Data sheet

Multi-resolution Video Wall and Multi-viewer

Product: 4K-2500 Video Processor

Comprehensive video processor for 2x2 video wall controller and quad split PIP/POP processor with seamless switching and image mirroring

- Video processing engine
- 4x4 seamless switcher
- Supports 4K @30Hz
- HDMI inputs
- Downscaling output
- HDCP 2.2/1.4 compliant
- HDMI 2.0 & DVI 1.0
- CEC compliant
- 2x2 video wall
- Image mirroring
- 1080p @60Hz
- HDMI output x 4
- 720/1080p/2K/4K
- Web browser config
- On-screen Display
- Audio delay feature
- Quad split PIP & POP
- <40ms switching
- 36 bit colour depth
- Front panel control
- EDID management
- 19" rack mounting
- RS232 & IR control
- TCP/IP control

Create a multitude of visual effects using this highly flexible multi input video processing unit for Video Walls and PIP/POP

The Smart-e **4K-2500** is a highly integrated compact unit capable of multiple functions using its internal Video processing engine. The **4K-2500** can be used as a 4x4 seamless switching and scaling matrix, 2x2 video wall processor and the added ability to act as a quad-split PIP/POP processor with multiple user selectable layout options.

The **4K-2500** can be used as flexible video processor or a 4x4 seamless HDMI matrix with fast switching speeds of less than 40ms. Four HDMI outputs designed to connect to four HDMI compliant monitors Can downscale video resolutions to 720p/1080p/2560x1440/1920x1200 and 1360x768. Individual outputs can be adjusted for X,Y offset, mirroring and rotation and the ability to disable the video.

Multiple control options are provided including: front panel button control, infra-red control via the provided handset or remote-control options of RS232 or TCP/IP for interfacing to an external control system.An internal web browser is also available for configuration and control whilst an on-screen display (OSD) completes the comprehensive rage of control methods

The **4K-2500** has comprehensive EDID management allowing users to assign the EDID values from 1080p to 4K to any of the four inputs maximizing the quality of the source material.

Two channel stereo audio is accommodated within the HDMI signal and can be delayed up to 250ms for each individual output, allowing for the video processing duration.

The 4Konnect range is from a family of digital extenders & matrices using standard CAT 6-8 STP cable to transmit HD signals over long distances

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TECHNICAL SPECIFICATION

Video – Digital

Connectors	4 x HDMI (Type A) input and outputs
Signal type	HDMI - TMDS
Standards	DVI 1.0, HDMI 2.0. HDCP 2.2/1.4
Maximum data rate	6Gbps per colour
Maximum pixel clock	300MHz
Resolution range - DTV	Max 4096x2160 @30Hz 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	4:2:2 & 4:2:0
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

Standards	Embedded within the HDMI signal
Maximum audio channels	2
Maximum sample rate per channel	192 kHz
Sample size	16-24 bits

Power

DC Voltage	External12V PSU
AC Voltage	100-230 VAC
AC frequency	50/60 Hz
Power consumption	13.5W (max)/1.2W (standby)
Operating temperature	0-40 degrees C
Storage temperature	-20-60 degrees C
Relative humidity	20-90%
Chassis size	1U 19" rack mounting
Chassis dimensions	440x200x44.5mm
Product weight	4Kg
MTBF	30,000 hours

Control – RS232

Connector	D9 female
Signal type	Full duplex
Signal level	+/- 5V
Baud rate	115200
Data bits	8
Stop bits	1
Parity	None
Pinout	2-TX, 3-RX, 0V-5

Control – Ethernet

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

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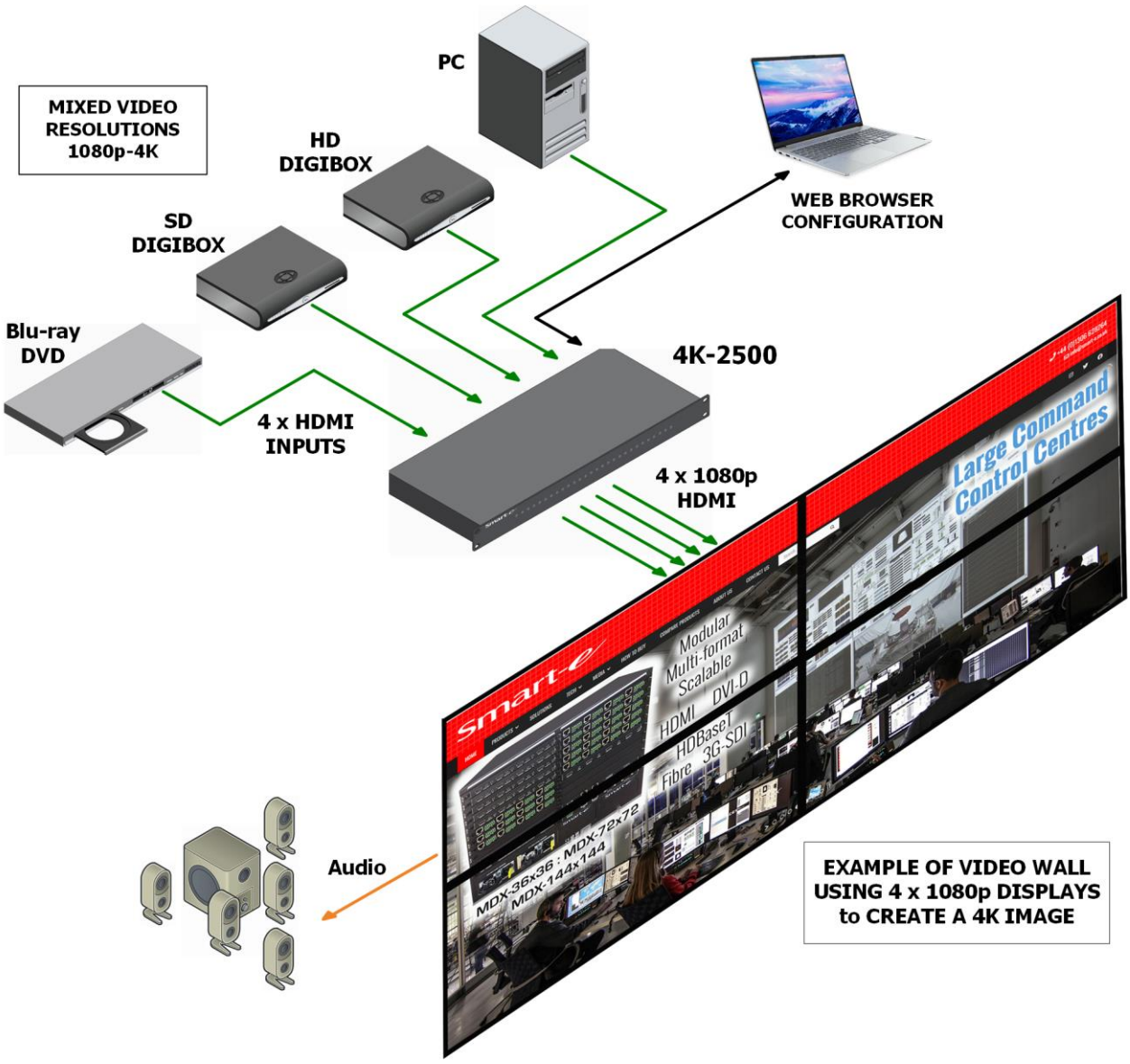
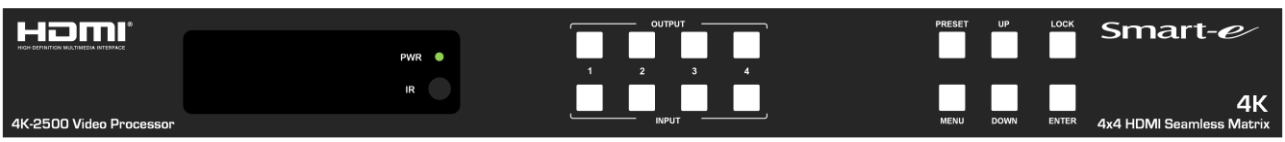
APPLICATION DRAWING – VIDEO WALL



PANEL DRAWINGS



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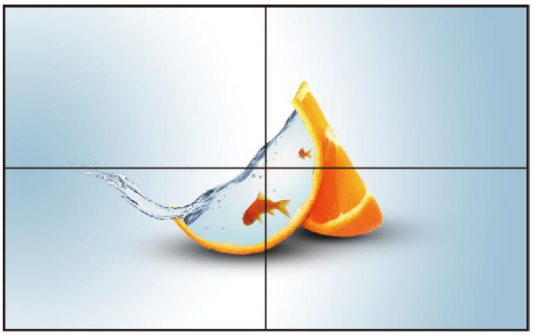
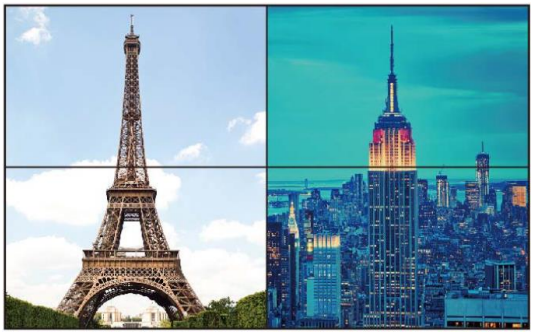
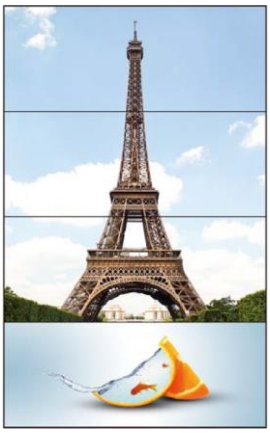
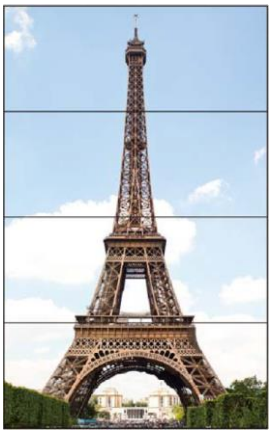
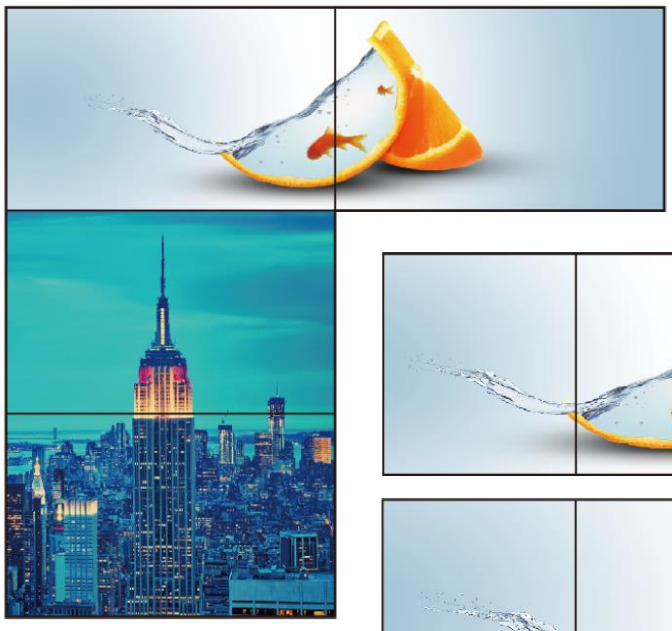
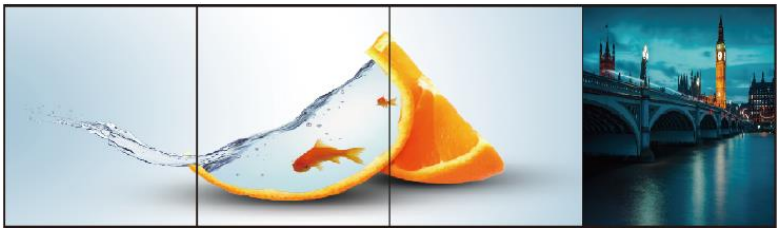
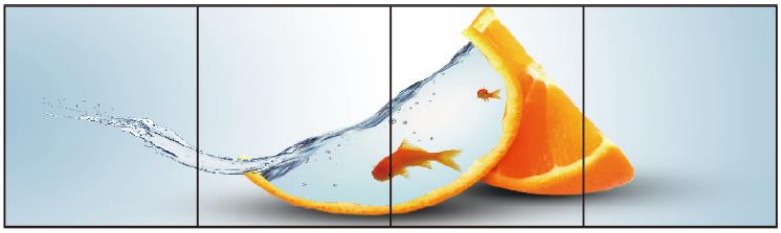





VIDEO WALL EXAMPLES

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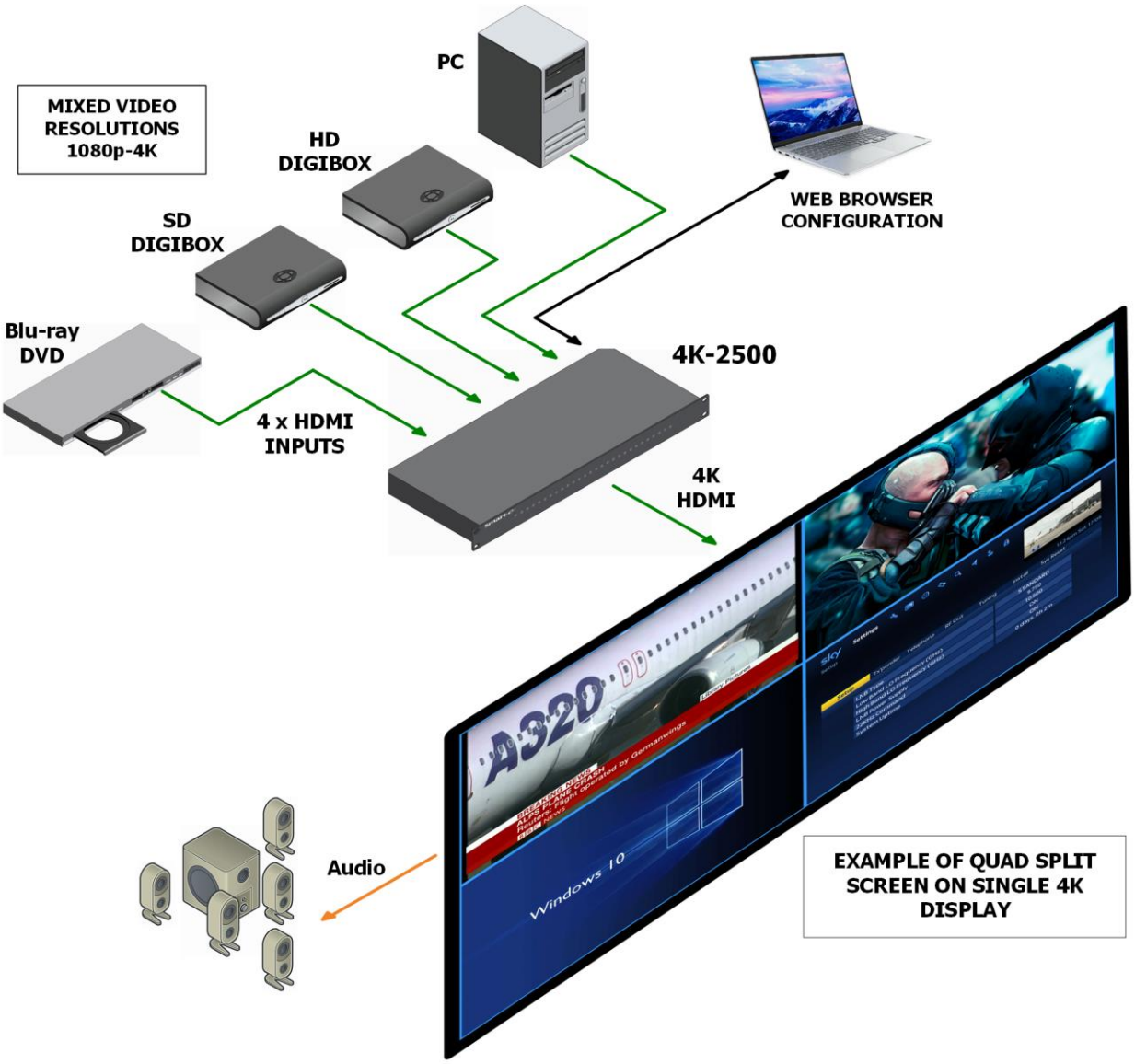
APPLICATION DRAWING – QUAD SPLIT



REAR PANEL DIAGRAM

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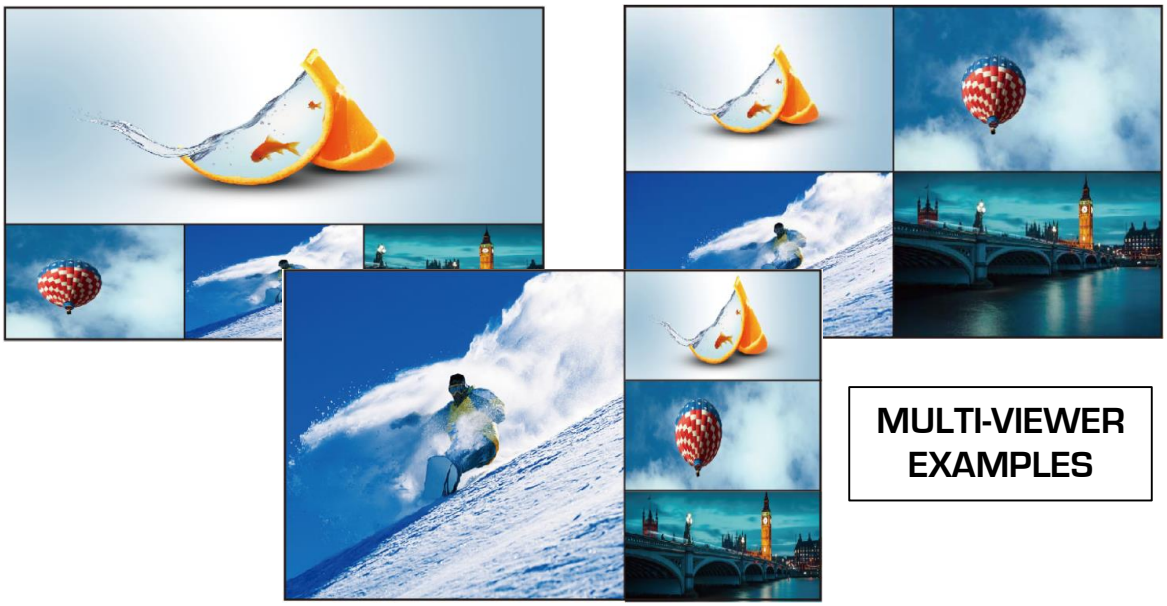
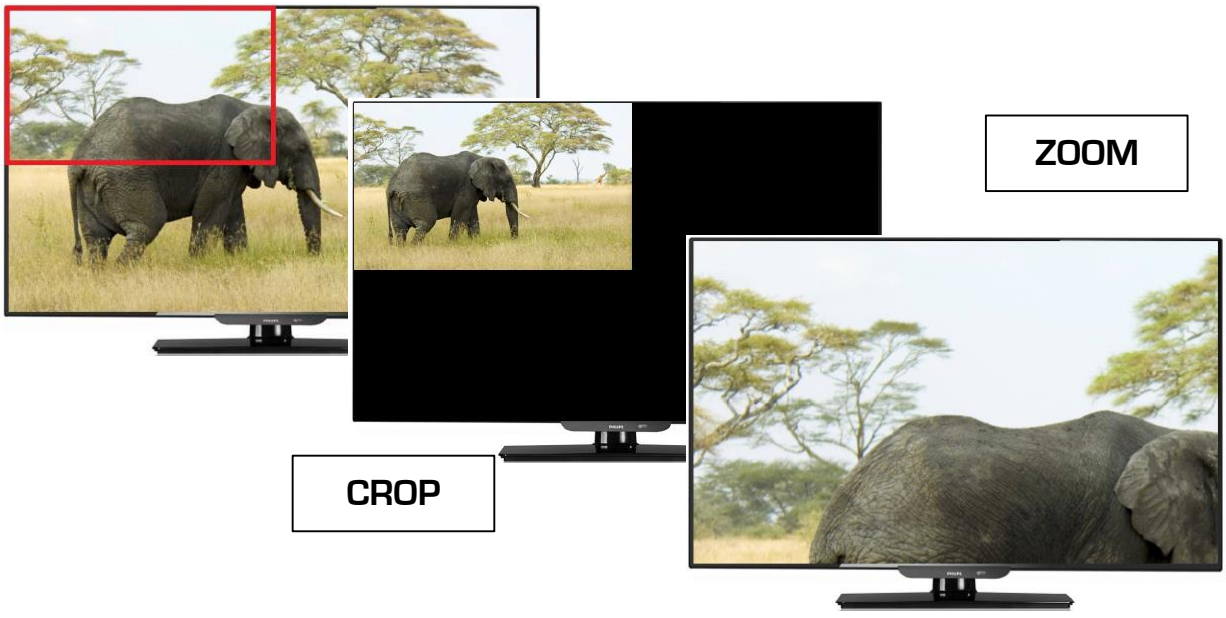


MULTI-VIEWER EXAMPLES



ZOOM

CROP

IMAGE FLIP

MIRROR IMAGE

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