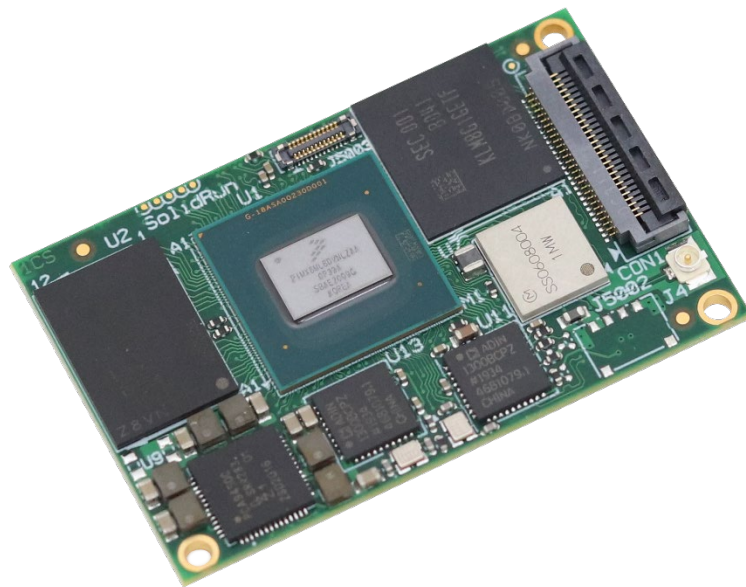


SOM i.MX 8M Plus

Datasheet

NXP i.MX 8M Plus based System-on-Module



Overview

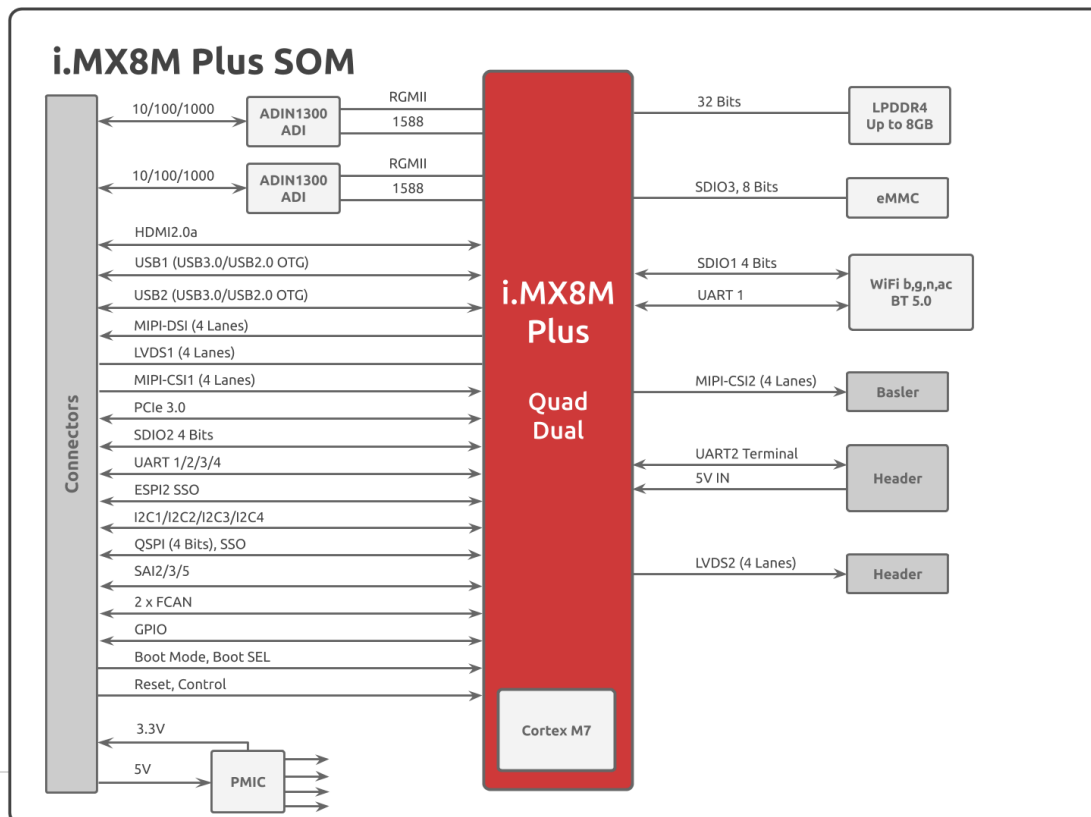
Based on Arm Cortex A53 technology and manufacturing process utilizing 14LPC FinFET process, the NXP i.MX 8M Plus SoC provides high performance and processing speed, while keeping the power consumption to a minimum.

The built-in NPU (up to 2.3TOPs) provides customers the option to perform machine learning inference directly on the edge, reducing cloud dependency, latency and is able to perform highly complex neural network functions like face and emotion detection, object detection and surveillance, which are key to applications such as smart and safe cities, retail, smart home and much more.

Featuring additional high-speed interfaces such as 2 x Gigabit Ethernet, TSN, PCIe Gen 3, USB 3.0, and CAN-FD capabilities, offering industrial temperature grade and NXP's longevity program, the i.MX8M Plus SOM is perfect for industrial IoT and HMI applications.

SOM i.MX 8M Plus Highlighted Features

- ✿ Quad/Dual core Cortex A53 + Cortex M7 for real time applications
- ✿ Integrated NPU up to 2.3TOPs
- ✿ Built in Dual ISP with onboard MIPI-CSI
- ✿ Up to 8GB LPDDR4 system memory



System Specifications

i.MX 8M Plus	
CPU Details	NXP i.MX 8M Plus Dual/Quad 2/4 x Cortex A53 1 x Cortex M7 1 x NPU up to 2.3 TOPS
CPU Speed	1.8GHz Commercial 1.6Ghz Industrial
Floating Point	VFPv4
SIMD	NEON
RAM	Up to 8GB LPDDR4
Internal Storage	8GB eMMC
External Storage Support	NOR-Flash SD PCIe-SSD
Ethernet	2 x 10/100/1000 Mbps 1 x with TSN
Wireless	802.11 ac/a/b/g/n + BT 5.0
GPU	Vivante GC7000UL
3D GPU Support	OpenGL ES 3.1/3.0 Vulkan Open CL 1.2 FP OpenVG 1.1
Video Decoder	1080p60
Video Encoder	1080p60
Display Interfaces	HDMI 2.0, MIPI-DSI, LVDS
Camera Interface	1 x MIPI-CSI2 (4 Lane) 2 x ISP
S/PDIF Input / Output	1
Digital Audio Serial Interface	18x I2S TDM, DSD512, 8-ch PDM Mic input, eARC, ASRC Low power voice accelerator: Cadence® Tensilica® HiFi 4 DSP @ 800 MHz
USB 3.0	2
PCIe	1 (Gen 3.0)
I2C	3
SPI SKU:SRMP9QDW00D01GE008V10C0	1
UART	2 (RTS/CTS/RX/TX) +1 (TX/RX)
GPIO	75
PWM	4
CAN	2
SD/MMC	1
JTAG	Test point header
OS Support	Linux

Size	47 x 30 mm
Interface	3 x Hirose DF40 connectors
Main Voltage	5V
I/O Voltage	3.3V/1.8V
Temperature	Commercial: 0°C to 70°C Industrial: -40°C to 85°C
Humidity	Humidity (non-condensing): 10% – 90%

Available SKUs for i.MX 8M Plus

SKU	Description
SKU:SRMP8QDWB1D01GE008V10C0	SOM i.MX8M Plus Quad Inc. WiFi/BT 1GB RAM 8GB EMMC Com.Temp R1.1 Unfused
SKU:SRMP8QDW00D01GE008V10C0	SOM i.MX8M Plus Quad No WiFi/BT 1GB RAM 8GB EMMC Com.Temp R1.1 Unfused

Support

For technical support please visit:

Our Developer Resources – <http://developer.solid-run.com/>

For direct support please contact us at: support@solid-run.com

Documentation

Additional documentation available at:

<https://developer.solid-run.com/knowledge-base/i-mx8m-plus-som/>