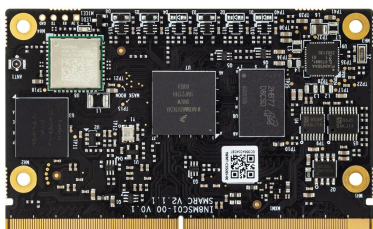


JSOM-N8MC

NXP i.MX 8M Mini SMARC Module

JSOM-N8MC is an Arm-based SMARC 2.1.1 Computer-on-Module powered by industrial grade NXP i.MX 8M Mini SoC, which includes 4x Arm Cortex-A53 cores and integrates a Cortex-M4 co-processor for real-time control. It features on-board WiFi+BT module and offers various high-speed interfaces including 1x GbE, 1x PCIe, 5x USB, 4x UART. JSOM-N8MC is the perfect basis for creating ultra low power, cost-effective solutions used in industrial IoT and medical applications.

JSOM-N8MC is paired with the JSOM-SC211 SMARC 2.1.1 development board for faster end-product peripheral integration and time-to-market, offered along with carrier board design support documents and Android/Linux SDK.

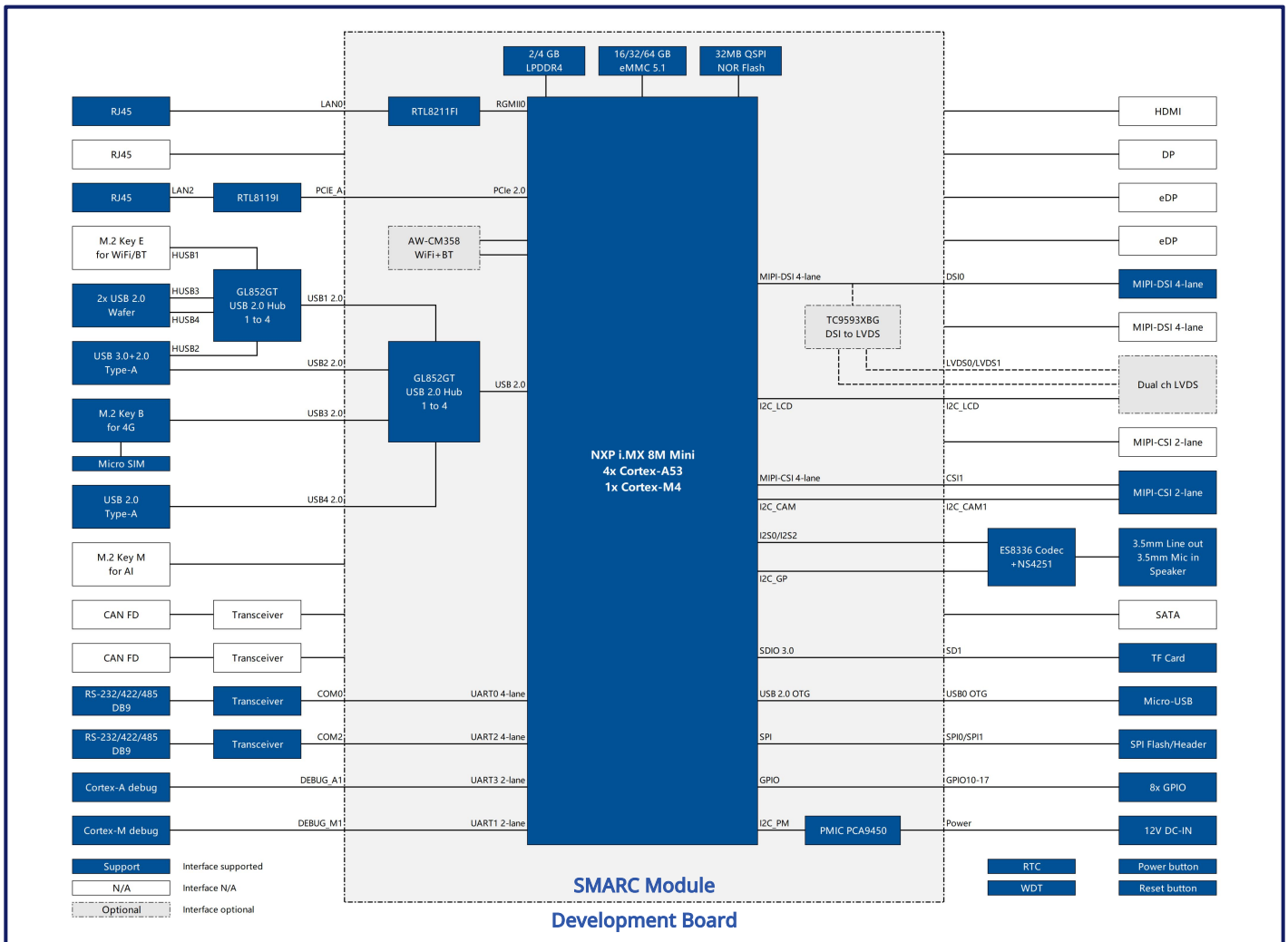


- NXP i.MX 8M Mini SoC up to 1.8 GHz
- 4x Cortex-A53 + 1x Cortex-M4 + GC NanoUltra GPU
- On-board 2/4GB LPDDR4 + 16/32/64GB eMMC
- Display: 1x MIPI-DSI or Dual channel LVDS
- I/O: 1x GbE, 1x PCIe, 5x USB, 4x UART
- Optional on-board WiFi+BT module
- Supports 0~60°C/-40~85°C operating temperature

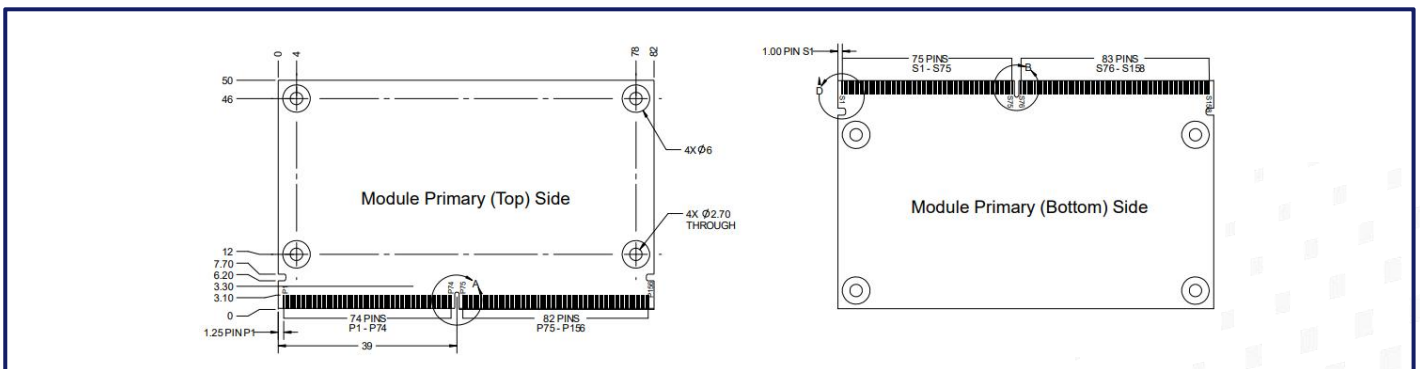
01 Specifications

CPU	NXP i.MX 8M Mini 4x Arm Cortex-A53 up to 1.8 GHz (consumer) / 1.6 GHz (industrial) 1x Arm Cortex-M4 up to 400 MHz for real-time control
NPU	-
GPU	Vivante GC NanoUltra, supports OpenGL ES 2.0, OpenVG 1.1
H/W Video Codec	H.265/H.264/VP9/VP8 Decoder up to 1080p60, H.264/VP8 Encoder up to 1080p60
Memory	On-board 2GB/4GB LPDDR4
Flash Memory	On-board 16GB/32GB/64GB eMMC 5.1 for OS On-board 32MB QSPI NOR Flash for board information
Ethernet	1x 10/100/1000 Mbps
Display	1x 4-lane MIPI-DSI or Dual channel LVDS
Video Input	1x 4-lane MIPI-CSI
Audio	2x I2S
PCIe	1x PCIe 2.0 1-lane
SATA	-
USB	4x USB 2.0 Host, 1x USB 2.0 OTG/Host
Serial Port	2x 4-wire UART, 2x 2-wire UART for debug
Other I/Os	1x SDIO (4 bit, for SD cards), 2x SPI, 4x I2C, 14x GPIO
Board Features	On-board AW-CM358 WiFi 5 (802.11ac) + Bluetooth 5.2 module Watchdog Timer, RTC
Power Supply	DC 5V, supports 3.6~5.25V operation from Lithium-ion cells
Form Factor	SMARC 2.1.1 314-pin MXM Connector, 82mm x 50mm
OS Support	Yocto 3.5 Linux, Ubuntu 22.04, Android 11
Boot Options	eMMC or SD, default to eMMC
Operating Conditions	0~60°C/-40~85°C, 10%~90% RH non-condensing
Storage Conditions	-40~85°C, 5%~90% RH non-condensing

Block Diagram



Dimensions



Order Information

Part Number	SoC	Memory	Flash	WiFi	Display	GbE	PCIe	USB	UART	Operating Temp.
JSOM-N8MC-AQLL1	i.MX 8M Mini Quad 1.6 GHz	2GB	16GB	No	LVDS	1	1	5	4	-40~85°C
JSOM-N8MC-BQML1	i.MX 8M Mini Quad 1.8 GHz	2GB	16GB	Yes	LVDS	1	1	5	4	0~60°C
JSOM-N8MC-BQLM1	i.MX 8M Mini Quad 1.8 GHz	2GB	16GB	No	MIPI-DSI	1	1	5	4	0~60°C