



High Performance AF400MI MiniITX Embedded Single Board Computer



**Excellent graphics and compute
in a standard form factor, low
cost, embedded SBC**

Processor	AMD Embedded R-Series SOC "Merlin Falcon"
Memory	Dual Channel DDR3 2133 MHz, SO-DIMM
PCIe slot	PCI Express® 3.0 (x8)
Mini-PCIe	1
Display Interface	VGA / DVI / HDMI (LVDS)
Ethernet	10/100/1000 Mbps RJ-45 x 2
SATA	600 MB/s (SATA 3.0)
USB3.0	2
USB2.0	Rear (2) Internal Connector (2)
Audio	3 (Mic-in, Line-out, Line-in)
Serial	2 (RS-232, supports 5V / 12V)
TPM	1.2 / 2.0 (optional)
Power	12V DC-IN
Temperature	Operating 0 ~ 60°C (32 ~ 140°F)
Dimensions	170mm x 170mm (6.69" x 6.69")
Planned Availability	2025

The AMD Embedded R-Series SOC "Merlin Falcon" delivers excellent graphics and HD multimedia processing performance, with support for DirectX 12, HW accelerated 4K video decode and encode. The SOC architecture integrates up to four AMD high-performance "Excavator" x86 CPU cores.

The Radeon™ R7 graphics, utilizing third-generation Graphics Core Next (GCN) architecture, integrated into the R-Series SOC delivers excellent integrated graphics, compute, and multiple display support for applications such as casino and arcade gaming machines, medical imaging applications, and digital signage.

Processor: Up to four x86 Excavator cores with 2 MB of shared L2 cache. The efficiency of the Excavator core offers increases in instructions per clock with a lower power solution.

Compute Performance: For parallel processing applications, HSA technology balances workloads between the CPU and GPU allowing for optimal processing performance, reducing latencies and maximizing access to 2MB of shared L2 cache memory using Heterogeneous Uniform Memory Access (hUMA) technology.

3D Compatibility: The Graphics Core Next advanced 3D graphics engine supports Microsoft® DirectX® 12 and Shader Model 5.0 for stunning graphics rendering for digital gaming applications.

HD Video: Delivering crisp high resolution video, AMD's sixth generation unified video decoder (UVD) supports decode of 4K H.264/H.265 and with support for VC-1, and with support for the Video Coding Engine (VCE) 3.1 to hardware accelerate the encoding of 4K H.264.

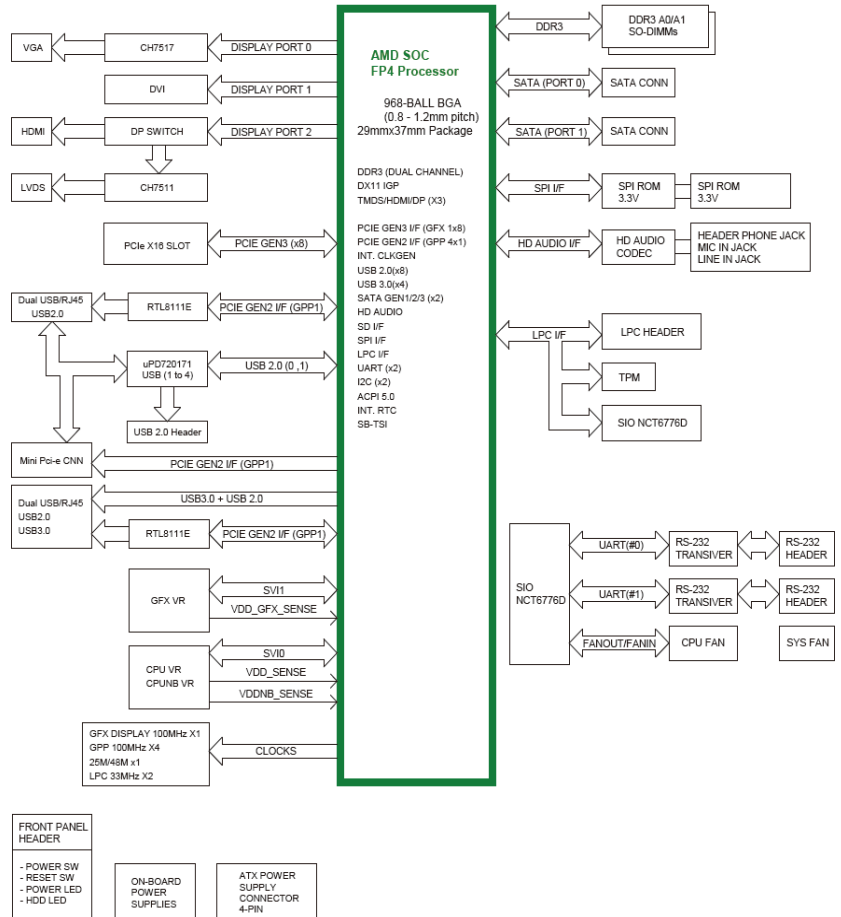


Display Support: Support for up to three independent 4K displays can be delivered through the on board VGA, HDMI (1.4/2.0) and LVDS interfaces. Delivering flexible options for multi-headed gaming, digital signage, and medical imaging applications.

Power Efficient Performance: The integrated SOC features a configurable thermal design power capability that enables a system designer to configure the power consumption of the processor to a range between 12 and 35 Watts, to meet their unique requirements. Standard 0-90°C operating temperature for the processor enables the AF400MI to operate reliably in 60°C environments.

Standard Form Factor: The standard MiniITX form factor enables the AF400MI to utilize a large variety standard embedded chassis and thermal solutions or be easily integrated with custom chassis developed around this common embedded SBC form factor.

Long Life: With a planned product life cycle of 10 years for the AMD R-Series SOC, the AF400MI delivers a stable lifecycle for industrial and embedded systems. Avoiding product obsolescence due to a shortage of critical parts enables this SBC to meet the demands of long life, durable and high stability applications and also helps to reduce OEMs development costs by avoiding frequent product revisions. The AF400MI available through HTA is planned to be available and supported through 2025 or longer under contract.¹



© 2017 Harmony Technical Associates. All rights reserved. The HTA logo is a trademark of Harmony Technical Associates, Inc. AMD and Radeon are trademarks of Advanced Micro Devices, Inc. PCIe and PCI Express are registered trademarks of PCI-SIG. Microsoft and DirectX are registered trademarks of Microsoft Corporation in the U.S. and/or other jurisdictions. 3DMark is a registered trademark of Futuremark Corporation. OpenCL is a trademark of Apple Inc. used by permission by Khronos. All other company and/or product names are for informational purposes only and may be trademarks and/or registered trademarks of their respective owners. This product brief is for informational purposes only and may vary from exact product specification.

¹ While efforts are made to select long life components, availability or exact board design is subject to modification based on availability of components.