



Painting a brighter future

AMD FirePro™ professional graphics is fully optimized, thoroughly tested and officially certified for use with MARI, NUKE and MODO from The Foundry giving you the power and reliability you need to paint a brighter future.

Certified Performance

The latest generation AMD FirePro cards feature the new Graphics Core Next (GCN) GPU architecture from AMD which delivers new levels of graphics and compute performance from a single card, making AMD FirePro your ideal choice to meet the needs of modern VFX production, enabling artists to work with textures up to 32K in resolution, on models comprising many millions of polygons.

Shaping the Future of Graphics Together

A demanding task requires a powerful tool – and in the case of texture painting, that tool is MARI. Originally developed for work on Avatar, the 3D paint package is designed to meet the needs of modern VFX production, enabling artists to work with textures up to 32K in resolution, on models comprising many millions of polygons.

To do this, MARI makes extensive use of the GPU, using shaders to provide a real-time 3D preview of the model complete with simulated displacement, ambient occlusion and specular highlights. So when The Foundry set out to optimise the application for AMD's graphics hardware, the two companies were in intense collaboration.



More Performance with AMD GCN GPU Architecture and Open Standards

A key advantage of The Foundry's software is its extensive use of shaders: programs that run on the GPU via its built-in rendering pipeline.

In MARI, The Foundry's tessellation shader simulates displacement, reducing the geometry count of a scene on the fly. The software also makes use of pixel shaders to apply ambient occlusion and advanced lighting effects.

MARI's use of shader code means that the graphics card is critical to a responsive user experience. With a fast GPU, a user can change objects and lighting more quickly: a performance boost that becomes more noticeable as a scene gets bigger.

AMD's support for open standards over proprietary technologies meant that The Foundry had to be rigorous with its code. "We use pretty much every trick in the book to get as much speed out of MARI as possible, so we use OpenGL in some inventive ways," says MARI Product Manager Jack Greasley. "The AMD drivers conform strictly to the OpenGL standard and we worked hard to ensure our shader code did too."

THE FOUNDRY.

Industry:

Media & Entertainment

Application:

MARI, NUKE and MODO from The Foundry

Challenges:

- ▲ Increasingly complex scenes and large textures
- ▲ Competitive pressure
- ▲ Combine multiple applications to create ideal workflow

Solution:

- ▲ AMD FirePro™ professional graphics is fully optimized, thoroughly tested and officially certified for MARI, NUKE, and MODO giving you the performance and reliability you need to paint a darker future.

Value Propositions:

- ▲ Optimized and certified for The Foundry applications MARI, NUKE and MODO
- ▲ More Performance with AMD GCN GPU Architecture and Open Standards
- ▲ Designed to Meeting the Needs of Real Productions
- ▲ Accelerate your Workflow with AMD Eyefinity Multi-Display Technology

The AMD FirePro Advantage:

- ▲ Three-year warranty and extended availability – Compared to consumer graphics, AMD FirePro cards have an extended lifecycle
- ▲ Highest level of customer support – Customers have the ability to contact the AMD technical team directly
- ▲ Energy efficiency – AMD FirePro graphics cards are based on a highly efficient GPU design and feature power saving technologies like AMD PowerTune and AMD ZeroCore technologies
- ▲ AMD Eyefinity technology – A single card can power up to 3, 4 and even 6 displays with up to 4K resolution with each output (4096 x 2180 pixels using DisplayPort 1.2)¹



Designed to Meet the Needs of Real Productions

The new AMD Radeon HD 7850 and HD 7950 consumer cards also feature the GCN architecture, and are certified for use with MARI. But while the AMD Radeon cards have only 2GB and 3GB of on-board memory, the professional AMD FirePro W-series cards benefit from a frame buffer twice that size: 4GB in the case of the AMD FirePro W7000 and W8000, 6GB for the W9000.

MARI has a lot of very heavy shader code that only mid-to-high-end cards can run correctly, but sometimes you also need a lot of memory to load all of the assets at the same time. Otherwise, a lot of time is wasted loading data to the GPU and unloading it back to the CPU. In general, the user experience will be more fluid on a high-end card, particularly with heavy projection work or using dense shaders.

“We’ve been really happy with the relationship with AMD. They’ve been incredibly proactive, and very keen to work with us to help us support our customers better. From now on, AMD is a first-class citizen in our suite of supported, tested graphics cards.”

Jack Greasley, MARI Product Manager, The Foundry



Accelerate your Workflow with AMD Eyefinity Multi-Display Technology

It needs to be taken into consideration that GPU resources are shared by other applications too, for example when running MARI alongside NUKE, Houdini, Maya, and Chrome with many tabs open at the same time. When working in a larger software ecosystem, the extra memory and processing cores of a professional card come into play.

This need to multi-task during production is further supported by AMD’s Eyefinity technology, which enables a single graphics card to run more than two displays. The AMD FirePro W9000 supports up to six monitors¹ via DisplayPort 1.2 with up to 4K resolution for each output: ideal for artists who need to work in complex multi-application pipelines while continuing to view the fine details that MARI is designed to create.

Recommended for The Foundry

	AMD FirePro W7100	AMD FirePro W8100	AMD FirePro W9100
GPU Memory	8GB GDDR5	8GB GDDR5	16GB GDDR5
AMD GCN Stream Processors	1792	2560	2816
Compute Performance (Single Precision)	3.3 TFLOPS	4.2 TFLOPS	5.24 TFLOPS
GeometryBoost	Yes	Yes	Yes
Memory Bandwidth	160 GB/s	320 GB/s	320 GB/s
Physical Display Outputs	Four DisplayPort 1.2a	Four DisplayPort 1.2	Six Mini-DisplayPort 1.2
Total Display Outputs with AMD Eyefinity and DisplayPort 1.2a ¹	6	6	6
Genlock/Framelock	Yes/ Yes	Yes/ Yes	Yes/ Yes
Ready for 4K (UHD)	Yes	Yes	Yes
System Interface	PCIe 3.0, Single-slot	PCIe 3.0, Dual-slot	PCIe 3.0, Dual-slot
OpenGL	4.4	4.4	4.4

For more information, visit [in.amdfireprohub.com/solutions/foundry/](http://amdfireprohub.com/solutions/foundry/)



¹ AMD Eyefinity technology supports up to six DisplayPort monitors on an enabled graphics card. Supported display quantity, type and resolution vary by model and board design. Mixed monitors of different resolutions are supported by select AMD FirePro™ professional graphics cards. Confirm specifications with manufacturer before purchase. To enable more than two displays, or multiple displays from a single output, additional hardware such as DisplayPort™-ready monitors or DisplayPort 1.2 MST-enabled hubs may be required. A maximum of two active adapters is recommended for consumer systems. See www.amd.com/eyefinityfaq for full details.

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