

44K

4K@60Hz
YUV 4:4:4,
18Gbps, HDR

**Product: H444K-
8x8-VP HDMI Matrix**

**Professional UHD HDMI seamless matrix with
output downscaling, video wall or multiview for
Commercial, Education and Residential use**



**Route 8 UHD HDMI to 8 local
displays including Video Wall and
Multiviewer, EDID management and output downscaling**

Key Features

- HDCP 2.2 compliant, backward compatible with earlier HDCP versions
- Supports video resolution up to 4K@60Hz 4:4:4 at 18Gbps bandwidth (HDMI 2.0b)
- Seamless switching for smooth, frame-accurate transitions between sources
- Built-in video wall function with flexible row/column splicing and bezel correction
- Multiview mode supports 12 display layouts, including PIP, Dual, Triple, Quad, and 3 user-defined modes
- 8 routes of L/R balanced audio output, with Bind-to-Input, Bind-to-Output, and Audio Matrix modes
- Independent horizontal and vertical mirror per output
- Selectable no-signal display: blank screen, blue screen, or output off
- Wide HDMI audio format support, including Dolby Atmos, Dolby TrueHD, and DTS-HD Master Audio
- CEC control support for connected source and display devices
- Power-off memory and advanced EDID management (12 factory, 2 user-defined, 8 copy modes)
- Multi-mode control: front-panel buttons, IR remote, RS-232, and Web GUI
- Compact 1U metal enclosure for flexible rack or shelf installation

Description

The Smart Digital Solutions **H444K-8x8-VP** is a professional compact 18Gbps 4K60 4:4:4 HDMI seamless matrix capable of selecting between 8 different HDMI devices to 8 HDMI displays. Flexible control options include front panel, infra-red, IP, RS232 and internal web browser control.

The Smart Digital Solutions **H444K-8x8-VP** offers an unprecedented level of both switching and distribution functionality for high resolution HDMI or DVI signals. Extensive features include EDID management with presets learning and , CEC compatibility together with audio de-embedding for analogue and digital signals enhance installation.

Each output can be independently downscaled, and seamless switching delivers smooth transitions between sources with no frame loss. Built-in video wall and multiview functions let a single unit drive tiled or multi-window layouts, while eight balanced L/R audio outputs provide flexible audio de-embedding.

The inclusion of Smart-e's new command protocol allows full control of the matrix, including EDID settings and muting inputs or outputs via RS232. Compact 1U 19" rack mounting chassis makes for ease of installation.

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Technical Specification

Video - Digital

Connectors (HDMI)	8 x HDMI (Type A) i/ps & 8 x HDMI (A) o/ps
Signal type	HDMI - TMDS
Standards	HDMI 2.0b, HDCP 2.2/1.4
Maximum data rate	6Gbps per colour
Maximum pixel clock	600MHz
Resolution range - DTV	Max 4096x2160 @60Hz 36 bit colour depth
Resolution range - PC	Max 1920x1200 @60Hz 24 bit colour depth
Frame rate	24, 25, 30, 50 & 60 Hz
Gain	0 dB
Formats	RGB and YCrCb
Colour space	4:4:4, 4:2:2 & 4:2:0
Colour depth	8-bit, 10-bit, 12-bit
HDR formats	HDR10, HDR10+, Dolby Vision, HLG
Clock jitter	<0.15T bit
Rise time	<0.3T bit (20-80%)
Fall time	<0.3T bit (20-80%)
Maximum transmission delay	5ns (+/- 1ns)
Signal strength	TMDS +/- 0.4V pk-pk
TMDS signal level	2.9V - 3.3V
Impedance	50R
Maximum DC offset	15mV
Maximum input cable length	15m 24 AWG
Maximum output cable length	15m 24 AWG

Audio - Digital

HDMI audio formats	LPCM 2/5.1/7.1, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby TrueHD, DTS-HD Master
Audio,	Dolby Atmos, DTS:X
Optical audio formats	LPCM 2.0, Dolby Digital / Plus, DTS 5.1
Optical audio connector	8 x TosLink

Audio - Analogue

Standards	Stereo - unbalanced
Bandwidth	20 - 20 kHz
Connector	8x 3.5mm stereo mini-jack socket

Power

DC Voltage	External 12V PSU
AC Voltage	100-230 VAC
AC frequency	50/60 Hz
Power consumption	43W (max)
Operating temperature	0-40 degrees C
Storage temperature	-20-60 degrees C
Relative humidity	20-90%
Chassis size	1U 19" rack mounting
Chassis dimensions	440x200x44mm
Product weight	2.8Kg
MTBF	30,000 hours



Technical Specification

Control - RS232

Connector	Db9 subminiature female
Signal type	Full duplex
Signal level	+/- 5V
Baud rate	115200
Data bits	8
Stop bits	1
Parity	None
Pinout	1-RX, 2-0V, 3-TX

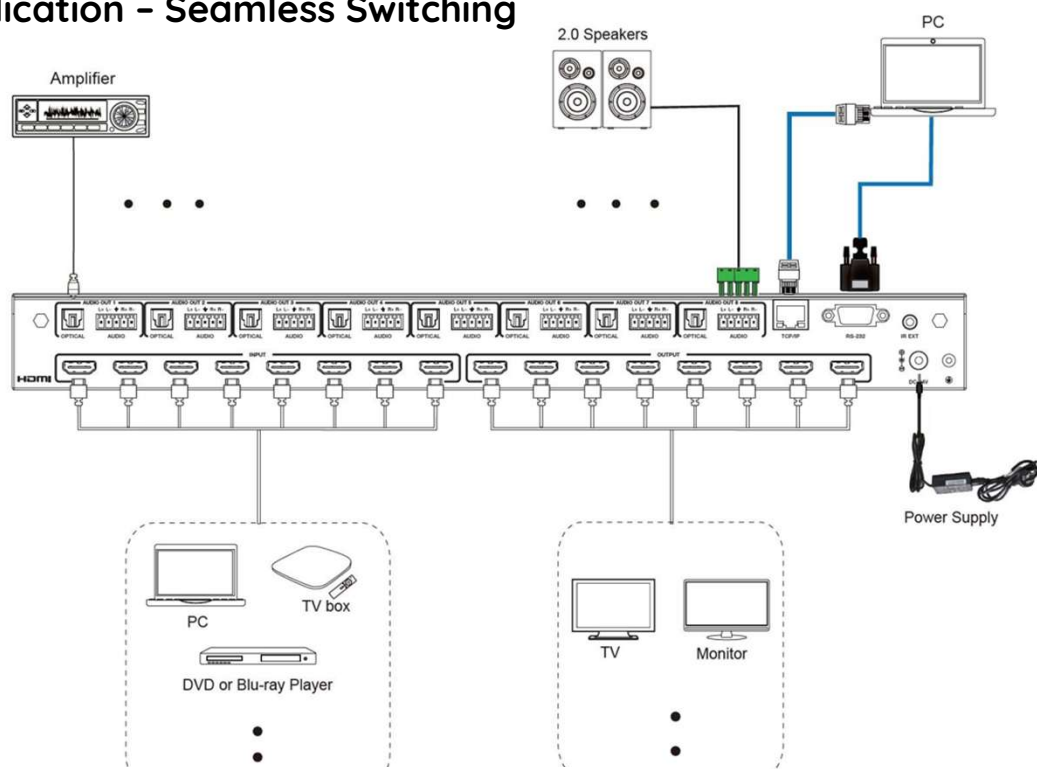
Control - Ethernet

Connector	RJ45 female
Protocol	TCP/IP
Control rate	Adaptive 10M/100M full or half duplex

Control - IR

Connector	3.5mm mini-jack socket
Signal type	Full duplex (via 2 connections)
Signal bandwidth	20-60KHz

Application - Seamless Switching

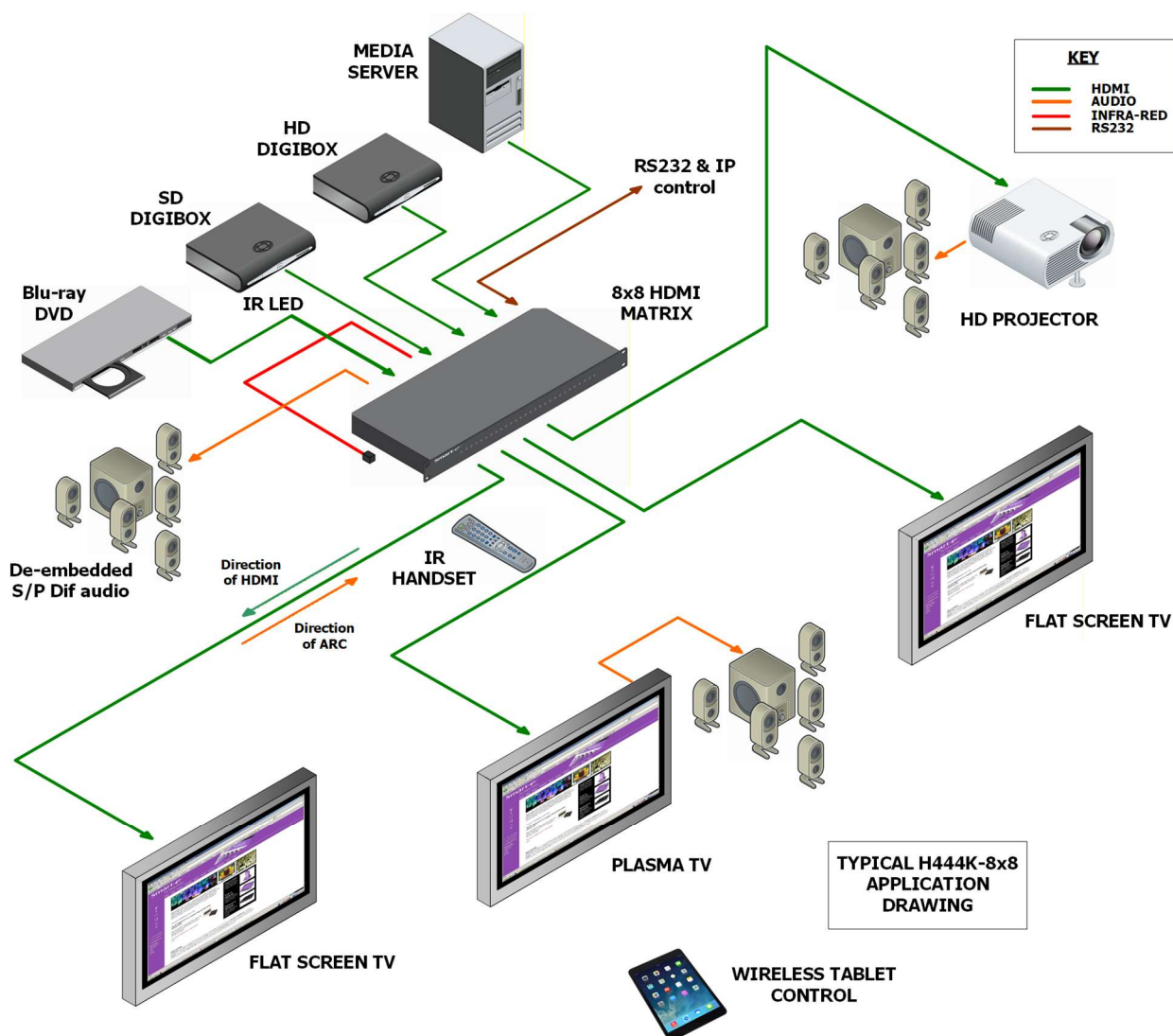


Front View

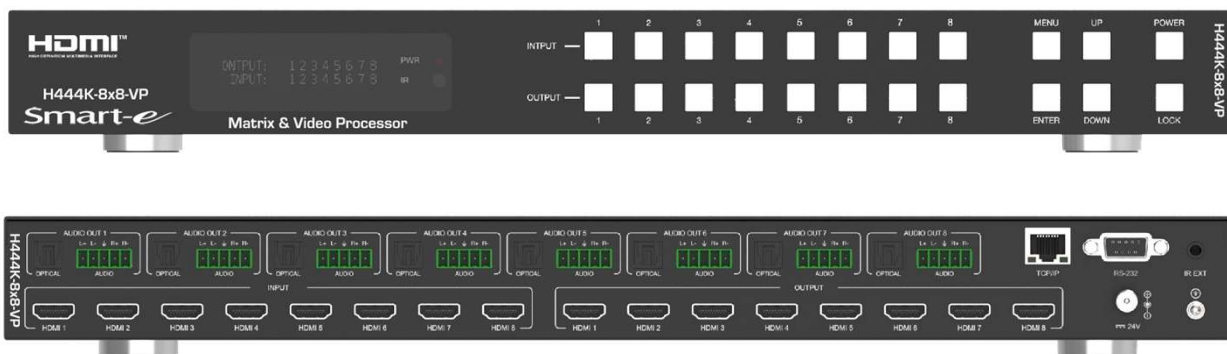


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Application - Seamless Switching



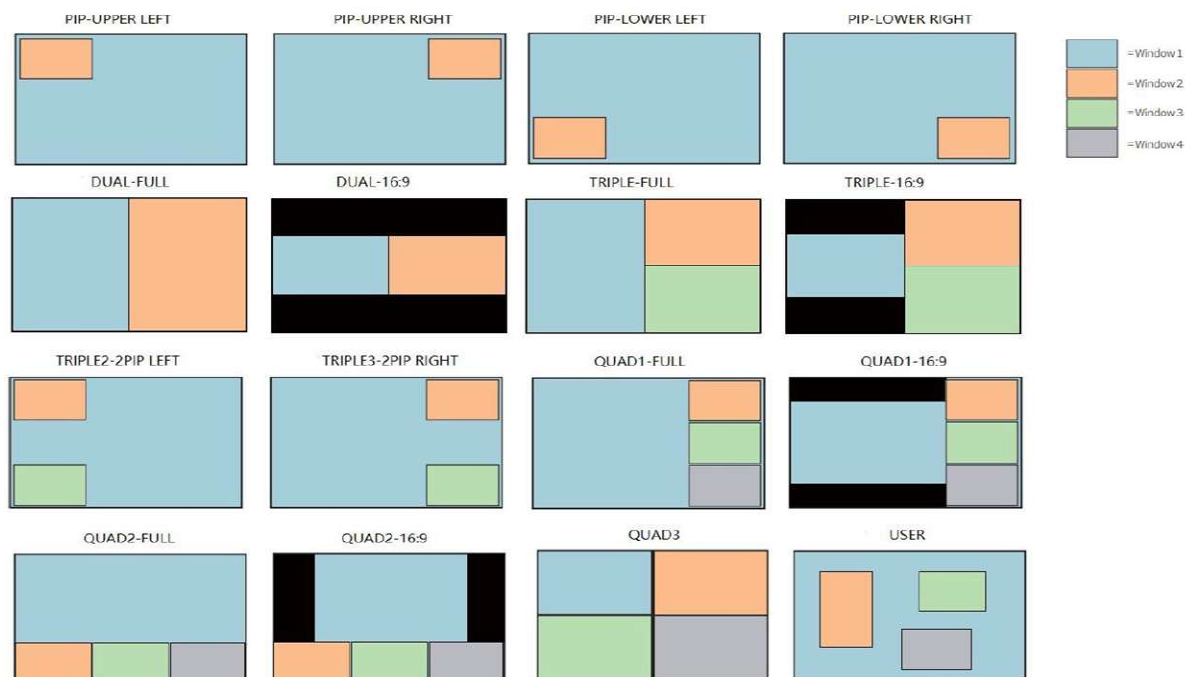
Panel Drawings



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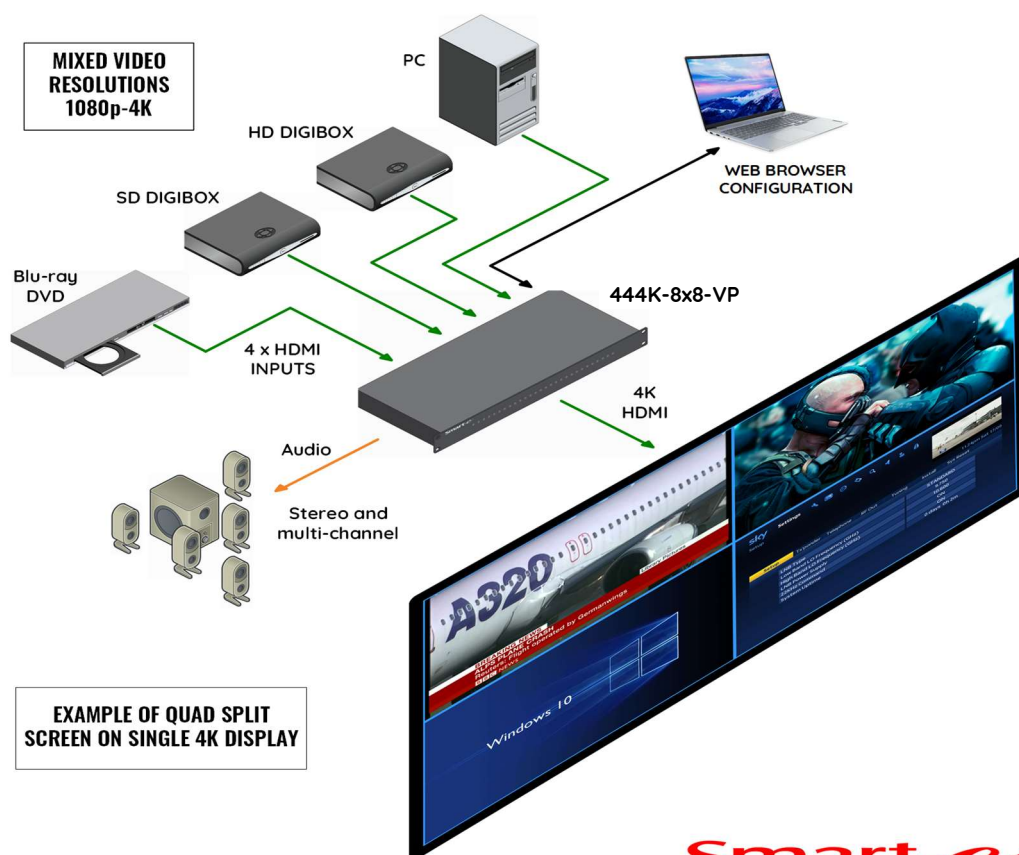
Multiview Options

The matrix supports multiple display modes including: SINGLE, PIP, Dual, Triple 1, Triple 2, Triple 3, Quad 1, Quad 2, Quad 3, User 1, User 2, User 3.



Users can select different operations for different multi-view modes as following:

- i) **SINGLE:** Inputs selection
- ii) **PIP:** Inputs selection, Sub window size and position selection
- iii) **Dual, Triple 1, Triple 2, Triple 3, Quad 1, Quad 2, Quad 3:** Inputs selection, Display mode selection, Display aspect selection



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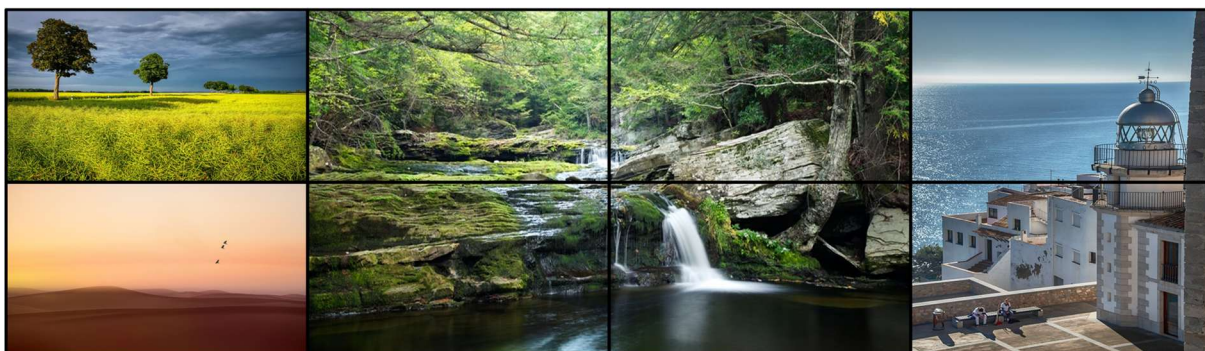
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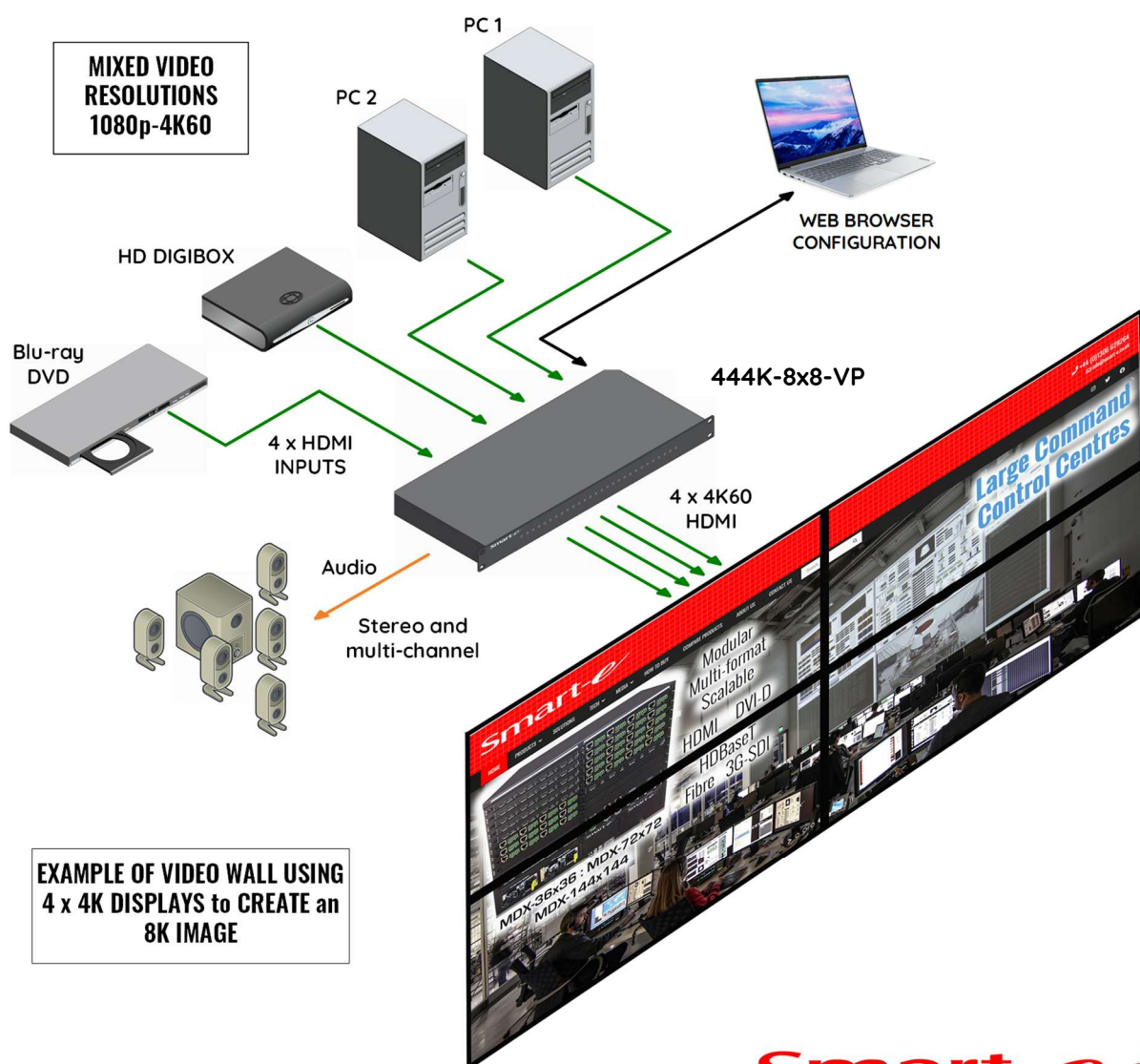
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Application Drawing – Video Wall

Example 1 : Output 1-8 – 4x2 video wall



Example 2 : Output 1-4 – 2x2 video wall



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