MAESTRO | ENGINE

Powering real-time graphics production

Get the real-time rendering power you need to produce stunning broadcast graphics, augmented reality, and video wall content in the highest quality possible. The Maestro™ | Engine real-time graphics rendering platform provides the performance, scalability, and format support to meet today's and tomorrow's broadcast requirements. Available in three configurations, this future-proof platform supports SD, HD, 3G, UHD, and HDR workflows.

SCALE THE I/O FOR YOUR NEEDS

The Maestro | Engine base system offers up to eight video insertions and up to four outputs, including fill and key, to handle most standard CG needs. It's also available in a dual-channel configuration to support two separate channels of CG with up to four video insertions. For demanding UHD, HDR, AR, and video wall productions, Maestro | Engine 4K can be configured with the HDR, 3G, and fill and key inputs and outputs you need.

PRODUCE STUNNING HIGH-END CONTENT

When your reputation is on the line, quality matters. Maestro | Engine works in concert with Maestro | RenderEngine software, providing advanced graphics rendering in the highest quality possible—whether displayed onscreen or in the studio. Plus, it can drive content to multiple canvases, scale content up or down, and crop it, making it easy to preview large-scale video walls with a single HD feed, reducing system complexity and cost.

GET FLAWLESS, VERSATILE PERFORMANCE

With ultra-low latency video transfer, Maestro | Engine maintains a constant two frames of delay from input to output for seamless object mapping and audio handling. Not only does it provide real-time graphics and video compositing and rendering, scalable inputs, and fill and key outputs, it also offers video server capabilities and an open API to create your own control applications.

WORK WITH ANY TYPE OF MEDIA

To ensure a high return on investment, you need a system that can grow with you as your workflow and technologies evolve. Maestro | Engine is built for today's and tomorrow's broadcast needs, supporting SD, HD, UHD, and HDR workflows.

INTEGRATE VIDEO PLAYBACK

In addition to live video sources, Maestro | Engine can play back video stored on its local drive, Avid NEXIS®, or other network storage device, offering two 1GbE connections—with a 10GbE option for more demanding video transfers. Create compelling visuals using video clips as background elements or as textures mapped onto scene objects. And get support for a wide range of codecs—including Avid DNxHD/DNxHR, XDCAM 50, AVC-I, XAVC-I, and QT RLE.

MANAGE SYSTEMS FROM ANYWHERE

No need to install additional client software or have a systems administrator tethered to your machine room to manage and configure settings. The engine uses a web-based interface for all systems management, enabling you to set up and make changes to user access rights, video formats, genlock sources, input and output mapping, and other settings from any computer or device on your network—from anywhere inside or outside your facility.

KEY FEATURES

- Produce stunning on-air and data-driven graphics, interactive 3D objects, video wall content, and more—all in real time
- Support the most complex news, sports, and other broadcast productions with up to 16 video insertions
- Scale the engine for your needs, including the number of video insertions and operational workflow, enabling you to use it either upstream or downstream
- Future-proof your workflow with support for SD, HD, UHD, 3G, SDI, NDI, and HDR workflows
- Composite and present real-time graphics and video in the highest quality possible with the included RenderEngine software
- Integrate video playback, with support for a wide range of codecs, using locally stored clips or direct from Avid NEXIS
- Get reliable 24/7 operation with redundant components, power supplies, and software and hardware watchdogs

PROTECT YOUR PRODUCTION

Maestro | Engine is solidly built to withstand the demands of 24/7 operation. It features dual power supplies, dual network interfaces, and software and hardware watchdogs, so should a system go offline, your production will not be interrupted. And because all Maestro graphics suite applications can control multiple Maestro | Engines, you can use additional engines as live backups to your on-air systems.

FOR MORE INFORMATION, VISIT

avid.com/maestro-graphics

Maestro | Engine—Powering real-time graphics production

HARDWARE SPECIFICATIONS

	MAESTRO | ENGINE 4K	MAESTRO | ENGINE (SINGLE/DUAL CHANNEL)
Motherboard	AIC Phoenix	AIC Grus
Graphics card	2 x NVIDIA RTX 2080	NVIDIA RTX 4000 (single channel) 2 x NVIDIA RTX 4000 (dual channel)
CPU	2 x Intel E5-2640 v4	Intel E5-2620 v4
Operating system	CentOS 7.4 with customized kernel	CentOS 7.4 with customized kernel
Memory	64 GB DDR4	32 GB DDR4
Internal storage	2 x 240 GB system disk (RAID 1) 4 x 2 TB (RAID 10) hard disks for clip storage	2 x 128 GB system disk (RAID 1) 4 x 2 TB (RAID 10) hard disks for clip storage
Ethernet	2 x 1000 BASE-T (RJ45) 2 x 10GbE (SFP+; optical modules optional)	2 x 1000 BASE-T (RJ45)
Ports	1 Serial, 2 USB (front), 2 USB (rear)	1 Serial, 2 USB (front), 2 USB (rear)
Control interfaces	1 x Serial, 2 x USB, 2 x Ethernet (1Gbit), VGA, IPMI	1 x Serial, 4 x USB, 2 x Ethernet (1Gbit), VGA, IPMI
Supported video standards (SDR and HDR)	3G: ST 425-1:2014 (Level A), ST 425-5:2019 (Level A) Quad-Link 3G HD: ST 260:1999, ST 295:1997, ST 274:2008 IP: NewTek NDI	3G: ST 425-1:2014 (Level A) HD: ST 260:1999, ST 295:1997, ST 274:2008 SD: ST 259:2008, ITU-R BT.601 IP: NewTek NDI
Video input (mixer)	Up to 4 3G	1 per channel
Video input (insertion)	Up to 16 HD-SDI inputs, Up to 8 3G inputs	Up to 8 3G/HD/SD SDI inputs in the single channel configuration Up to 4 3G/HD/SD SDI inputs per channel in the dual channel configuration
Video output	Up to 16 HD-SDI outputs Up to 8 3G fill and 8 3G key outputs Up to 4 3G HDR fill and 4 3G HDR key outputs Video key compositing configurable; internal linear keyer	Up to 2 3G or 4 HD/SD SDI/outputs per channel (video key compositing configurable); internal linear keyer and chroma keyer (3G/HD only)
Video references	Bi / Tri level Sync	Bi / Tri level Sync
Audio output	Embedded audio support: 24-bit/48 kHz in HD/3G	Embedded audio support: 20-bit/48 kHz in SD and 24-bit/48 kHz in HD/3G
Clip options	Video to texture mapping of AVI, QuickTime, DV, DVC25, and MPEG files (optional)	Video to texture mapping of AVI, QuickTime, DV, DVC25, and MPEG files (optional)
Video bypass	Up to 4 Mechanical bypasses (optional), Watchdog on each DSK	Up to 2 Mechanical bypasses (optional), Watchdog on each DSK
SIze (H x W x D)	5.1 x 17.4 x 29.5 in (130 x 443 x 750 mm)	5.1 x 17.4 x 22.8 in (130 x 443 x 580 mm)
Weight	59.5 lbs (27 kg) approximate	37.5 lbs (17 kg) approximate
Power supply	Redundant power supply: 100–240 V, 47–63 Hz, 2 x 1500W (peak), 2 x 930W (continuous)	Redundant power supply: 100–240 V, 47–63 Hz 2 x 800W (peak), 2 x 500W (continuous)

** Specifications are subject to change without notice.*

SOFTWARE COMPATIBILITY

- Maestro | AR
- Maestro | Designer
- Maestro | Interactive
- Maestro | Live
- Maestro | News
- Maestro | RenderEngine
- Maestro | TX

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