

PICO-IMX8M



Main Features

- PICO-IMX8M is an extreme-performance, low-power SoM featuring NXP i.MX8M applications processor based on ARM Cortex-A53 and Cortex-M4 architecture that provides industry-leading video, voice and audio processing capabilities.
- Featuring video quality with full 4K UltraHD resolution and HDR.
- It supports the newest high-speed interfaces for flexible connectivity.
- Optimized for fanless operation, low thermal system cost, and long battery life.
- WiFi and Bluetooth communication interface.



EDISON				
Power	SDIO	I ² S	SPI	PWM
	USB OTG	UART	I ² C	GPIO

EXP-A	
LVDS	RGMI
TTL	

EXP-B			
CAN	PCIe	HDMI	SATA
I ² C	USB HOST	MIPI	

Specifications

Core System

Processor	NXP i.MX8M Dual NXP i.MX8M QuadLite NXP i.MX8M Quad
Processor Speed	1.3GHz / 1.5GHz
Architecture	ARM Cortex-A53 + M4
PMIC	RoHM BD71837
Memory	up to 4GB LPDDR4
Storage	eMMC (8GB Default)
Board-to-Board Connector	Edison compatible connector PICO 70-pin Hirose connectors PICO SOM
System on Module	

Connectivity

Network LAN	RGMI
WiFi/Bluetooth	Qualcomm QCA6174 802.11 a/b/g/n/ac + BT 4.1 (BR+EDR+BLE) Qualcomm QCA9377 802.11 a/b/g/n/ac + BT 4.2 (BR+EDR+BLE)
Antenna	MHF4 connector (optional)

Signaling

I/O	HDMI	I ² S
	MIPI CSI	UART
	MIPI DSI	SPI
	RGMI	I ² C
	PCIe	PWM
	USB	GPIO
	USB OTG	

Video

Graphic Engine	Vivante GC7000Lite
Video Decode	4K UltraHD HDR 4Kp60 H.265 VP9
Camera	MIPI CSI (4 lanes)

Audio

Audio Codec	On carrier board
Audio Interface	I ² S (2 channel)

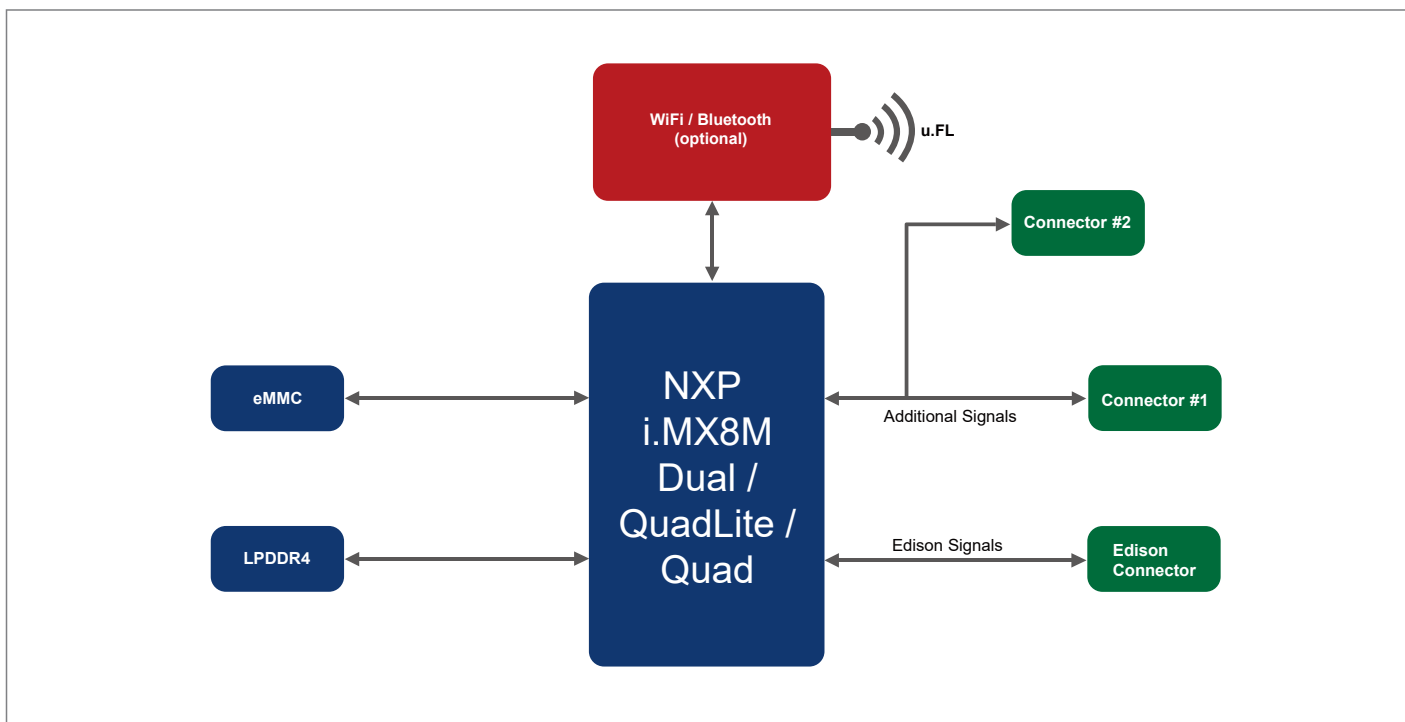
Power Specifications

Power Input	4.2-5.25V DC
Power Consumption	Depending on Configuration

Operation Systems

Standard Support	Linux Yocto Ubuntu Android
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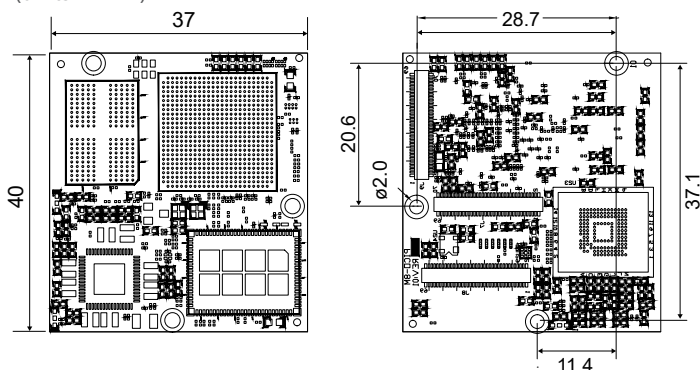
Block Diagram



Environmental and Mechanical

Dimensions	37 x 40 mm / 1 5/8 x 1 5/8 inch
Form Factor	PICO Compute Module
Weight	8 grams
Temperature	Commercial: 0° to +60° C Extended: -20° to +70° C Industrial: -35° to +85° C
Relative Humidity	10 to 90 %
MTBF	>100 000 Hours
Shock	50G/25ms
Vibration	20G/0-600Hz
Certification	Compliant with CE / FCC / RoHS / REACH directives

Dimensions (units in mm)



Order Information Example:

PICO-IMX8Mxxx-Rxx-Exx-xxxx-xx-xxxx

	Code	Description
Processor	IMX8MD	NXP i.MX8MDual
	IMX8MU	NXP i.MX8MQuadLite
	IMX8MQ	NXP i.MX8MQuad
Processor Speed	13	1.3GHz
	15	1.5GHz
Memory	R05	512MB LPDDR4
	R10	1GB LPDDR4
	R20	2GB LPDDR4
	R30	3GB LPDDR4
	R40	4GB LPDDR4
Storage	E08	eMMC capacity in Gigabytes E04=4GB / E08 = 8GB / E16 = 16GB E32 = 32GB / E64 = 64GB /
	-	-
	6174	Qualcomm QCA6174 802.11a/b/g/n/ac (2.4 + 5GHz) + Bluetooth 4.1
	9377	Qualcomm QCA9377 802.11a/b/g/n/ac (2.4 + 5GHz) + Bluetooth 4.2
Temperature Range	-	Commercial Temperature range (0° to +60° C) (Default)
	TE	Extended Temperature range (-20° to +70° C)
	T1	Industrial Temperature range (-40° to +85° C)
Custom ID	XXXX	Custom Part number ID for customized Software loader and special component (BOM)

* Feel free to contact us for customization requests.