4K HDMI Optical Extender
VE883 User Manual

www.aten.com

EMC Information

FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

CE Warning: Operation of this equipment in a residential environment could cause radio interference.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

RoHS

This product is RoHS compliant.

User Information

Online Registration

Be sure to register your product at our online support center:

International	http://eservice.aten.com

Telephone Support

For telephone support, call this number:

International	886-2-8692-6959
China	86-400-810-0-810
Japan	81-3-5615-5811
Korea	82-2-467-6789
North America	1-888-999-ATEN ext 4988 1-949-428-1111

User Notice

All information, documentation, and specifications contained in this manual are subject to change without prior notification by the manufacturer. The manufacturer makes no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims any warranties as to merchantability or fitness for any particular purpose. Any of the manufacturer's software described in this manual is sold or licensed *as is*. Should the programs prove defective following their purchase, the buyer (and not the manufacturer, its distributor, or its dealer), assumes the entire cost of all necessary servicing, repair and any incidental or consequential damages resulting from any defect in the software.

The manufacturer of this system is not responsible for any radio and/or TV interference caused by unauthorized modifications to this device. It is the responsibility of the user to correct such interference.

The manufacturer is not responsible for any damage incurred in the operation of this system if the correct operational voltage setting was not selected prior to operation. PLEASE VERIFY THAT THE VOLTAGE SETTING IS CORRECT BEFORE USE.

Package Contents

- 1 VE883T 4K HDMI Optical Extender Transmitter
- 1 VE883R 4K HDMI Optical Extender Receiver
- 2 Power Adapters
- 2 Terminal Block 3 Pole
- 2 Terminal Block 5 Pole
- 1 IR Receiver
- 1 IR Emitter
- 1 USB Cable
- 2 HDMI LockPro
- 2 SFP+ Modules*
- 1 User Instructions

Note:

- Make sure that all of the items are present and in good order. If anything is missing or was damaged in shipping, please contact your dealer for further assistance.
- The supplied SFP+ modules differ depending on your chosen order (VE883K1 or VE883K2) for the VE883 package:

Part No.	Supplied SFP+ Modules	
	Model No.	Description
VE883K1	2X-C32-1G	SFP+ Duplex MM Transceivers (10 Gbps/300m, black)
VE883K2	2X-C32-2G	SFP+ Duplex SM Transceiver (10 Gbps/10km, blue)

- If you would like to replace the SFP+ modules, please contact the ATEN Technical Support for assistance.
- The VE883 supports full frequency IR signals from 30 kHz to 56 kHz.

Table of Contents

About this Manual

This user manual is provided to help you get the most from the VE883 unit. It covers all aspects of installation, configuration, and operation. An overview of the information found in the manual is provided below.

Chapter 1, *Introduction* introduces you to the 4K HDMI Optical Extender. Its purpose, features, and installation considerations are described.

Chapter 2, *Hardware Setup* describes the panel components of the 4K HDMI Optical Extender and details the steps that are necessary to quickly and safely set up your installation.

Chapter 2, *Hardware Setup* provides details on supported RS-232 commands and how to upgrade the device firmware.

Appendix provides a list of safety instructions and precautions, contact information for ATEN technical support, product specifications, and other technical information.

Note:

- Read this manual thoroughly and follow the installation and operation procedures carefully to prevent any damage to the unit or any connected devices.
- ATEN regularly updates its product documentation for new features and fixes. For an up-to-date VE883 documentation, visit http://www.aten.com/global/en/

Conventions

This manual uses the following conventions:

`Monospaced`	Indicates text that you should key in.
[ ]	Indicates keys you should press. For example, [Enter] means to press the **Enter** key. If keys need to be chorded, they appear together in the same bracket with a plus sign between them: [Ctrl+Alt].
1.	Numbered lists represent procedures with sequential steps.
♦	Bullet lists provide information, but do not involve sequential steps.
→	Indicates selecting the option (on a menu or dialog box, for example), that comes next. For example, Start ⟶ Run means to open the *Start* menu, and then select *Run*.
	Indicates critical information.

Product Information

For information about all ATEN products and how they can help you connect without limits, visit ATEN on the Web or contact an ATEN Authorized Reseller. Visit ATEN on the Web for a list of locations and telephone numbers:

International	http://www.aten.com
North America	http://www.aten-usa.com

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Chapter 1
Introduction

Overview

The VE883 is a fiber-based extender designed to extend uncompressed 4K signal up to 300 m (using VE883K1) or 10 km (using VE883K2) over duplex fiber optic cables. The VE883 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 VE883 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 VE883 features an HDMI input and output, analog audio input and output, USB2.0, IR, RS-232 control port, and a Gigabit Ethernet port. For point-to-point extension, the VE883 can receive fiber optic cables by inserting SFP+ modules to its optic port.

To avoid bulky cable setup, the VE883 guarantees a simple and fast solution for optimum transmission of Ethernet, IR, HDMI, RS-232，and USB signals up to 10 km simply via a set of duplex optic fiber. The VE883 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, VE883 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 local and remote units
- Supports ultra long distance transmission up to 10 km*
- HDMI (3D, Deep Color, 4K); HDCP 2.2 compatible
- 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 25Mbps
- 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 (VE883K1 or VE883K2), different SFP+ modules are supplied:
  - VE883K1: 10 Gbps/300m SFP+ Duplex Multi Mode Transceiver
  - VE883K2: 10 Gbps/10 km SFP+ Duplex Single Mode Transceiver
- ATEN recommends using single-mode fibers that conform to IEC 11801 (OS1, OS1a, OS2), and using multi-mode fibers that conform to IEC 11801 (OM3, OM4).
- The VE883 is a class 1 laser product that meets the safety regulations of IEC/EN 60825-1 and 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007.

Planning the Installation

Required Equipment

Prepare the following before installing the VE883 unit:

- 1 source device (e.g. a Blu-ray disc or a PC)
- 1 display device equipped with an HDMI connector
- 2 HDMI cables
- 1 duplex fiber optic cable

Supported Operating Systems

The VE883 supports PCs (as source devices) using the following operation systems:

Operating System	Versions
Windows	Dos 6.22*, Windows NT* / 2K / XP / XP Pro 32-bit / XP Pro 64-bit / 2003 / 2008 / Vista / 7 / 8
Linux*	RedHat 9.0, Fedora or higher, RHEL 5
	SUSE 10 / 11.1 or higher, OpenSUSE 10.2,SLES 10 SP1
	Debian 3.1 / 4.0
	Ubuntu 7.04 / 7.10
Unix	IBM AIX 4.3 / 5L (v5.2, v5.3) / v6 (v6.1)
	FreeBSD 5.5 / 6.1 / 6.2
	Novell Netware 5.0* / 6.0 / 6.5
Sun	Solaris 8 / 9 / 10
Mac	OS 10.1 / 10.2 / 10.3 / 10.4 / 10.5 / 10.7 / 10.8 or higher

Note:

- Windows Dos 6.22, Windows NT, and Unix Novell Netware 5.0 do not support USB devices.
- A Linux platform only supports USB 2.0 devices when using kernel version 2.6 or later.

Optional Equipment

To use the serial controller function, prepare a high-end controller and RS-232 serial cables.

Accessories

For more details, visit the VE883 product page at www.aten.com

Model	Name	Description
VE-RMK1U	Video Extender Rack Mount Kit	Mounting kit for installation to a 1U rack.
2L-7D02H-1	ATEN HDMI Cable	High-speed HDMI cable with Ethernet (1.8m)
2L-7D03H		High-speed HDMI cable with Ethernet (3m)
2L-7D05H		High-speed HDMI cable with Ethernet (5m)
2L-7D10H		High-speed HDMI cable with Ethernet (10m)
2L-7D15H		High-speed HDMI cable with Ethernet (15m)
2L-7D20H		High-speed HDMI cable with Ethernet (20m)

Compatible ATEN Products

The VE883 is compatible with a range of ATEN HDMI Switches, HDMI Splitters, Modular Matrix Switches, and Video Matrix Switches, and HDMI Converters. For more details, visit the VE883 product page at www.aten.com

Supported Video Resolutions

The VE883 supports the following video resolutions at 60 Hz:

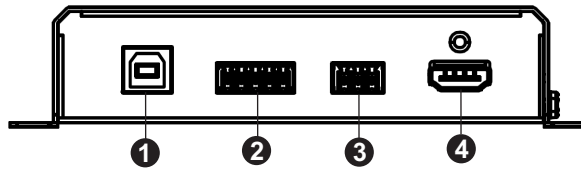
Width (Pixels)	Height (Pixels)
640	480
1024	768
1280	768
1280	800
1280	768
1280	800
1280	960
1280	1024
1360	768
1366	768
1400	1050
1440	900
1600	900
1600	1200
1680	1050
1792	1344
1856	1392
1920	1080
1920	1200
1920	1440
2560	1600
3840	2160
4096	2160

Chapter 2
Hardware Setup

1. Please review the safety information regarding the placement of this device in *Safety Instructions*, page 19.
2. Do not power on the VE883 until all the necessary hardware is connected.

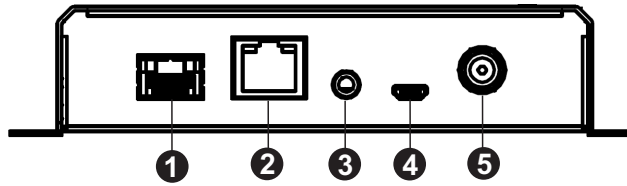
Components

VE883T Front View



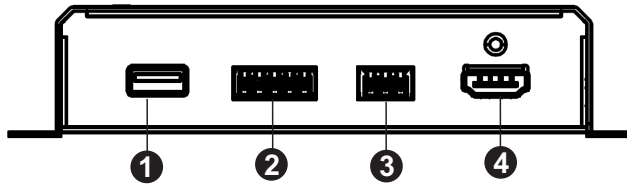
No.	Component	Description
1	USB 2.0 Type-B	Connects to a USB port on the source device to transmit data to or receive data from the USB peripherals installed to the corresponding VE883R.
2	Audio In	Connects to the Audio Out port on the source device via an audio cable.
3	RS-232 Port	Connects to the serial port on the source device via a serial cable.
4	HDMI In	Connects to the HDMI Out port on the source device via an HDMI cable.

VE883T Rear View



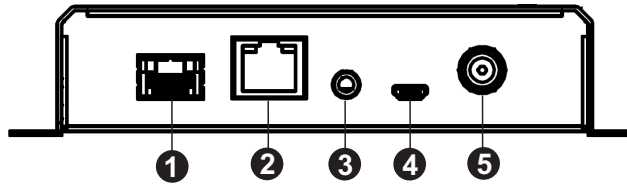
No.	Component	Description
1	Optical Port	Plug this port with an SFP+ module.
2	Ethernet Channel Port	Connects to the source device via an Ethernet cable to allow the source device to access the network from the corresponding VE883R. For details, see the installation illustration in *Installation*, page 13.
3	IR Port	Receives an IR emitter or receiver.
4	Firmware Upgrade Port	This port is reserved for ATEN Technical Support. If you would like to do a firmware upgrade yourself, please contact your dealer.
5	Power Jack	Receives a power adapter cable.

VE883R Front View



No.	Component	Description
1	USB 2.0 Type-A	Connects to a USB peripheral via a USB cable.
2	Audio Out	Connects to the Audio In port on a speaker via an audio cable.
3	RS-232 Serial Port	Connects to an RS-232 serial controller, such as a barcode scanner or a touch pad.
4	HDMI Out	Connects to the HDMI In port on the display device via an HDMI cable.

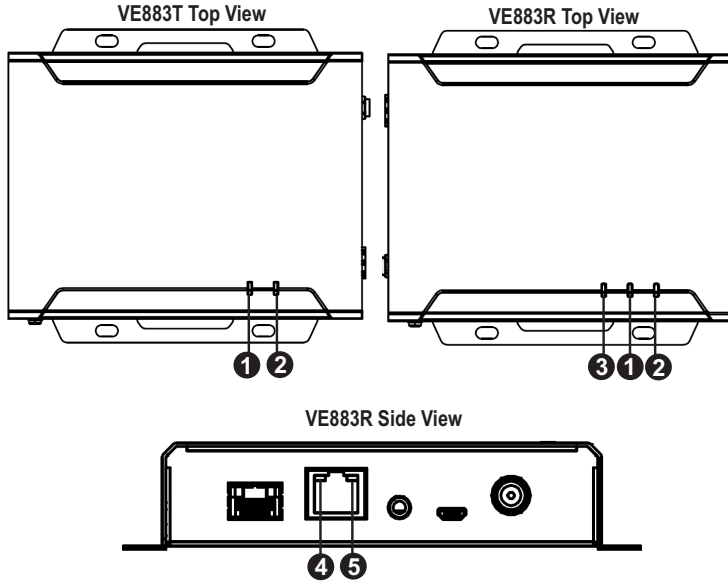
VE883R Rear View



No.	Component	Description
1	Optical Port	Plug this port with an SFP+ module.
2	Ethernet Channel Port	Connects to a hub via an Ethernet cable.
3	IR Port	Connects to an IR emitter or receiver.
4	Firmware Upgrade Port	This port is reserved for ATEN Technical Support. If you would like to do a firmware upgrade yourself, please contact your dealer.
5	Power Jack	Receives a power adapter cable.

LED Display

You can find the unit's LEDs on the top panels and side panel of the VE883R as illustrated below. See the table below for details on LED indication.



No.	LED	Indication	Description
1	System Link	Lights orange	The connection between the VE883T and VE883R is stable.
		Flashes orange	The connection between the VE883T and VE883R is unstable.
		Off	The connection between the VE883T and VE883R is off.
2	Power	Lights green	The unit is powered on.
		Flashes green	The unit is receiving a firmware upgrade.
3	HDMI Out	Lights orange	The video is displayed and secured with HDCP.
		Flashes orange	The video is displayed but not secured with HDCP.
		Off	The video is not displayed.

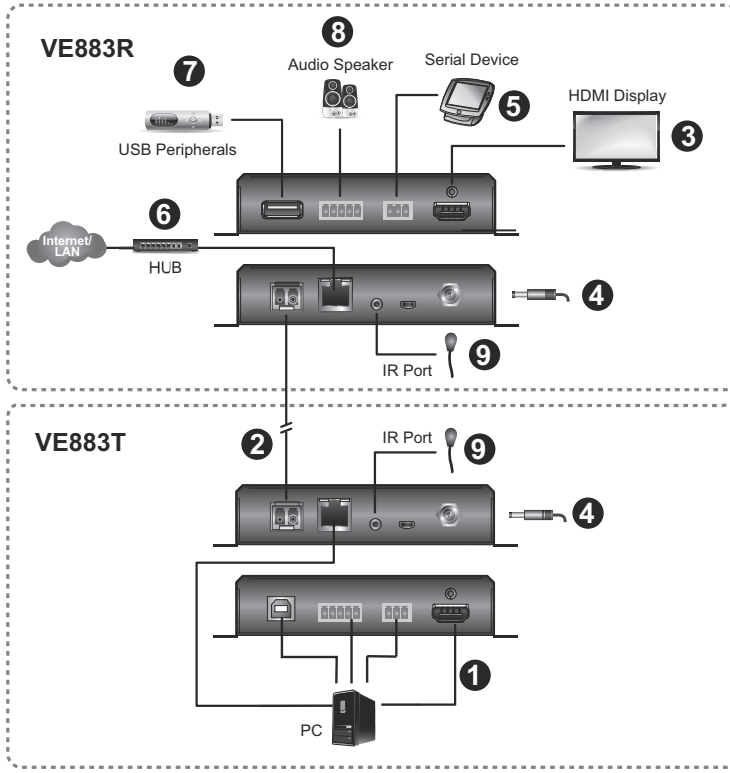
No.	LED	Indication	Description
4	Ethernet speed	Lights orange	The data is being transmitted/received at 100 Mbps.
		Lights green	The data is being transmitted/received at 1 Gbps.
		Off	The data is being transmitted/received at 10 Mbps or not transmitted/received.
5	Ethernet link	Lights green	The VE883R's connection to Ethernet is active.
		Flashes green	The VE883R is actively transmitting/receiving data over Ethernet.
		Off	The VE883R is not connected to Ethernet.

Mounting

Use the VE-RMK1U Rack Mount Kit to rack-mount the VE883. For more information about this accessory, go to www.aten.com/products

Installation

Follow the steps below to safely install the VE883 to a source, a display device, SFP+ modules, and other devices as required.



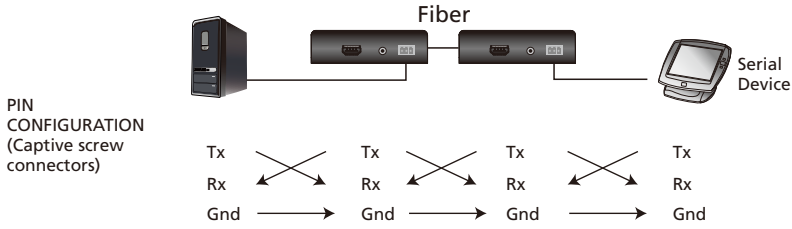
1. Connect your source device to the VE883T. To transmit HDMI video/stereo audio/USB/serial/Ethernet signals, connect the source device's HDMI Out/ Audio Out/USB/RS-232 Serial/Ethernet port to the VE883T.
2. Plug the SFP+ Modules to the Optical Ports on your VE883T and VE883R, and then connect the two SFP+ modules using a duplex fiber optic cable.
3. Use an HDMI cable to connect your video display to the HDMI Out port on the VE883R.
4. Plug the Power Adapter cable into the Power Jack on the VE883T and VE883R.
5. (Optional) Connect a barcode scanner or a touch pad to the RS-232 Port on the VE883R using a serial cable.
6. (Optional) To provide Internet or LAN connectivity to the source device (e.g. PC), connect the VE883R to the Internet or LAN using a Cat 5e/6/6a cable.
7. (Optional) Connect a USB peripheral to the USB Type-A port.

   Note: The VE883 supports up to 3 USB flash disks or 4 USB peripherals of other type via a USB hub.

8. (Optional) Connect the unit to an audio speaker.
9. (Optional) Connect an IR Emitter to the IR Port on VE883T or VE883R, depending on where you wish to use the IR remote control unit; install the IR receiver to the corresponding VE883T/VE883R.
10. Power on the VE883T, VE883R, and the connected devices.

RS-232 Channel Transmission

You can utilize the VE883 to extend RS-232 serial control signals between two serial devices, for example, such as a computer and a bar code scanner. The flow of the RS-232 signal transmission can be illustrated as follows:



From a source device, the RS-232 signals is transmitted (Tx) to the VE883 receiving (Rx) unit; the VE883R transmits (Tx) signals to the display device (Rx).

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Chapter 3
Operation

Firmware Upgrades

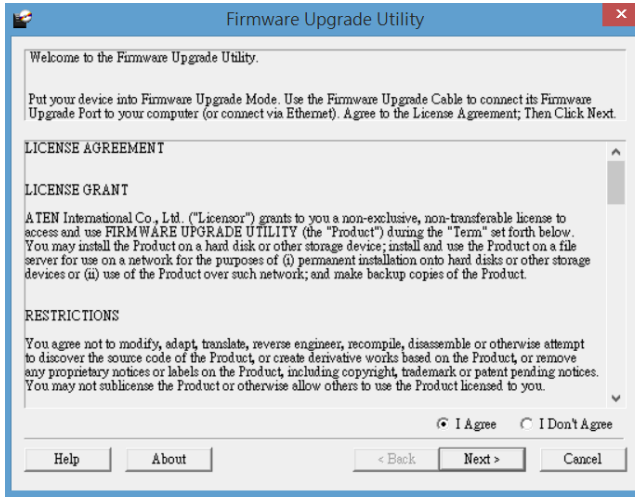
You can upgrade one or two VE883 units in your setup using Firmware Upgrade Utility from PCs installed at the VE883T or the VE883R's side.

Note:

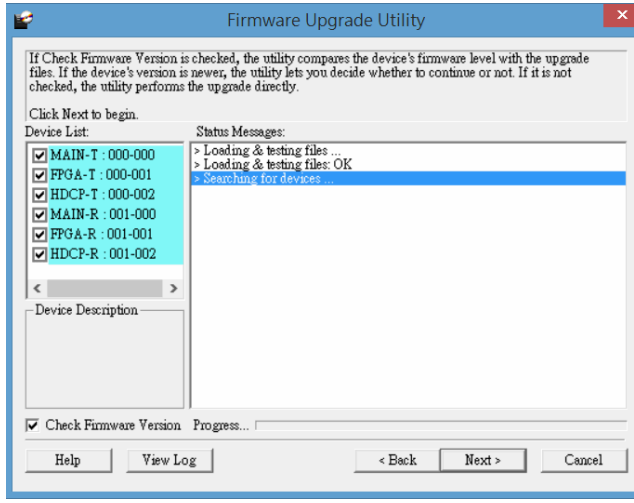
- To upgrade both the VE883T and VE883R in your environment, make sure they are powered on and connected via a duplex fiber optic cable. The system link LEDs on the VE883 units light orange.
- For a better user experience, use Windows 7 or later versions if you are using a Windows platform for firmware upgrade.

To upgrade the VE883:

1. Go to the VE883 product web page.
2. Download the latest firmware package to a computer connected to the VE883T or VE883R's side.
3. From the downloaded package, execute the **VE883.exe** file. This screen appears.



4. Read and agree to the License Agreement, and then click **Next**. The utility automatically browses and lists the VE883 devices in Device List.



5. Click **Next** to start the upgrade. When the upgrade is complete, a confirmation message, “Firmware Upgrade: OK” appears in the Status Messages column.

Appendix

Safety Instructions

General

- This product is for indoor use only.
- Read all of these instructions. Save them for future reference.
- Follow all warnings and instructions marked on the device.
- Do not place the device on any unstable surface (cart, stand, table, etc.). If the device falls, serious damage will result.
- Do not use the device near water.
- Do not place the device near, or over, radiators or heat registers.
- The device cabinet is provided with slots and openings to allow for adequate ventilation. To ensure reliable operation, and to protect against overheating, these openings must never be blocked or covered.
- The device should never be placed on a soft surface (bed, sofa, rug, etc.) as this will block its ventilation openings. Likewise, the device should not be placed in a built in enclosure unless adequate ventilation has been provided.
- Never spill liquid of any kind on the device.
- Unplug the device from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
- The device should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- The device is designed for IT power distribution systems with 230V phase-to-phase voltage.
- To prevent damage to your installation it is important that all devices are properly grounded.
- The device is equipped with a 3-wire grounding type plug. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not attempt to defeat the purpose of the grounding-type plug. Always follow your local/national wiring codes.
- Do not allow anything to rest on the power cord or cables. Route the power cord and cables so that they cannot be stepped on or tripped over.

- If an extension cord is used with this device make sure that the total of the ampere ratings of all products used on this cord does not exceed the extension cord ampere rating. Make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.
- To help protect your system from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner, or uninterruptible power supply (UPS).
- Position system cables and power cables carefully; Be sure that nothing rests on any cables.
- Never push objects of any kind into or through cabinet slots. They may touch dangerous voltage points or short out parts resulting in a risk of fire or electrical shock.
- Do not attempt to service the device yourself. Refer all servicing to qualified service personnel.
- If the following conditions occur, unplug the device from the wall outlet and bring it to qualified service personnel for repair.
  - The power cord or plug has become damaged or frayed.
  - Liquid has been spilled into the device.
  - The device has been exposed to rain or water.
  - The device has been dropped, or the cabinet has been damaged.
  - The device exhibits a distinct change in performance, indicating a need for service.
  - The device does not operate normally when the operating instructions are followed.
- Only adjust those controls that are covered in the operating instructions. Improper adjustment of other controls may result in damage that will require extensive work by a qualified technician to repair.

Rack Mounting

- Before working on the rack, make sure that the stabilizers are secured to the rack, extended to the floor, and that the full weight of the rack rests on the floor. Install front and side stabilizers on a single rack or front stabilizers for joined multiple racks before working on the rack.
- Always load the rack from the bottom up, and load the heaviest item in the rack first.
- Make sure that the rack is level and stable before extending a device from the rack.
- Use caution when pressing the device rail release latches and sliding a device into or out of a rack; the slide rails can pinch your fingers.
- Do not overload the AC supply branch circuit that provides power to the rack. The total rack load should not exceed 80 percent of the branch circuit rating.
- Make sure that all equipment used on the rack – including power strips and other electrical connectors – is properly grounded.
- Ensure that proper airflow is provided to devices in the rack.
- Ensure that the operating ambient temperature of the rack environment does not exceed the maximum ambient temperature specified for the equipment by the manufacturer.
- Do not step on or stand on any device when servicing other devices in a rack.

Technical Support

International

- For online technical support – including troubleshooting, documentation, and software updates: http://support.aten.com
- For telephone support, see *Telephone Support*, page iii.

North America

Email Support		support@aten-usa.com
Online Technical Support	Troubleshooting Documentation Software Updates	http://www.aten-usa.com/support
Telephone Support		1-888-999-ATEN ext 4988

When you contact us, please have the following information ready beforehand:

- Product model number, serial number, and date of purchase
- Your computer configuration, including operating system, revision level, expansion cards, and software
- Any error messages displayed at the time the error occurred
- The sequence of operations that led up to the error
- Any other information you feel may be of help

Specifications

Function	VE883R	VE883T
Video Input		
Interfaces	N/A	1 x HDMI Type A Female (Black)
Impedance	N/A	100 Ω
Max. Distance	N/A	Up to 5 m
Video Output		
Interfaces	1 x HDMI Type A Female (Black)	N/A
Impedance	100 Ω	N/A
Max. Distance	Up to 10 m	N/A
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. Resolutions	4096 x 2160 / 3840 x 2160 @ 60Hz (4:2:0) 4096 x 2160 / 3840 x 2160 @ 30Hz (4:4:4)	
Max. Distances	1 x SFP+ Module VE883K1: Up to 300 m (MM, OM3, Black) VE883K2: Up to 10 km (SM, Blue)	1 x SFP+ Module VE883K1: Up to 300 m (MM, OM3, Black) VE883K2: Up to 10 km (SM, Blue)
Audio		
Input	N/A	1 x Terminal Block, 5 Pole (Green)
Output	1 x Terminal Block, 5 Pole (Green)	N/A
Connectors		
Unit to Unit	1 x bi-directional SFP+ (LC)	
Power	1 x DC Jack with Locking	
Firmware Upgrade	1 x Micro USB (Type B) Female (Black)	
Fiber Optics		
Data Rate	10.3 Gbps	

Function	VE883R	VE883T
Wavelength	VE883K1: 850 nm VE883K2: 1310 nm	
Fiber Type	VE883K1: Multimode (MM), OM3, LC Duplex Type VE883K2: Single Mode (SM), LC Duplex Type	
Control		
USB Channel	1 x USB Type A Female (White)	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	
LEDs		
Power	1 (Green)	
Link	1 (Orange)	
Video Output	1 (Orange)	N/A
Power Consumption	DC5V, 6.77W	DC5V, 7.05W
Environmental		
Operating Temperature	0 - 40°C	
Storage Temperature	-20 - 60°C	
Humidity	0 x 80% RH, Non-Condensing	
Physical Properties		
Housing	Metal	
Weight	0.64 kg (1.41 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. The maximum operating distance is an estimate. It may vary depending on factors such as the fiber type, bandwidth, connector splicing, losses, model or chromatic dispersion, environmental factors, and kinks.
2. ATEN recommends using single-mode fibers that conform to IEC 11801 (OS1, OS1a, OS2), and using multi-mode fibers that conform to IEC 11801 (OM3, OM4).
3. The VE883 is a class 1 laser product that meets the safety regulations of IEC/EN 60825-1 and 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007.

Limited Warranty

ATEN warrants its hardware in the country of purchase against flaws in materials and workmanship for a Warranty Period of two [2] years (warranty period may vary in certain regions/countries) commencing on the date of original purchase. This warranty period includes the LCD panel of ATEN LCD KVM switches. Select products are warranted for an additional year (see *A+ Warranty* for further details). Cables and accessories are not covered by the Standard Warranty.

What is covered by the Limited Hardware Warranty
ATEN will provide a repair service, without charge, during the Warranty Period. If a product is detective, ATEN will, at its discretion, have the option to (1) repair said product with new or repaired components, or (2) replace the entire product with an identical product or with a similar product which fulfills the same function as the defective product. Replaced products assume the warranty of the original product for the remaining period or a period of 90 days, whichever is longer. When the products or components are replaced, the replacing articles shall become customer property and the replaced articles shall become the property of ATEN.

To learn more about our warranty policies, please visit our website:
http://www.aten.com/global/en/legal/policies/warranty-policy