madVR Envy MK2 Series - Model Comparison[4]

Features by model[4]	Pro MK2	Extreme MK2
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 5K24 and 8K24[1]	-	★★★★★
Upscaling to 5K50/60, and any custom resolution up to 8K60[1]	-	★★★★★
Sharp & ring-free high quality downscaling	★★★★★	★★★★★
Aspect Ratios & Front Projection		
Automatic, truly instant aspect ratio and black bar detection, including IMAX format	✓	✓
Subtitle Management (dynamically fit subtitles while maximizing image size)	✓	✓
Masking for projection screens	✓	✓
Image shift for CIW projection	✓	✓
Advanced convergence correction	✓	✓
Automatic activation of JVC & Sony lens memories (via IP control)	✓	✓
Non-linear Stretch (NLS+) fits any aspect ratio content to any aspect ratio screen	✓	✓
Advanced geometry correction (fix a-lens barrel distortion, fit curved screens, off-axis PJ installs)	-	✓
AI-based anamorphic stretch upscaling for 1080p projectors	★★★★★	★★★★★
AI-based anamorphic stretch upscaling for 4K projectors	★★★★☆	★★★★★
AI-based anamorphic stretch upscaling for 5K/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	★★★★★	★★★★★
Product Roadmap - Future Algorithms[2,4]		
MotionAI™ (per-pixel, AI based motion interpolation, currently in private beta)	-	★★★★★
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 (DTM gen3)	-	★★★★★
Additional undisclosed AI-based algorithms and features	-	★★★★★

Features by model[4]	Pro MK2	Extreme MK2
General		
96bit per pixel floating point using 4:4:4 for all algorithms	★★★★★	★★★★★
Extreme quality dithering algorithm	★★★★★	★★★★★
Smooth motion algorithm for displays with no (or poor) 24 FPS support	★★★★★	★★★★★
Automatic optimization of algorithm quality levels	✓	✓
Advanced 3D LUT calibration[3]	✓	✓
Massive 3D and 1D LUTs (3D LUT 65^3 or 256^3, 1D front/back LUTs 4,096 points, 12 bit precision)	✓	✓
Software updates easily installable via Envy menu	✓	✓
Remote technical assistance from authorized dealers ("madAssist")	✓	✓
Highly intuitive user interface, true plug-and-play installation in minutes	✓	✓
IP control (Crestron, Control4, Savant, RTI, others)	✓	✓
Frame packed 1080p24 3D support	✓	✓
Remote control included[5]	Dual band IR + RF	Dual band IR + RF
Supported max input formats	60 Hz: 4096x2160 in 12 bit 4:2:0, 4:2:2 or 8 bit 4:4:4, RGB 30 Hz: 4096x2160 in 12 bit 4:2:0, 4:2:2 or 12 bit 4:4:4, RGB	
Supported max output resolutions[1]	All up to 4K60	All up to 4K120 and 8K60
Hardware and Miscellaneous		
Warranty on parts and labor	5 Years	5 Years
General CPU processing power (cores / threads)[7]	6 / 12	6 / 12
General graphics processing power (GFLOPS)[7]	9,500[2]	43,000
Specialized AI graphics processing power (Tensor core GFLOPS)[7]	37,500[2]	172,000 - 344,000
Quality when running multiple demanding algorithms simultaneously[6]	★★★☆☆	★★★★★
HDMI 2.0b HDCP 2.2 18.0 Gbps input ports	1	1
HDMI 2.1 HDCP 2.3 48.0 Gbps output ports	1	1
HDMI 2.0b HDCP 2.2 18.0 Gbps zero-latency pass-thru	1	1
Paid options for future hardware updates	-	✓
Power consumption	60W - 205W	60W - 400W
AC power input	110V - 240V	110V - 240V
AC power frequency	50Hz - 60Hz	50Hz - 60Hz
Dimensions and Weight		
Unit dimensions with feet (W x D x H)	17.31 x 17.44 x 7.56" 440 x 443 x 192 mm	17.31 x 17.44 x 7.56" 440 x 443 x 192 mm
Shipping dimensions (W x D x H)	27 x 24 x 14" 68.6 x 61.0 x 35.6 cm	27 x 24 x 14" 68.6 x 61.0 x 35.6 cm
Shipping weight	46 lbs (20.9.6 Kg)[2]	48 lbs (21.8 Kg)
Rack mount ears and screws included	✓	✓
Rack units[9]	4U	4U

[1] Using HDMI 2.1 output.

[2] TBD or estimated.

[3] Supports Calman and ColourSpace with Envy calibration engine V2.

[4] Subject to change without notice.

[6] Ships with MK1 remote. New premium, backlit MK2 remote provided at no charge when available.

[6] For example, running upscaling & MotionAI together.

[7] Or better.

[8] Custom rack shelf with form-fit face plate available through Middle Atlantic in lieu of using rack mount kit. 5 RU in this configuration, 4 RU otherwise.

[9] Ideally racked above a component that does not generate a lot of heat.