

Comprehensive professional HDMI/HDBaseT matrix with output scaling & CAT 6/6a distribution for Commercial, Education and Residential use



- HDBaseT technology
- HDMI 2.0 4K@60Hz, 4:4:4, 18Gbps
- HDR 10, HDR10+, Dolby Vision, HLG
- HDCP 2.2/1.3 compliant
- Dual mirrored outputs
- IR routing and pass-through
- POC (remote powering receivers)
- CEC control of source and display
- 4K>1080p downscaling per output
- 4x Analog De-embedded Audio
- 4x SPDIF De-embedded Audio
- Front panel control
- EDID management
- 19" rack mounting
- RS232 & IR control
- Ethernet control + Web browser

Route and distribute 4 HDMI inputs to 4 remote & 4 local displays up to 150m of CAT 6/6A STP cable using HDBaseT technology

The Smart Digital Solutions **SDSC-4x4-RSP** is a professional flexible HDBaseT matrix capable of selecting between 4 different HDMI devices to 4 HDMI displays and 4 HDBaseT receivers/displays located up to 150m from the unit. Flexible control options include front panel, infra-red, IP, RS232 and internal web browser control.

The **SDSC-4x4-RSP** offers an unprecedented level of both switching and distribution functionality for high resolution HDMI or DVI signals. Displays can be installed using extra long cables: up to 150m for 1080p resolution video and 120m for 4K 18Gbps resolutions. Extension of 18Gbps video is possible by the use of visually lossless compression, Digital Stream compression (DSC). DSC is an international VESA standard providing a low latency, low complexity codec ideal for a 2:1 compression.

The **SDSC-4x4-RSP** has extensive features including EDID management with presets and learning together with audio de-embedding for analogue and digital signals enhance installation. Each output is mirrored to a HDMI and HDBaseT connection providing simultaneously viewing. Additionally the output can be displayed at the original 4K resolution or down-scaled to 1080p. This feature allows the mix of display types with varying native resolutions maintaining the original quality of the signal where necessary.

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.

DESIGN

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TECHNICAL SPECIFICATION**Video - Digital**

Connectors (HDMI)	8 x HDMI (Type A) input and outputs
Connectors (HDBT)	4 x RJ45 screened
Signal type	HDMI - TMDS, HDBaseT - Cat 6
Standards	HDMI 2.0. HDCP 2.2/1.4
Maximum data rate	4.5Gbps per colour
Maximum pixel clock	340MHz
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
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	Up to 7.1 HD audio - LPCM, Dolby TrueHD, DTS-HD Master Audio
Standards de-embedded	SPDIF
De-embedded connector	RCA
Maximum audio channels	8
Maximum sample rate per channel	192 kHz
Sample size	16-24 bits

Audio - Analogue

Standards de-embedded	Stereo - unbalanced
De-embedded connector	3pin Phoenix
Bandwidth	20 - 20 kHz

Power

AC Voltage	100-230 VAC
AC frequency	50/60 Hz
Power consumption	80W (max)/12W (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	440x200x44mm
Product weight	4Kg
MTBF	30,000 hours

TECHNICAL SPECIFICATION

Control - RS232

Connector	Sub miniature DB9
Signal type	Full duplex
Signal level	+/- 5V
Baud rate	115200
Data bits	8
Stop bits	1
Parity	None

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

Cat cable connectivity

Number of cables	1 x Cat 6/6A screened twisted pair cables
Connectors	1 x female screened RJ45 connectors per unit
Termination standard	TIA/EIA T568B
Cable requirements	Solid conductor, 24 AWG or better
Cable recommendations	400 MHz bandwidth STP (shielded twisted pair)
Transmission distance	120 4K@60Hz 150m 1080p@60Hz Shielded twisted pair CAT 6 or CAT 6A

FRONT PANEL

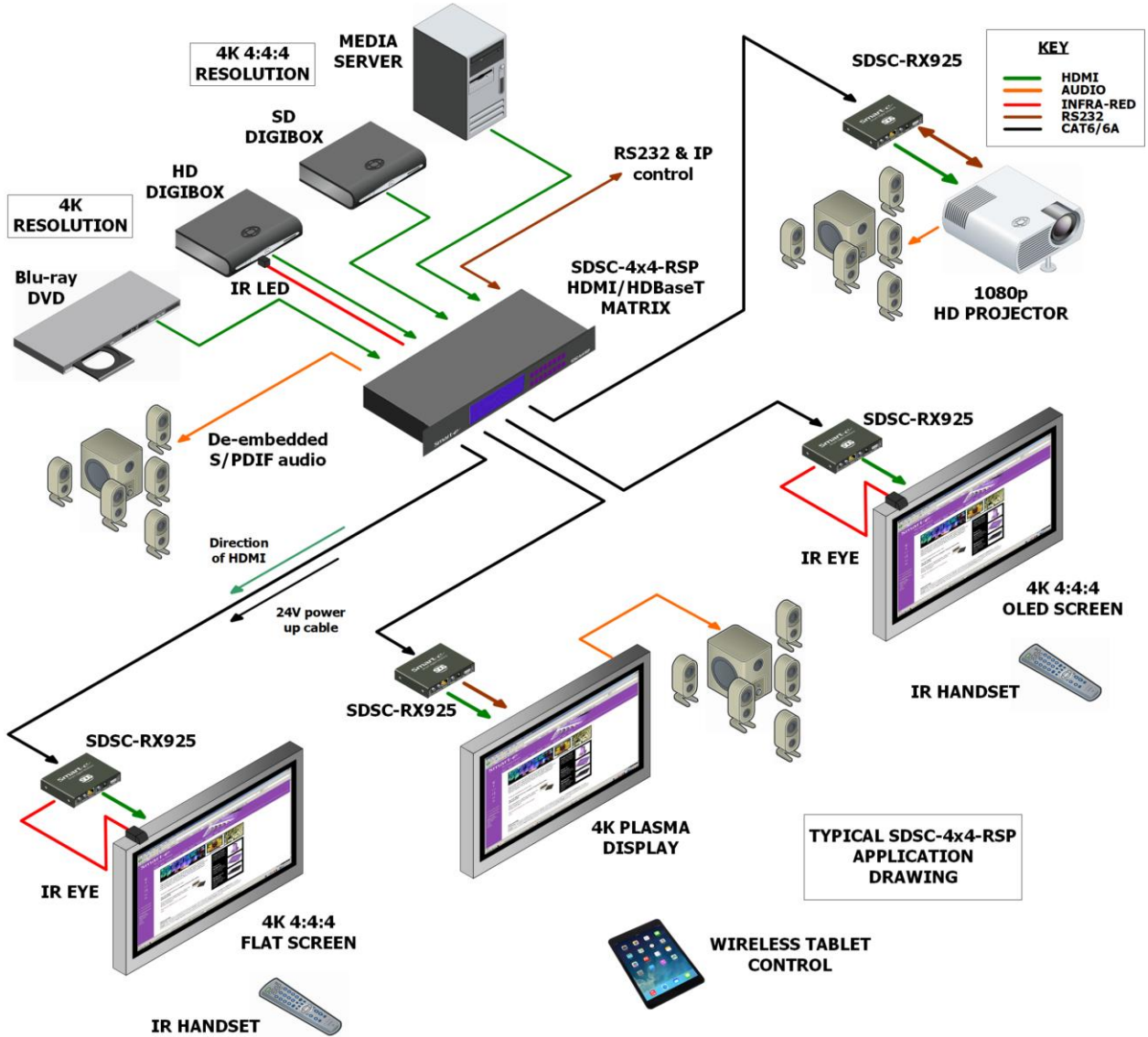


REAR PANEL

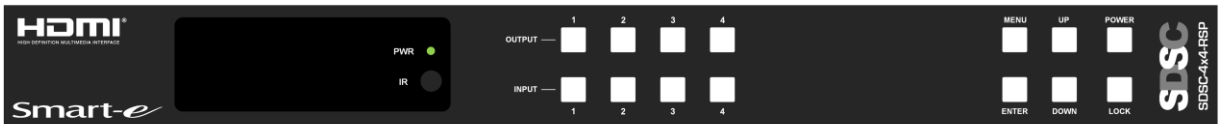


specifications are subject to change without notice

APPLICATION DRAWING



PANEL DRAWINGS



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Flexible cost-effective long range professional HDMI receiver using CAT 6/6A distribution system



Digital Stream
Compression

- HDBaseT technology
- HDMI 2.0 4K@60Hz, 4:4:4, 18Gbps
- HDR 10, HDR10+, Dolby Vision, HLG
- HDCP 2.2/1.3 compliant
- Looping inputs for transmitter
- Full duplex RS232 pass through
- Bi-directional IR pass through
- 150m @1080p, 120m @4K
- Single CAT 6/6A STP/FTP
- CEC compliant
- Analogue audio out on receiver
- Secure DC connection
- POC (remote powering receivers)
- Slim profile 18mm

Receive high resolution UHD HDMI video together with IR and RS232 over a single CAT 6 screened twisted pair cable up to 150m

The **SDSC-RX925** is a flexible and cost effective HDBaseT receiver solution for extending HDMI, bi-directional IR, full duplex RS232 together with POC (remote power over cable). The unit is very compact and comes with the IR accessories. By incorporating an extended HDBaseT technology, 4K UHD HDMI signals can be transmitted up to 120m and 1080p @60Hz video up to 150m using CAT 6/6A STP/FTP.

The **SDSC-RX925** is a HDBaseT receiver unit capable of accepting UHD HDMI signals up to 4K UHD resolutions. Implementing a special extended version of the HDBaseT specification, the extender also provides the pass through of wide band bi-directional InfraRed signals and full duplex RS232 up to 115Kbaud. Whilst POC power (24V) can be sent by either the TX or RX through the Cat 6/6A cable to provide power to the remote end. All that is required is a single Cat 6/6A cable connection to provide all these features.

The **SDSC-RX925** receiver has an analogue stereo audio output replicating the de-embedded audio from the HDMI signal.

The unit is very compact having a height of only 18mm helping to hide the units in confined spaces. Each box also has integral mounting feet for desktop use and the ability to fix right-angled brackets allowing ease of installation.

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TECHNICAL SPECIFICATION**Video - Digital**

Connectors	HDMI (Type A)
Signal type	HDMI - TMDS
Standards	HDMI 2.0. HDCP 2.2/ 1.4
Maximum data rate	4.5Gbps per colour
Maximum pixel clock	340MHz
Resolution range - DTV	Max 4096x2160 @60Hz 36 bit colour depth
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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
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, SPDIF
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
Connector	3.5mm stereo jack socket

Power

DC Voltage	External 24V PSU
DC connector	2.1mm jack with screw fitting
AC Voltage (External Supply)	100-230 VAC
AC frequency (External Supply)	50/60 Hz
Power consumption	9W (max)/1.2W (standby)
Operating temperature	0-40 degrees C
Storage temperature	-20-60 degrees C
Relative humidity	20-90%
Dimensions (each unit)	140x65x18mm
Product weight	0.16Kg
MTBF	30,000 hours

TECHNICAL SPECIFICATION

Control - RS232

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

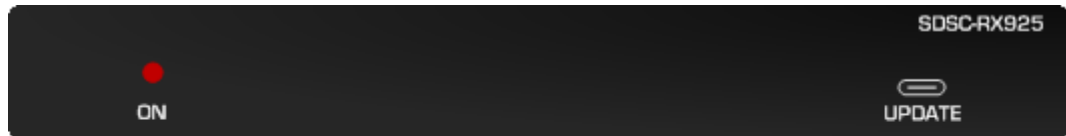
Control - IR

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

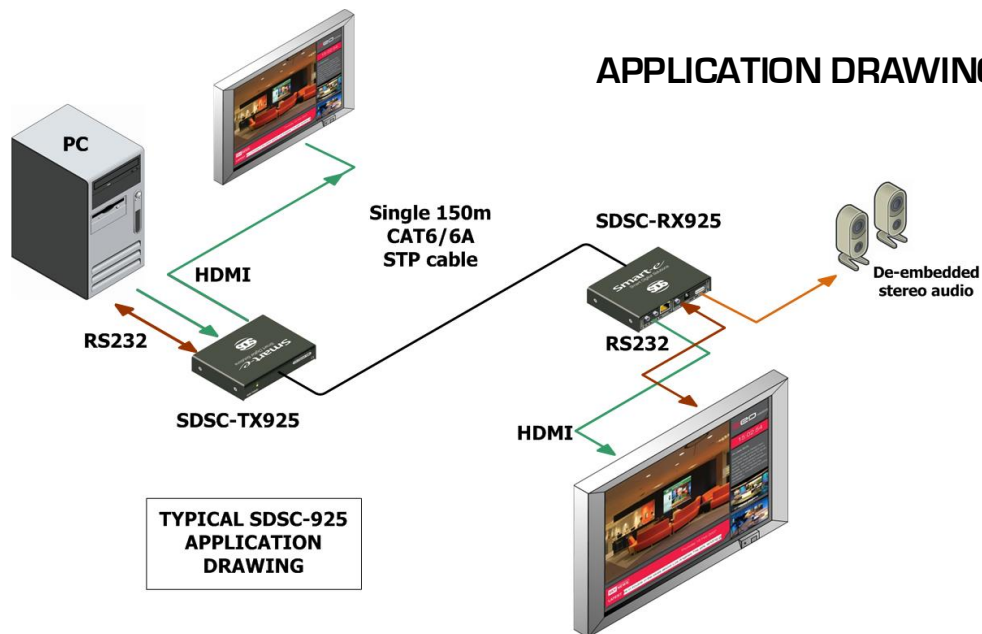
Cat cable connectivity

Number of cables	1 x Cat 6/6A screened twisted pair cables
Connectors	1 x female screened RJ45 connectors per unit
Termination standard	TIA/EIA T568B
Cable requirements	Solid conductor, 24 AWG or better
Cable recommendations	400 MHz bandwidth STP (shielded twisted pair)
Transmission distance	120/150m shielded twisted pair CAT 6 or CAT 6A - resolution dependent

PANEL DRAWINGS



APPLICATION DRAWING



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