

444K**4K@60hz**
YUV4:4:4,
18Gbps, HDR**Product: 444K-
TX966 8-port DA**

**Comprehensive solution for distributing 8 x 18Gbps,
444K HDMI video together with IR, RS232 and
remote power over 100m of Cat 6/6A**



**Transmit a single high resolution 4K UHD HDMI signal
together with IR & RS232 over a single 100m CAT6/6A
cable to 8 displays**

Tech Brief

- HDMI 1.4
- 4K@60Hz, 4:4:4
- 18 Gbps
- HDCP 2.2 compliant
- Colour 8/10/12 bits
- HDR & HDR10
- 1-8 HDBaseT splitter
- Wide 20K-60K Hz IR
- Full duplex RS232
- EDID management
- 100m cable max
- 70m @4K60

Key Features

- Looping input
- CEC compliant
- Cascading RS232
- Cascading IR
- HDBaseT protocol
- Mounting brackets
- 1U (44mm) high
- 24V POC

Description

The Smart-e **444K-TX966** is a 19" rack mounting 1 in and 8 out HDBaseT splitter with IR and RS232 pass-through capable of transmitting 4K UHD signal over 100m of structured cabling (using the appropriate receiver) whilst providing DC power to all the receiving devices.

The **444K-TX966** is a self contained compact HDBaseT splitter capable of expanding to a 20 output solution (5 cascading units) using the HDMI looping input and RS232/IR expansion ports.

A single HDMI input can be connected to the rear of the unit where it gets split internally and then fed to 8 separate HDBaseT outputs. Each receiver (**444K-RX875** or **444K-RX888**) decodes the HDBaseT protocol back to HDMI, IR and RS232. Power is provided from the transmitter through the same Cat cable so there is no need for bulky PSUs at the display end. A secure lockable DC connector on the splitter provides a reliable power connection.

Each HDBaseT connection also allows for RS232 signals to be received back from the receiver enabling remote control of the source device. Fully HDCP 2.2 compliant this **444K-TX966** compact unit is ideal for digital signage use in Education, Entertainment and Retail Market.

Technical Specification

Video - Digital

Connectors	10 x HDMI (Type A) input/output
Signal type	HDMI - TMDS
Standards	HDMI 2.0. HDCP 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 PSUs
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	438 x 189.5 x 43.7mm
Dimensions with 'ears'	480 x 189.5 x 43.7mm
Product weight	2.5Kg
MTBF	30,000 hours

specifications are subject to change without notice

CREATIVE

PROVEN

TECHNOLOGY

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

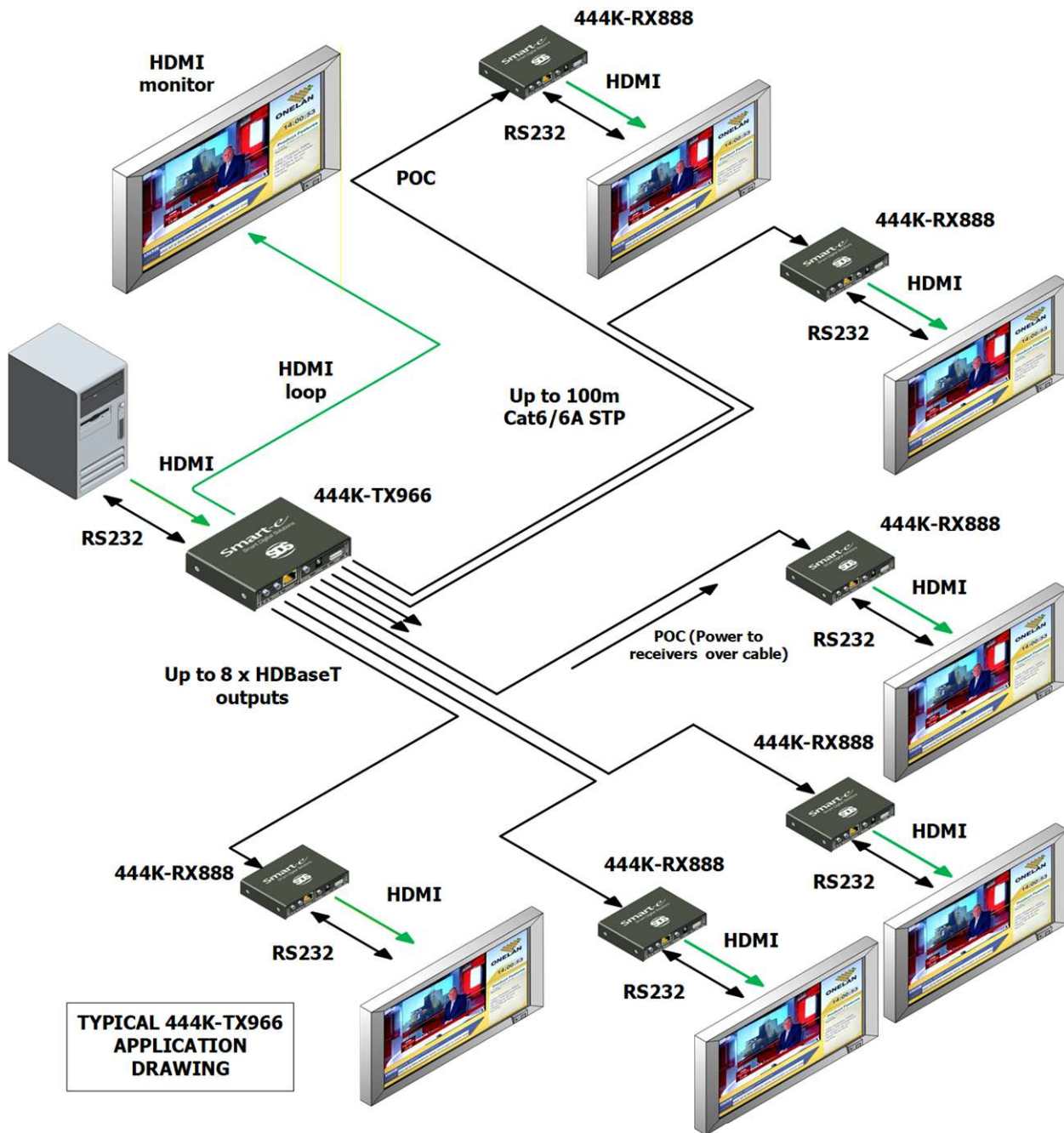
Number of cables	8 x Cat 6/6A screened twisted pair cables
Connectors	8 x female screened RJ45 connectors per unit
Termination standard	TIA/EIA T568B
Cable requirements	Solid conductor, 24 AWG or better
Cable recommendations	400 MHz bandwidth STP (shielded twisted pair)
Transmission distance	100m shielded twisted pair STP CAT 6 or CAT 6A

Dimensions



specifications are subject to change without notice

Application Drawing



Application showing an 8 display
configuration + a local monitor
using the looping input feature

3 year
WARRANTY Smart-e

specifications are subject to change without notice

CREATIVE

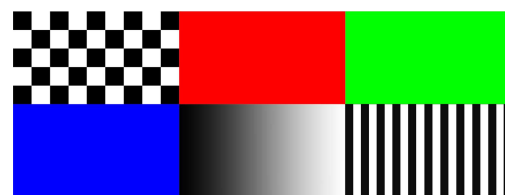
PROVEN

TECHNOLOGY

444^K**18 Gbps
4K60Hz 4:4:4
100m Cat 6/6A****Product: 444K-888
Cat 6/6A extender****Professional 4K60@70m, 1080p@100m HDMI
extender including internal Test Signal Generator**

The **444K-888** is a flexible and cost effective solution for extending HDMI, IR and full duplex RS232 together with POC (power over cable) and de-embedded audio.

Using HDBaseT technology, UHD video signals up to 18 Gbps can be transmitted to 100M using Cat 6/6A STP/FTP.



Test signal generator examples

Tech Brief

- HDMI 2.0
- HDCP 2.2 compliant
- 12-48V DC power
- Internal EDID
- 4K@60Hz, 4:4:4
- Colour 8/10/12 bits
- Wide 20K-60K Hz IR
- 100m @1080p60
- 18 Gbps
- HDR & HDR10
- Full duplex RS232
- 70m @4K60

Key Features

- Looping HDMI i/p
- CEC compliant
- De-embedded audio
- Test sig generator
- HDBaseT protocol
- Mounting brackets
- Slim profile 20mm
- Bi-directional POC

Description

The **444K-888** is an extender pair unit capable of accepting UHD HDMI signals up to 4K60 resolutions and converting them to HDBaseT protocol for subsequent transmission and distribution. The extender also provides the pass through of wide band bi-directional infrared signals and full duplex RS232 up to 115Kbaud. Whilst POC power (12-48V) 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.

Enhanced **444K-TX888** transmitter features include looping HDMI input and an internal test signal generator to facilitate installation fault finding. Whilst audio de-embedding feature is available on the transmitter and receiver via a 3.5mm jack connection. The **444K-888** uses the standard HDBaseT protocol making it compatible with other Smart-e products including the LDX, MDXE and VDX range of multiformat, modular matrices.

The **444K-888** is very compact having a height of only 20mm helping to hide the units in confined spaces. Each box also contains infrared accessories and discrete mounting brackets allowing ease of installation.

Technical Specification

Video - Digital

Connectors	HDMI
Signal type	HDMI-TMDS
Standards	HDMI 2.0 HDCP 2.2/1.4
Maximum data rate	6/3.4 (TX/RX) Gbps per colour
Maximum pixel clock	600/300MHz (TX/RX)
Resolution range - DTV	Max 4096x2160 @60Hz 24 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
Maximum audio channels	8
Maximum sample rate per channel	192 kHz
Sample size	16-24 bits

Audio - Analogue

Standards	Stereo - unbalanced
Bandwidth	20 - 20KHz
Connector	3.5mm stereo jack socket

Power

DC Voltage	External 12-48V 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)	108x67x20mm
Product weight	0.185Kg
MTBF	30,000 hours



444^k18 Gbps
4K60Hz 4:4:4
100m Cat 6/6AProduct: 444K-888
Cat 6/6A extender

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, 2-0V, 3-TX

Control - IR

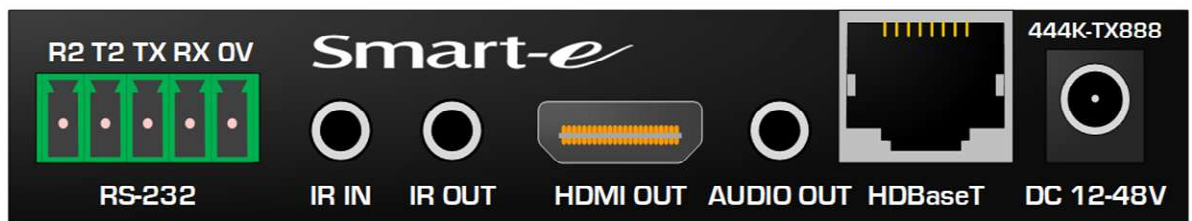
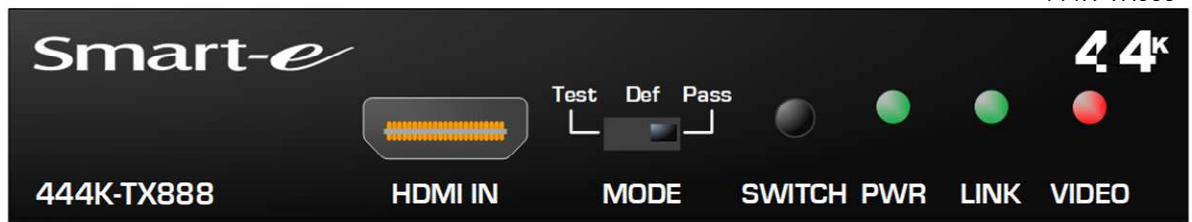
Connector	3.5mm mini-jack socket
Signal type	Full duplex (via 2 connections)
Signal bandwidth	20-60KHz

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	100m shielded twisted pair CAT 6 or CAT 6A

Panel Drawings

444K-TX888



444K-RX888

