



AMD FirePro™ A300 Series

ACCELERATED PROCESSORS

Redefining entry-workstation value
and performance.

Key Product Notes:

- Integrated AMD FirePro™ workstation-class graphics
- Balanced blend of GPU and CPU performance designed to accelerate a range of professional design workloads
- ISV-certified for maximum stability and reliability with many common professional design applications
- Workstation-class user experience
- Industry-leading price-performance and value for design professionals⁰
- Up to 736 GFLOPs of integrated compute performance for application acceleration¹
- Support for Discrete Compute Offload (DCO) for on-demand GPGPU compute performance scaling

Design professionals require tools that enable productivity and flexibility in their workflow.

AMD FirePro™ A300 series Accelerated Processing Units (or APUs) give workstation integrators and end users an exciting new computing platform on which to build powerful, certified workstation configurations that deliver unbeaten value for many entry and mainstream CAD and content creation workflows.

As the primary processing technology used to power a range of revolutionary new professional workstations, AMD FirePro™ A300 Series APUs provide a balanced blend of performance and application compatibility to help keep design professionals productive in their work.

AMD FirePro™ APUs combine legendary AMD FirePro™ graphics (GPU) technology with AMD's quad-core "Piledriver" (CPU) cores for a balanced and stable workstation computing experience at incredibly low price points.

In fact, AMD FirePro™ A300 series APUs are the first integrated processors truly capable of delivering the workstation-class visual computing performance required for today's advanced professional design workflows.

AMD FirePro™ A300 Series APUs are a powerful expression of modern high-performance computing infused with AMD's expertise in workstation graphics technology. By combining a world-class professional GPU and powerful CPU on the same integrated chip, this new class of processors is enabling incredibly cost-effective solutions that can outperform⁰ more expensive "discrete" solutions.

Supporting advanced graphics technologies such as AMD Eyefinity and DisplayPort™ 1.2, A300 Series APUs can access up to 2GB of system memory and offer unrivaled flexibility for advanced multi-monitor 3D workflows at up to 4K pixel resolutions per monitor.²

Other AMD technologies such as Turbo Core 3.0 and Discrete Compute Offload (DCO) help ensure that workstations powered by AMD FirePro™ A300 Accelerated Processors enable the performance scaling required to solve tough design challenges.

With support for integrated system-level features such as USB 3.0, 6Gb SATA, and up to 32Gb of super-fast DDR3 1866Mhz RAM, this new workstation computing platform maximizes compatibility and with modern PC components and peripherals. This helps ensure that workstations built using AMD FirePro™ A300 Series APUs deliver an enduring, affordable yet powerful workstation experience for a wide range of professional design workflow requirements.

PRODUCT NAME	AMD FIREPRO™ A320 APU	AMD FIREPRO™ A300 APU
Ordering Part Number	AWA320WOA44HJ	AWA300OKA44HJ
Product Class	Workstation-Class APU for 2D/Entry 3D	
Operating System Support	Windows® 7 (64- and 32-bit), Windows Vista® (64- and 32-bit), Windows® XP (32-bit), SUSE Enterprise Desktop (SLED) Release 11.4 and 11.5 (64- and 32-bit), Ubuntu Release 11.04 and 11.10 (64- and 32-bit)	
CPU Clock Turbo Boost Speed ³	Up to 4.2GHz	Up to 4.0GHz
CPU Clock Base Speed	3.8GHz	3.4GHz
CPU Cores on Die	4	
Frequency Unlocked	Yes ⁴	No
Number of Stream Processors	384	
GPU Core Clock Speed	800MHz	760MHz
Peak Performance in GFLOPs per APU ¹ (theoretical max) ¹	Single Precision: 736	Single Precision: 693
Fixed Function Acceleration	Unified Video Decoder (UVD) 3.2, Video Compression Engine (VCE) 1.0, IOMMU v2	
Thermal Design Power (TDP)	100W	65W
Total L2 Cache	4MB	
Memory Type Supported	Dual Channel DDR3 (128-bit)	
Memory Speed Supported	Up to 1866MHz	
Maximum Memory Capacity	Up to 32GB	
Display Outputs Supported	Supports 3 independent physical display outputs, with up to 4 independent display channels ² Support for DisplayPort 1.2, Single- and Dual-Link DVI, Single-Link HDMI, VGA, and Single/Dual-Channel LVDS ²	
Single Monitor Resolution Support ²	Up to 4096x2160	
Stereographic Display Capabilities Supported ²	AMD HD3D PRO 10-bit, Stereoscopic 3D ⁵	
PCIe Configurations Supported	All lanes support PCIe gen 2: 1 X 16 PCIe gen 2 (can be configured as 2 X 8, 1 X 8 + 2 X 4, 3 X 4) for discrete graphics, 1 X 4 PCIe gen 2 (can be configured as 2 X 2, 4 X 1) for GPP	
FCH Capabilities Supported	Up to 4 USB 3.0 + 10 USB 2.0, RAID 0,1,5,10	
APIs Supported	OpenGL 4.2, DirectX® 11, OpenCL™ 1.1, DirectCompute	
Instruction Set Support	AVX, AES, SSE4.1 and 4.2, XOP, FMA3/4	
ISV Certifications Supported	All major CAD and M&E applications (visit http://www.amd.com/fireprocertifiedapps for complete listing)	

For a detailed list of specifications, technology partners, features & benefits and other information about AMD FirePro™ A300 Series APUs, please visit www.amd.com/fireproAPU

0 Based on internal AMD testing conducted comparing AMD FirePro™ A320 APU vs. Intel Xeon w3680 + nvidia Quadro Q600 graphics card. Both systems configured with 16GB RAM, Windows® 7 64. Test conducted using internal build of specAPC PTC Creo 2.0. Claims based on comparative "Graphics composite" and "Worldcar graphics" test scores.

1 AMD FirePro™ A320 APU Peak GFLOPs (single-precision) = CPU GFLOPs + GPU GFLOPs = CPU Core Freq. (3.8GHz) X Core Count (4) X 8 FLOPs + GPU Core Freq. (800MHz) X DirectX® 11 capable Shader Count (384) X 2 FLOPs. 1 AMD FirePro™ A300 APU Peak GFLOPs (single-precision) = CPU GFLOPs + GPU GFLOPs = CPU Core Freq. (3.4GHz) X Core Count (4) X 8 FLOPs + GPU Core Freq. (760MHz) X DirectX®

2 AMD Eyefinity technology can support up to six DisplayPort displays using a single enabled AMD graphics card. The number and resolution of supported displays varies by card model and board design; confirm specifications with the manufacturer before purchase. Additional hardware may be required. Utilizing DisplayPort 1.2 and Multi-Stream technology-enabled displays, connectors and/or hubs, a single graphics card may support up to two more displays than it has display outputs; limit six displays. Microsoft® Windows® 7, Windows Vista®, or Linux® is required to support more than 2 displays; Windows XP is no longer supported. AMD Eyefinity technology works with applications that support non-standard aspect ratios, which is required for panning across multiple displays. SLS ("Single Large Surface") functionality requires an identical display resolution on all displays. See www.amd.com/firepro or www.amd.com/eyefinity for details.

3 AMD Turbo Core technology boosts up to half of the CPU cores on demand when thermal headroom is available. Speeds up to Up to 4.2GHz for AMD FirePro™ A320 APU and up to 4.0GHz for AMD FirePro™ A300 APU are supported

4 AMD's product warranty does not cover damages caused by overclocking (even when overclocking is enabled via AMD hardware or software).

5 AMD HD3D is a technology designed to enable stereoscopic 3D support in software applications such as Computer Aided Design and Digital Content Creation. Additional hardware (e.g. 3D enabled panels, 3D-enabled glasses/emitter, Blu-ray 3D drive) and/or software (e.g. Blu-ray 3D discs, 3D middleware, software applications) are required for the enablement of stereoscopic 3D. Not all features may be supported on all components or systems – check with your component or system manufacturer for specific model capabilities and supported technologies.

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