VE883T

4K HDMI Optical Transmitter (4K@980 ft (K1, MM) / 6.2 miles (K2, SM))

The VE883T is a fiber-based transmitter designed to extend uncompressed 4K signal up to 980 feet (using VE883TK1) or 6.2 miles (using VE883TK2) over duplex fiber optic cables. The VE883T meets HDMI Specifications, including 3D, Deep Color (up to 12 bit), and signaling rates (up to 10.2 Gb) to ensure superior video quality. With ATEN's exclusive FarSmooth technology, the VE883T prevents lagging and freezing by matching the output rates to the input rates and ensures the video display is stable, smooth and identical to the source, particularly in long-distance extension applications where uninterrupted video streams are required. The VE883T features an HDMI input, analog audio input, USB2.0, IR, RS-232 control port, and a Gigabit Ethernet port. For point-to-point extension, the VE883T can receive fiber optic cables by inserting SFP+ modules to its optic port.

To avoid bulky cable setup, the VE883T guarantees a simple and fast solution for optimum transmission of Ethernet, IR, HDMI, RS-232, and USB signals up to 16.2 miles simply via a set of duplex optic fiber. The VE883T is also USB transparent, making it compatible with a wide range of USB peripherals.

Engineered to meet the latest trend of lossless 4K and long distance signal extension, VE883T is suitable for where long distance transmission is a must and little interference is allowed, such as in traffic station and modern office buildings.

Features

- Extends HDMI video, stereo audio, IR, RS-232 control, and Ethernet signals over duplex fiber optic cabling
- Applies duplex fiber optic cables to connect the transmitter and the receiver
- Supports ultra long distance transmission up to 6.2 miles*
- HDMI (3D, Deep Color, 4K); HDCP 2.2 compliant
- Supports lossless 4K video up to 4096 x 2160 / 3840 x 2160 @ 60Hz (4:2:0)
- FarSmooth – ATEN's exclusive FarSmooth technology prevents lagging and freezing by matching the output rates to the input rates and ensures the video display is stable, smooth and identical to the source, particularly in long-distance extension applications where uninterrupted video streams are required.
- Supports Gigabit Ethernet Channel
- Supports USB 2.0, with a maximal transfer rate of 25MByte/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 (VE883TK1 or VE883TK2), different SFP+ modules are supplied:
    • VE883TK1: 10 Gbps/980ft SFP+ Duplex Multi Mode Transceiver
    • VE883TK2: 10 Gbps/6.2 miles 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	340 MHz
Compliance	HDMI (3D, Deep Color, 4K) HDCP 2.2 Compatible
Max. Resolution	4096x2160/3840x2160@60Hz (4:2:0); 4096x2160/3840x2160@30Hz (4:4:4)
Max. Distance	1 x SFP Module (*Note) VE883TK1: up to 300m (MM, OM3, Black) VE883TK2: 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	VE883TK1: 850 nm VE883TK2: 1310 nm
Fiber Type	VE883TK1: Multimode(MM), OM3, LC Duplex Type VE883TK2: 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); 30~56 KHz full range transmission
Ethernet Channel	1 x RJ45 Female
LEDs	
Power	1 (Green)
Link	1 (Orange)
Video Output	N/A
Power Consumption	DC5V:7.05W:33BTU/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	0.64 kg (1.41 lb)
Dimensions (L x W x H) with bracket	19.94 x 14.69 x 3.00 cm (7.85 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.)
Carton Lot	5 pcs

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