MV4 • IP Multiviewer

General Description

The system's primary function shall be to facilitate Audio and Video Distribution over a standard 1 Gigabit network. System includes support for Real-Time 1080P, 4K and HDR content transmission.

The system end-to-end latency shall be capable of 1 frame of latency (including encoding and decoding).

The system shall be capable of being supplied as factory configured to consultant/architect's specification for video, audio, and IP settings.

The system shall be capable of Mass Configuration, allowing Auto Discover and configuration of all Visionary encoders & decoders on the network without the need for any external hardware.

The system shall be capable of supporting an unlimited number of endpoints.

The system shall be the Visionary PacketAV® series.

Decoding

The MV4 shall be capable of receiving 1080p and 4K resolutions at less than 1GB total throughput.

The MV4 shall support JPEG2000 based codec with optimization for computer-generated content as well as support for fast-motion, cinema-grade content.

The MV4 shall enable the display of up to four IP video sources simultaneously on a single display up to 4K.

The MV4 shall support input resolutions: 480P - 4K30

The MV4 shall support output resolution: 1080P & 4K30

The MV4 units shall provide integrated scaling with no additional latency.

The MV4 shall support switching transition between encoder streams shall not be greater than 1 second.

The MV4 shall support switching between sources of the same framerate shall transition cleanly.

Audio

The MV4 shall support the following digital audio formats: Dolby Digital®, Dolby Digital EX, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos, DTS®, DTS-ES, DTS 96/24, DTS-HD High Res, DTS-HD Master Audio, DTS:X, LPCM up to 8 channels.

Control

The MV4 shall support fully automatic basic operation without a control system.

The MV4 shall support browser control.

The MV4 shall support front panel control.

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The MV4 shall support OSD (on screen display) menus for control.

The MV4 OSD menus shall support: MV4 Menu, Image Quality Adjust, Image Channel Setup, Channel X Image Setup, Channel X Size Adjust, Channel X Position Adjust, Image Convert.

The MV4 graphical user interface and built-in dashboard functions shall not require custom or project specific programming or API development.

The MV4 shall provide control without the need for any additional components. Any system requiring the need of a control system interface or system discovery device shall not be accepted.

The MV4 shall be capable of control from a variety of 3rd-party manufacturers, supported systems include (among others) Crestron, Extron, AMX, RTI, QSC and Symetrix.

The MV4 shall support integration with enterprise grade software management platforms to provide complete system monitoring, management, and control.

The MV4 shall be capable of presenting live thumbnail previews to 3rd party control UI, for all content on encoders and decoders, in JPEG snapshot format, updated once per second.

The MV4 shall support integration with enterprise grade software management platforms to provide complete system monitoring, management and control.

The MV4 shall be able to be controlled using ASCII-readable HTTP(S) GET/POST, UDP Unicast, or UDP Multicast API.

The MV4 shall support multiple windowing modes.

The MV4 shall support Picture in Picture.

The MV4 shall support Text and Image Overlay.

The MV4 shall support custom photo or logo at any screen location.

Communication & Control of External Devices

The MV4 shall support HDMI 2.0.

The MV4 shall support HDCP (High-bandwidth digital copy protection) for both version 1.x and 2.2 control.

Connectors

The MV4 shall include one HDMI video output.

The MV4 shall include one Ethernet port for encoder and control functionality.

The MV4 shall include four Ethernet ports for decoder functionality.

The MV4 shall include a physical hardware Reset switch, accessible on the rear of unit.

The MV4 shall include a physical power (ON) switch, accessible on the rear of unit.

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Network

The MV4 shall be capable of LLDP, allowing for dynamic control of endpoints based on automatic discovery of physical location.

The MV4 shall not require proprietary network management software or hardware.

The MV4 shall not require proprietary or manufacturer specific Ethernet switches.

The MV4 network connections shall support 10/100/1000 Mbps, auto-switching, auto negotiating, auto-discovery, full/half duplex, DHCP.

The Maximum bandwidth requirement per decoder AV stream shall be 1 Gigabit.

Enterprise Security

The MV4 shall provide SSH security capability.

The MV4 shall provide 802.1X security capability.

The MV4 shall provide AES stream encryption capability.

Form Factor

The MV4 is a single unit integrated 4K four channel decoder, multi-window processor, and encoder.

The MV4 shall be 1 RU and desktop or rack mountable.

Compliance

The MV4 shall be TAA compliant.

The MV4 shall be CE compliant.

The MV4 shall be FCC compliant.

The MV4 shall be C-tick compliant.

The IP Multiviewer shall be the Visionary MV4 IP Multiviewer.