VE883AT

True 4K HDMI Optical Transmitter (4K@300m (K1, MM) / 10km (K2, SM))

The VE883AT is a True 4K HDMI Optical transmitter that extends up to 4096 x 2160 / 3840 x 2160 @ 60 Hz (4:4:4) HDMI, audio, USB 2.0, IR, RS-232, and Gigabit Ethernet signals across 300 m (VE883ATK1) or 10 km (VE883ATK2) over a single duplex fiber optic cable losslessly. While helping avoid bulky cable setup, fiber optic cables are electrically isolated, thus they are immune to RFI and EMI. With ATEN's exclusive FarSmooth technology, the VE883AT prevents lagging and freezing by matching the output rates to the input rates and ensures that the video display is stable, smooth and identical to the source, particularly in long-distance extension applications where uninterrupted video streams are required.

The VE883AT comes with interfaces of HDMI output, analog audio output, USB 2.0, IR, RS-232, and Gigabit Ethernet. For point-to-point extension, pluggable SFP+ modules are included to serve the purpose of optical connection. Plus, the VE883AT is compatible with ATEN's VM7584 Optical Input Board installed in ATEN's modular matrix switches to broaden applications. It is suitable for installations where True 4K video transmission across a long distance and electrical isolation are essential, such as control rooms, factories, and hospitals.

Note: VE883A / VE883AT / VE883AR is not backward compatible with VE883 / VE883T / VE883R.

Features

- Extends HDMI video, audio, IR, RS-232 control, and Ethernet signals over a duplex fiber optic cable across up to 10 km*
- Lossless transmission of up to 4096 x 2160 / 3840 x 2160 @ 60 Hz (4:4:4) signals
- HDMI (3D, Deep Color, True 4K); HDCP 2.2 compliant
- ATEN's exclusive FarSmooth technology – prevents lagging and freezing by matching the output rates to the input rates and ensures the 4K@60Hz video display to be stable, smooth and identical to the source through 10 Gbps bandwidth
- Supports transparent USB 2.0 signals for expanded connectivity with USB peripherals at a maximum transfer rate of 25MB/s
- Bi-directional IR signal transmission – IR transmission is processed one direction at a time, ranged from 30 kHz to 56 kHz
- Features RS-232 serial port for connecting peripherals such as touch screens, and barcode scanners
- Supports batch upgrades using Firmware Upgrade Utility
- Built-in 8 kV / 15 kV ESD protection
- Plug-and-play
- Hot-pluggable
- Rack-mountable

Note:
• The maximum transmission distance may vary depending on the fiber type, bandwidth, connector splicing, losses, model, chromatic dispersion, environmental factor, and kinks.
• For long distance transmissions, ATEN recommends using SFP+ modules to allow compatibility with single or multi mode fibers. Depending on the chosen package (VE883AK1 or VE883AK2), different SFP+ modules are supplied:
  • VE883AK1: 10 Gbps/300m SFP+ Duplex Multi Mode Transceiver
  • VE883AK2: 10 Gbps/10 km SFP+ Duplex Single Mode Transceiver
• ATEN recommends using Single Mode fibers that conform to IEC 11801 (OS1, OS1a, OS2), and Multi Mode fibers that conform to IEC 11801 (OM3, OM4) specifications.
• The Device is class 1 laser product. It meets the safety regulations of IEC/EN 60825-1, 21 CFR 1040.10, and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007.

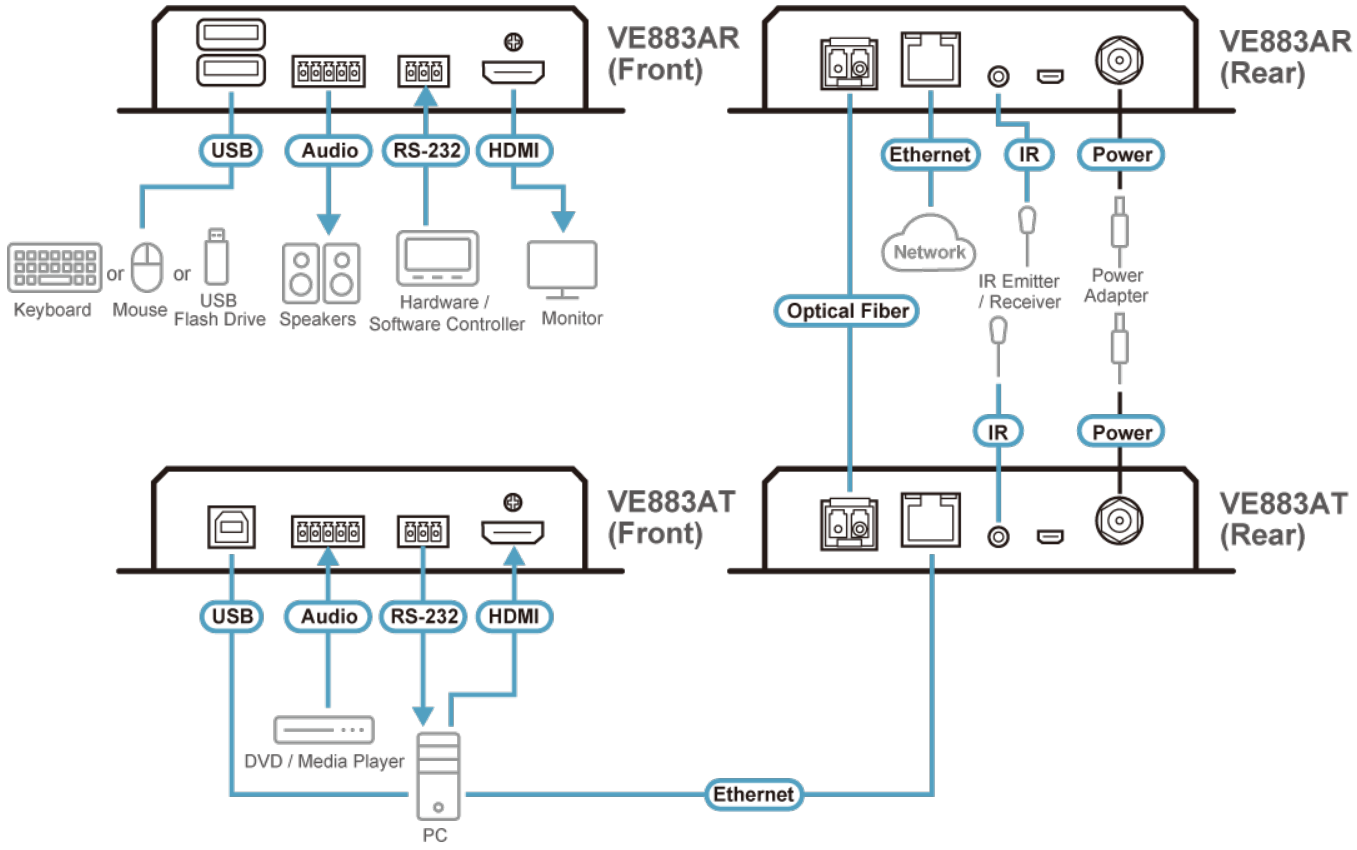
Specification

Video Input	
Interfaces	1 x HDMI Type A Female (Black)
Impedance	100 Ω
Max. Distance	Up to 5 m

Video	
Max. Data Rate	10.2 Gbps (3.4 Gbps Per Lane)
Max. Pixel Clock	594 MHz
Compliance	HDMI (3D, Deep Color, 4K) HDCP 2.2/2.3 Compatible
Max. Resolution	4096x2160@60Hz (4:4:4) / 3840x2160@60Hz (4:4:4)
Max. Distance	1 x SFP Module (*Note) VE883AK1: 4Kx2K/60Hz 4:4:4 up to 300m (MM, OM3, Black) VE883AK2: 4Kx2K/60Hz 4:4:4 up to 10km (SM, Blue)
Audio	
Input	1 x Terminal Block, 5 pole (Green)
Output	N/A
Connectors	
Unit To Unit	1 x bi-directional SFP (LC)
Firmware Upgrade	1 x Micro USB (Type B) Female (Black)
Power	1 x DC Jack with locking
Fiber Optics	
Data Rate	10.3 Gbps
Wavelength	VE883AK1: 850 nm VE883AK2: 1310 nm
Fiber Type	VE883AK1: Multimode(MM), OM3, LC Duplex Type VE883AK2: Singlemode(SM), LC Duplex Type
Control	
USB Channel	1 x USB Type B Female (White)
RS-232 Channel	1 x Terminal Block, 3 pole (Green)
IR Channel	1 x Mini Stereo Jack Female (Black); 30K~56 KHz full range transmission
Ethernet Channel	1 x GbE (RJ-45 Female)
LEDs	
Power	1 (Green)
Link	1 (Orange)
Video Output	N/A
Power Consumption	DC12V:5.57W:26BTU/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.
Environmental	
Operating Temperature	0-40°C
Storage Temperature	-20 - 60°C
Humidity	0 - 80% RH, Non-Condensing
Physical Properties	
Housing	Metal
Weight	0.67 kg (1.48 lb)
Dimensions (L x W x H) with bracket	16.94 x 14.69 x 3.00 cm (6.67 x 5.78 x 1.18 in.)

Dimensions (L x W x H) without bracket	16.60 x 12.49 x 2.90 cm (6.54 x 4.92 x 1.14 in.)
Note	1. Operating distance is approximate. A typical maximum distance may vary depending on factors such as fiber type, bandwidth, connector splicing, losses, modal or chromatic dispersion, environmental factors, and kinks. 2. It is recommended that you use Single Mode fibers that conforms to IEC 60793- 2-50 B1.1 or ITU-T G.652.B specifications; Use Multi Mode fibers that conform to IEC 11801 (OM3) specifications. 3. The Device is class 1 laser product. It meet the safety regulations of IEC-60825, FDA 21 CFR 1040.10, and FDA 21 CFR 1040.11.

Diagram



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