

# madVR Envoy - Model Comparison<sup>10</sup>

## Features by model<sup>4</sup>

Pro

Extreme

### HDR Dynamic Tone Mapping (DTM)

|   |                     |       |
|---|---------------------|-------|
| Frame by frame DTM, no metadata required                                  | ✓                   | ✓     |
| Advanced dual-algorithm scene change detection                            | ✓                   | ✓     |
| Contrast Recovery (off, low, medium, high)                                | All                 | All   |
| Shadow Detail Recovery (off, low, medium, high, very high, insane)        | All except "insane" | All   |
| Highlight Recovery up to 4K24 (off, low, medium, high, very high, insane) | All except "insane" | All   |
| Highlight Recovery at 4K60 (off, low, medium, high, very high, insane)    | -                   | All   |
| DTM with 1080p60 HDR  | ★★★★★               | ★★★★★ |
| DTM with 4K24 HDR   | ★★★★★               | ★★★★★ |
| DTM with 4K60 HDR   | ★★★★★               | ★★★★★ |

### Scaling

|  |       |       |
|--|-------|-------|
| AI-based ring-free & artifact-free chroma upscaling                      | ✓     | ✓     |
| AI-based ring-free & artifact-free image upscaling                       | ✓     | ✓     |
| Upscaling can be switched to either optimize high or low quality sources | ✓     | ✓     |
| Upscaling to 4K24  | ★★★★★ | ★★★★★ |
| Upscaling to 4K60  | ★★★★★ | ★★★★★ |
| Upscaling to 8K24 <sup>1</sup>   | -     | ★★★★★ |
| Upscaling to 8K60 <sup>1</sup>   | -     | ★★★★★ |
| Sharp & ring-free high quality downscaling                               | ★★★★★ | ★★★★★ |

### Aspect Ratios & Front Projection

|   |       |       |
|---|-------|-------|
| Automatic aspect ratio and black bar detection                    | ✓     | ✓     |
| Automatic IMAX aspect ratio changes                               | ✓     | ✓     |
| Masking for projection screens                                    | ✓     | ✓     |
| Image shift for CIW projection                                    | ✓     | ✓     |
| Advanced convergence correction                                   | ✓     | ✓     |
| Automatic activation of JVC & Sony lens memories (via IP control) | ✓     | ✓     |
| Advanced geometry correction (e.g. for curved screens)            | -     | ✓     |
| AI-based anamorphic stretch upscaling for 1080p projectors        | ★★★★★ | ★★★★★ |
| AI-based anamorphic stretch upscaling for 4K projectors           | ★★★★★ | ★★★★★ |
| AI-based anamorphic stretch upscaling for 8K projectors           | -     | ★★★★★ |

### Artifact Reduction and Edge/Texture Enhancement

|  |       |       |
|--|-------|-------|
| AI-based algorithm to reduce compression artifacts | ★★★★★ | ★★★★★ |
| Algorithm to reduce banding artifacts              | ★★★★★ | ★★★★★ |
| Edge enhancement (aka sharpening)                  | ★★★★★ | ★★★★★ |
| Texture detail enhancement                         | ★★★★★ | ★★★★★ |

### Planned Future Algorithms<sup>2,4</sup> (added via software updates)

|   |   |       |
|---|---|-------|
| AI-based motion interpolation                                 | - | ★★★★★ |
| AI-based motion compensated video deinterlacing               | - | ★★★★★ |
| AI-based motion compensated multi frame noise/grain reduction | - | ★★★★★ |
| AI-based grain agnostic sharpening                            | - | ★★★★★ |
| AI-based 4K HDR dynamic tone mapping processing               | - | ★★★★★ |
| Additional undisclosed AI-based algorithms and features       | - | ★★★★★ |

| General   |   |   |
|---|---|---|
| 32 bit floating point per component processing  | ★★★★★   | ★★★★★                                       |
| Extreme quality dithering algorithm   | ★★★★★   | ★★★★★                                       |
| Smooth motion algorithm for displays with no (or poor) 24 FPS support                     | ★★★★★   | ★★★★★                                       |
| Automatic optimization of algorithm quality levels  | ✓   | ✓   |
| 3D LUT calibration using CalMAN, LightSpace, DisplayCAL, and more <sup>3</sup>            | ✓   | ✓   |
| Large 3D LUT w/ 274,625 (65 * 65 * 65) or 16,777,216 points (256 * 256 * 256)             | ✓   | ✓   |
| Software updates easily installable via Envy menu   | ✓   | ✓   |
| Remote technical assistance from authorized dealers ("madAssist")                         | ✓   | ✓   |
| Highly intuitive user interface, true plug-and-play installation in 1 minute <sup>5</sup> | ✓   | ✓   |
| IP control  | ✓   | ✓   |
| Remote control included   | Dual band IR + RF   | Dual band IR + RF                           |
| Frame packed 3D support   | Pass-thru & TBD <sup>7</sup>  | Pass-thru & TBD <sup>7</sup>                |
| Supported max input formats   | 60 Hz: 4096x2160 in 12 bit 4:2:0, 4:2:2 or 8 bit 4:4:4, RGB<br>30 Hz: 4096x2160 in 12 bit 4:2:0, 4:2:2 or 12 bit 4:4:4, RGB |   |
| Supported max output resolutions <sup>1</sup>   | All up to 4K60  | All up to 8K60                              |
| Hardware and Miscellaneous  |   |   |
| Warranty on parts and labor   | 24 Months   | 36 Months                                   |
| General CPU processing power (cores / threads)  | 4 / 4   | 6 / 12                                      |
| General graphics processing power (GFLOPS)  | 4,300   | 10,100                                      |
| Specialized AI graphics processing power (Tensor core GFLOPS)                             | -   | 81,100                                      |
| Quality when running multiple demanding algorithms simultaneously <sup>6</sup>            | ★★★★★   | ★★★★★                                       |
| HDMI 2.0b 18.0 Gbps input ports   | 1   | 1   |
| HDMI 2.0b 18.0 Gbps output ports  | 1   | 2   |
| HDMI 2.0b 18.0 Gbps no-latency pass-thru  | 1   | 1   |
| DisplayPort 1.4 DSC 36.4 Gbps output ports <sup>1,4</sup>                                 | 2   | 2   |
| Optional (paid) upgrade to HDMI 2.1 output <sup>2</sup>                                   | ✓   | ✓   |
| Optional (paid) upgrades to keep Envy up-to-date in the future <sup>2</sup>               | -   | ✓   |
| Power consumption   | 60W - 205W  | 60W - 350W                                  |
| AC power input  | 110V - 230V   | 115V - 240V                                 |
| AC power frequency  | 47Hz - 63Hz   | 47Hz - 63Hz                                 |
| Dimensions and Weight   |   |   |
| Unit dimensions with feet (W x D x H)   | 17.32 x 17.13 x 6.89"<br>440 x 435 x 175 mm   | 17.32 x 17.13 x 6.89"<br>440 x 435 x 175 mm |
| Shipping dimensions (W x D x H)   | 22 x 22 x 12"<br>560 x 560 x 305 mm   | 22 x 22 x 12"<br>560 x 560 x 305 mm         |
| Shipping weight   | 26 lbs (11.8 Kg)  | 28 lbs (12.7 Kg)                            |
| Rack mount kit available <sup>8</sup>   | ✓   | ✓   |
| Rack units <sup>9</sup>   | 4 RU  | 4 RU  |

<sup>1</sup> Using DisplayPort 1.4 DSC output port, or future HDMI 2.1 output port.

<sup>2</sup> Date of availability TBD, not likely before 2021.

<sup>3</sup> Supports CalMAN, LightSpace, DisplayCAL & ArgyllCMS, ChromaPure and HCFR.

<sup>4</sup> Subject to change without notice.

<sup>5</sup> Insert HDMI cables. Done. No configuration needed.

<sup>6</sup> For example, running upscaling & motion interpolation together.

<sup>7</sup> Frame packed 3D is supported through the pass-thru HDMI port. It is TBD if Envy 3D processing will be available.

<sup>8</sup> Custom rack shelf with form-fit face plate available through Middle Atlantic in lieu of using rack mount kit. 5 RU in this configuration.

<sup>9</sup> Please allow for 1 RU clearance above unit for cooling.

<sup>10</sup> Preliminary, subject to change.