

## VM8584

4-Port 10G Optical Output Board (4K@300m (K1, MM) / 10km (K2, SM))



The VM8584 4-Port 10G Optical Output Board offers an easy way to route 4 HDMI sources to HDMI displays through optical extenders, and up to 16/32 input and 16/32 output connections on an ATEN Modular Matrix Switch through various AV interfaces. Designed with fiber optics technology for long-distance transmission, the VM8584 along with its SFP+ module extends uncompressed 4K signal up to 300 m (using VM8584K1) or 10 km (using VM8584K2) over duplex fiber optic cables. The optical fiber simplifies cabling by guaranteeing an interference-free long-haul transmission of audio, video, IR, and RS-232 control signals over one single set of duplex cables that easily connects to the SFP+ slot. Moreover, the VM8584 supports a high data rate of 10.2 Gbps and meets HDMI Specifications that include 3D, Deep Color, and 4K to ensure superior video quality.

The ATEN VM input/output boards are hot-swappable which gives system integrators great flexibility and efficiency for installation and maintenance. The ATEN VM input/output boards along with ATEN Modular Matrix Switches offer ideal solutions that perfectly meet your demands for scalable video-critical applications.



### Features

- Compatible with the [VM3250/VM3200/VM1600A](#); mix and match with modular I/O boards of any type for optimum flexibility
- Extends audio/video, IR, and RS-232 control signals over long distances via duplex fiber optic cables
- Superior video quality over long-distance transmission – up to 4096 x 2160@60Hz (4:2:0), 300m with VM8584K1 over multimode cables or 10km with VM8584K2 over single-mode cables
- **Scaler** – features a 4K video scaling function to convert input resolutions to the optimum display resolutions\*
- **Seamless Switch™** – features close-to-zero second switching that provides continuous video streams, real-time switching, and stable signal transmissions\*
- **Video Wall** – allows you to create custom video wall layouts via intuitive web GUI\*
- HDMI (3D, Deep Color, 4K); HDCP 2.2 compatible
- Consumer Electronics Control (CEC) support
- **Bi-directional RS-232 channel** – allows you to connect to serial terminals or serial devices, such as touch screens and barcode scanners\*
- **Bi-directional IR channel** – IR transmission is processed one direction at a time, ranging from 30 kHz to 60 kHz\*
- **EDID Expert™** – selects optimum EDID settings for smooth power-up, high-quality display, and use of the best resolutions across different screens
- **FrameSync** – prevents image tearing by synchronizing the scaler output frame rate to the input signal frame rate\*
- Hot-swappable fiber optic module and I/O boards for easy integration and maintenance

\*Note: The VM8584 is designed to work with the [VE883AR](#) True 4K HDMI Optical Receiver. These features are only available when used with the [VE883AR](#).

**Specifications**

Fiber Optics	
Data Rate	10.3 Gbps
Wavelength	VM8584K1: 850 nm VM8584K2: 1310 nm
Fiber Type	VM8584K1: Multimode(MM), OM3, LC Duplex Type VM8584K2: Singlemode(SM), LC Duplex Type
Video Output	
Interfaces	4 x bi-directional SFP+ (LC)
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 Consumer Electronics Control (CEC)
Max. Resolution	Up to 4096 x 2160 / 3840 x 2160 @ 60Hz (4:2:0); 4096 x 2160 / 3840 x 2160 @ 30Hz (4:4:4)
Max. Distance	VM8584K1: up to 300m (MM, OM3, Black) VM8584K2: up to 10km (SM, Blue)
Control	
RS-232 Channel	4 x Captive Screw Connectors, 3 pole
IR Channel	4 x Mini Stereo Jack Female (Black)
LEDs	
Status	1 (Green)
Link	4 (Orange)
Power Consumption	22.96W:108BTU/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	0.65 kg ( 1.43 lb )
Dimensions (L x W x H)	35.20 x 23.80 x 2.33 cm (13.86 x 9.37 x 0.92 in.)
Carton Lot	2 pcs
Note	1. The operating distance may vary depending on the fiber type, network bandwidth, connector splicing, signal losses, modal or chromatic dispersion, environmental factors, and kinks. 2. ATEN recommends using single-mode optical fibers that conform to IEC60793-2-50 B1.1 or ITU-T G.652.B specifications; multimode optical fibers that conform to IEC11801 (OM3) specification. 3. The VM8584 is a class 1 laser product and complies with the safety regulations of IEC-60825, FDA 21 CFR 1040.10, and FDA 21 CFR 1040.11.
Note	For some of rack mount products, please note that the standard physical dimensions of WxDxH are expressed using a LxWxH format.

Diagram



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