# 4K HDMI HDBaseT Receiver with Scaler
## VE816R

- ATEN VE816R 4K HDMI HDBaseT Receiver with Scaler is designed to work with several ATEN HDBaseT Matrix Switches to extend 4K HDMI signals up to 100 m over a single Cat 5e/6/6a or an ATEN 2L-2910 Cat 6 cable, and at the same time, scales videos of different resolutions for optimal display.

Supporting bi-directional RS-232 channel and IR signaling pass-through, the VE816R provides users the path to remotely control the compatible devices. When working with ATEN HDBaseT Matrix, The VE816R features Frame Sync and Cable Quality Tester technologies to ensure smooth video and intuitive cable testing process.

When working with ATEN HDMI HDBaseT-Lite Matrix Switches, or Modular Matrix Switches with HDBaseT output boards, the VE816R supports video wall integration and ATEN's Seamless Switch™ function, providing users the ultimate A/V experiences.

Video Wall | RS-232 Channel | IR Channel | Seamless Switch | Scaler | A/V In HDBaseT | A/V Out HDMI

VE816R Front View

VE816R Rear View

## Features

- Extends HDMI, RS-232, and IR signals up to 100 m over a single Cat 5e/6/6a or ATEN 2L-2910 Cat 6 cable
- HDCP 2.2 compatible
- Superior video quality:
  - 4K up to 100 m
  - 1080p up to 150 m
- HDBaseT Long Reach Mode – activated by RS-232 commands, Long Reach Mode extends signals up to 150 m, 1080p, via a single Cat 5e/6 cable
- Scaler – scales videos of different resolutions to their optimal output for display and to avoid black screen[1]
- Video Wall – features video wall profiles that allows for custom screen layouts via an intuitive web GUI[2]
- Seamless Switch™ – close-to-zero second switching that provides continuous video streams, real-time switching, and stable signal transmissions[2]
- HDBaseT Anti-jamming – resists signal interference during high-quality video transmissions using HDBaseT technology
- Bi-directional RS-232 channel – allows for control using 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[3]
- Cable Quality Tester – examines the category cable quality through signal level detection from HDBaseT Matrix Switches to the VE816R.
- FrameSync – prevents image tearing by synchronizing the scaler output frame rate to the input signal frame rate
- Remote Firmware upgrade
- Built- in 8KV / 15 KV ESD protection
- Plug-and-play
- Rack-mountable

**Note:**

1. Videos may not display within range when Seamless Switch™ or Video Wall is enabled, in which case please adjust the display settings on your device.
2. The Seamless Switch™ and video wall functionalities are available when the VE816R is used with ATEN HDBaseT Matrix. For further information, please see the compatible list below
3. Supports full-frequency IR signals from 30 KHz to 56 KHz.

## Highlights

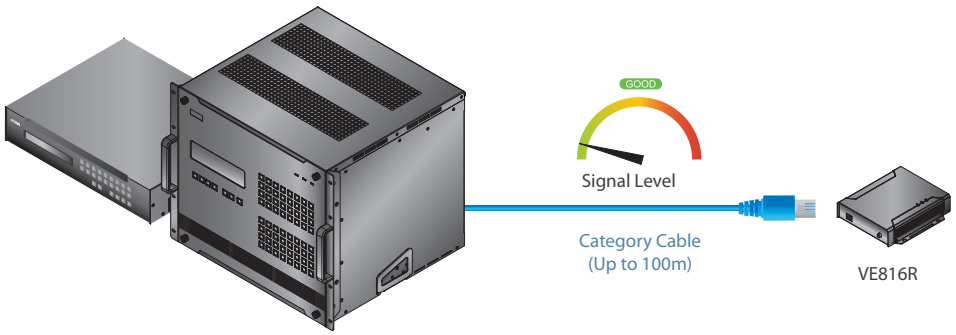
**FrameSync**

In video wall mode, FrameSync prevents image tearing without adding or dropping frames by synchronizing the scaler output frame rate to the input signal frame rate and guarantees smooth video for high-motion elements, especially when a fast-moving object appears on the screen

Before After

**Cable Quality Tester**

Sends test signals from HDBaseT Matrix Switches to the HDBaseT receivers to examine category cable quality through signal level detection, which eliminates the need for an extensive checking process, facilitates troubleshooting and expedites system recovery




HDBaseT Matrix Switch

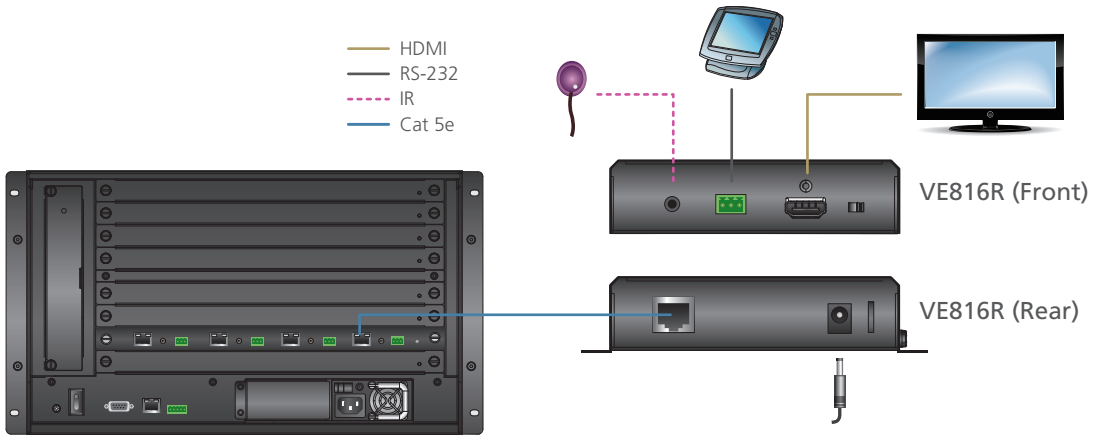
## Compatible Products

| Model | Description | Max. Distance | RS-232 | IR | Seamless Switch | Video Wall |
|---|---|---|---|---|---|---|
| **VM8514** | 4-Port HDBaseT Output Board | 100 m / 150 m in Long Reach Mode | v | v | v | v |
| **VM3404H** | 4 x 4 HDMI HDBaseT-Lite Matrix Switch | 70 m | x | v | v | v |
| **VM3909H** | 9 x 9 HDMI HDBaseT-Lite Matrix Switch | 70 m | x | v | v | v |

**Note:**
- VM8514 is compatible with VE816R when plugged into ATEN Modular Matrix Switches (VM1600 and VM3200).
- For a complete list of compatible ATEN products, please visit the VE816R product web page.

## Optional Accessories

| Description | Model |
|---|---|
| HDMI Cable | 2L-7D02H-1 (2m), 2L-7D03H (3m), 2L-7D05H (5m), 2L-7D10H (10m), |
| Cat 6 Cable | 2L-2910 |
| Video Extender Rack Mount Kit | VE-RMK 1U |




## Specifications

| Functions | VE816R |
|---|---|
| **Video Output** | |
| Interfaces | 1 x HDMI Type A Female (Black) |
| Impedance | 100 Ω |
| Max. Distance | Up to 10 m |
| **Video** | |
| Max. Data Rate | 10.2 Gbps (3.40 Gbps per lane) |
| Max. Pixel Clock | 340 MHz |
| Compliance | HDMI (3D, 4K, Deep Color)<br>HDCP 2.2 Compatible<br>HDBaseT Compatible |
| Max. Resolutions / Distance | Up to 4K @ 70m (Cat 5e/6) / 100m (Cat 6a/ATEN 2L-2910 Cat6);<br>1080p @ 100m (Cat 5e/6/6a)<br>***4K supported:**<br>4096 x 2160 / 3840 x 2160 @ 60Hz (4:2:0);<br>4096 x 2160 / 3840 x 2160 @ 30Hz (4:4:4) |
| **Connectors** | |
| Unit To Unit | 1 x RJ-45 Female |
| **Control** | |
| IR Channel | 1 x Mini Stereo Jack Female (Black) |
| RS-232 Channel | 1 x Terminal Block, 3 pole (Green) |
| **Switches** | |
| Firmware Upgrade | 1 x Slide Switch - ON/OFF |
| **Power** | |
| Connectors | 1 x DC Jack (Sliver) |
| Consumption | DC 5V, 9.09W |
| **Environmental** | |
| Operating Temperature | 0° to 40° C |
| Storage Temperature | -20° to 60° C |
| Humidity | 0 - 80% RH, Non-Condensing |
| **Physical Properties** | |
| Housing | Metal |
| Weight | 0.67 kg |
| Dimensions (L x W x H) with bracket | 16.80 x 14.69x 3.00 cm |
| Dimensions (L x W x H) without bracket | 16.60 x 12.49 x 2.90 cm |

*Product information is subject to change without prior notice.*

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Publish Date: 12/2017 V1.0

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