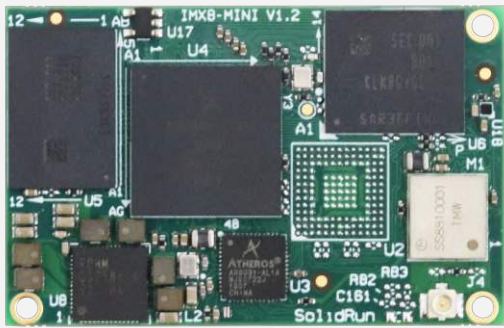


# i.MX8M Mini SOM

Up to 4 x Arm Cortex-A53 cores, 1 x Cortex-M4

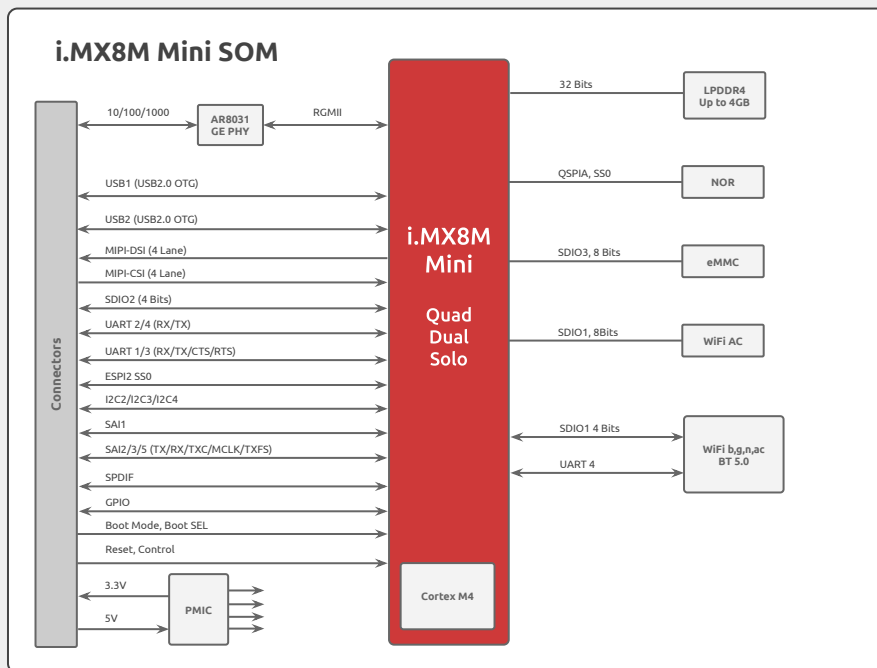
# NXP i.MX 8M Mini Processor System on Module



- Single to quad-core ArmV8 64-bit processors up to 1.8 GHz
- Onboard Dual Band Wifi 802.11 a/b/g/n/ac with Bluetooth 5.0
- Pin to Pin compatible with i.MX 8M Nano application processor (Ordering option)



|              |                                | i.MX8M Mini Quad  | i.MX8M Mini Dual  | i.MX8M Mini Solo  |
|--------------|--------------------------------|---|---|---|
| CPU Details  | CPU Name                       | NXP i.MX8M Mini Quad                                      | NXP i.MX8M Mini Dual                                      | NXP i.MX8M Mini Solo                                      |
|              | CPU Type                       | 4 x Cortex A53<br>1 x Cortex M4                           | 2 x Cortex A53<br>1 x Cortex M4                           | 1 x Cortex A53<br>1 x Cortex M4                           |
|              | CPU Speed                      | 1.8GHz Commercial<br>1.6GHz Industrial                    | 1.8GHz Commercial<br>1.6GHz Industrial                    | 1.8GHz Commercial<br>1.6GHz Industrial                    |
|              | Floating Point                 | VFPv4   | VFPv4   | VFPv3   |
|              | SIMD                           | NEON  | NEON  | NEON  |
| RAM          | Memory & Storage               | 2GB LPDDR4  | 1GB LPDDR4  | 1GB LPDDR4  |
|              | Internal Storage               | 8GB eMMC  | 8GB eMMC  | 8GB eMMC  |
|              | External Storage Support       | NOR-Flash<br>SD<br>PCIe-SSD                               | NOR-Flash<br>SD<br>PCIe-SSD                               | NOR-Flash<br>SD<br>PCIe-SSD                               |
| Networking   | Ethernet                       | 10/100/1000 Mbps  | 10/100/1000 Mbps  | 10/100/1000 Mbps  |
|              | Wireless                       | 802.11 ac/a/b/g/n + BT 5.0                                | 802.11 ac/a/b/g/n + BT 5.0                                | 802.11 ac/a/b/g/n + BT 5.0                                |
| Multimedia   | GPU                            | GC NanoUltra 3D + GC320 2D                                | GC NanoUltra 3D + GC320 2D                                | GC NanoUltra 3D + GC320 2D                                |
|              | 3D GPU Support                 | OpenGL ES 2.0   | OpenGL ES 2.0   | OpenGL ES 2.0   |
|              | Video Decoder                  | 1080p60   | 1080p60   | 1080p60   |
|              | Video Encoder                  | 1080p60   | 1080p60   | 1080p60   |
|              | Display Interfaces             | MIPI-DSI  | MIPI-DSI  | MIPI-DSI  |
|              | Camera Interface               | 1 x MIPI-CSI2 (4 Lane)                                    | 1 x MIPI-CSI2 (4 Lane)                                    | 1 x MIPI-CSI2 (4 Lane)                                    |
|              | S/PDIF Input / Output          | 1   | 1   | 1   |
| Connectivity | Digital Audio Serial Interface | 20 channels, 32bits @384khz, DSD512, 8 x PDM DMIC channel | 20 channels, 32bits @384khz, DSD512, 8 x PDM DMIC channel | 20 channels, 32bits @384khz, DSD512, 8 x PDM DMIC channel |
|              | USB 2.0                        | 2   | 2   | 2   |
|              | PCIe                           | 1 (Gen 2.0)   | 1 (Gen 2.0)   | 1 (Gen 2.0)   |
|              | I2C                            | 2   | 2   | 2   |
|              | SPI                            | 1   | 1   | 1   |
|              | UART                           | 2 (RTS/CTS/RX/TX) +1 (TX/RX)                              | 2 (RTS/CTS/RX/TX) +1 (TX/RX)                              | 2 (RTS/CTS/RX/TX) +1 (TX/RX)                              |
|              | GPIO                           | 75  | 75  | 75  |
|              | PWM                            | 4   | 4   | 4   |
|              | SD/MMC                         | 1   | 1   | 1   |
|              | JTAG                           | Test point header   | Test point header   | Test point header   |
| OS Support   | Embedded Linux                 | Linux   | Linux   | Linux   |
| Physical     | Size                           | 47 x 30 mm  | 47 x 30 mm  | 47 x 30 mm  |
|              | Interface                      | 3 x Hirose DF40 connectors                                | 3 x Hirose DF40 connectors                                | 3 x Hirose DF40 connectors                                |
| Power        | Main Voltage                   | 5V  | 5V  | 5V  |
|              | I/O Voltage                    | 3.3V  | 3.3V  | 3.3V  |
| Environment  | Temperature                    | Commercial: 0°C to 70°C<br>Industrial: -40°C to 85°C      | Commercial: 0°C to 70°C<br>Industrial: -40°C to 85°C      | Commercial: 0°C to 70°C<br>Industrial: -40°C to 85°C      |
|              | Humidity                       | Humidity (non-condensing): 10% – 90%                      | Humidity (non-condensing): 10% – 90%                      | Humidity (non-condensing): 10% – 90%                      |



## Ordering Information

### Available on Shop

| SKU                                     | Description  |
|---|--|
| <a href="#">SRMM8ODW00D02GE008V12C0</a> | SOM i.MX8M Mini Quad   No WiFi/BT   1GB RAM   8GB eMMC   Com.Temp   R1.2   Unfused   |
| <a href="#">SRMM8ODWB1D02GE008V12C0</a> | SOM i.MX8M Mini Quad   Inc. WiFi/BT   2GB RAM   8GB eMMC   Com.Temp   R1.2   Unfused   |
| <a href="#">SRMM8-KIT001</a>            | i.MX8 Mini Starter Kit - SOM i.MX8M Mini Quad   HummingBoard Pulse   Inc. WiFi/BT   1GB RAM   8GB eMMC  Com.Temp   R02   Inc. Heatsink   12V 1.5A Power adapter   Micro SD   USB to Micro USB Cable   WiFi Antenna |

- To choose your ideal configuration see our [Product Configurator Tool](#)

### Accessories:

| SKU                      | Description     |
|--------------------------|-----------------|
| <a href="#">HS00016K</a> | i.MX8M Heatsink |

### Kits

| SKU                                     | Description   |
|---|---|
| <a href="#">SRMM8ODW00D02GE008R02CH</a> | SOM i.MX8M Mini Quad   No WiFi/BT   2GB RAM   8GB eMMC   HummingBoard Ripple   Com.Temp   Unfused   |
| <a href="#">SRMM8ODWB1D02GE008R02CH</a> | SOM i.MX8M Mini Quad   Inc. WiFi/BT   2GB RAM   8GB eMMC   HummingBoard Ripple   Com.Temp   Unfused |

For more information about the i.MX8M Mini SOM Software/Hardware visit our:

[Developer Center](#)