



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 two configurations—Maestro | Engine and Maestro | Engine 4K—this future-proof platform supports SD, HD, 3G, UHD, and (coming soon) HDR workflows, offers simultaneous Maestro | RenderEngine and Unreal Engine rendering, and makes it easy to transition from SDI to video over IP workflows whenever you're ready.

SCALE THE I/O FOR YOUR NEEDS

Maestro | Engine is available in two hardware configurations that can be scaled for any production need. 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. To tackle more demanding UHD, video wall, and virtual studio productions, Maestro | Engine 4K offers up to 16 video insertions and up to eight outputs—or up to four fill and four key outputs for UHD production.

PRODUCE STUNNING SD, HD, AND UHD 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

Featuring a proprietary new DVG (digital video graphics) card that delivers 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.

HAVE FLEXIBILITY FOR THE FUTURE

To ensure a high return on investment, you need a system that can grow with you as your workflow and technologies evolve. The Maestro | Engine platform is built for today's and tomorrow's broadcast needs, supporting SD, HD, UHD, and (coming soon) HDR workflows. It offers field-changeable interface boards that enable you to transition from SDI to IP whenever you're ready. Plus, support for new technologies and features will be made available through software updates.

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. Maestro | Engine uses a web-based interface for all systems management,

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 8 video insertions in Maestro | Engine and up to 16 insertions in Maestro | Engine 4K
- 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, 3G, UHD, SDI, video over IP, and (coming soon) HDR workflows
- Composite and present real-time graphics and video in the highest quality possible with the included Maestro | 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

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.

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

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HARDWARE SPECIFICATIONS



	Maestro Engine (single/dual channel)	Maestro Engine 4K
Motherboard	AIC Grus	AIC Phoenix
Graphics card	NVIDIA GTX 1060 (single channel) 2 x NVIDIA GTX 1060 (dual channel)	2 x NVIDIA GTX 1080
CPU	Intel E5-2620 v4	2 x Intel E5-2620 v4
Operating system	CentOS 7.4 with customized kernel	CentOS 7.4 with customized kernel
Memory	32 GB DDR4	64 GB DDR4
Internal storage	2 x 128 GB system disk (RAID 1) Hard disks for clips storage 4 x 2 TB (RAID 10)	2 x 240 GB system disk (RAID 1) Hard disks for clips storage 4 x 2 TB (RAID 10)
Ethernet	2 x 1000 BASE-T (RJ-45)	2 x 1000 BASE-T (RJ-45) 2 x 10GbE (SFP+)
Ports	1 Serial, 2 USB (front), 2 USB (rear)	1 Serial, 2 USB (front), 2 USB (rear)
Control interfaces	1 x Serial, 4 x USB, 2 x Ethernet (1Gbit), VGA, IPMI	1 x Serial, 2 x USB, 2 x Ethernet (1Gbit), VGA, IPMI
Supported video standards	3G: SMPTE 424M HD: SMPTE 260, SMPTE 295, SMPTE 274, SMPTE 296 SD: SMPTE 259 ITU-R BT.601 IP: ST2022-6 , ST2110	3G: SMPTE 424M (including UHD using quad link SDI) HD: SMPTE 260, SMPTE 295, SMPTE 274, SMPTE 296 SD: SMPTE 259 ITU-R BT.601 IP: ST2022-6 , ST2110
Video in (mixer)	1 per channel	Up to 4
Video in (insertion)	Up to 8 3G/HD/SD SDI/IP inputs per channel (IP 3G/HD only)	Up to 14 3G, up to 16 HD/SD SDI/IP inputs (IP 3G/HD only)
Video output	Up to 2 3G or 4 HD/SD SDI/IP outputs per channel (video key compositing configurable); Internal linear keyer and chroma keyer (IP 3G/HD only)	Up to 4 3G, 8 HD/SD SDI/IP outputs per channel (video key compositing configurable); Internal linear keyer and chroma keyer (IP 3G/HD only)
Video references	Bi / Tri level Sync	Bi / Tri level Sync
Audio support	Embedded audio support 20-bit/48 kHz in SD and 24-bit/48 kHz in HD	Embedded audio support 20-bit/48 kHz in SD and 24-bit/48 kHz in HD
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 2 Mechanical bypasses (optional), Watchdog on each DSK	Up to 2 Mechanical bypasses (optional), Watchdog on each DSK
Size (H x W x D)	7.1 x 17.4 x 22.8 in (180 x 443 x 580 mm)	7.1 x 17.4 x 29.5 in (180 x 443 x 750 mm)
Weight	37.5 lbs (17 kg) approximate	59.5 lbs (27 kg) approximate
Power supply	Redundant Power Supply: 100–240 V Frequency: 47–63 Hz 2 x 800W (peak), 2 x 500W (continuous)	Redundant Power Supply: 100–240 V Frequency: 47–63 Hz 2 x 1500W (peak), 2 x 930W (continuous)

SOFTWARE COMPATIBILITY

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

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