

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



- Double gang Wall plate transmitter
- HDMI 2.0 4K@60Hz
- 4:4:4, 18G, HDR10, Dolby Vision
- HDCP 2.2/1.3 compliant
- Dual mirrored outputs on receiver
- 70m CAT 6/6A STP cable
- Bi-directional RS232/IR pass through
- VGA input with embedding audio
- Priority switching HDMI & VGA
- HDMI resolutions 4K, 2K & 1080p
- CEC compliant
- Integral mounting brackets
- Secure DC connection
- POC (remote powering wall plate)

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-912** is a flexible and cost effective wall plate transmitter and compact receiver solution for extending HDMI, RGBHV, bi-directional IR, full duplex RS232 together and POC (remote power over cable). The pair of units are supplied as a convenient UK size double gang transmitter wall/floor plate [**444K-TX912-WP**] together with its complementary compact receiver [**444K-RX750**]. The **444K-912** comes with all the IR accessories and by incorporating the full HDBaseT technology 4K UHD HDMI signals can be transmitted up to 70m away

The **444K-TX912-WP** transmitter wall plate allows the connection of both HDMI and RGBHV formats. Selection between both signals is controlled by a priority switch (last connected wins) or a manual button, status of which is shown via LED indicators above the active input. The RGBHV signal is digitised and converted to HDMI with the embedded stereo audio connected via the mini-jack input.

The **444K-912** pair also allows the pass through of wide band bi-directional InfraRed signals and full duplex RS232 up to 115Kbaud. The wall plate is powered through the Cat6 cable from the receiver with a 24V PSU. Dual mirrored HDMI outputs on the receiver provide a convenient solution to back to back displays commonly found in Digital Signage applications.

DESIGN



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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

Video – Analogue

Standards	VESA
Bandwidth	400 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
Format	RGBHV and YPrPb

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 & Environment

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%
MTBF	30,000 hours



TECHNICAL SPECIFICATION

Control - RS232

Connector (TX & RX)	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

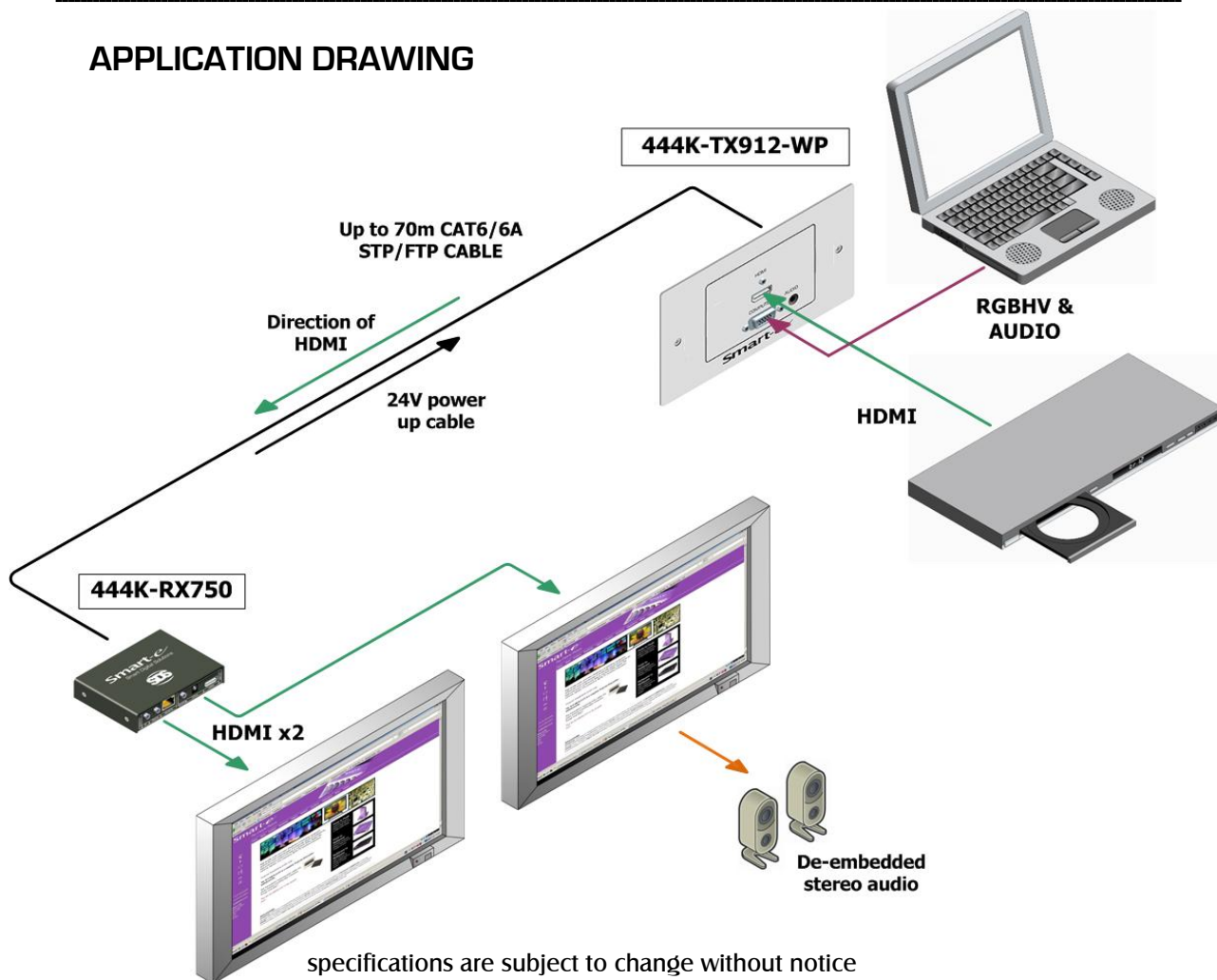
Control - IR

Connector (TX)	5pin Phoenix
Connector (RX)	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

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SPECIFICATION - UNITS

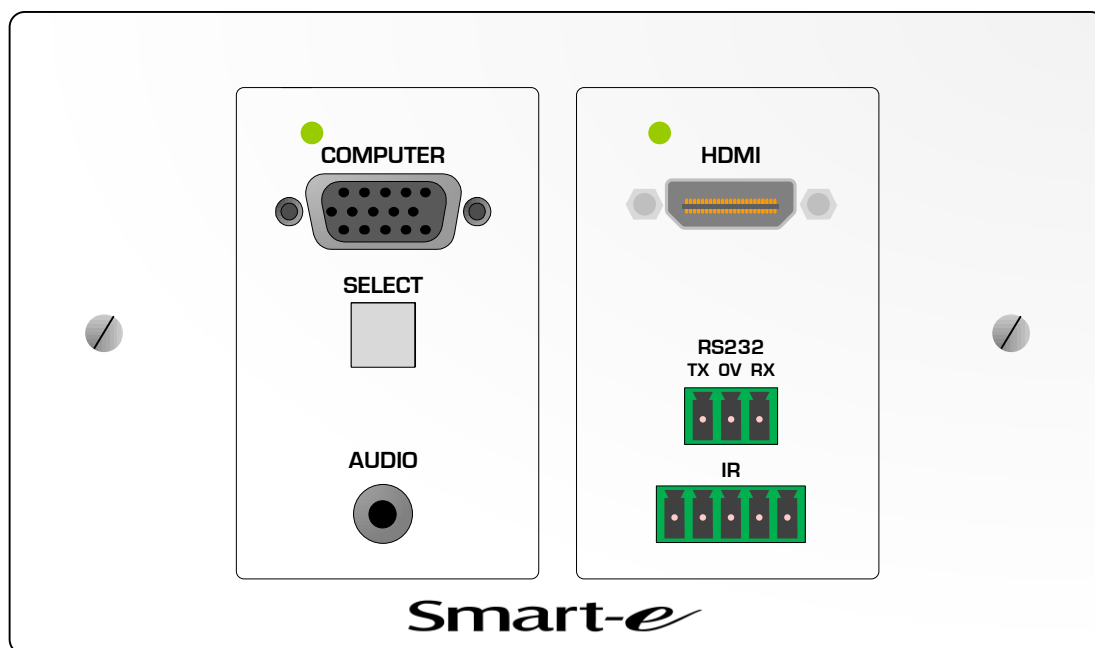
Transmitter

Input connector

Digital video	HDMI
Embedded audio	HDMI
Analogue video	Sub miniature high density D9 socket
Analogue audio	3.5mm jack socket
RS232	3Pin Phoenix
IR	5Pin Phoenix
Cat cable	RJ45 screened connector

Physical

Dimensions	145 x 85 x 20mm (UK double gang wall plate)
Weight	200g
Power	3 Watts



PANEL DRAWING

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SPECIFICATION - UNITS

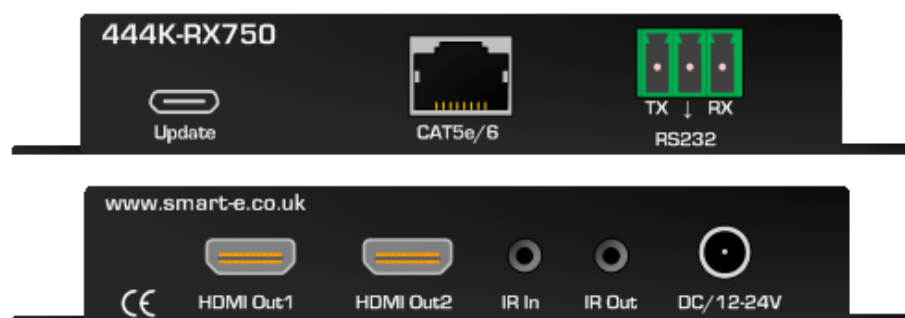
Receiver

Output connector

Digital video	HDMI x 2
Embedded audio	HDMI
Analogue video	Sub miniature high density D9 socket
RS232	3Pin Phoenix
IR	3.5mm jack socket
Cat cable	RJ45 screened connectors

Physical

Dimensions	119x67x20mm
Dimensions with brackets	139x67x20mm
Product weight	0.5Kg
Power	3 Watts
Connector	2.1mm DC socket - locking



PANEL DRAWING

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