

# I-Pi SMARC IMX8M Plus

I-Pi SMARC Plus Prototyping  
 DevKit powered by NXP  
 i.MX8M Plus



## Features

- Based on NXP i.MX8M Plus 4-core SoC with integrated NPU, VPU, and GPU units
- Equipped with SMARC 2.1 compatible module specially designed for industrial embedded applications requiring long life, high MTBF, and strict revision control
- Industrial-grade quality and 15-year product availability
- Supports Yocto, Android, Ubuntu OS

## Specifications

|             |                |                                                                                     |
|-------------|----------------|-------------------------------------------------------------------------------------|
| Core System | SoC            | NXP i.MX8M Plus 4-core SoC                                                          |
|             | NPU            | 2.3 TOPS Neural Processing Unit                                                     |
|             | Architecture   | Arm Cortex-A53 + 4x Cortex-M7                                                       |
|             | Memory         | 2GB LPDDR4                                                                          |
|             | Storage        | 32GB eMMC 5.0                                                                       |
|             | IoT Security   | TPM 2.0*, TrustZone, Crypto ATECC608A, RDC, OCRAM, CAAM, PKHA, RTIC, True RNG, SNVS |
| Video       | GPU Core       | Vivante GC7000UL                                                                    |
|             | Video Decoding | 1080p60 HEVC, H.265 for decode, H.264, VP9, VP8                                     |
|             | Video Encoding | 1080p60 H.265, H.264                                                                |
|             | Camera         | 1x MIPI-CSI (4 data lanes), 1x MIPI-CSI (2 data lanes)                              |
| Audio       | Codec          | WM890                                                                               |
| Ethernet    | LAN            | 2x GbE (1x TSN capable)                                                             |

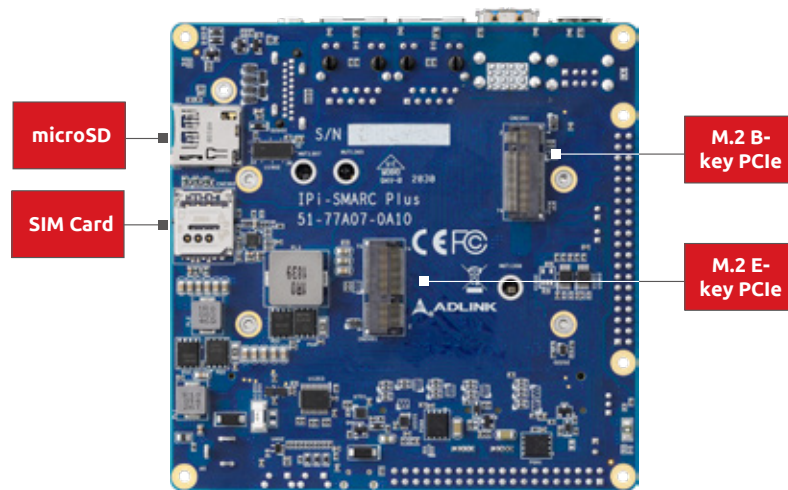
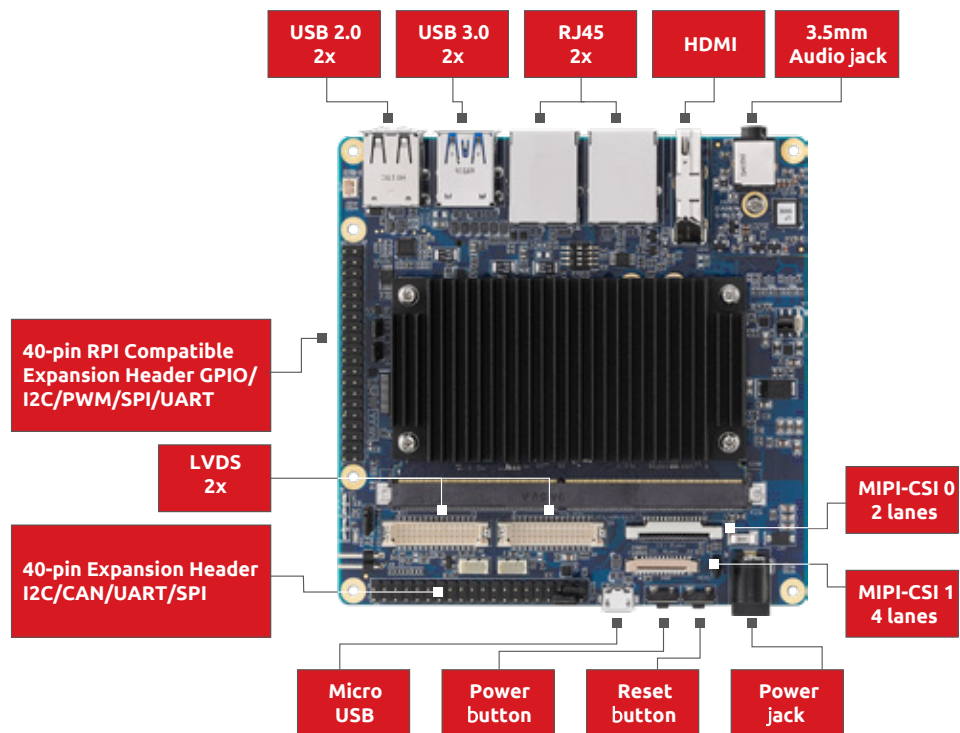
## Specifications

|                    |                             |                                                                                                                                   |
|--------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Connectors/Headers | Display                     | 1x HDMI<br>2x LVDS                                                                                                                |
|                    | Audio                       | 1x 3.5mm Audio jack                                                                                                               |
|                    | Network                     | 2x RJ45                                                                                                                           |
|                    | USB                         | 2x USB 3.0, 2x USB2.0, 1x micro USB                                                                                               |
|                    | Buttons                     | 1x Reset<br>1x Power                                                                                                              |
|                    | SD Card Slot                | 1x microSD                                                                                                                        |
|                    | SIM Card Slot               | 1x SIM                                                                                                                            |
|                    | M.2 Card Slots              | 1x M.2 B-key PCIe<br>1x M.2 E-key PCIe                                                                                            |
|                    | 40-pin RPI Expansion Header | GPIO / I <sup>2</sup> C / PWM / SPI / UART                                                                                        |
|                    | 40-pin Expansion Header     | I <sup>2</sup> C / CAN / SPI / UART                                                                                               |
| Power              | Input                       | 19V+/-5% DC                                                                                                                       |
|                    | Connector                   | DC Jack                                                                                                                           |
| Operating Systems  | Standard Support            | Yocto / Android / Ubuntu / Windows 10 IoT                                                                                         |
| Mechanical         | Form Factor                 | SGET SMARC Specification v2.1                                                                                                     |
|                    | Dimensions                  | SMARC short size module (82mm x 50mm)                                                                                             |
|                    | Operating Temperature       | Standard: 0°C to 60°C<br>Rugged: -20°C to 85°C*                                                                                   |
|                    | Humidity                    | Operating: 5-90% RH, non-condensing<br>Storage: 5-95% RH                                                                          |
|                    | Shock and Vibration         | IEC 60068-2-64 and IEC-60068-2-27<br>MIL-STD-202 F Method 213B, Table 213-I, Condition A<br>Method 214A, Table 214-I, Condition D |
|                    | HALT                        | Thermal Stress, Vibration Stress,<br>Thermal Shock and Combined Test                                                              |

## Ordering Information

| Development Kit                | Description/Configuration                                           |
|--------------------------------|---------------------------------------------------------------------|
| I-Pi SMARC IMX8M Plus US-Wi-Fi | SMARC LEC-IMX8MP Prototyping Dev Kit with 2G-32G and US power cable |
| I-Pi SMARC IMX8M Plus EU-Wi-Fi | SMARC LEC-IMX8MP Prototyping Dev Kit with 2G-32G and EU power cable |

\*optional, subject to the module used



# Mouser Electronics

Authorized Distributor

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