

444^K**4K@60Hz
YUV4:4:4,
18Gbps, HDR****Product: 444K-4x4-L
HDBaseT Matrix**

Flexible and comprehensive professional HDMI / HDBaseT matrix with CAT 6 distribution system for Commercial, Education and Residential use



- HDBaseT technology
- HDMI 2.0 4K@60Hz
- 4:4:4, 18G, HDR10, Dolby Vision
- HDCP 2.2/1.3 compliant
- Dual mirrored outputs
- Wide-band IR routing
- POC (remote powering receivers)
- CEC compliant
- 4x Analog Stereo Audio input
- 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 displays located up to 70m of CAT 6/6A STP cable using HDBaseT Lite technology

The Smart Digital Solutions **444K-4x4-L** is a professional 18Gbps flexible HDBaseT matrix capable of selecting between 4 different HDMI devices to 4 local HDMI displays and simultaneously 4 HDBaseT receivers/displays located up to 70m from the unit. Flexible control options include front panel, infra-red, RS232 and an internal web browser configuration.

The Smart-e **444K-4x4-L** offers an unprecedented level of both fast switching and long distant distribution functionality for Ultra High Definition (UHD) resolution HDMI, DVI or DisplayPort signals. IR pass-through features include a reverse wide-band path using 'plasma-friendly' eyes connecting to the HDBT receiver units for control of source devices. Whilst wide-band IR signal transmission is also available through the matrix and up the same Cat cable to control the display devices.

Each output also provides an individual de-embedded audio connection for both analogue stereo and digital S/P DIF. This enables combined audio zoning within an installation using external power amplifiers and speaker cabling. Audio embedding into each HDMI input feature is provided via individual analogue stereo mini-jack connections.

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.

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

DESIGN



INNOVATE



ORIGINATE

TECHNICAL SPECIFICATION**Video - Digital**

Connectors	8 x HDMI (Type A) input and outputs
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
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 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

Power

DC Voltage	External 24V 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	440x394x44mm
Product weight	3Kg
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 - 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	70m shielded twisted pair CAT 6 or CAT 6A

REAR PANEL



DESIGN



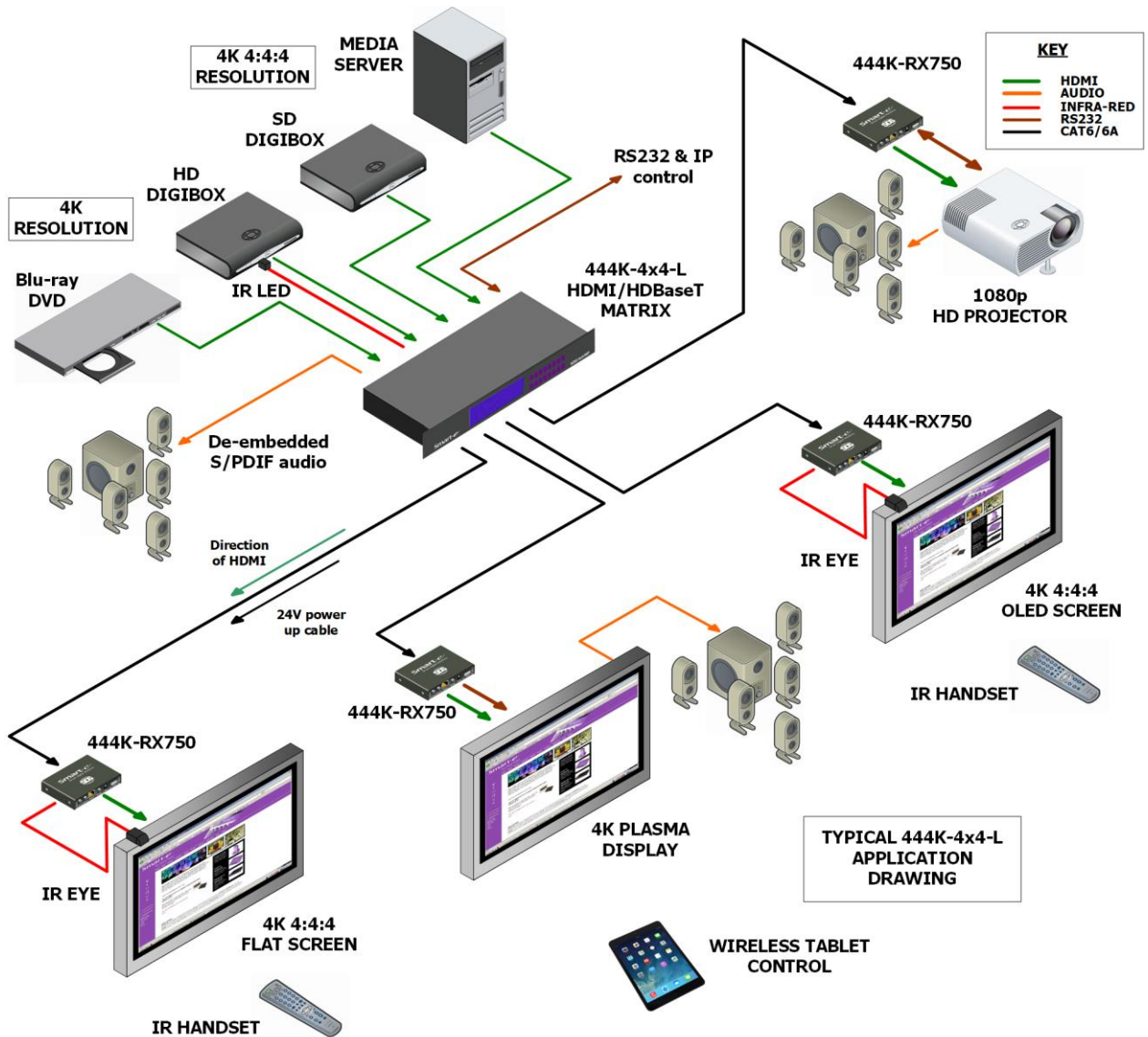
INNOVATE



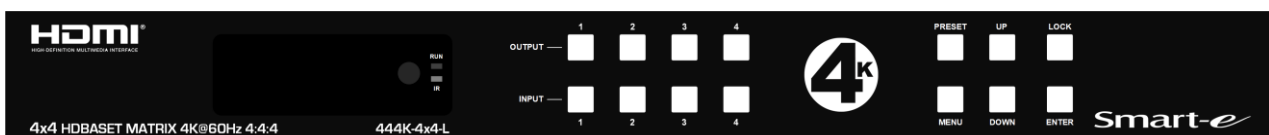
ORIGINATE

specifications are subject to change without notice

APPLICATION DRAWING



PANEL DRAWINGS



specifications are subject to change without notice

Smart-e

DESIGN

INNOVATE

ORIGINATE

444^k**4K@60Hz
YUV4:4:4,
18Gbps, HDR****Product:444K-RX750
HDBaseT RX**

Flexible and comprehensive professional HDMI extender with CAT 6 distribution system for Commercial, Education and Residential use



- HDBaseT technology
- HDMI 2.0 4K@60Hz
- 4:4:4, 18G, HDR10, Dolby Vision
- HDCP 2.2/1.3 compliant
- Dual mirrored outputs
- Full duplex RS232 pass through
- Bi-directional IR pass through
- POC (remote powering receivers)
- 70m CAT 6/6A STP cable
- HDMI resolutions 4K, 2K &1080p
- CEC compliant
- Integral mounting brackets
- Secure DC connection
- Compact housing

Distribute high resolution UHD HDMI video together with IR and RS232 over a single CAT 6 screened twisted pair cable up to 70m

The **444K-RX750** is a flexible and cost effective receiver solution to extending HDMI, bi-directional IR, full duplex RS232 together and POC (remote power over cable). The unit is compact and comes with the IR accessories. By incorporating the full HDBaseT technology 4K UHD HDMI signals can be transmitted up to 70m away

The **444K-RX750** is a HDBaseT receiver capable of transmitting UHD HDMI signals up to 4K UHD resolutions. Implementing the complete **4-Play** of the HDBaseT specification the receiver extender also provides the pass through of wide band bi-directional InfraRed signals and full duplex RS232 up to 115Kbaud. Whilst POC power (12-24V) can be sent by either the TX, Matrix or Splitter through the Cat6 cable to provide power to the remote end. All that is required is a single Cat6/6A STP cable connection to provide all these features. Dual mirrored HDMI outputs provide a convenient solution to back to back displays commonly found in Digital Signage applications.

The **444K-RX750** can connect to any other product in the **4Kconnect** range as an extender or into or out of a matrix.

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

smart-e

DESIGN

◆
INNOVATE◆
ORIGINATE

TECHNICAL SPECIFICATION

Video - Digital

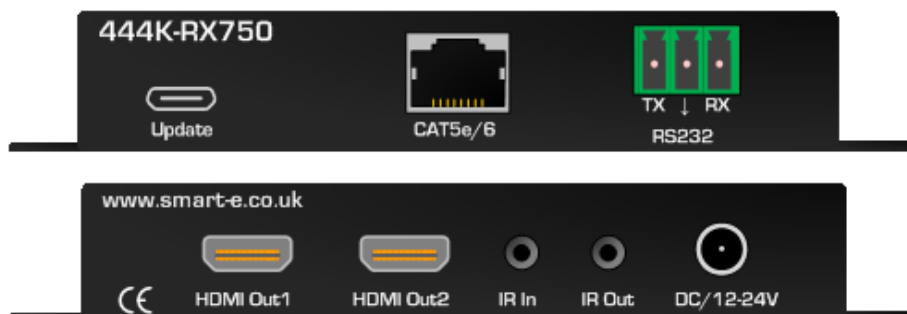
Connectors	2 x HDMI (Type A) outputs
Signal type	HDMI - TMDS
Standards	HDMI 2.0. HDCP 2.2/ 1.4
Maximum data rate	4.5Gbps per colour
Maximum pixel clock	340MHz
Resolution range - DTV	Max 4096x2160 @60Hz 36 bit colour depth
Resolution range - PC	Max 1920x1200 @60Hz 24 bit colour depth
Frame rate	24, 25, 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 within the HDMI signal, SPDIF
Maximum audio channels	8
Maximum sample rate per channel	192 kHz
Sample size	16-24 bits

Power

DC Voltage	External 12-24V 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	6W (max)/ 1.2W (standby)
Operating temperature	0-40 degrees C
Storage temperature	-20-60 degrees C
Relative humidity	20-90%
Dimensions	119x67x20mm
Dimensions with brackets	139x67x20mm
Product weight	0.5Kg
MTBF	30,000 hours



smart-e

DESIGN

INNOVATE

ORIGINATE

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

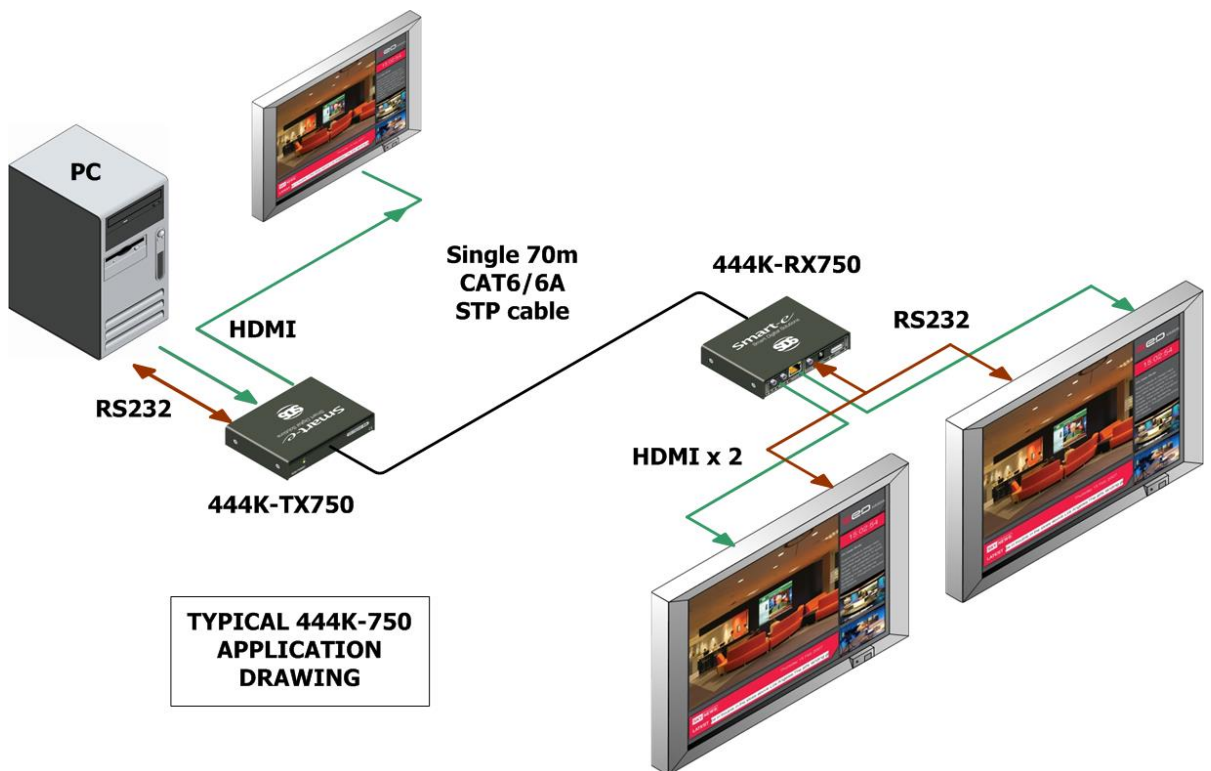
Control - IR

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	70m shielded twisted pair STP CAT 6 or CAT 6A

APPLICATION DRAWING



specifications are subject to change without notice