

APU targets embedded designs that are low power, small form factor, cost-sensitive

AMD introduced the latest entry to the AMD Embedded G-Series processor family with the AMD Embedded G-T16R Accelerated Processing Unit (APU). The AMD G-T16R is targeted at very low power, small form factor and cost-sensitive embedded designs that require a combination of x86 compatibility and graphics. The optimized design of the AMD Embedded G-T16R sips power, with power consumption of just 2.3 watts[iv] on average or 4.5 watts thermal design power (TDP).

Embedded product designers are taking to the industry's green challenge to design a broad range of next-generation applications for the industrial control, point-of-sale, medical appliance and transportation markets. For example, industrial customers can use the APU to help create greener factories based on more power-efficient factory hardware. Additionally, embedded designers can develop applications like point-of-sale order-entry stations and tablets, medical bed-side terminals and even solar-powered traffic control devices using the AMD G-T16R.

The new AMD Embedded G-Series APU also offers embedded product designers a seamless upgrade path for legacy applications with the following features:

- fits into small form factor boards by implementing a two-chip platform, the APU and its companion controller hub;
- legacy I/O card support based on a full 32-bit PCI interface and an ISA bus solution with DMA support;
- support for a full range of display technologies, with analog VGA and LVDS support for legacy applications and DVI, HDMI and DisplayPort interfaces for the latest display technology.

There are already more than 50 standard form factor motherboards available supporting the AMD Embedded G-Series platform, ranging from the small Qseven computer-on-modules to the versatile and widely available MiniITX form factor. This enhanced compatibility provides original equipment manufacturers (OEMs) with a variety of board options to design into their system solutions. The platform consists of both the APU and its companion controller hub, which have a total combined footprint of just 890 mm² – approximately the size of a square inch.

The AMD Embedded G-T16R APU is designed to help reduce product development and life cycle costs through a common scalable platform design that spans the entire AMD Embedded G-Series. AMD's unique approach enables one design to serve multiple product configurations, simplifying the supply chain, helping reduce operational complexity and enabling better platform economics. The AMD G-T16R APU is also available at extremely accessible price points, allowing designers to easily incorporate it into cost-sensitive embedded applications.

For users of the AMD Geode™ LX processor family, the AMD G-T16R APU offers a

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cost-effective upgrade path, consuming about seven percent less power and three times the performance of the 2.45 watt AMD Geode™ LX processor, while reducing the overall chip footprint by 58 percent. Support for the latest DDR3 memory helps reduce memory costs for legacy applications while enabling higher memory speed and capacity[v].

The AMD Embedded G-T16R APU supports Windows® Embedded Compact 7, Green Hills INTEGRITY and Express Logic ThreadX operating systems, allowing applications that leverage these popular embedded and real-time operating systems to easily migrate to the new platform.

Along with the announcement of the new AMD G-T16R APU, AMD is also extending the planned availability for the entire AMD Embedded G-Series processor family through 2017, resetting the five-year clock for both existing and new designs.

A variety of AMD customers are announcing small form factor motherboards designed around the legacy I/O and low power support of the AMD G-T16R APU:

- Advantech PCM-3356 PC/104 board
- Aewin PM-6161 PC/104 board
- Arbor EmETX-a55E0 ETX Module
- aValue ECM-A50M 3.5" embedded motherboard
- Axiomtek CM100 COM Express module
- MEN Mikro Elektronik SC24 Computer On Module

Supporting Resources

- Visit the AMD Embedded G-Series platform site
- Visit the AMD Embedded Solutions blog for more background on the new G-Series APU
- Learn about the full ISA bus solution for the AMD G-Series APU
- For more AMD-based Embedded products, visit the AMD-Based Embedded Product Catalog

AMD

www.amd.com [1]

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[1] <http://www.amd.com>