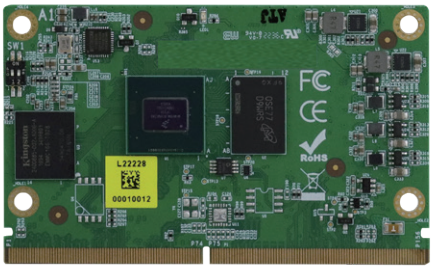
# RM-N8MP

## SMARC 2.1 CPU Module

Wide-Temperature SMARC™ 2.1 Module
with NXP ARM® i.MX 8M Plus Quad Cortex-A53 Processor



## Features

- NXP i.MX8M Plus Quad Cortex-A53 processor
- 3GB LPDDR4, 16GB eMMC on board
- Rich peripheral I/O support
- Validated with Yocto 4.0 (sumo, kernel 5.4.70) / Android 11
- Long-term supply with NxP solution
- Compliant with SMARC™ 2.1
- Wide-range operating temperature (-40°C~85°C)

## Specifications

| | |
|---|---|
| Form Factor | SMARC™ 2.1 |
| Processor | NXP i.MX8M Plus Quad Cortex-A53 processor |
| System Memory | 3GB LPDDR4 on board |
| Flash Memory | 16GB eMMC on board (up to 64GB) |
| Display | HDMI, LVDS and MIPI-DSI 4-lane up to 1920 x 1080 at 60 Hz |
| Video Codec | Up to 1080p/60fps video decode, AVC/H.264, HEVC/H.265, VP8, VP9<br>Up to 1080p/60fps video encode, AVC/H.264, HEVC/H.265 |
| Graphics | GC7000UL with OpenGL ES 1.1, 2.0, 3.0, OpenCL 1.2 and Vulkan |
| Audio Interface | 1x I²S |
| LAN | GbE with YT8531H LAN PHY on board |
| USB | 2x USB 3.0 with OTG interface |
| Image Capture Interface | 2x MIPI-CSI2 4-lane + 2-lane |
| Serial Interface | 4x UART, 2x SPI |
| Media Interface | 3x High-speed SDIO |
| PCI-E | 1x PCI-E interface |
| SATA | N/A |
| GPIO | 12x GPIO |
| I²C | 4x I²C |
| Others | N/A |
| CAN Bus | 2x CAN FD |
| Dimensions | 82mm x 50mm (3.2" x 2") |
| Environment | Humidity: 0 % to 90 % RH at 60° C (non-condensing)<br>Shock: Non-Operating: 1G, 15 mins (x-, y-, z-axis)<br>Vibration: Non-operating: 3 Hz to 500 Hz, 15 mins |
| Operating Temperature | -40°C~+85°C (-40°F ~ 185°F) |
| OS Support | Yocto 4.0 (sumo, kernel 5.4.70) / Android 11<br>Other OS (by request) |
| Certification | CE/ FCC Class A |

## Ordering Information

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|---|---|
| RM-N8MP-Q316I | NXP i.MX8M Plus Quad Cortex-A53 1.8GHz processor, 3GB LPDDR4, 16GB eMMC |
| F8Sxx-HSK | Heat sink |

## Dimensions