

True 4K HDMI / USB HDBaseT 3.0 Transceiver

VE1843

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 (HDBaseT³ 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 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.

Note: 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.



Front View



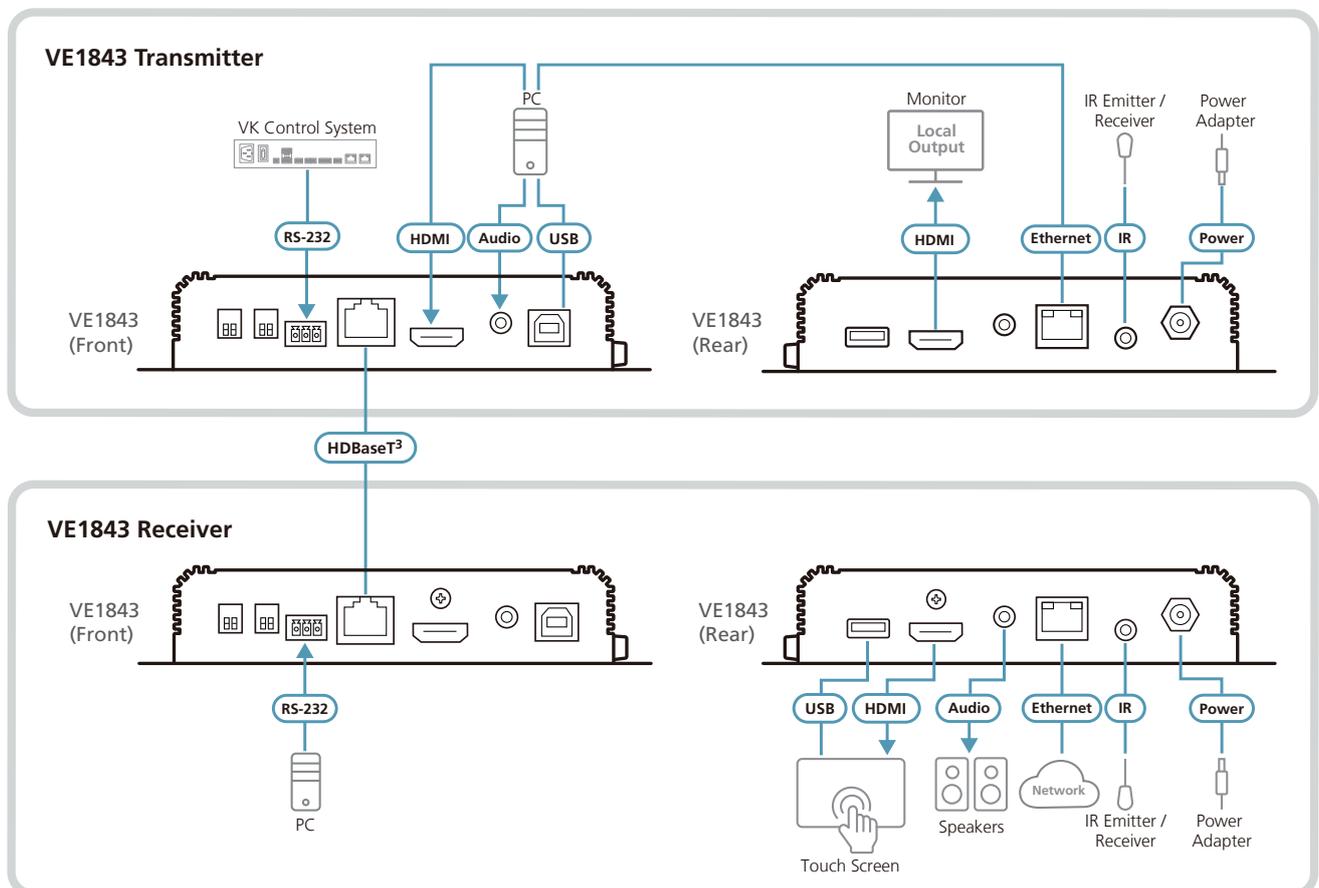
Rear View



Features

- Extends uncompressed True 4K HDMI signals up to 100 m over a single Cat 6a cable (HDBaseT³ 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 / 60 Hz); HDCP 2.3 compliant
- Superior video quality – up to 4096 x 2160 @ 60 Hz (4:4:4); HDR, HDR 10+, and Dolby Vision supported
- HDBaseT long reach mode up to 1080P @ 150 m
- Long reach mode switch – switches between HDBaseT Standard and long reach modes in a snap
- 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 8 KV / 15 KV 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.



Note: The illustrated installation is based on two VE1843 units.

Specifications

VE1843	
Video Input	
Interfaces	1 x HDMI Type A Female (Black)
Impedance	100 Ω
Max. Distance	5 m
Video Output	
Interfaces	1 x HDMI Type A Female (Black)
Impedance	100 Ω
Max. Distance	5 m
Video	
Max. Data Rate	18 Gbps (6 Gbps Per Lane)
Max. Pixel Clock	600 MHz
Compliance	HDMI (3D, Deep Color, 4K / 60Hz); 4K HDR HDCP 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. Resolutions	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) @ 100 m (HDBaseT ³ Certified Cat 6a U/FTP cable / ATEN2L-29330 Cat 6a 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 – 56 KHz full range transmission
Ethernet Channel	1 x GbE (RJ-45 Female)
USB Channel	1 x USB 2.0 Type-B Female (White, Host) 1 x USB 2.0 Type-A Female (White, Device) Transmission data bandwidth: Up to 300 Mbps
Switches	
Selection	1 x Slide Switch - Tx (Be a Transmitter) / Rx (Be a Receiver) Selection
Mode Selection	1 x Slide Switch - HDMI Audio Embedding or De-embedding 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)
Power Consumption	
DC 12 V : 6.45 W : 40 BTU	
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
Dimensions (L x W x H)	17.15 x 15.09 x 3.00 cm

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