True 4K HDMI / USB HDBaseT 3.0 Transceiver with PoH

VE1843A

Designed for AV environments with extremely high image quality requirements such as conference halls, lecture theaters, and exhibition spaces, the VE1843A is a high-performance HDBaseT 3.0 solution that integrates both transmitter and receiver functionality into a single unit. It delivers uncompressed True 4K HDMI extension with zero latency over a single Cat 6a cable*.

Uncompromised True 4K Precision with Zero Latency
The VE1843A leverages the latest HDBaseT 3.0 technology to extend uncompressed True 4K @ 60 Hz (4:4:4) signals up to 100 meters (and 1080P up to 150 meters) with zero latency. By supporting HDR10+, Dolby Vision, and HDCP 2.3, it ensures that high-fidelity visuals are delivered with mission-critical precision, making it the ideal choice for environments where real-time response and image integrity are non-negotiable.

Adaptive 2-in-1 Design for Maximum Deployment Flexibility
The VE1843A eliminates the need for separate hardware. Its unique 2-in-1 architecture allows a single unit to be configured as either a transmitter or a receiver to fit any AV architecture. This flexibility helps system integrators streamline inventory and reconfigure setups for point-to-point extensions or complex matrix systems with much greater agility.

Unified Single-Cable Signal Distribution for Streamlined Integration
The VE1843A consolidates uncompressed video, bi-directional IR, RS-232, Gigabit Ethernet, independent audio, power and USB 2.0 into one Cat 6a cable. This integration ensures seamless connectivity for peripherals like touchscreens and cameras, making it the perfect foundation for modern collaborative environments.

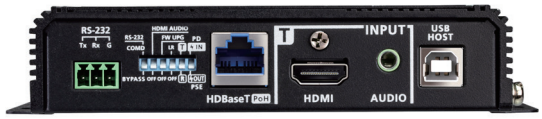
Independent Audio Routing with Bi-Directional PoH Efficiency
The VE1843A empowers users with independent audio embedding and de-embedding, providing the freedom to route sound to match any environment. To simplify installation, bi-directional PoH allows the unit to draw power from either the source or display side, effectively removing the need for extra power outlets. Enclosed in a fanless fin heat sink for silent, stable cooling, the VE1843A is built for reliable, continuous professional use.

4K TRUE HDR HDMI HIGH-DEFINITION MULTIMEDIA INTERFACE HDBT3

A/V In HDMI | A/V Out HDMI | RS-232 Channel | HDCP 2.3 | GbE Ethernet | USB 2.0 Peripherals | Audio Out Stereo | IR Channel | Bi-directional PoH



Front View



Rear View



Features

High-Performance Video and HDBaseT™ 3.0 Capabilities

- Superior video quality – up to 4096 x 2160 @ 60 Hz (4:4:4); HDR, HDR10+, and Dolby Vision supported
- Extends uncompressed True 4K HDMI signals up to 100 m (and 1080P up to 150 m in long reach mode) over a single Cat 6a cable* with zero latency
- Compliant with HDBaseT 3.0 standards – transmits high-quality video, full range IR, bi-directional RS-232, Gigabit Ethernet, independent stereo audio, Power and USB 2.0 signals
- Supports extremely high refresh rates up to 240 Hz for the connected display
- HDMI (3D, Deep Color, 4K/60Hz) and HDCP 2.3 compliant
- Supports HDMI local output for convenient monitoring at the local side

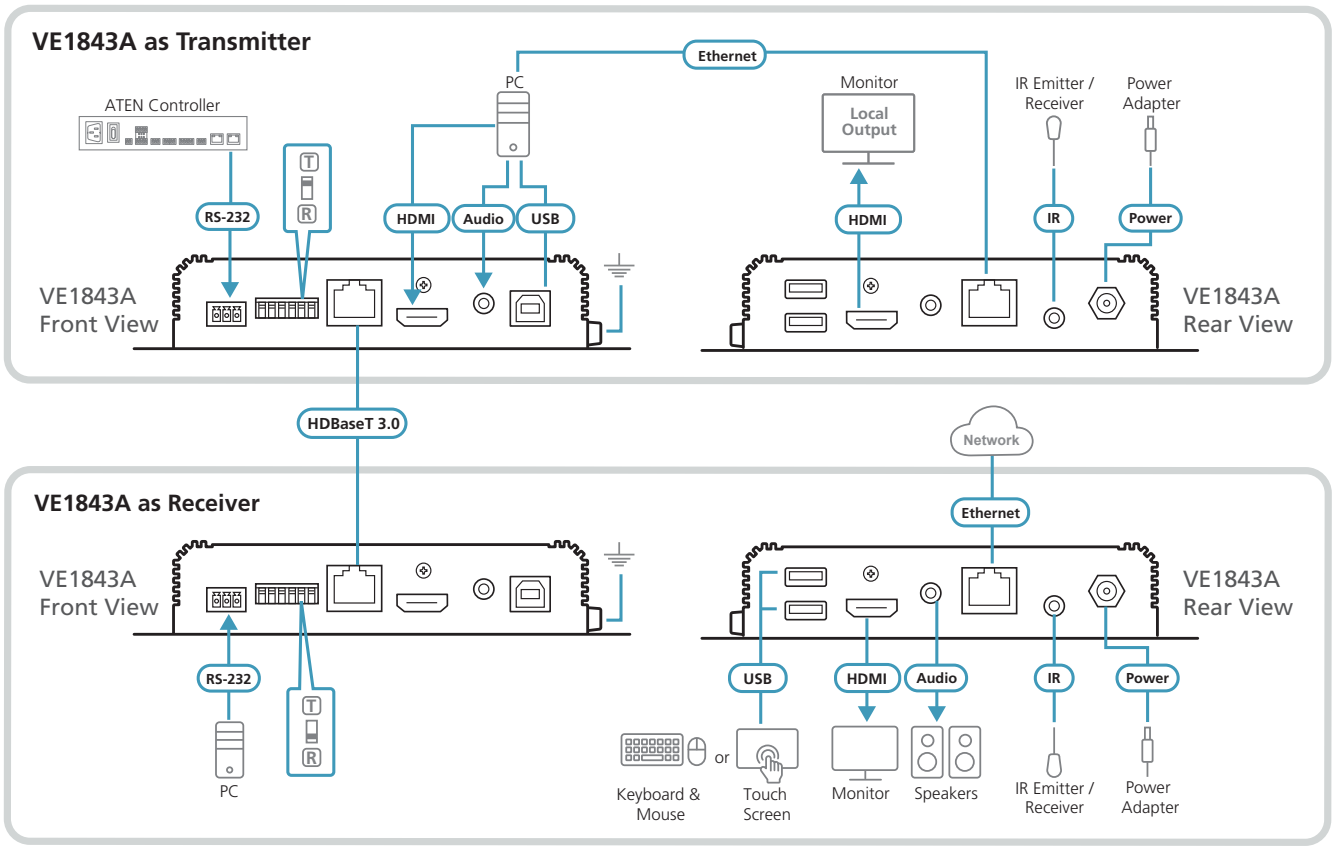
Versatile Integration and Management Controls

- Flexible for deployment – can be configured as a transmitter or receiver depending on the AV solution
- Supports HDMI audio embedding / de-embedding functions – allows users to flexibly adapt suitable audio/video combinations based on different environments
- Supports bi-directional PoH (Power over HDBaseT) – allows the unit to draw power from either the source or display side
- Independent stereo audio and USB 2.0 signals channel bypass
- 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
- Firmware upgradable

Industrial-Grade Reliability and Easy Installation

- Fanless fin heat sink enclosure – elevates durability and reliability by preventing overheating, fan malfunctions, and noises
- Built-in 8KV / 15KV ESD protection
- Plug-and-play – no software or driver required
- Rack-mountable – ideal for professional AV rack installations

Note: Please refer to the Compatible Cables section on the product page.



Specifications

	VE1843A
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	18Gbps (6Gbps per lane)
Max. Pixel Clock	600 MHz
Compliance	HDMI (3D, Deep Color, 4K/60Hz); 4K HDR HDCP 2.2/2.3 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. 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) @100m (HDBaseT3 Certified Cat 6a U/FTP cable*) Up to 1080P@150m @ Long reach mode (Cat 6/ 6a or above cable) **Note:** Please refer to the Compatible Cables section on the product page.
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 1 x RJ-45 Female, PoH PD & PSE supported
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 (RJ-45 Female)
USB Channel	1 x USB 2.0 Type-B Female (White, Host) 2 x USB 2.0 Type-A Female (White, Device) Transmission data bandwidth: Up to 300Mbps
Power Consumption	DC12V:5.66W
Power	
Power over Ethernet (PoE)	DC12V:6.13W
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 1 x Slide Switch - PoH PD or PSE selection 1 x Slide Switch - RS232 Command or Bypass mode selection
Firmware Upgrade	1 x Slide Switch - ON/OFF
Long Reach Mode Switch	1 x Slide Switch - ON/OFF
LEDs	
Power	Tx: 1 x DC in Power supplied (Green) & 1 x PoH Power supplied (Orange) Rx: 1 x DC in Power supplied (Green) & 1 x PoH Power supplied (Orange) **Note:** The Tx or Rx LED lights to indicate which role the VE1843A is set to by DC Power or PoH.
Link	1 x Tx Link status (Transmitter, Yellow Green) 1 x Rx Link status (Receiver, Yellow Green)
Video Output	1 x Rx HDMI out status (Receiver, Orange)
Video Input	1 x Tx HDMI in status (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
Dimensions (L x W x H)	17.05 x 15.09 x 3.00 cm

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