P05D00129-02

NXP i.MX8M Plus

Front View



Features

- Powerful embedded computing Quad Arm Cortex-A53 for efficient embedded performance
- Industrial-grade power design, 9 to 24V DC input for flexible and reliable deployment
- Ready for intelligent edge, optimized for IoT, automation, and smart industrial applications

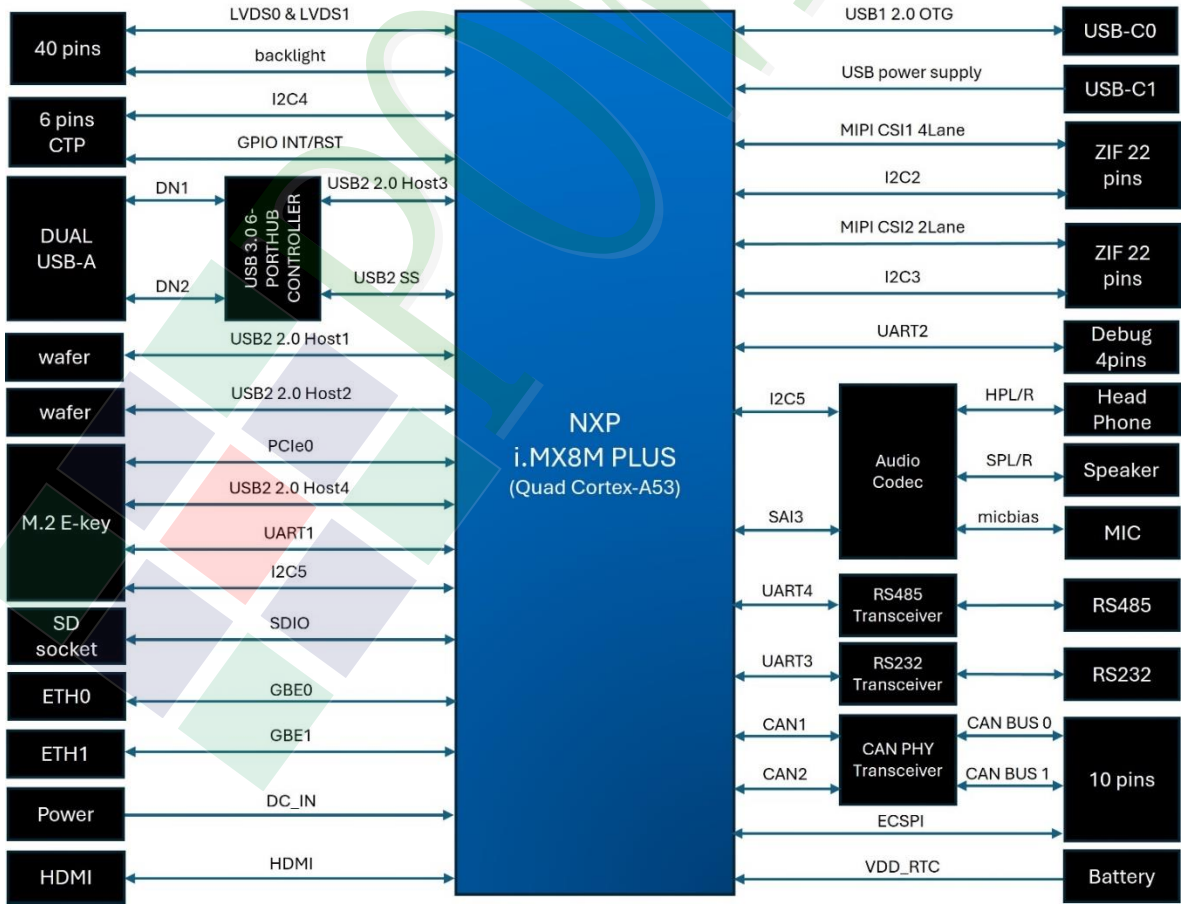
Specifications

Hardware		
CPU	i.MX8M Plus	Quad Core,1.8GHz ARM Cortex-A53 & ARM Cortex-M7
GPU	2D Graphics	Vivante GC520L
	3D Graphics	Vivante GC7000UL
NPU	Integrated into SoC	Accelerator with processing performance up to 2.3 TOPS
Memory	On Board RAM	4GB LPDDR4 SDRAM
	Storage	16GB eMMC Flash (Default Boot Device) 8K Bit EEPROM
I/O	Display	1 × MIPI DSI (optional) 2 × Single LVDS channels 1 × HDMI 2.1
	Camera	1 × MIPI CSI (4-lane) 1 × MIPI CSI (2-lane)
	USB	2 × USB 3.0 Host (Type-A) 2 × USB 2.0 Host (wafer connector) 1 × USB 2.0 OTG (Type-C, C0) 1 × USB with PD (Type-C, C1)
	Ethernet	2 × 10/100/1000 Mbps
	Audio	1 × Headphone output 1 × Microphone input 1 × Speaker output
	Serial Port	3 × UART (1 × debug console, 1 × RS232, 1 × RS485)
	I^2C	1 × I^2C

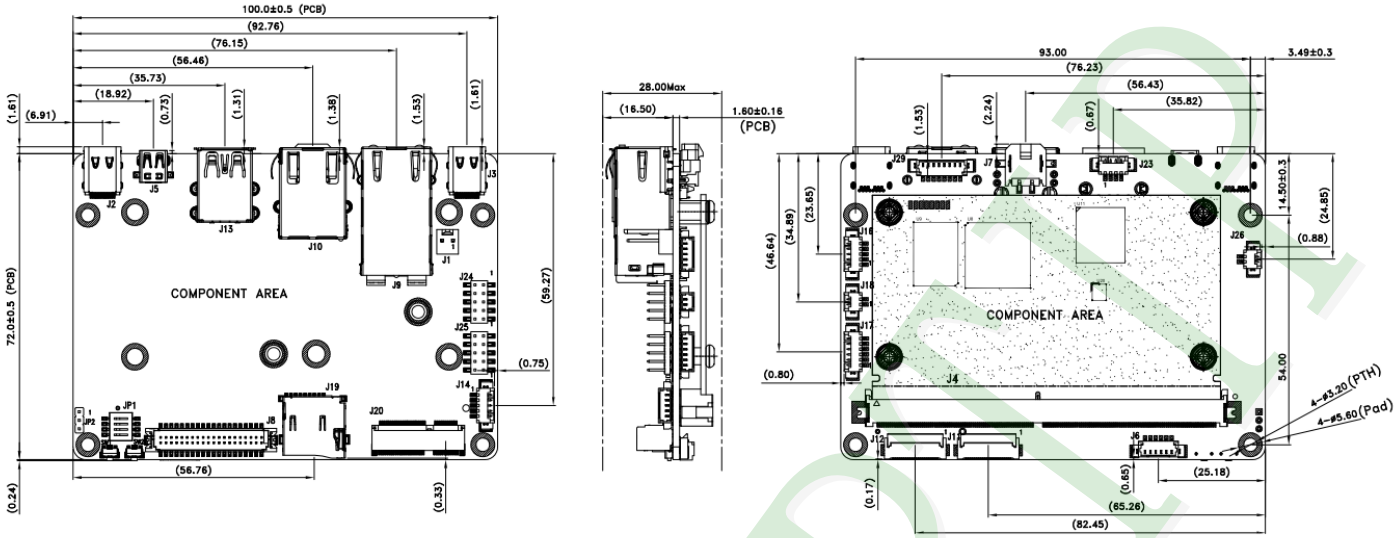
Hardware		
I/O	PWM	2 × PWM
	CAN	2 × CAN
	SPI	1 × ECSPI
	Other	GPIOs
Expansion	M.2 E key	1 × USB 2.0, 1 × UART, 1 × PCIe 3.0 x1, 1 × I^2C
	SD Socket	1 × microSD card socket
Power	Input Voltage	9 ~ 24V DC
Environment	Operating Temp.	0 ~ 70 °C
	Storage Temp.	-30 ~ 85 °C
Mechanical	Form Factor	SMARC v2.2 Module + Pico Carrier Board
	SMARC Module	82 × 50 mm
	Pico Carrier Board	100 × 72 mm

Software		
OS	Default	Yocto 5.X
	Optional	Android

Block Diagram



Dimensions


100.0±0.5 (PCB)
(92.76)
(76.15)
(56.46)
(35.73)
(18.92)
(6.91)
(1.61)
(0.73)
(1.31)
(1.38)
(1.53)
(1.61)
72.0±0.5 (PCB)
COMPONENT AREA
(59.27)
(0.75)
(56.76)
(0.24)
(0.33)
28.00Max
(16.50)
1.60±0.16
(PCB)
93.00
(76.23)
(56.43)
(35.82)
3.49±0.3
(1.53)
(2.24)
(0.67)
14.50±0.3
(24.85)
(0.88)
(46.64)
(34.89)
(23.65)
(0.80)
COMPONENT AREA
54.00
4-ø3.20(PTH)
4-ø5.60(Pad)
(0.17)
(0.85)
(25.18)
(85.26)
(82.45)