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# Nuvoton Announces MA35D0 Series MPUs for Industrial Edge Devices

## *Dual Core, Excels in Security Capabilities, Memory Capacity, and Rich Peripheral*

**Hsinchu, Taiwan - April 29, 2024 –** Nuvoton is pleased to announce the NuMicro® MA35D0 series, a high-performance microprocessor targeted at industrial edge device applications. The MPU features extensive connectivity and security, which is ideal for smart infrastructure, manufacturing automation, and new energy systems requiring control and networking. Meeting the computing demands of these scenarios, the device is based around dual power-efficient high-performance 64/32-bit Arm® Cortex®-A35 cores (Armv8-A architecture), running at up to 650 MHz, with 32KB of L1 instruction and data cache for each core, plus a 512KB shared L2 cache. The MA35D0 also features high-performance hardware floating-point units (FPU) that enhance its digital signal processing (DSP) capabilities.

To help achieve the cost, performance, size, and energy consumption requirements of its target applications, the MA35D0’s LQFP package, with 128MB or 256MB of stacked DDR SDRAM, significantly reduces PCB layer count, device size, BOM cost, and electromagnetic interference (EMI). The chip has an extensive operating temperature (Tj) range from -40°C to +125°C, ensuring reliable operation in challenging edge computing environments.

With all these features, the MA35D0 is well-suited for industrial and other edge and Industrial IoT roles, including factory automation, industrial control, smart buildings, smart homes, smart gateways, and new energy systems.

### Extensive Toughened Security Keeps Critical Data Safe

The MA35D0 series can easily establish fast encrypted communications, keep sensitive user data safe, and offer a secure environment for critical applications. The MPU supports secure booting in four modes: USB, SD/eMMC, NAND, and SPI Flash (SPI NOR/SPI NAND).

This chip provides a trusted system that meets the practical security requirements of industrial applications. Arm TrustZone secure boot, and other security features help this MPU safeguard valuable data and code. In addition to TrustZone, it includes Snoop Control Unit (SCU) L2 cache protection and built-in cryptographic accelerators with AES, SHA, ECC, RSA, SM2/3/4—plus a True Random Number Generator (TRNG). The MPU’s cryptographic key store and OTP memory further protect sensitive data.

### Wide Choice of Connectivity

For high-performance edge device roles, such as industrial control or gateway applications, the MA35D0 series provides high-speed connectivity and advanced control interfaces, such as 2x megabit ethernet (complying with IEEE 1588 v2), high-speed USB host and device connections, SD3.0/eMMC, 3x CAN FD, and 11x UART. The MA35D0 series also provides touchscreen support and a TFT LCD controller, with resolutions up to 1280x800.

### Generous Evaluation and Development Resources

Nuvoton provides rich design resources for the MA35D0 series. The evaluation and development system, the MA35D0 EVB, is pre-loaded with remote control examples, such as browser status access and cloud connectivity, allowing users to begin evaluation and development immediately.

For more information about the MA35D0 series of industrial edge MPUs, please visit <https://www.nuvoton.com/products/microprocessors/arm-cortex-a35-mpus/ma35d0-industrial-edge-device-series/>

### About Nuvoton Technology

Nuvoton Technology Corporation (Nuvoton) was founded to bring innovative semiconductor solutions to the market. Nuvoton was spun-off as a Winbond Electronics affiliate in July 2008 and went public in September 2010 on the Taiwan Stock Exchange (TWSE). Nuvoton focuses on the developments of microcontroller/audio, cloud security, battery monitoring, component, visual sensing and IoT with security ICs and has strong market share in Industrial, Automotive, Communication, Consumer and Computer markets. Nuvoton owns 6-inch wafer fabs equipped with diversified processing technologies to provide professional wafer foundry services. Nuvoton provides products with a high performance/cost ratio for its customers by leveraging flexible technology, advanced design capability, and integration of digital and analog technologies. Nuvoton values long term relationships with its partners and customers and is dedicated to continuous innovation of its products, processes, and services. Nuvoton has established subsidiaries in the USA, China, Israel, India, Singapore, Korea, Japan and Germany to strengthen regional customer support and global management. For more information, please visit [https://www.nuvoton.com](https://www.nuvoton.com/).

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