

Empowering image processing

Advantech (Taiwan), an early access partner of NXP, released three i.MX 8M Plus-based products with CAN FD connectivity.



RSB-3720 single board computer (left), the EPC-R3720 box PC, and ROM-5722 computer on module (Source: Advantech)

The series includes the 2,5-inch RSB-3720 Pico-ITX single board computer (SBC), the EPC-R3720 edge AI (artificial intelligence) box PC, and the ROM-5722 Smarc 2.1 computer on module (COM). The solutions are powered with up to four core 1,8-GHz Cortex-A53 processors supported by a Cortex-M7 co-processor for real-time tasks. This is accelerated by two image signal processors (ISPs) and a neural network processor (NPU) at up to 2,3 Tera operations per second (TOPS). These features enable the platform for AI applications such as object detection, recognition, classification, and pose estimation. The company's AIM-Linux software services integrate application add-ons and Edge AI

inference engines/libraries mainly based on the NXP eIQ toolkit. For fast development start, Python-based demo programs empower AI inference using Arm NN, Tensorflow Lite, and ONNX inference engines. The manufacturer also developed factory-focused AI models that run on the EPC-R3720 PC. These augment efficiencies by helping calculate, monitor line productivity, and improve safety.

For visual applications, the products provide two Mipi-CSI (camera serial interface) inputs, accommodate multiple displays via HDMI, one dual-channel LVDS, and one four-lane Mipi-DSI (display serial interface). The units offer up to two CAN (FD) ports and are extendable by further CAN (FD) ports. 1-Gbit/s Ethernet, wireless LAN and WAN, USB, and further interfaces are available. Operating temperatures can range from -40 °C to +85 °C. The supported manufacturer's Wise-Deviceon platform enables fast setup for multiple IoT device solutions. It offers real-time device management, firmware over-the-air maintenance, failure analysis, and operation efficiency optimization on the same dashboard.

[of](#)