MediaTek Unveils Genio 720 and Genio 520 IoT Platforms for Generative AI Applications

Delivers fast edge processing, low power consumption and advanced multimedia features to IoT devices

NUREMBERG, Germany – March 11, 2025 – Today at Embedded World, MediaTek introduced the high-performance Genio 720 and Genio 520 edge-AI IoT platforms. These new additions to the Genio series support the latest generative AI models, human machine interface (HMI), multimedia, and connectivity features for smart home, retail, industrial, and commercial IoT devices.

The Genio 720 and Genio 520 deliver superb edge performance, enabling up to 10 TOPS with a built-in MediaTek 8th-generation Neural Processing Unit (NPU) offering full hardware acceleration for transformer and convolutional neural network (CNN) models. Additionally, Genio 720 and Genio 520 offer enhanced memory performance with up to 16GB of LPDDR5 memory to support data-intensive edge-optimized large language models (LLMs) such as Llama, Gemini, Phi and DeepSeek, and accelerate generative AI tasks. Backed by MediaTek's extensive global AI ecosystem, developers can leverage leading global language models and common frameworks to efficiently deploy multi-modal generative AI applications and bring products to market faster.

"The Genio 720 and Genio 520 will unleash a new era of IoT innovation with powerful yet efficient generative AI capabilities on-device, offering a seamless user experience that also ensures data privacy," said CK Wang, General Manager of the IoT Business Group at MediaTek. "With our partnership with Nvidia to integrate the TAO Toolkit for Edge AI applications, developers can scale their designs across different products and form factors, from smart retail displays to sophisticated industrial HMI applications."

Built on a 6nm process node, Genio 720 and Genio 520 integrate an octa-core CPU with two Arm Cortex-A78 processors and six Cortex-A55 processors to optimize performance and power efficiency. These highly efficient IoT platforms are optimized for low-power usage, making them suitable for mobile devices requiring fanless enclosures and battery-powered operation.

With a range of advanced multimedia features, Genio 720 and Genio 520 are ideal for commercial displays, smart retail devices, HMI applications, and other multi-window or interactive applications. The unified hardware and software design of these IoT platforms makes it easy for developers to write once, run everywhere, while also offering the opportunity for customization to meet specific application needs.

Genio 720/520 also supports OSM (Open Standard Module) with reference designs that ensure power and signal integrity, which greatly shortens users' development cycle in OSM. MediaTek partners plan to launch OSM solutions based on Genio 720/520 in the second half of the year, which can accelerate time-to-market for many applications.

Additional features of Genio 720 and Genio 520 include:
- Support for one 4K/5K ultrawide display, or dual 2.5K displays
- Power-efficient 4K H.264/H.265video decoding and encoding
- Up to dual ISP 16+16/32MP@30fps.
- Support up to 6xFHD30 camera with MIPI virtual channels

- Pre-integrated MediaTek Wi-Fi 6/6E solutions
- Support Wi-Fi 7 and 5G Redcap via external modules
- Android, Yocto Linux, and Ubuntu OS options
- Flexible set of high-speed I/O interfaces for system level expansion
- Rich set of display interfaces for applications that require multiple screens
- Commercial & Industrial Temperature Range

The Genio 720 and Genio 520 platforms will be sampling to customers starting in Q2 2025. To learn more about the Genio series, please visit: https://www.mediatek.com/products/iot/genio-iot.

MediaTek will be showcasing its Genio portfolio at Embedded World, taking place Nuremberg, Germany from March 11-13, 2025 in Hall 3 at Booth 3-539.

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About MediaTek Inc.

MediaTek Incorporated (TWSE: 2454) is a global fabless semiconductor company that enables nearly 2 billion connected devices a year. We are a market leader in developing innovative systems-on-chip (SoC) for mobile, home entertainment, connectivity and IoT products. Our dedication to innovation has positioned us as a driving market force in several key technology areas, including highly power-efficient mobile technologies, automotive solutions and a broad range of advanced multimedia products such as smartphones, tablets, digital televisions, 5G, Voice Assistant Devices (VAD) and wearables. MediaTek empowers and inspires people to expand their horizons and achieve their goals through smart technology, more easily and efficiently than ever before. We work with the brands you love to make great technology accessible to everyone, and it drives everything we do. Visit www.mediatek.com for more information.