SEAMLESS & SCALING
Smart-e

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Smart Digital Solutions **MDX-72x72**

Flexible and comprehensive next generation professional Digital Modular Matrix (DMM) for Commercial, Education and Residential

Smart-e
MDX-72x72 modular matrix
DIGITAL
MODULAR
MATRIX
POWER
ACTIVE
SENSOR
PROFESSIONAL DIGITAL SEAMLESS MODULAR MATRIX

The **MDX-72x72** is a professional flexible Digital Modular Matrix (DMM) capable of selecting between 72 different devices to 72 displays. Seamless switching together with output video scaling provides a professional image selection whilst 4-way modular input and output cards cater for a wide range of signal formats.

Seamlessly route 72 high resolution video sources to 72 displays for HDMI, DVI, HDBaseT, Fibre and 3G-SDI together with analogue VGA, YPrPb and composite

The **MDX-72x27** chassis offers an unprecedented level of both switching and distribution functionality for high resolution HDMI, DVI, HDBaseT and 3G-SDI. Legacy products are also catered for with analogue input cards capable of accepting RGBHV, YPrPb, Y/C and PAL/NTSC all of which can be up-scaled to 1080p resolution.

By combining Seamless video switching with modular input and output modules Smart-e sets a new benchmark for complete integrated AV solutions, all of which can be controlled easily via either IP, RS232 and keypad.

Fully HDCP compliant and incorporating enhanced EDID management the matrix is ideal for many multi-channel signal switching and distribution for Commercial, Educational and Residential solutions. Compact 12U 19" rack mounting chassis makes for ease of installation with optional upgrade to SmartiP (extra 1U).

DIGITAL
MODULAR
MATRIX

The Smart-e MDX-72x72 features

- HDMI, DVI, HDBaseT, Fibre, VGA & SDI
- HDCP & HDMI 1.4 compliant
- Combined Data rate of 12 Gbits/s
- HDTV 1080p 60Hz 36bpp resolutions
- PC resolutions up to 1920x1200@60 Hz
- **Seamless switching**
- Enhanced EDID management
- Supports Deep Colour (10 ,12 &16 bit)
- Modular construction— 4 port cards
- **Individual output scaling**
- TCP/IP control
- Dual port RS232 control
- **Inline power for receivers (POH)**
- Compact 12U 19" rack mounting
- 3 year warranty
- Sizes ranges from 8x8 to 144x144

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Video

Signal Types	HDMI, DVI, VGA, HDBaseT, 3G-SDI
Formats	1080p @60Hz with 10 & 12 bit Deep Colour, 3D, 4K, 2K & DVI. HDCP compliant, PC up to WUXGA,. Analogue RGBHV, YPrPb, Y/C, PAL or NTSC
Content Protection	HDCP V1.3
Connector	HDMI Type A, RJ45, HD15, BNC
Cable Types	CAT 5e, CAT 6/6e, CAT 7, STP, FTP
TV resolutions PC resolutions	480, 576, 720, 1080 p & I, 2K 4K 640x480 through to 1920x1200

Audio & Power

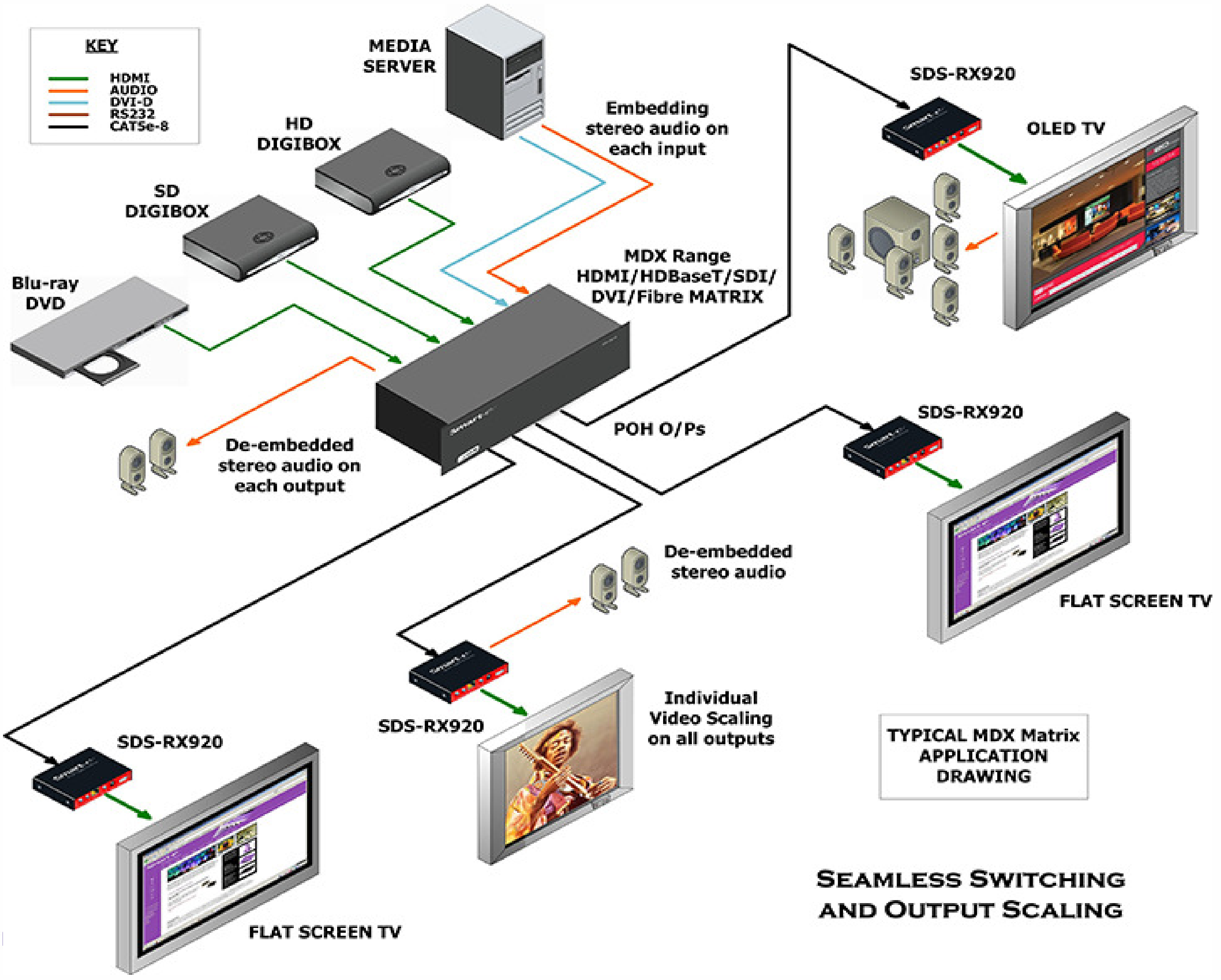
Types	Embedded audio
Digital Formats	Dolby Digital®, Dolby Digital EX, Dolby Digital Plus, Dolby® TrueHD, DTS®, DTS-ES, DTS 96/24, DTS-HD High Res, DTS-HD Master Audio™
Voltage	110-240 AC 50/60 Hz
Connector	IEC
Fuse rating	1 AT
Power	30W

Dimensions

Height	12U
Width	19" rack mounting
Depth	400mm
Weight	29Kg

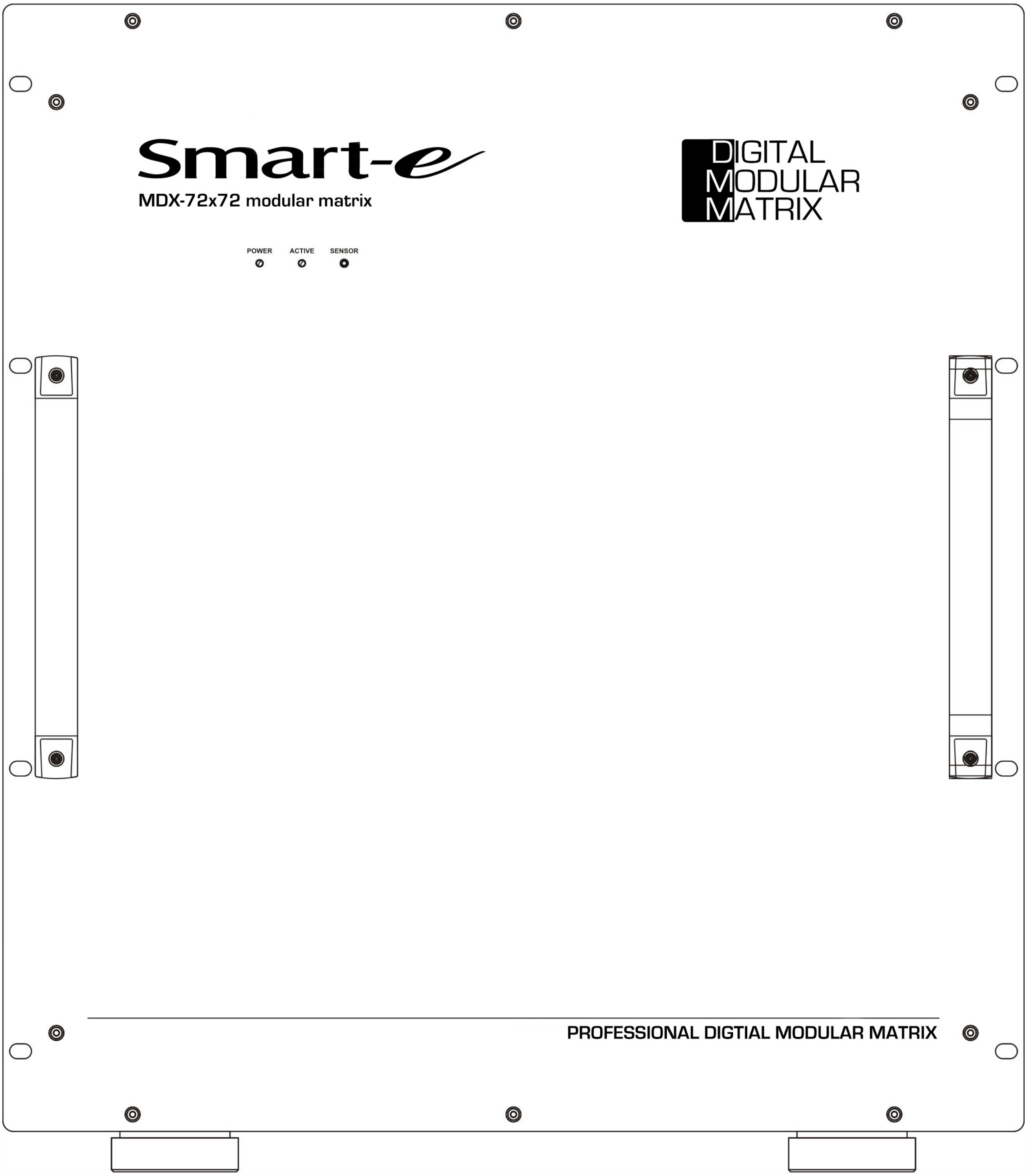
Control

IP	TCP/IP
IR signal	30-50Hz
RS232	9600 baud: 8 data.1 S, 0P
RS232 connector	Sub-miniature D9 socket


KEY
HDMI
AUDIO
DVI-D
RS232
CAT5e-8
MEDIA SERVER
HD DIGIBOX
SD DIGIBOX
Blu-ray DVD
Embedding stereo audio on each input
MDX Range HDMI/HDBaseT/SDI/DVI/Fibre MATRIX
SDS-RX920
OLED TV
POH O/Ps
SDS-RX920
De-embedded stereo audio on each output
De-embedded stereo audio
FLAT SCREEN TV
SDS-RX920
Individual Video Scaling on all outputs
SDS-RX920
FLAT SCREEN TV
TYPICAL MDX Matrix APPLICATION DRAWING

SEAMLESS SWITCHING AND OUTPUT SCALING

Panel drawings


Smart-e
MDX-72x72 modular matrix
POWER
ACTIVE
SENSOR
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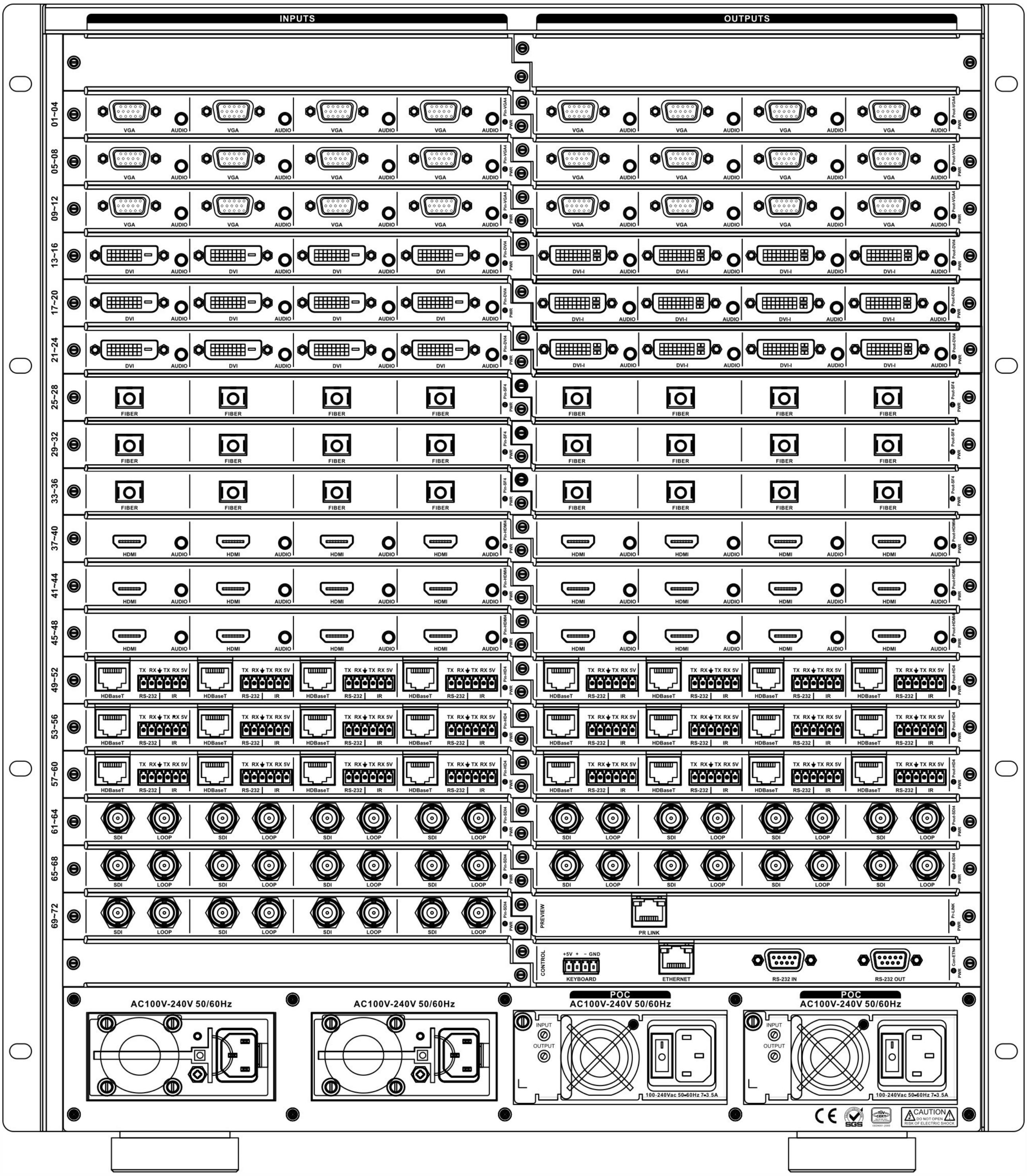
PROFESSIONAL DIGTIAL MODULAR MATRIX

Panel drawings


INPUTS
OUTPUTS
01~04
05~08
09~12
13~16
17~20
21~24
25~28
29~32
33~36
37~40
41~44
45~48
49~52
53~56
57~60
61~64
65~68
69~72
VGA
AUDIO
DVI
DVI-I
FIBER
HDMI
HDBaseT
RS-232
IR
TX RX TX RX 5V
SDI
LOOP
PWR
PREVIEW
PR LINK
CONTROL
+5V + - GND
KEYBOARD
ETHERNET
RS-232 IN
RS-232 OUT
AC100V-240V 50/60Hz
POC
INPUT
OUTPUT
100-240Vac 50-60Hz 7-3.5A
CAUTION
DO NOT OPEN
RISK OF ELECTRIC SHOCK
CE
SGS

Input cards

MDX-IP4-HDMI

- Provides 4x independent HDMI [Type-A] inputs
- HDMI 1.4, DVI 1.0 & HDCP 1.3 protocol
- Supports EDID editing function
- Maximum input resolution:
- 1920x1200p @ 60Hz 24bit,1080p @ 60Hz 36bit

MDX-RX4-HDBT

- Provides 4x independent HDBaseT inputs
- Compatible with HDBaseT protocol
- Supports EDID editing function
- Maximum input resolution:
- 1920x1200p @ 60Hz 24bit, 1080p @ 60Hz 36bit

MDX-RX4-FB

- Provides 4x independent SC optical fibre inputs
- Multimode 850nm <300m
- Supports EDID editing function
- Maximum input resolution:
- 1920x1200p @ 60Hz 24bit, 1080p @ 60Hz 36bit

MDX-IP4-DVI

- Provides 4x independent DVI inputs
- HDMI 1.4, DVI 1.0 & HDCP 1.3 protocol
- Supports EDID editing function
- Maximum input resolution:
- 1920x1200p @ 60Hz 24bit,1080p @ 60Hz 36bit

MDX-IP4-VGA

- Provides 4x independent Analogue [HD15] inputs VGA/RGBHV, YPbPr, Y/C S-video, Composite-video [using adapter cable]
- Maximum input resolution: 1920x1200p @ 60Hz 24bit, 1080p @ 60Hz 36bit
- Digitises and up-scales input resolution ≤1920x1080p @ 60Hz

Output cards

MDX-OP4-HDMI

- Provides 4x independent HDMI [Type-A] outputs
- HDMI 1.4, DVI 1.0 & HDCP 1.3 protocol
- Maximum output resolution:
- HDPC: 1920x1200p @ 60Hz 24bit
- HDTV: 1920x1080p @ 60Hz 36bit (HD1080p60)

MDX-TX4-HDBT

- Provides 4x independent HDBaseT outputs
- Compatible with HDBaseT protocol
- Maximum output resolution:
- HDPC: 1920x1200p @ 60Hz 24bit
- HDTV: 1920x1080p @ 60Hz 36bit (HD1080p60)

MDX-TX4-FB

- Provides 4x independent SC optical fibre outputs
- Multimode 850nm <300m
- Maximum output resolution:
- HDPC: 1920x1200p @ 60Hz 24bit
- HDTV: 1920x1080p @ 60Hz 36bit (HD1080p60)

MDX-OP4-DVI

- Provides 4x independent DVI outputs
- HDMI 1.4, DVI 1.0 & HDCP 1.3 protocol
- Maximum output resolution:
- HDPC: 1920x1200p @ 60Hz 24bit
- HDTV: 1920x1080p @ 60Hz 36bit (HD1080p60)

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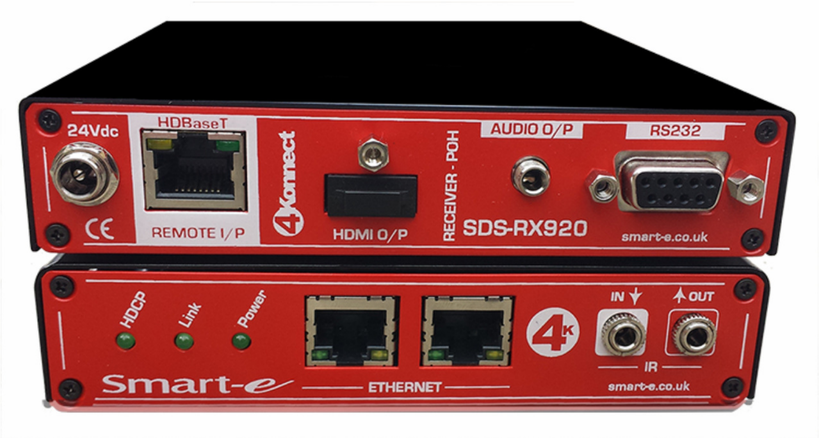
Smart Digital Solutions **SDS-RX920**

Flexible and cost effective HDBaseT 100 m receiver with integral audio de-embedder



The **SDS-RX920** is a HDBaseT receiver unit designed to accept a Cat 6 input and output a HDMI signal together with bi-directional infrared and RS232 signals over a single twisted pair CAT 5e-8 cable. The units use HDbaseT technology to extend PC resolutions up to 1920x1200 @60Hz together with 1080p @60Hz. In addition the **SDS-RX920** will also de-embed the audio within the HDMI transmission.

HDBaseT receiver for HDMI, IR and RS232 over a single 100m of CAT 5e-8 cable together with analogue audio output

The **SDS-RX920** is a robust professional product designed for reliability and functionality. The unit meets all the HDBaseT specifications as a receiving device together with an audio extractor function.

The internal digital audio within the HDMI signal is de-embedded and then converted to an analogue stereo audio using a high quality Digital to Analogue converter (DAC), the signal is then presented on a 3.5mm stereo jack socket.

Wide band Infra-Red via external adapters (SM-EYER & SM-LED) and RS232 signals are extended through the same CAT 5e-8 cable between the transmitter and receiver unit up to 100m of cable. Each box has fixing holes to facilitate ease of installation and multiple units can fit side by side on a 1U 19" rack shelf.

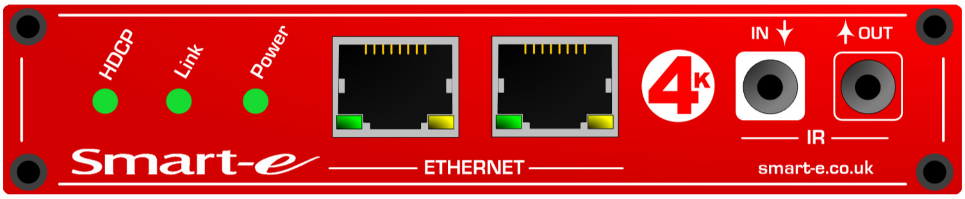
The Smart-e SDS-RX920 features

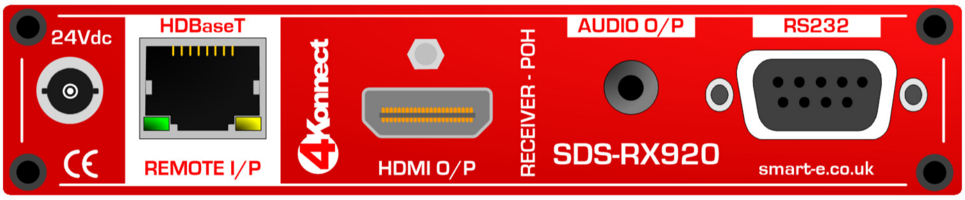
- HDMI V1.3a & DVI V1.0
- Deep Colour
- 100m of CAT5e-8 STP cable
- HDCP V1.3 compliant
- Audio de-embedder
- HDMI output
- 100BaseT Ethernet passthrough
- Supports 1920x1200 @ 60 Hz
- Wide bandwidth IR transmission
- Analogue audio output
- Transparent RS232 pass-through
- Secure HDMI connector
- Convenient fixing holes
- Cost effective, multi-function unit

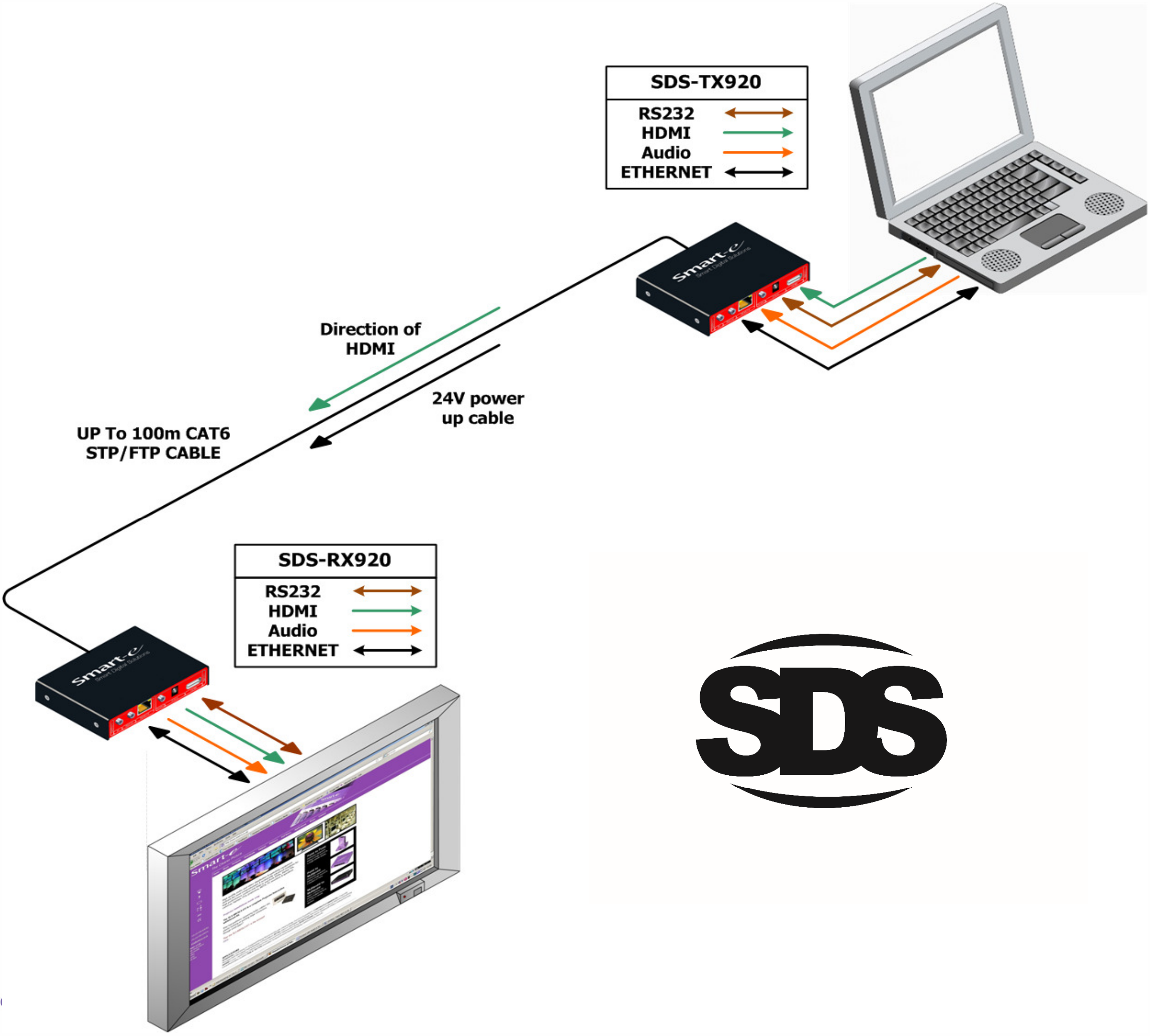
The SDS-900 range from Smart-e provides a flexible and cost effective solution for point to point transmission for a single source to a single display

SDS-RX920

Front and rear panel connections


HDCP
Link
Power
IN
OUT
4K
IR
Smart-e
ETHERNET
smart-e.co.uk


24Vdc
CE
HDBaseT
REMOTE I/P
4Konnect
HDMI O/P
RECEIVER - POH
AUDIO O/P
RS232
SDS-RX920
smart-e.co.uk


SDS-TX920
RS232
HDMI
Audio
ETHERNET
Direction of HDMI
24V power up cable
UP To 100m CAT6 STP/FTP CABLE
SDS-RX920
RS232
HDMI
Audio
ETHERNET

SDS-RX920 Specification

Digital Video

Signal Types	HDMI, DVI, DisplayPort Multimode
Formats	HDMI V1.3a DVD V1.0 Deep Color
Content Protection	HDCP V1.3
Connector	HDMI Type A Female or DVD-D
Bandwidth	2.25Gbps each colour
TV resolutions PC resolutions	480, 576, 720, 1080 p & I @60Hz 640x480 to 1920x1200 @60Hz

Digital Audio

Types	Embedded audio in HDMI
Formats	Dolby Digital® Plus Dolby® TrueHD DTS-HD High Res DTS-HD Master Audio™, up to 8chPCM
Connector	HDMI

Analogue Audio

Type	Analogue stereo
Bandwidth	20-20kHz
Impedance	51R output
Signal level	2V RMS (max)

Power

Voltage	24V DC POH
Connector	2.1mm DC jack
Max. current	500mA per unit
Power	11.5Watts

Dimensions

Height	34mm
Width	165mm
Depth	195mm with mounting ears
Weight	100g

Control

IR signal	38kHz
IR connector	3.5mm jack socket
RS232	<115Kbaud
RS232 connector	3.5mm jack socket

made in the UK by Smart-e