Virtium Embedded Artists launches industry's first SOM to include on-board hardware AI accelerator chip

The new SOM combines the popular i.MX 8M Mini application processor with a power-efficient DEEPX NPU offering 25 TOPS of AI processor throughput

Malmö, Sweden – June 25, 2025 – Virtium Embedded Artists, a trusted designer and manufacturer of industrial and edge AI computing solutions, today announced the launch of the iMX8M Mini DX-M1, a system-on-module (SOM) which integrates a quad-core application processor and a 25 TOPS AI hardware accelerator chip with associated memory on a board with a compact 82mm x 50mm footprint.

By integrating a DEEPX DX-M1 AI accelerator, an advanced neural processing unit (NPU), into the SOM, Virtium Embedded Artists eliminates the need for embedded device manufacturers that want to implement AI functions to plug a discrete AI processor module into their system. This provides multiple benefits to OEMs and designers, including board space savings, simplified systems design, streamlined bill-of-materials, and faster time-to-market.

The new Virtium Embedded Artists SOM is based on the i.MX 8M Mini from NXP Semiconductors, an application processor which features four 1.6GHz/1.8GHz Arm® Cortex®-A53 CPU cores backed by 2GB of LPDDR4 memory, as well as a 400MHz Cortex-M4 controller core. The i.MX 8M Mini provides strong support for video and imaging applications thanks to its video engine with 1080p codec, 2D/3D graphics engine, and 4-lane MIPI-DSI interface, as well as a Gigabit Ethernet interface.

Working in tandem with the DEEPX DX-M1 NPU, the i.MX 8M provides the image processing capability required to support AI-enabled vision systems used in popular and emerging vision applications. These include:

- Drones
- Security and surveillance

- Automated inspection and monitoring
- Transportation
- MedTech
- AgTech

The DX-M1, a high-performance AI accelerator, provides 25 TOPS of throughput at an average power consumption of 5W, making the SOM ideal for power-constrained edge computing applications. In this new Virtium Embedded Artists implementation, the SOM provides 4GB of LPDDR5 memory for the AI processor accessed via a 64-bit, 4-channel data bus. This enables the DX-M1 to run multiple AI models concurrently without performance degradation.

Anders Rosvall, Managing Director of Virtium Embedded Artists, said: 'By bringing the iMX8M Mini DX-M1 to market, Virtium Embedded Artists is meeting surging demand from edge and IoT device manufacturers for a ready-made hardware platform for low-power vision AI processing and embedded control. Now OEMs can get to market faster and more easily with new product designs which offer the extra value that vision AI brings to industrial, mobility, security and edge computing applications.'

Virtium Embedded Artists supplies the iMX8M Mini DX-M1 SOM in two versions: one with the DEEPX AI accelerator and i.MX 8M Mini processor, and one with the i.MX 8M Mini alone. This allows OEMs to easily scale up embedded computer systems based on the i.MX 8M Mini to also provide vision AI capabilities without altering their carrier board design.

Each of the two versions of the SOM is available with a 1.8GHz i.MX 8M Mini, for operation at temperatures between 0°C and 70°C, or with a 1.6GHz i.MX 8M Mini with an operating-temperature range of -40°C to 85°C.

Alongside the iMX8M Mini DX-M1 hardware, Virtium Embedded Artists provides a full technical support service. It also supplies the DEEPX iM8 Mini AI Kit, which includes reference design implementations for key interfaces. Virtium Embedded Artists provides pre-designed standard carrier boards to ease integration into customers' designs.

Virtium Embedded Artists is accepting orders for the iMX8M Mini DX-M1 SOM now via its website at www.embeddedartists.com/products/imx8m-mini-dx-m1-som and via its

distributors, Arrow, Avnet and Future Electronics. Shipments are expected to start in August.

For more information on the iMX8M Mini DX-M1 SOM, contact Sales at Embedded Artists or visit Virtium.

About Virtium-Embedded Artists

Embedded Artists has been a part of Virtium since 2024.
Virtium is a trusted leader in the design and manufacturing of high-reliability industrial modular hardware solutions which enable embedded computing system manufacturers to get to market more quickly, with lower development risk, and to benefit from a streamlined supply chain. Virtium's products include industrial-grade SSDs, industrial-grade DDR memory modules, and computer systems-on-module (SOMs), including SOMs with on-board AI accelerator hardware.
The SOM products are marketed by Embedded Artists, a Virtium company. With over 25 years of experience, Virtium has earned a reputation for delivering high-quality products that meet the demanding requirements of global customers in industries such as networking, telecommunications, industrial OEMs, and embedded markets.
Virtium's commitment to innovation, long-term product availability, and customer support has made it a preferred partner for companies requiring mission-critical edge AI system solutions.

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