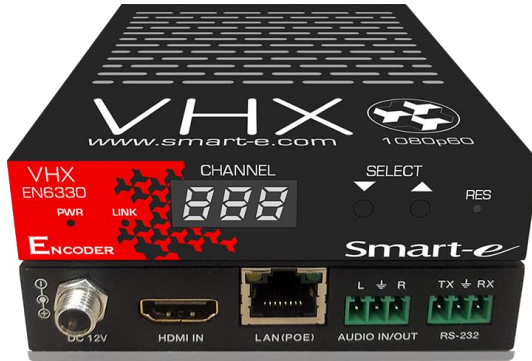




Professional high definition AVoIP encoder and decoder for HDMI, Audio, and RS232 with POE

VHX-EN6330



VHX-DC6330



The VHX-6330 is a flexible and cost-effective Audio and Video over Internet Protocol (AVoIP) encoder/decoder pair for HDMI, audio, and R232 signals. The units enable high definition HDMI signals up to 1920 x 1200 resolutions to be transmitted over a 100M or 1G Ethernet network with minimal latency and excellent visual quality.

Tech spec

- HDMI 1.3
- HDCP 1.4 compliant
- H.264/265 compression
- 100m CAT 6 cable
- 1080p@60Hz, 4:4:4
- 100M Ethernet
- Monitoring H.265 stream
- Video matrixing
- 1920 x 1200, 4.95G
- 1G Ethernet
- RS232 extension
- CEC compliant

Features

- Scalable
- Point to point
- LPCM 2CH audio
- Secure DC connection
- Low latency
- Video matrixing
- Near unlimited distance
- POE – switch powered
- Unicast & Multicast
- Mounting brackets
- Video Wall 9x9 feature
- Compact metal box

Description

The VHX-EN6330 encoder allows the connected video to be encoded into 2 independent IP streams. The primary H.265 stream provides a very high quality video and audio transmission with less than a frame duration latency whilst the secondary H.264 stream can be used for monitoring via standard software or third party applications. The VHX-DC6330 decoder allows IP streams within Ethernet connection to be decoded back into HDMI video, audio and RS232 signals. Multiple decoders can be used with a single encoder when used in multicast applications.

Video streaming is compatible with a standard 100M or 1G Ethernet IGMP switcher using the Unicast and Multicast protocols. Point to point, point to multipoint and matrix switching can be achieved easily using industry standard Ethernet switchers and installation enhanced with the POE feature. Other control signals can also be transmitted over the same network and can be used for RS232 and CEC signals.

The VHX-EN6330 together with the decoder VHX-DC6330 provide a highly scalable and cost-effective solution for distributing HD video and control signals for a multitude of applications.

Feature highlights

| | | | | |
|----------------------------|--------------------------|------------------------------|---------------------------------------|-----------------------------|
| 1080p 4:4:4 60Hz | HDMI V1.3 | HDCP V1.4 | EDID Management | AUDIO 2 CH STEREO |
| POE Remote power | 1Gbps Ethernet | AUDIO De/Embedding | RS232 Full duplex & routing | Video wall |

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Technical Specification

Video - Digital

| | |
|-----------------------------|---|
| Connectors | 1 x HDMI (Type A) input VHX-EN6330 1 x HDMI (Type A) output VHX-DC6330 |
| Signal type | HDMI - TMDS |
| Standards | HDMI 1.3. HDCP 1.4 |
| Compression standard | H.264/H.265 |
| Maximum data rate | 1.65Gbps per colour |
| Maximum pixel clock | 165MHz |
| Resolution range - DTV | Max 1920x1080 @60Hz 36 bit colour depth |
| Resolution range - PC | Max 1920x1200 @60Hz 36 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 |
| Colour depth | Input: 8-bit, 10-bit, 12-bit (1080p@60Hz) Output: 8-bit |
| 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

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|---------------------------------|---|
| Standards | Embedded in HDMI - LPCM 2CH 32/44.1/48KHz |
| Maximum audio channels | 8 |
| Maximum sample rate per channel | 192 kHz |
| Sample size | 16-24 bits |

Audio - Analogue

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| Standards | Stereo - unbalanced |
| Bandwidth | 20 - 20 kHz |
| Connector | 3 pin phoenix |

Power

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| POE | 802.3af Class 3, PD mode |
| Optional DC Voltage | External 12V/1A 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 | <3W encoder and decoder |
| Operating temperature | (-10) to 45 degrees C |
| Storage temperature | (-20) to (-60) degrees C |
| Relative humidity | 20 to 90% RH (no condensing) |
| Dimensions | 120 x 95 x 21.5mm |
| Product weight | 0.3Kg |
| MTBF | 30,000 hours |

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Technical Specification (cont)

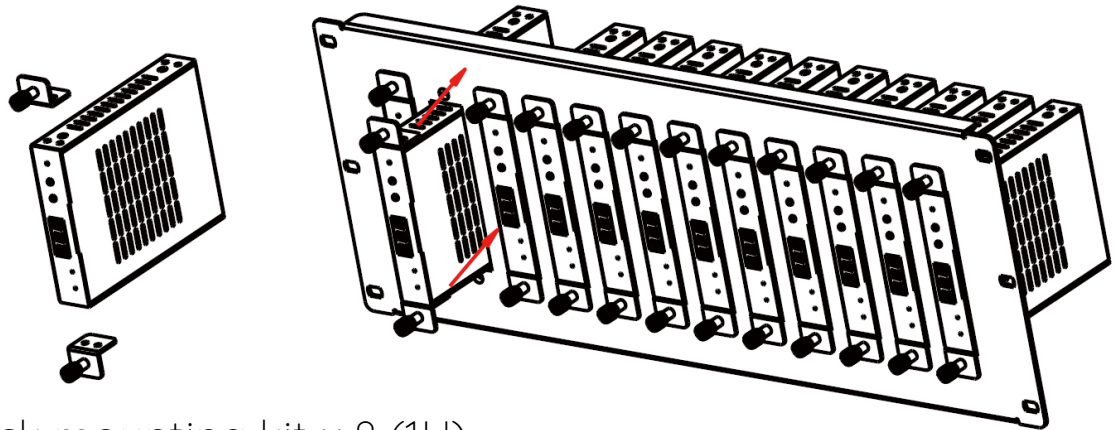
Control - RS232

| | |
|--------------|------------------|
| Connector | 3pin Phoenix |
| Signal type | Full duplex |
| Signal level | +/- 5V |
| Baud rate | Up to 115200 |
| Data bits | 8 |
| Stop bits | 1 |
| Parity | None |
| Pinout | 1-RX, 2-0V, 3-TX |

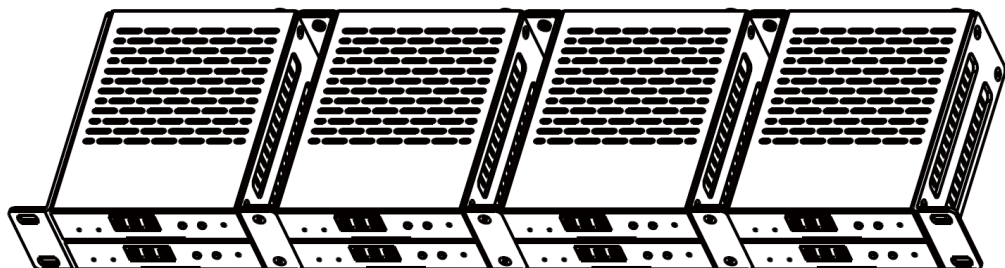
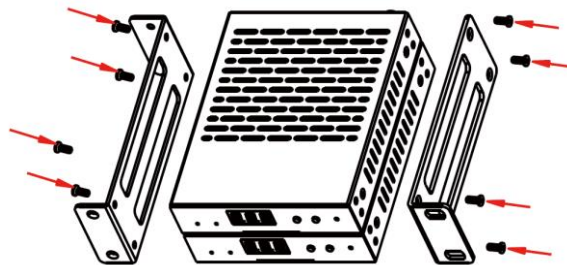
Cat cable connectivity

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|-----------------------|---|
| Number of cables | 4 x Cat 5e/6 screened twisted pair cables |
| Connectors | 4 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 100ME or 1GE Ethernet |

Rack mounting kit x 12 (4U)



Rack mounting kit x 8 (1U)



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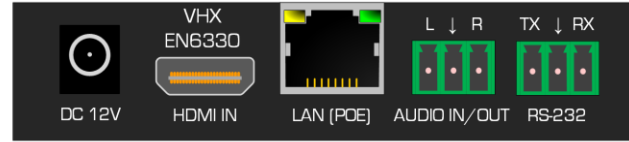


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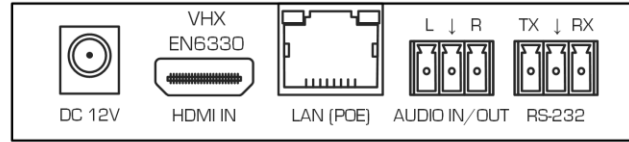
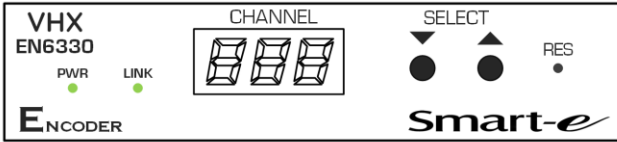


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VHX-EN6330 – panel drawing



Connectivity



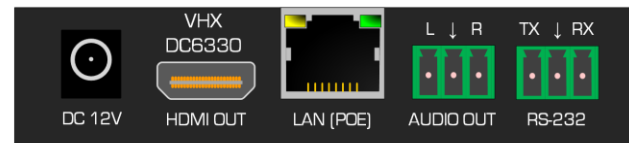
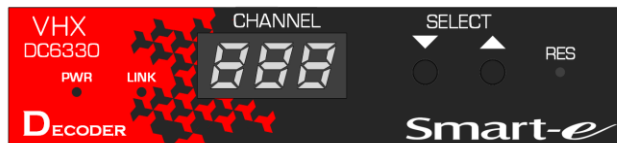
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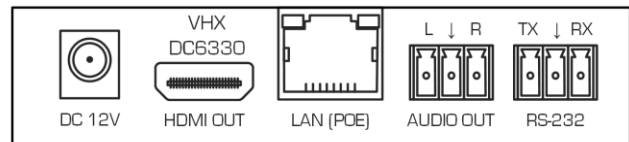
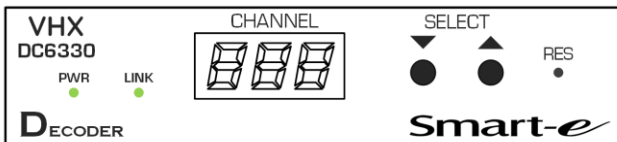
| | | |
|---|-------------|-------------------------------|
| 1 | Power LED | Power on status - red |
| 2 | Network LED | Network status - green |
| 3 | LED display | Shows IP address and ID |
| 4 | Buttons | Channel selection - up & down |
| 5 | Button | Reset button |

| | | |
|----|---------------|---|
| 6 | DC | 12V local PSU (optional) |
| 7 | HDMI | Video input |
| 8 | Data LED | Flashing data status - yellow |
| 9 | RJ45 | 100m/1G network connection |
| 10 | Link LED | Network link - green |
| 11 | 3 pin Phoenix | Audio in - analogue input |
| 12 | 3 pin Phoenix | Audio out - analogue output Full duplex RS232 connection |

VHX-DC6330 – panel drawing



Connectivity



- 1
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- 12

| | | |
|---|-------------|-------------------------------|
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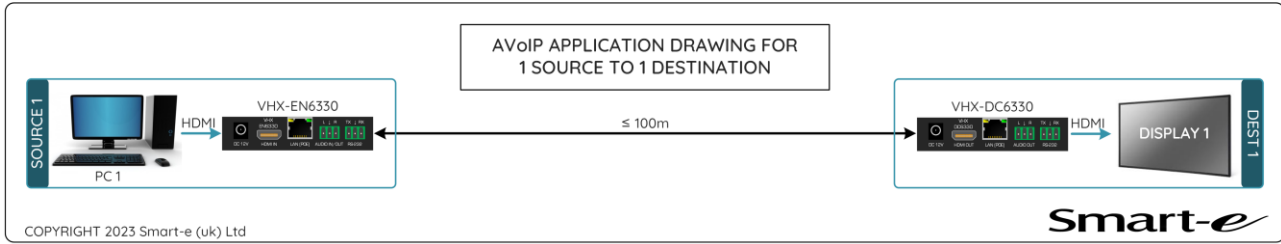


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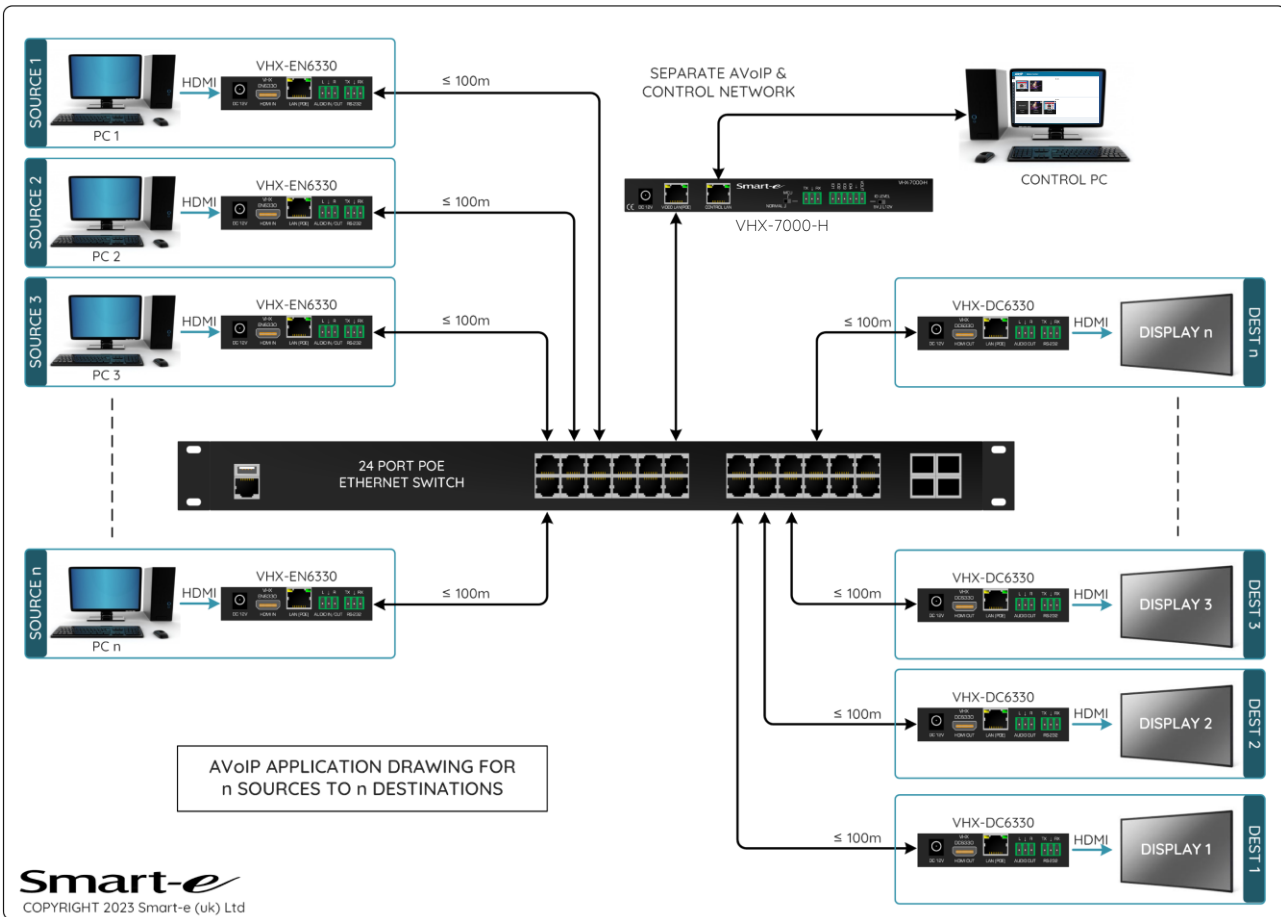


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Application drawing - point to point



Application drawing - multicasting



Controller - VHX-7000-H



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