

## VE1843

True 4K HDMI / USB HDBaseT 3.0 Transceiver





# The Latest in Signal Convergence, The Next Level in True 4K Performance



**VE1843**

**True 4K HDMI / USB  
HDBaseT 3.0 Transceiver**



As ATEN's first video transceiver, the VE1843 features the latest HDBaseT 3.0 technology, allowing users to easily configure the unit to be a transmitter or receiver depending on the AV solution they need, while enabling uncompressed True 4K HDMI transmission up to 100m/328ft with zero latency via just one Cat 6A U/FTP cable. With its user-oriented hardware design and enhanced durability, this new model is purpose-built for spaces that require long-distance, yet high-quality, signal transmission with easy installation and non-stop operation, such as conference rooms, auditoriums, banquet halls, and museums.

\* Cat 6A U/FTP is the recommended setting. The skewless nature and inter-pair shielding of FTP provides the better near-end crosstalk (NEXT, source end) and far-end crosstalk (FEXT, receiver end) parameters required to achieve the maximum performance and distance.



Uncompressed True 4K



HDBaseT 3.0



Up to 100m Transmission over a Cat 6A U/FTP



Multiple Control Signals (AV, RS-232, IR, USB, Ethernet)



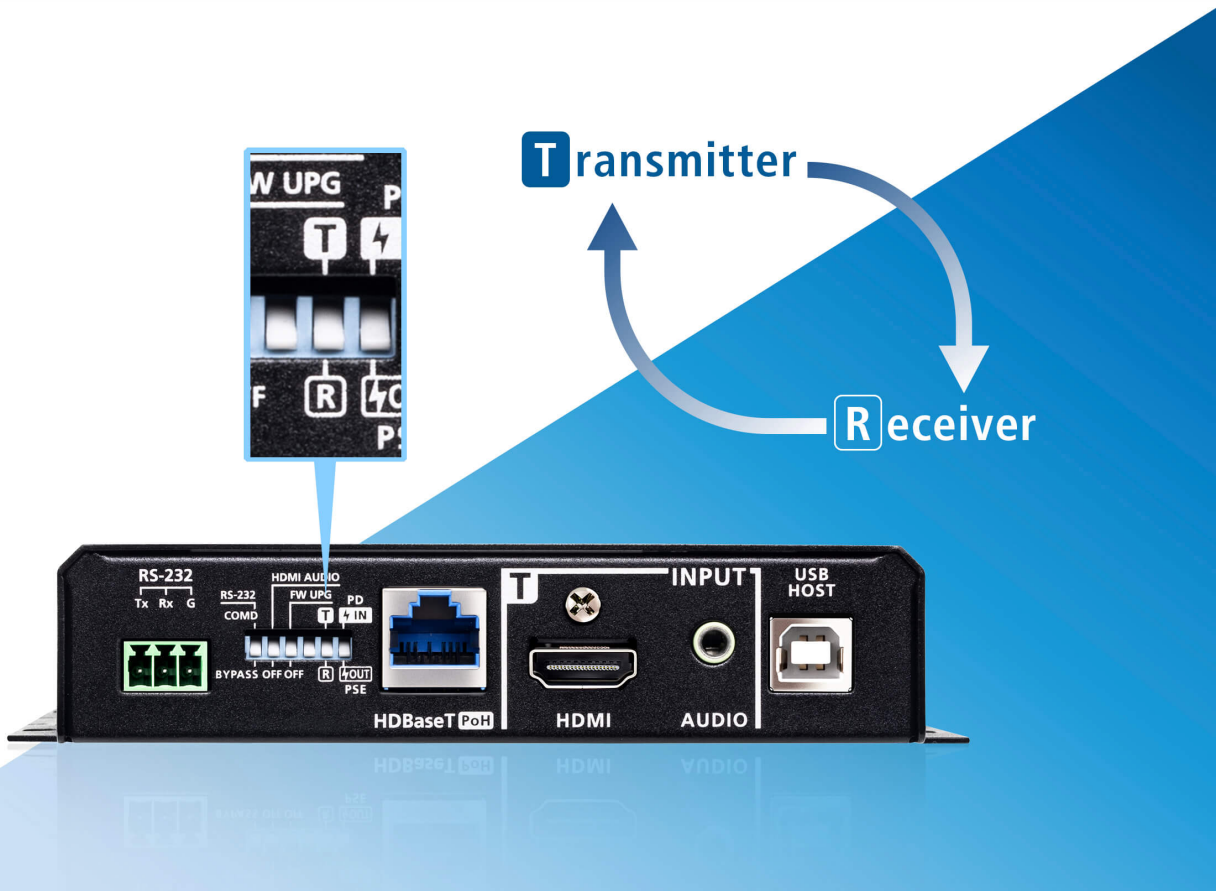
Audio Embedding & De-embedding



Improved Heat Dissipation



Easy Installation



**One Unit, Two Configurations**

VE1843 integrates the functions of a transmitter and a receiver into one unit for users to easily set it to the direction (Tx / Rx) required and enjoy more flexible deployment with video matrix switches, splitters, and more.

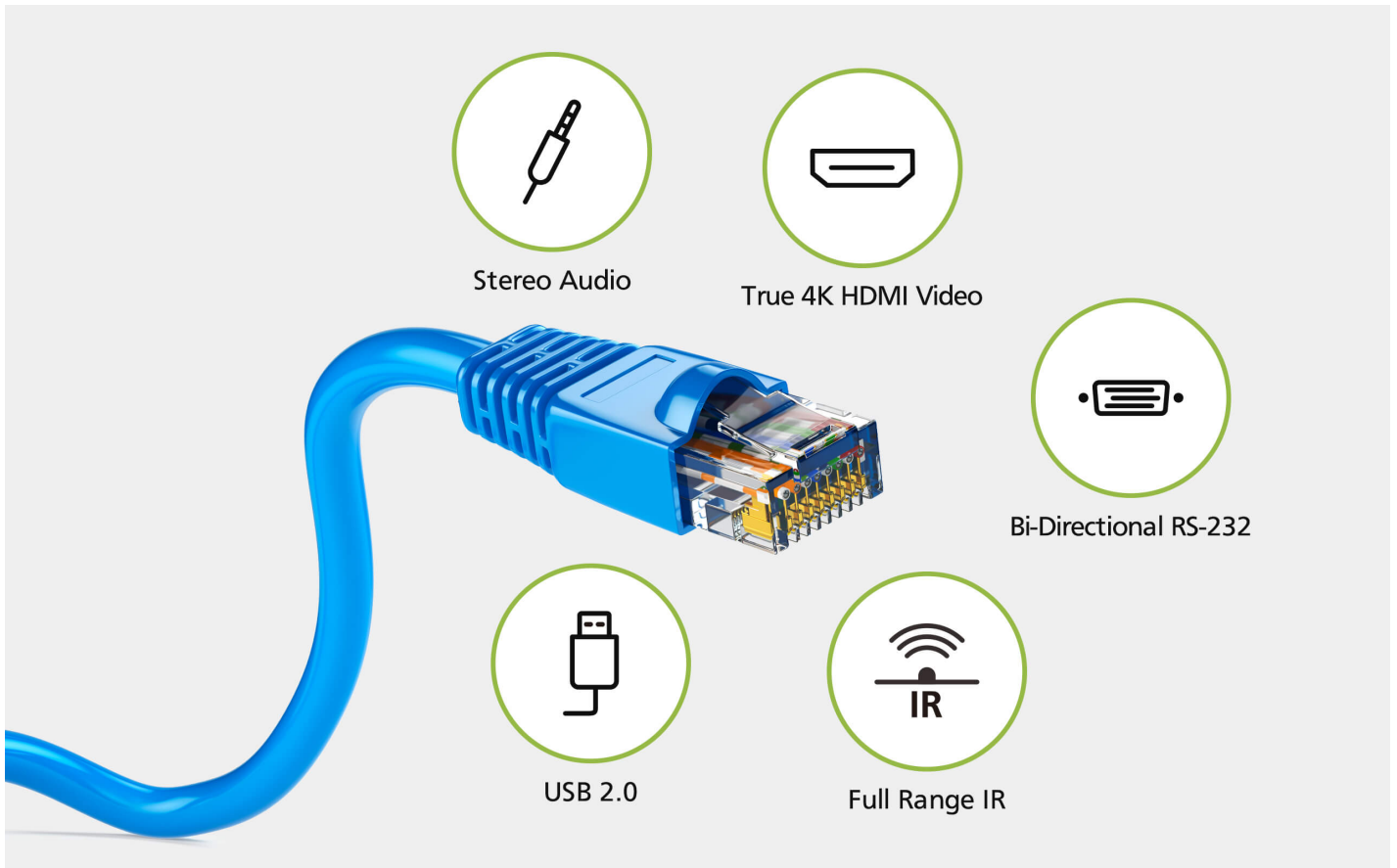
**Uncompressed True 4K HDMI with HDR @100m**

Delivering uncompressed True 4K @ 60Hz 4:4:4 HDMI with HDR up to 100m/328ft over a Cat 6A U/FTP cable with no latency, VE1843 offers superior video quality even when output devices are located far away.



**One Cable to Transmit It All**

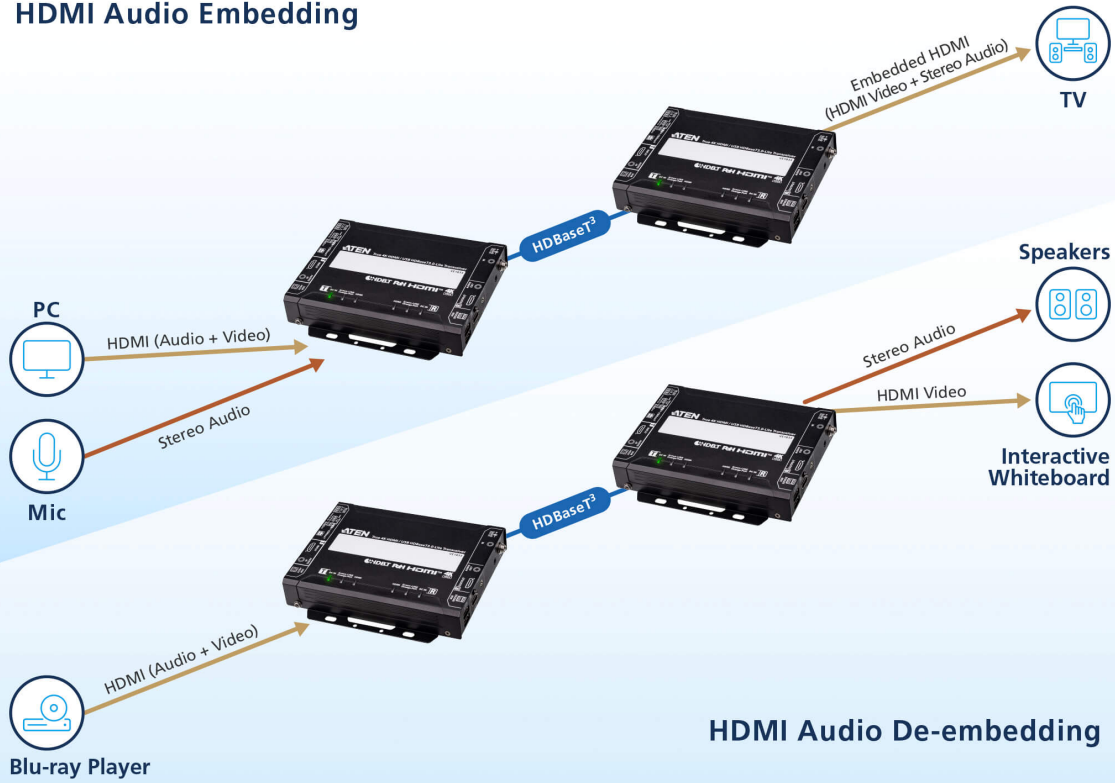
Streamline complex installation and enjoy multi-signal control by using a Cat 6A U/FTP cable to extend signals including high-quality video, audio, IR, RS-232, Gigabit Ethernet, and USB 2.0 for remotely located equipment management.



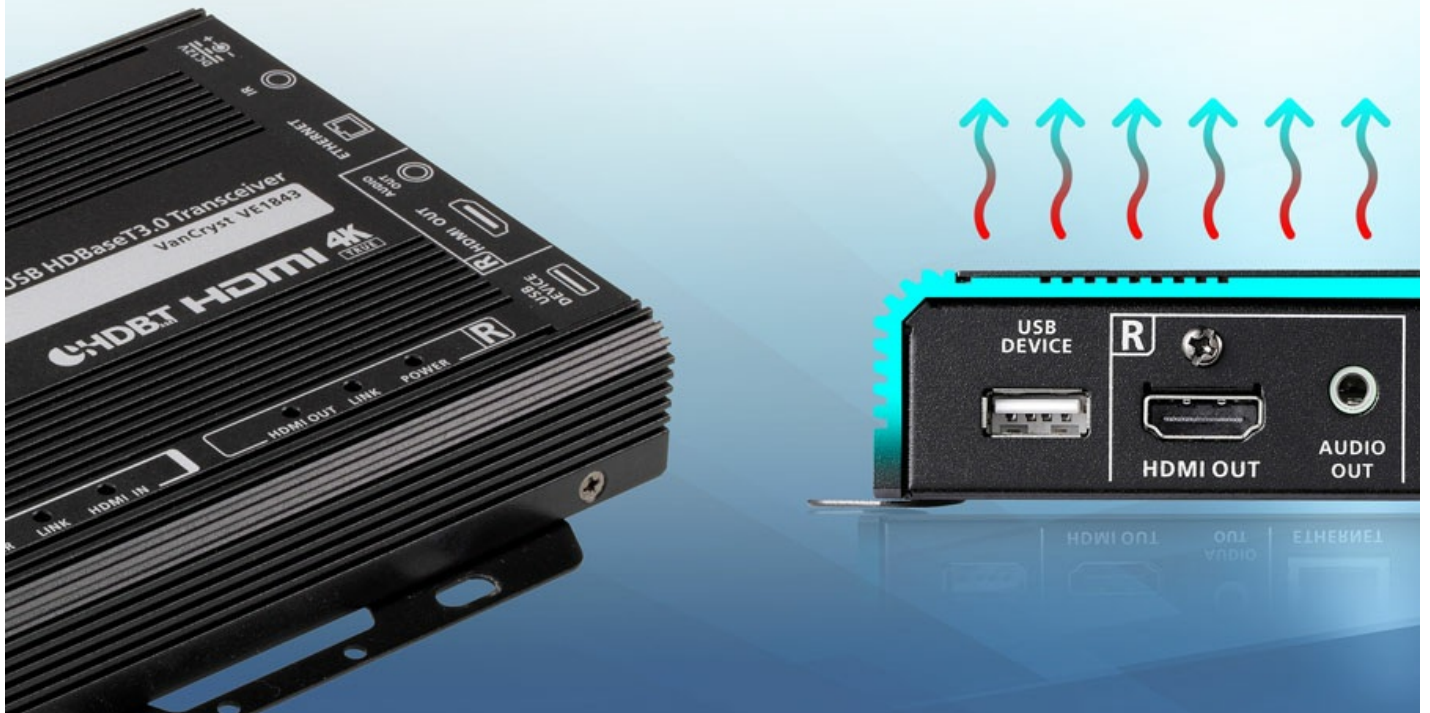
**HDMI Audio Embedding & De-embedding**

VE1843 comes with HDMI audio embedding / de-embedding functions, enabling users to easily embed a separate audio source to video content for applications such as training and education, or de-embed an audio signal from HDMI input source and output to an amplifier or speaker for enhanced sound quality.

### HDMI Audio Embedding



### HDMI Audio De-embedding

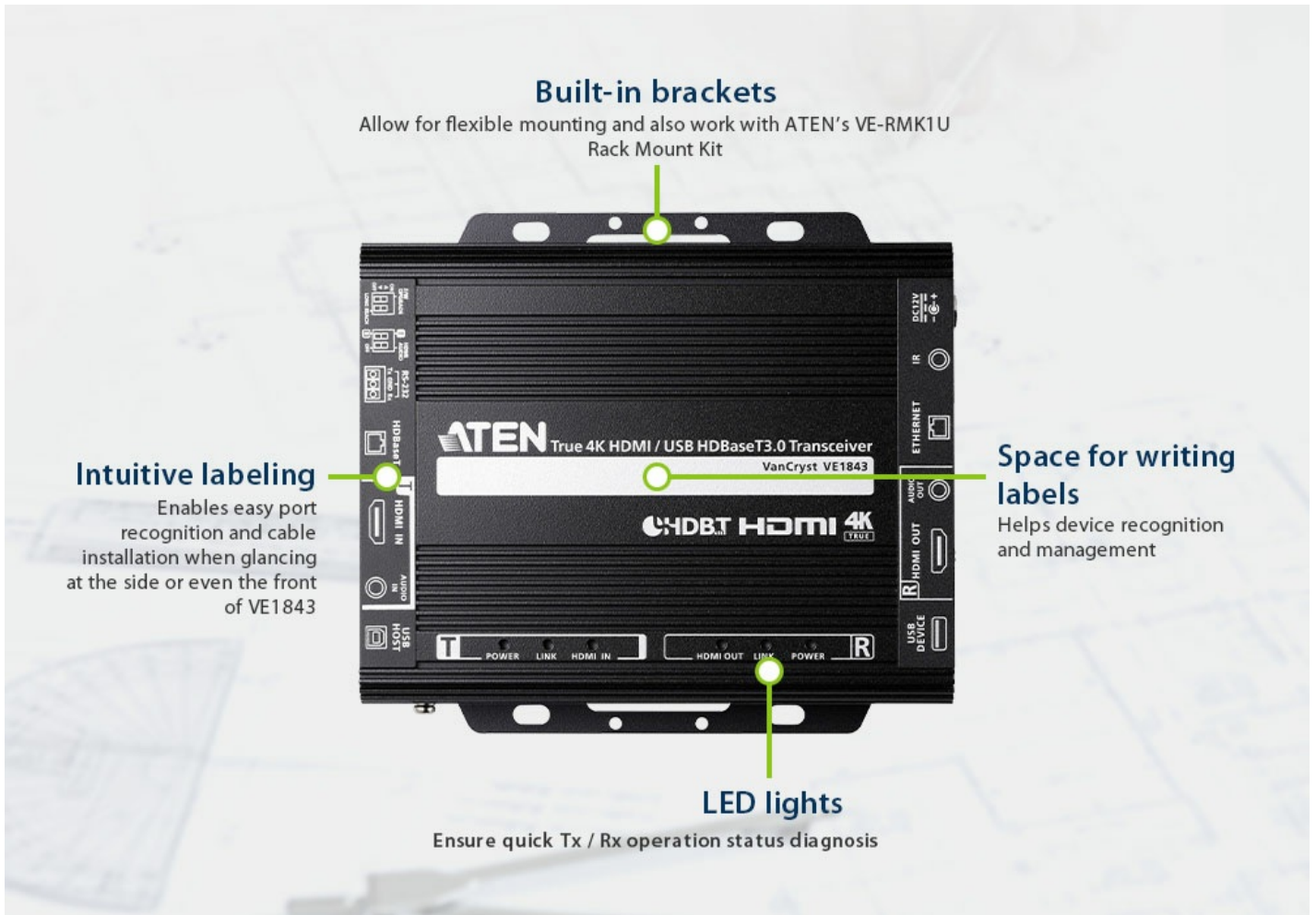


**Tailored Fanless Fin Heat Sink Enclosure**

VE1843 prevents overheating and fan malfunctions, which will shut down operation, ensuring efficient thermal dissipation and non-stop signal transmission, while improving durability.

**User-Focused Design in Every Detail**

The design of VE1843 elevates its ease-of-use, including the self-explanatory labeling for intuitive port recognition, the built-in brackets for easy mounting, the LED lights for quick diagnosis, and a dedicated space on the front for writing labels to help device recognition / management.



**Applications**

VE1843 is ideal for small / mid-sized video presentation in conference rooms, public areas, and other applications where high-quality signal transmission across up to 100m/328ft is needed.



**Product Comparison**



**Features**

The VE1843 is ATEN's first video transceiver and integrates the functions of a transmitter and a receiver into one unit. This combination allows users to easily configure the unit to be a transmitter or receiver depending on their AV solution, and to enjoy more flexible deployment and effective use with video matrix switches, video splitters, etc.

Designed with HDBaseT 3.0 technology, the VE1843 not only extends True 4K uncompressed signals up to 100 m over a single Cat 6a cable (HDBaseT 3.0 Certified Cat 6a U/FTP cable\* / ATEN [2L-29330](#) Cat 6a cable) with zero latency, but also transmits IR, RS-232, Ethernet, independent audio, and USB signals with the latest HDBaseT standards. For stable HDMI signal transmission, the VE1843 ensures high-quality visuals and reliable extension by supporting HDCP 2.3, 3D, Deep Color, HDR, HDR 10+, and Dolby Vision. In addition, the VE1843 is equipped with HDMI audio embedding / de-embedding functions, enabling users to flexibly adapt suitable audio / video combinations based on different environments. To ensure non-stop operations, the fanless fin heat sink design prevents overheating and thus elevates its reliability.

Empowered by the above benefits, the VE1843 increases the potential of AV applications while also streamlining complex installations. This makes the VE1843 an ideal solution for conference halls, auditoriums, lecture halls, museums, exhibition rooms, and anywhere else that requires high-quality transmission and easy-to-use application.

- Extends uncompressed True 4K HDMI signals up to 100 m over a single Cat 6a cable (HDBaseT 3.0 Certified Cat 6a U/ FTP cable\* / ATEN [2L-29330](#) Cat 6a cable) with zero latency
- Flexible for deployment – can be configured as a transmitter or receiver depending on the AV solution
- Compliant with HDBaseT 3.0 standards – transmits high-quality video, full range IR, bi-directional RS-232, Gigabit Ethernet, independent stereo audio and USB 2.0 signals channel bypass
- HDMI (3D, Deep Color, 4K/60Hz); HDCP 2.3 compliant
- Superior video quality – up to 4096 x 2160 @ 60 Hz (4:4:4); HDR, HDR 10+, Dolby Vision supported
- Supports HDMI audio embedding / de-embedding functions
- Supports HDMI local output
- Compliant with the USB 2.0 standard for a wide range of USB peripherals compatibility
- LED indication of HDBaseT and HDMI signal status for easier recognition
- Fanless fin heat sink enclosure – elevates durability and reliability by preventing overheating, fan malfunctions, and noises
- Supports extremely high refresh rates up to 240 Hz for the connected display
- Firmware upgradable
- Built-in 8KV / 15KV ESD protection
- Plug-and-play
- Rack-mountable

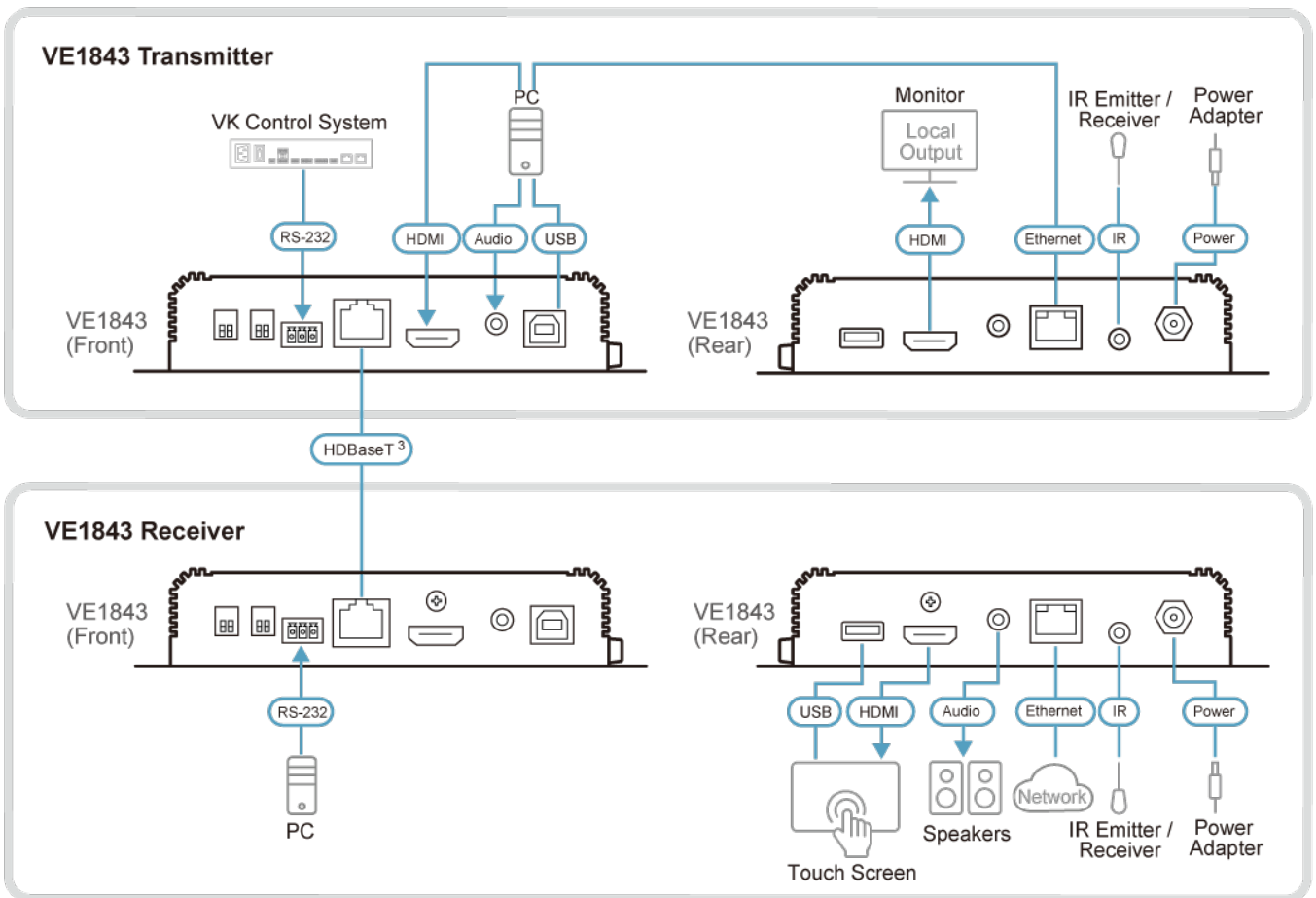
\* Cat 6a U/FTP is the recommended setting. The skewless nature and inter-pair shielding of FTP provides the better near-end crosstalk (NEXT, source end) and far-end crosstalk (FEXT, receiver end) parameters required to achieve the maximum performance and distance.

**Specification**

Video Input	
Interfaces	1 x HDMI Type A Female (Black)
Impedance	100 $\Omega$
Max. Distance	5 m
Video Output	
Interfaces	1 x HDMI Type A Female (Black)
Impedance	100 $\Omega$
Max. Distance	5 m
Video	
Max. Data Rate	18Gbps (6Gbps per lane)
Max. Pixel Clock	600 MHz
Compliance	HDMI (3D, Deep Color, 4K/60Hz); 4K HDR HDCP2.2/2.3 Compatible Consumer Electronics Control (CEC)*  *The CEC signals are only bypassed from the transmitter unit to the receiver unit and do not support local output.
Max. Resolution	4096 x 2160 @ 60Hz (4:4:4) 3840 x 2160 @ 60Hz (4:4:4)
Max. Resolutions / Distance	Up to 4K x 2K @ 60Hz (4:4:4) @100m (HDBaseT3 Certified Cat 6a U/FTP cable / ATEN's tailor-made HDBaseT cable) Up to 1080P@150m @Long reach mode (Cat 6/ 6a or above cable)
Audio	
Input	1 x HDMI Type A Female (Black) 1 x Stereo Audio ( mini stereo Jack female , Green)
Output	1 x HDMI Type A Female (Black) 1 x Stereo Audio ( mini stereo Jack female , Green)
Connectors	
Unit To Unit	1 x RJ-45 Female
Power	1 x DC Jack (Black) with locking
Control	
RS-232 Channel	Connector: 1 x Terminal Block, 3 pole Baud Rate: 19200, Data Bits:8, Stop Bits:1, no parity and flow control
IR Channel	1 x Mini Stereo Jack Female, (Bi-directional, Black) 30K ~56KHz full range transmission
Ethernet Channel	1 x GbE (RJ45 Female)
USB Channel	1 x USB2.0 Type B Female (White, Host) 1 x USB2.0 Type A Female (White, Device) Transmission data bandwidth: Up to 300Mbps
Power Consumption	DC12V:6.45W:40BTU/h  Note: ● The measurement in Watts indicates the typical power consumption of the device with no external loading. ● The measurement in BTU/h indicates the power consumption of the device when it is fully loaded.
Switches	
Selection	1 x Slide Switch - TX (Be a Transmitter) / RX (Be a Receiver) selection
Mode Selection	1 x Slide Switch - HDMI Audio embed or De-embed ON/OFF selection
Firmware Upgrade	1 x Slide Switch - ON/OFF
Long Reach Mode Switch	1 x Slide Switch - ON/OFF
LEDs	

Power	1 x TX (Transmitter, Green) 1 x RX (Receiver, Green)  NOTE: The TX or RX LED lights to indicate which role the VE1843 is set to.
Link	1 x TX (Transmitter, Orange) 1 x RX (Receiver, Orange)
Video Output	1 x RX HDMI OUT (Receiver, Orange)
Video Input	1 x Tx HDMI IN (Transmitter, Orange)
Environmental	
Operating Temperature	0 - 40°C
Storage Temperature	-20 - 60°C
Humidity	0 - 80% RH, Non-Condensing
Physical Properties	
Housing	Metal
Weight	0.64 kg ( 1.41 lb )
Dimensions (L x W x H)	17.15 x 15.09 x 3.00 cm (6.75 x 5.94 x 1.18 in.)
Note	For some of rack mount products, please note that the standard physical dimensions of WxDxH are expressed using a LxWxH format.

Diagram





Simply Better Connections

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