/ AVNET i.MX 8M PLUS EDGE AI KIT

AVNET

The Avnet i.MX 8M Plus Edge AI Kit consists of a SMARC System-on-Module(SOM) and an Industrial Carrier board bundled together with a dual camera adapter to provide a complete embedded computing system for prototyping new industrial systems and evaluating the capabilities of the NXP i.MX 8M device family. The high-performance NPU of the i.MX 8M Plus processor allows machine learning and Artificial Intelligence implementations with heavy compute demands to be pushed from the cloud down to the edge where low latency response can be critical for achieving end application goals.

System designers can simply design their own carrier card, plug-in the Avnet SMARC SOM, and start their application development with proven i.MX 8M Plus hardware. Available with NXP 14nm FinFET technology to allow high computing, graphics, and image processing performance at very low power consumption and combined with a high degree of functional integration device, the Avnet SMARC SOM enables designers to build industrial, medical, retail, and other embedded vision applications with confidence and ease. The integrated Neural Network Accelerator provides up to 2.25TOPS for boosting AI applications at the edge (without High Performance CPU/GPU) enabling emerging applications like Access Control based on Face Recognition to become more easily deployed without complete reliance upon cloud computing resources.

When combining this development kit with the NXP eIQ™ Machine Learning Software Development Environment, many options for Inference Engines, Vision Libraries, and ML workflow can be used to quickly deploy applications needing the following types of model capabilities:

- Classification
- Object Detection
- Face Recognition
- Sequence Analysis

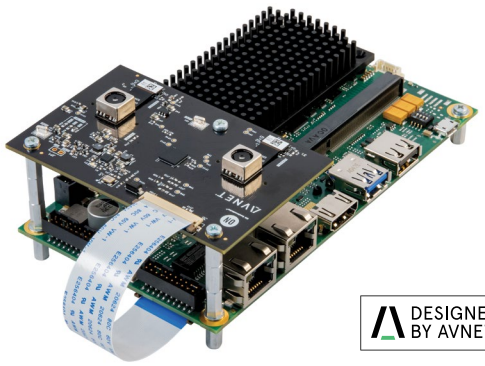
New eIQ capabilities are added on a regular basis as the underlying model libraries and tools evolve over time.

Kit includes

- Avnet i.MX 8M Plus SMARC SOM
- Avnet EP5 SMARC Carrier
- Dual Image Sensor Adapter and Cable
- 10.1 Inch Touch Display and Cables
- Standard Heat Sink Thermal Management Solution
- 12V Power Supply
- Quick Start Instruction Card

Not included

- SD card (8GB-64GB)
- For debugging and interacting with the board
  - A D-SUB 9-pin "null-modem" (Tx/Rx crossed) cable
  - An RS-232 to USB cable (if your PC doesn't have a native serial port)



Target apps

- Artificial Intelligence
- Machine Learning
- Add-on Sensor IoT/Cloud Connectivity
- Embedded Computing
- Industrial Robotics
- Wired Industrial Networking using Gigabit Ethernet (IEEE 1588, 1x with TSN)
- Wireless Communications using Wi-Fi/Bluetooth/NFC
- Entry level i.MX 8M Plus Development Environment
- Training, Prototyping, and Proof-of-concept Demo Platform
- Production Ready, Available for Mass-production

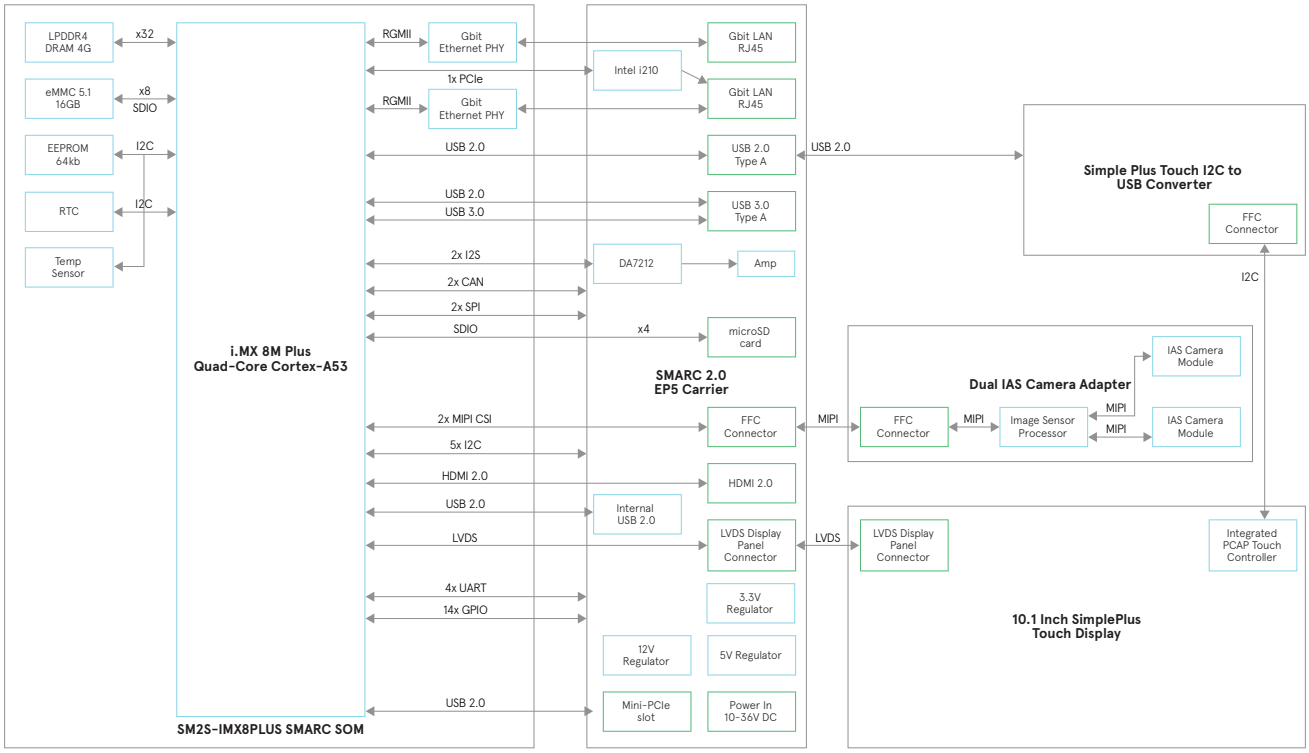
Features

- Quad Core Arm Cortex-A53 ARM Applications Processor
- 2GB (up to 4GB options available) LPDDR4 Memory (inline ECC)
- 16GB (up to 256GB option available) eMMC 5.1 Flash Storage
- 64Mb QSPI Flash (option available)
- Delkin 16GB MicroSD Card + Adapter
- Yocto Linux BSP Available for Download
- Wi-Fi/Bluetooth/NFC Module (option available)
- HDMI 2.0 up to 4K (3840x2160@30FPS)
- 2 x LVDS Display Panel Support
- Two ON Semiconductor AR1335 IAS Camera Modules
- ON Semiconductor AP1302 ISP
- Dual MIPI-CSI Host Interfaces
- 1x USB 3.0, 1x USB 2.0 Type A ports
- Machine Learning Accelerator (2.3 TOPS)
- Image Sensor Processor 12MP@30fps
- 146mm x 80mm Form Factor
- 40C to +85C Industrial Temperature Rated

For more information visit: avnet.me/imx8mplus-edgeai
For custom features, email customize@avnet.com

NXP GOLD PARTNER

Block diagram



Featured manufacturers

Parts

Part Number	Description	Price and availability
AES-IMX8MPLUS-AI-DEV-KIT-G	SMARC Industrial Embedded Computing Kit with Edge AI Acceleration	avnet.me/imx8mplus-edgeai-pdp

Countries Available for Purchase: Americas, EMEA, Japan

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