Data sheet

Multi-format video wall and PIP/POP unit

Product: SDS-2500 Hydra Processor

Comprehensive video processor for 2x2 video wall controller and quad split PIP/POP processor

- Hydra video processing engine
- 2x2 video wall controller
- Quad split PIP & POP
- 4x4 seamless switcher
- Supports 1920 x 1080 @ 60Hz
- HDCP 1.3 compliant
- HDMI 1.3 & DVI 1.0
- CEC compliant
- HDMI, VGA & composite inputs
- Separate stereo audio input
- HDMI output x 4
- Front panel control
- EDID management
- 19" rack mounting
- RS232 & IR control
- Ethernet 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 **SDS-2500** is a highly integrated compact unit capable of multiple functions using its internal **Hydra** processing engine. The **SDS-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.

Four multi-format video inputs are available, each able to accept HDMI, VGA or composite video signals. Stereo audio can also be added separately or use the embedded audio within the HDMI connection. All analogue video inputs are digitised and up-scaled where necessary to create a seamless image.

The **SDS-2500** provides four HDMI outputs designed to connect to four HDMI compliant monitors accepting resolutions up to 1080p.

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.

The **SDS-2500** has comprehensive EDID management allowing users to assign a number of EDID values from 480i to 1080p to any of the four inputs. EDID commands can be issued either by the front panel controls or the RS232 serial commands. Using the serial communications user defined EDID strings can be issued or EDID values can be read directly from screens connected to any of the four HDMI outputs. Infra-red connectivity is provided on the rear of the unit to direct infra-red commands from and to the displays back to the sources providing a convenient of control for users.

The SDS 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 1.3. HDCP 1.3
Maximum data rate	2.25Gbps per colour
Maximum pixel clock	165MHz
Resolution range - DTV	Max 1920x1080 @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	4:2:2 & 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

Video – Analogue RGBHV

Connectors	4 x High density sub miniature D9 female
Signal type	RGBHV (VGA)
Standards	VESA
Gain	0dB
Bandwidth	380 MHz
Resolution range - DTV	480i, 480p, 720p, 1080i,1080p
Resolution range - PC	VGA, SVGA, XGA, SXGA, UXGA
Frame rate	24, 25, 30, 50 & 60 Hz
Resolution range	VGA, SVGA, XGA, SXGA, UXGA
Signal Strength	0.63V p-p - 0.9V p-p
Signal levels	RGB: 0-1V / HV Syncs: 0-5V
Impedance	75R
Echo loss	<-20dB @5MHz
Maximum input cable length	10m

Video – Analogue composite (CV)

Connectors	4 x Phono RCA females
Signal type	PAL, NTSC3.58, NTSC 4.43, SECAM, PAL/M, PAL/N
Standards	SMPTE/EBU
Gain	0dB
Bandwidth	150 MHz @-3dB point
Differential Phase Error	0.1^0, 3.58-4.43 MHz
Differential Gain Error	0.1^0, 3.58-4.43 MHz
Signal Strength	1V pk-pk
Signal levels	+/- 2V
Impedance	75R
Echo loss	<-30dB @5MHz
Maximum input cable length	15m

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Audio – Digital

Standards	Embedded within the HDMI signal
Maximum audio channels	8
Maximum sample rate per channel	192 kHz
Sample size	16-24 bits

Audio – Analogue

Standards	Stereo - unbalanced
Bandwidth	20 - 20 kHz

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

specifications are subject to change without notice

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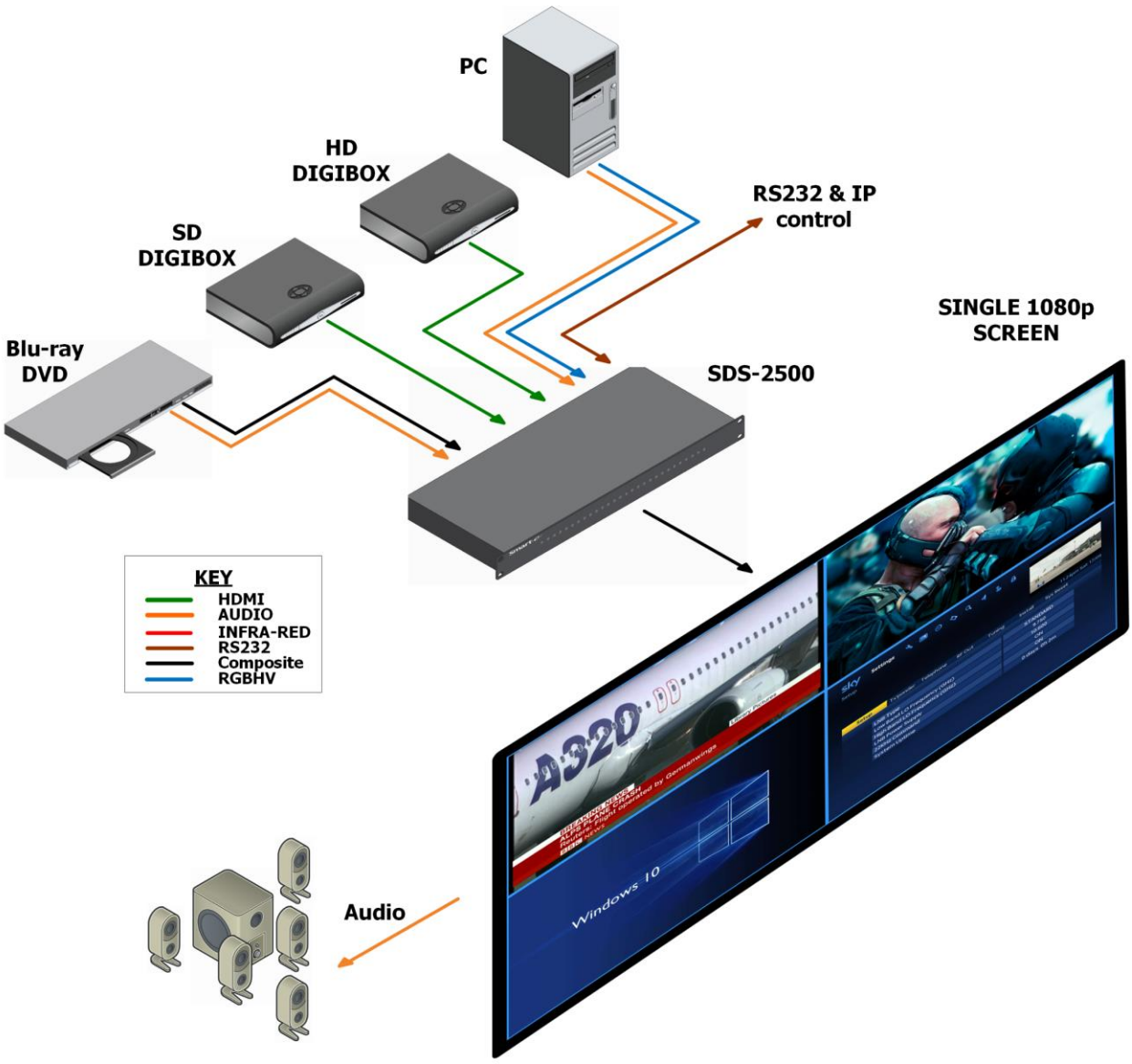
APPLICATION DRAWING – QUAD SPLIT



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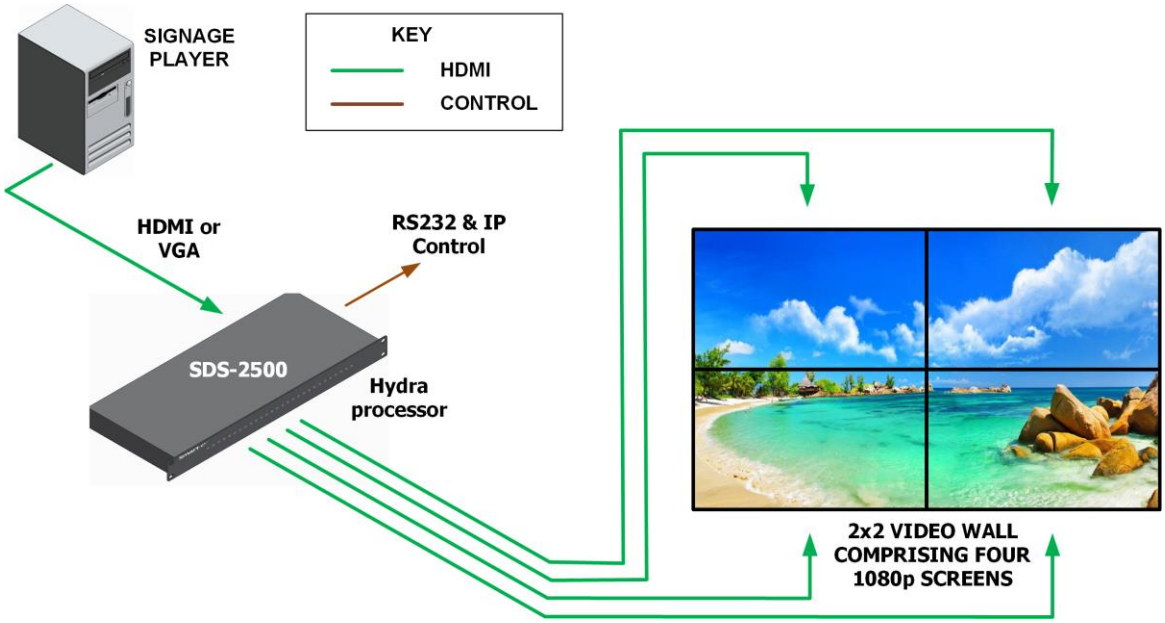
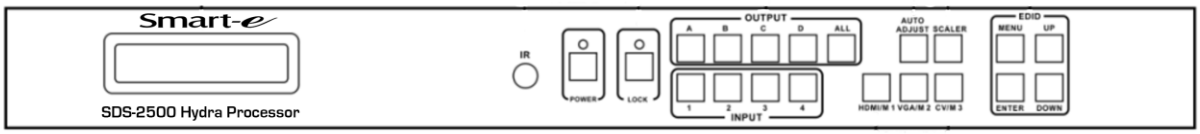
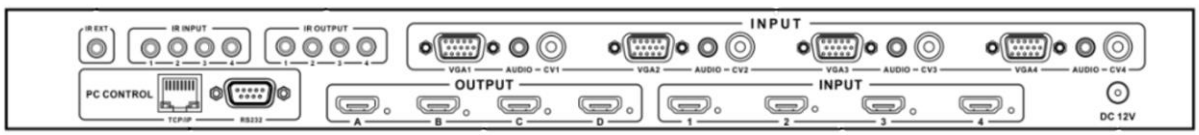
APPLICATION DRAWING – VIDEO WALL



PANEL DRAWING





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