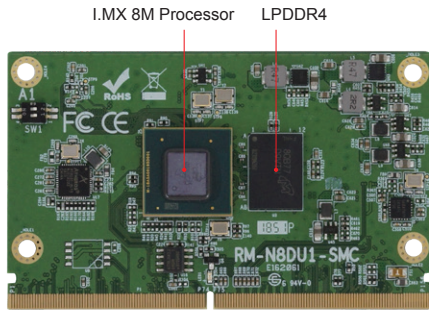


RM-N8M Series

SMARC 2.0 CPU Module

Wide-Temperature SMARC™ 2.0 Module with NXP ARM® Cortex-A53/Cortex-M4 i.MX 8M Dual/Quad 1.5GHz Processor



System

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|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Form Factor | SMARC™ V2.0 |
| Processor | NXP i.MX 8M Dual/Quad Cortex-A53 and Cortex-M4, 1.5GHz |
| System Memory | 3GB LPDDR4 on board |
| Flash Memory | 8GB eMMC on board (optional 16/32/64 GB) |
| Display | 1x MIPI-DSI 4-lane up to 1920 x 1080 at 60Hz 1x HDMI V2.0a, up to 4K, supports HDCP2.2 and HDCP1.4 |
| Video Codec | <ul style="list-style-type: none"> 4Kp60 HEVC/H.265 main, and main 10 decoder 4Kp60 VP9 decoder 4Kp30 AVC/H.264 decoder 1080p60 MPEG-2, MPEG-4p2, VC-1, VP8, RV9, AVS, MJPEG, H.263 decoder |
| Graphics | <ul style="list-style-type: none"> GC7000Lite OpenGL ES 1.1, 2.0, 3.0, 3.1, Open CL 1.2, and Vulkan |
| Audio Interface | 2x I ² S, 1x SPDIF |
| LAN | 1x GbE LAN |
| USB | 2x USB3.0/USB2.0 with OTG interface |
| Image Capture Interface | 2x MIPI-CSI2 4-lane each |
| Serial Interface | 4x UART, 2x SPI |
| Media Interface | 2x High-speed MMC/SDIO (MMC 8-bit, SDIO 4-bit) |
| PCI-E | 2x PCI-E (x1) Gen2 |
| SATA | N/A |
| GPIO | 12x GPIO |

Features

- With NXP Cortex-A53/Cortex-M4, i.MX 8M Dual/Quad 1.5GHz processor
- 3GB LPDDR4, 8/16/32/64GB eMMC
- Rich peripheral I/O support
- Validated with Yocto v2.5 and Android 9
- Long life time supply with Nxp solution
- Compliant with SGeT standard SMARC™ V2.0

| | |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| I ² C | 4x I ² C |
| CAN Bus | N/A |
| Dimensions | 82mm x 50mm (3.2" x 2") |
| Environment | Humidity: 0 % to 90 % RH at 60° C (non-condensing) Shock: Non-operating: 1G, 15 mins (x-, y-, z-axis) Vibration: Non-operating: 3 Hz to 500 Hz, 15 mins |
| Operating Temperature | Consumer Grade : 0°C ~ 70°C Industrial Grade : -40°C ~ 85°C |
| OS Support | Yocto 2.5 (Kernel 4.14.62) Android 9 (Kernel 4.14.62) |
| Certification | CE/ FCC Class B |

Ordering Information

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|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RM-N8M-D308 | SMARC 2.0 CPU module, Cortex-A53 i.MX 8M Dual 1.5GHz, 3GB LPDDR4, 8GB MLC eMMC |
| RM-N8M-D308I | Industrial grade SMARC 2.0 CPU module, Cortex-A53 i.MX 8M Dual 1.3GHz, 3GB LPDDR4, 8GB MLC eMMC |
| RM-N8M-Q316 | SMARC 2.0 CPU module, Cortex-A53 i.MX 8M Quad 1.5GHz, 3GB LPDDR4, 16GB TLC eMMC |
| RM-N8M-Q316I | Industrial grade SMARC 2.0 CPU module, Cortex-A53 i.MX 8M Quad 1.3GHz, 3GB LPDDR4, 16GB TLC eMMC |
| RP-103-SMC (Carrier Board) | 3.5" SMARC 2.0 carrier board, 2-CH LVDS, HDMI, 2x CSI, DSI, GbE, RS-234/422/285, USB3.0, M.2 Key-E (2230), Mini PCI-E w/ SIM socket, USB OTG, SATA, CAN, Audio/Speaker out/HP&MIC, MicroSD and 12~24VDC |



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