standby state to conserve energy when not in use.
- **Ethernet monitoring and control** — Can be proactively monitored, managed, or controlled over a LAN, WAN, or the Internet using standard TCP/IP protocols.
- **RS-232 control port** — Using serial commands, the matrix switcher can be integrated into a control system. Extron products use the SIS™ – Simple Instruction Set command protocol, a set of basic ASCII code commands that allow for quick and easy programming.
- **Easy setup and commissioning with Extron's PCS – Product Configuration Software** — Conveniently configure multiple products using a single software application.
- **Front panel USB configuration port** — Enables easy setup, configuration, and firmware updating without having to access the rear panel.
- **Front panel security lockout** — Prevents unauthorized use in non-secure environments.
- **Rack-mountable full rack width metal enclosure:**
 - 1U - 4x4, 8x4, and 8x8
 - 2U - 16x8 and 16x16

Remarks:



- **THE ABOVE SPECIFICATIONS CAN BE CHANGED WITHOUT PRIOR INFORMATION.**
- **THE IMAGES SHOWN FOR ILLUSTRATION PURPOSE ONLY. ACTUAL PROUDUCT MAY VARY DUE TO PRODUCT ENHANCEMENT.**