

The MaaXBoard Nano is a low-cost, NXP i.MX 8M Nano processor-based, single board computer ideal for embedded computing and smart edge IoT applications. The i.MX 8M Nano family of application processors is based on the Arm® Cortex®-A53 and Cortex-M7 cores which provide industry-leading audio, voice and video processing for applications that scale from consumer home audio to industrial building automation and embedded computers. The MaaXBoard Nano is production ready, FCC, CE and RoHS certified. It is available in quantities of five hundred or greater.

The MaaXBoard Nano contains everything necessary to support and create a Linux, Android or other OS-based systems. The platform offers several on-board peripherals including 1 GB of DDR4 memory, a Gigabit Ethernet port, quad USB 2.0 host ports, MIPI-DSI, MIPI-CSI, WiFi, Bluetooth, MicroSD card slot, four on-board microphones and an audio jack. A Raspberry Pi hat-compatible expansion connector also provides interfaces for UART, SPI, I2C and GPIO. These combined capabilities make it an ideal platform for investigating AI, IOT and multimedia applications.

Each MaaXBoard Nano is shipped with a quick start guide to assist developers with their hardware or software development project. A user-supplied 5V/3A USB Type C power supply is required to power the board. A 16 GB microSD card and a UART USB Serial translator are recommended for booting the MaaXBoard Nano out-of-box experience. To jump-start your development, Avnet offers supported Android 9.0 and Linux images available for download. For software debugging, an optional Microchip USB-to-UART evaluation board is recommended, allowing USB terminal access through a UART port on the 40-pin expansion connector.

Kit includes

- MaaXBoard Nano
- Quick start guide

Target apps

- Embedded computing
- Machine vision
- AI platform
- Consumer audio
- Smart IoT platform



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Features

Processor

- NXP i.MX 8M Nano Processor
 - Quad Arm Cortex-A53 @1.5GHz
 - Single Cortex-M7F @750MHz

Memory

- 1GB DDR4 SDRAM
- 256mB QSPI Flash
- MicroSD Slot
- 16GB eMMC

Communications and user interface

- Gigabit Ethernet
- Quad USB2.0 Host
- MIPI-DSI Display Interface
- MIPI-CSI Camera Interface
- Wi-Fi 802.11 b/g/n/ac
- Bluetooth 4.2 and 5
- External Antenna Connector
- Four on-board Microphones
- Audio Jack

User I/O

- 40 Pin Low Speed Expansion Interface
 - Raspberry Pi Hat Compatible
 - Digital I/O voltage: 3.3V
- 2 x User Buttons
- 2 x User Leds

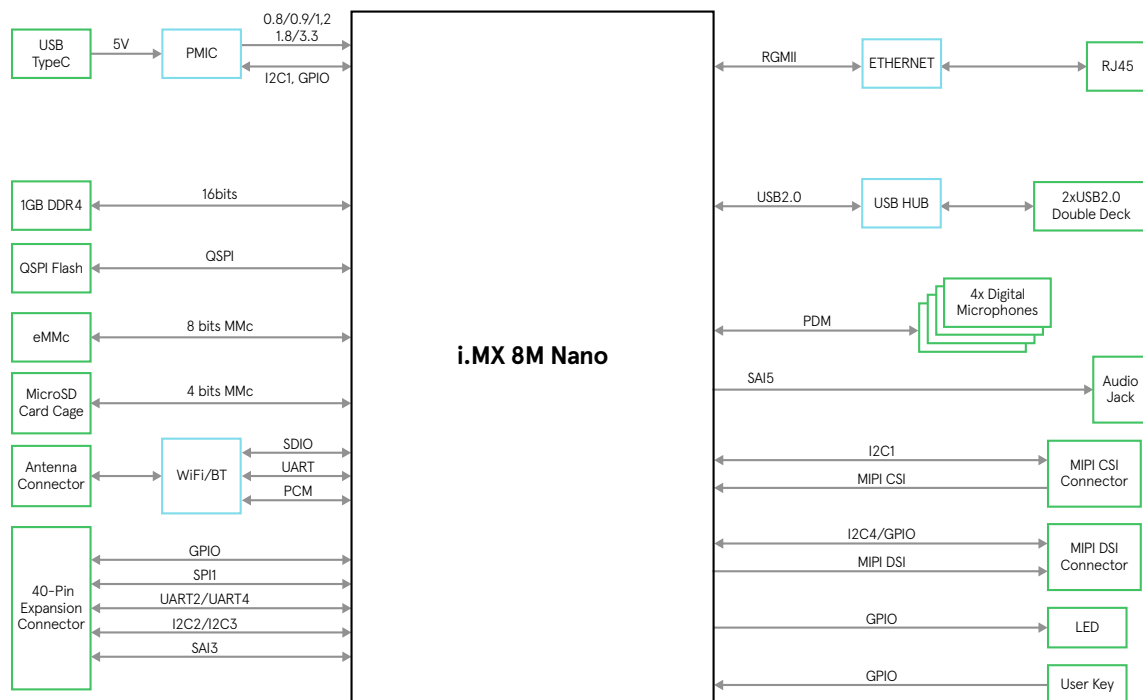
Other

- PMIC
- Type C 5V/3A Power input
- Operating Temperature: 0~70°C

Mechanical

- 85mm x 56mm form factor

Block diagram



Featured manufacturers



Parts

Part number	Description	Price and availability
AES-MC-SBC-IMX8NANO-G	The MaaXBoard Nano is a low-cost, NXP i.MX 8M Nano based single board computer	avnet.me/maaxboard-nano-pdp

Related parts

Part number	Description	Price and availability
55Y8325	UART Debug Communication Board	Call for quote
AES-ACC-MAAX-DISP1	MIPI DSI LCD Display	avnet.me/maax-disp1-buy
AES-ACC-MAAX-CAM1	MIPI CSI Camera Module	avnet.me/maax-cam1-nxp
AES-ACC-MAAX-PWRUL	UL Certified 5V/3A USB Type-C Power Supply	avnet.me/maax-pwrul-buy

Countries available for purchase: Americas, EMEA

Contact information

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Phoenix, Arizona 85034
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