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# AMD Unveils AMD Ryzen™ Embedded V2000 Processors with Enhanced Performance and Power Efficiency

*— AMD Ryzen Embedded V2000 Series processors deliver double the cores[1], up to 2x the performance-per-watt[2] and an estimated 15 percent IPC uplift[3] over the previous generation —*

SANTA CLARA, Calif., Nov. 10, 2020 (GLOBE NEWSWIRE) -- AMD (NASDAQ: AMD) today launched a new product in its high-performance Embedded processor family, the AMD Ryzen™ Embedded V2000 Series processor. Built on the innovative 7nm process technology, 'Zen 2' cores and high-performance AMD Radeon™ graphics, the AMD Ryzen Embedded V2000 Series provides a new class of performance with 7nm technology, incredible power efficiency and continues to deliver enterprise-class security features for embedded customers.

The AMD Embedded Ryzen V2000 family is designed for embedded applications such as Thin Client, MiniPC and Edge systems. Equipped with up to eight CPU cores and seven GPU compute units, a single AMD Ryzen Embedded V2000 Series processor provides 2x[4] the multi-threaded performance-per-watt, up to 30 percent[5] better single-thread CPU performance and up to 40 percent[6] better graphics performance over the previous generation. For customers and applications that need high-performance display capabilities, the Ryzen Embedded V2000 series can power up to four independent displays in 4K resolution.

"AMD is continuing to deliver high performance embedded processors for our customers with the new Ryzen Embedded V2000 series," said Rajneesh Gaur, corporate vice president and general manager, Embedded Business, AMD. "Pairing the 'Zen 2' CPU cores with Radeon graphics, we're now providing our customers with a new class of performance and power efficiency with 7nm technology that enables them to implement unique designs that target their applications. We continue the 10-year planned availability as with our other Ryzen Embedded processors and look forward to seeing partners and customers utilizing fast processing speeds, integrated graphics and outstanding power efficiency of the Ryzen Embedded V2000 processor for years to come."

**Keeping Security Top of Mind**

In addition to providing customers with generationally improved performance and efficiency, the AMD Ryzen Embedded V2000 Series processor continues providing advanced security features, helping to defend against unauthorized access to memory or critical software. Similar to the AMD Ryzen Embedded V1000 and R1000 Series, the AMD Ryzen Embedded V2000 will support AMD Memory Guard, a suite of security features including Secure Boot

and Secure Memory Encryption, in which stored memory is encrypted to help prevent an attacker from accessing the data, as well as helps to mitigate cold boot attacks.

### Growing the Ryzen Embedded Family

With support for rich multimedia capabilities, the AMD Ryzen Embedded processor ecosystem includes a strong roster of key customers and partners who rely on the AMD Ryzen Embedded V1000 and R1000 Series processors. Initial launch partners of the AMD Ryzen Embedded V2000 series include Advantech, ASRock Industrial, iBase and Sapphire, with numerous other ecosystem partners pledging their support.

As a current provider of AMD Ryzen Embedded V1000 and R1000 Series-based Mini PCs, ASRock Industrial is adding support for the new V2000 Series to its Mini PC lineup. “By working with AMD, we were able to deliver the first AMD Ryzen Embedded Mini PC system in the world, providing reliable, high-performance solutions. With the launch of the AMD Ryzen Embedded V2000 Series, we are looking forward to implementing the new enhanced performance and security capabilities into our family of 4x4 products,” said James Lee, President of ASRock Industrial.

Advantech is supporting the new V2000 Series in its Mini-ITX and COM Express solutions by Embedded IoT Group. “Our customers rely on us to deliver innovative embedded products with superior performance and reliable hardware design to accelerate the revolution on Edge AIoT applications. The planned longevity with CPU and GPU integration of the V2000 Series from AMD will help us continue to offer leading performance to the embedded market,” said Rex Lee, Director at Advantech.

Additionally, Sapphire is utilizing the AMD Ryzen Embedded V2000 Series to target the Mini PC and other segments. “The AMD Ryzen Embedded products have been an excellent choice for us building platforms with leading performance and features. The V2000 series sets a new standard for embedded designs and allows us to offer the performance to support four independent displays in 4 resolution, while maintaining a secure host connection. We are excited to bring the embedded industry the performance and features from the Ryzen Embedded V2000 series with our new 4x4 and 5x5 motherboards and the new Simply NUC Mini PC,” said Paul Smith, senior director of Business Development for Embedded Products at Sapphire.

### AMD Ryzen Embedded V2000 Series Processor Overview

| Model | TDP Range | CPU Core / Thread Count | CPU Base Freq. GHz | 1T CPU Boost Freq. GHz @80C (Up to)* | Radeon Graphics Compute Unit Count | Graphics Freq. GHz (up to max) | Max # of simultaneous displays | L2 Cache | DRAM ECC |
|---|---|---|---|---|---|---|---|---|---|
| V2748 | 35-54W | 8 / 16 | 2.9 GHz | 4.25 GHz | 7 | 1.6 GHz | 4 | 4 MB | 3200 |
| V2546 | 35-54W | 6 / 12 | 3.0 GHz | 3.95 GHz | 6 | 1.5 GHz | 4 | 3 MB | 3200 |
| V2718 | 10-25W | 8 / 16 | 1.7 GHz | 4.15 GHz | 7 | 1.6 GHz | 4 | 4 MB | 3200 |
| V2516 | 10-25W | 6 / 12 | 2.1 GHz | 3.95 GHz | 6 | 1.5 GHz | 4 | 3 MB | 3200 |

### Supporting Resources

- Learn more about AMD Ryzen™ Embedded Processors
- Follow AMD on Twitter

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[1] Ryzen™ Embedded V2000 SoCs offer up to eight CPU cores. Ryzen™ Embedded V1000 SoCs offer up to four CPU cores. EMB-168

[2] Testing conducted by AMD Performance Labs as of July 2020 on the Ryzen™ Embedded V2718 and June 2018 on the Ryzen Embedded V1605B processor both at 15 watts (STAPM mode enabled) using Cinebench R15 nt. Results may vary. EMB-170

[3] AMD "Zen 2" CPU-based system scored an estimated 15% higher than previous generation AMD "Zen" based system using estimated SPECint®_base2006 results. SPEC® and SPECint® are registered trademarks of the Standard Performance Evaluation Corporation. See www.spec.org. GD-141

[4] Testing conducted by AMD Performance Labs as of July 2020 on the Ryzen™ Embedded V2718 and June 2018 on the Ryzen Embedded V1605B processor both at 15 watts (STAPM mode enabled) using Cinebench R15 nt. Results may vary. EMB-169

[5] Testing conducted by AMD Performance Labs as of July 2020 on the Ryzen™ Embedded V2718 and June 2018 on the Ryzen Embedded V1605B processor both at 15 watts (STAPM mode enabled) using Cinebench R15 1T. Results may vary. EMB-171

[6] Testing conducted by AMD Performance Labs as of July 2020 on the Ryzen™ Embedded V2718 and June 2018 on the Ryzen Embedded V1605B processor both at 15 watts (STAPM mode enabled) using 3DMark11. Results may vary. EMB-172

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