ADLINK
LEADING EDGE AI COMPUTING

I-Pi OSM-510

I-Pi OSM Development Kit Based on MediaTek Genio 510 Dual-Core Arm® Cortex-A78 & quad-core Arm® Cortex-A55



Features

- OSM-EB4 carrier
- OSM-MTK510 module powered by MediaTek Genio 510 with 2 core Arm® Cortex-A78 & 4 core Arm® Cortex-A55
- In-SoC MediaTek 5th Gen NPU, up to 3.2 TOPS
- 2GB LPDDR4L soldered, 32GB eMMC
- HDMI, DSI, DP, eDP graphic outputs
- Dual GbE (1x TSN capable), USB3.0, USB 2.0, USB 2.0 OTG
- Rugged operating temperature (optional): -40°C to +85°C

Specifications

Core System	SoC	MediaTek Genio 510 dual-core Arm® Cortex-A78 & quad-core Arm® Cortex-A55
	NPU	MediaTek 5th Gen NPU, up to 3.2 TOPS
	Architecture	2x Arm® Cortex-A78 + 4x Arm® Cortex-A55
	Memory	2GB LPDDR4
	Storage	32GB eMMC
	Security	Arm® TrustZone®

Note: “Build option” indicates an alternative BOM configuration to support additional or alternative functions that are not available on the standard product. Be aware that these “build option” part numbers will need to be newly created and this will result in production lead times.

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Specifications

Video	GPU Core	Arm Mali-G57 MC2
	HDMI	1x HDMI interface
	MIPI DSI	1x MIPI DSI via LVDS connector, 4 lanes
	DP	1x DP interface (Reserved Pin)
	eDP	1x eDP interface, 2 lanes
	Camera	1x 22-pin CSI connector, with 4 lanes available.
Audio	Codec	TI TLV320AIC3107
Ethernet	LAN	2x GbE (1x TSN capable)
Connectors/Headers	Display	1x HDMI, 1x DSI, 1x DP, 1x eDP
	Audio	1x 3.5mm Audio jack
	Network	2x RJ45
	USB	2x USB 2.0 Host,2x USB 3.0 Host, 1x USB 2.0 OTG
	SD Card Slot	1x microSD
	M.2 Card Slots	1x M.2 M-key PCIe
	UART	3x UART on header
	SPI	2x SPI on header
	I^2C	2x I2C on header
	GPIO	8x GPIO on header
	PWM	4x PWM on header
	ADC	2x ADC on header
Power	Input	15 to 30 VDC (Adapter: 19VDC)
	Connector	DC jack
Operating Systems	Standard Support	Yocto Linux BSP, Android (by project), Ubuntu (by project)
	Extended Support	Foundries.IO Linux microPlatform (LMP)
Mechanical and Environmental	Form Factor	4" EPIC
	Dimensions	165mm x 115mm
	Operating Temperature	Standard: 0°C to +60°C
		Rugged: -40°C to +85°C (optional)
	Humidity	5-90% RH operating, non-condensing 5-95% RH storage (and operating with conformal coating)
	Shock and Vibration	IEC 60068-2-64 and IEC-60068-2-27, MIL-STD-202 F, Method 213B, Table 213-I, Condition A and Method 214A, Table 214-I, Condition D

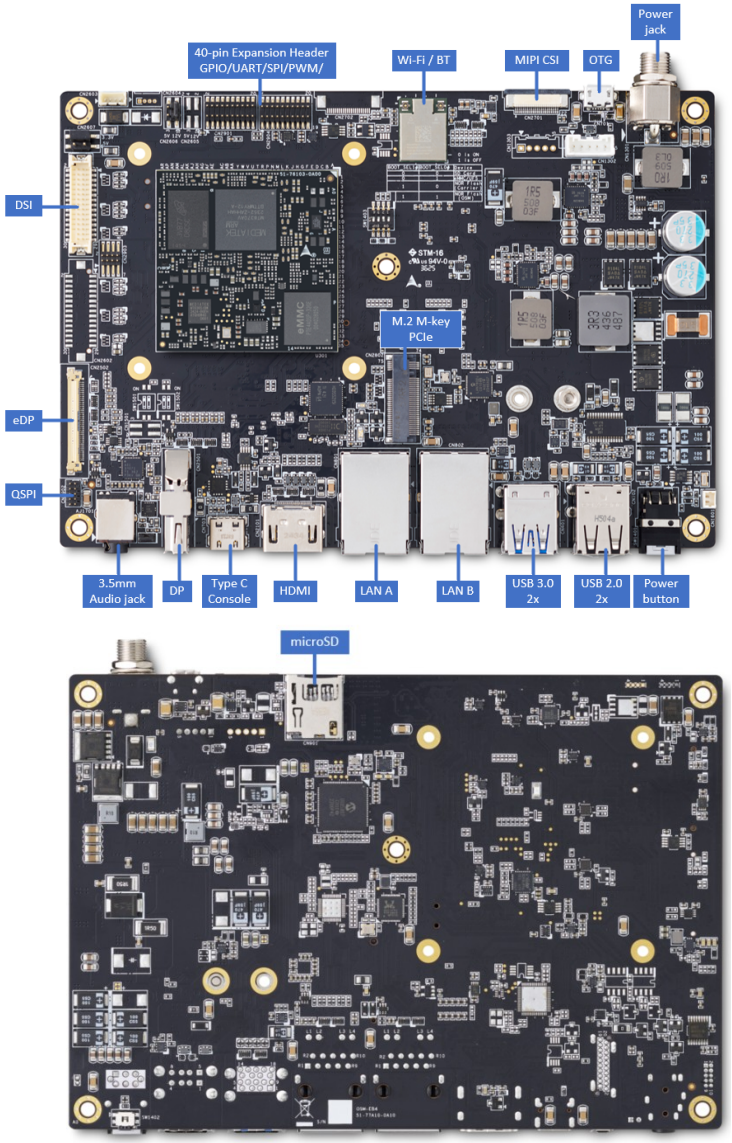
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Ordering Information

Part Name	Description/Configuration
OSM-MTK510-2G-32G-CT	OSM Size-L module with Genio 510 SOC , NPU , 2 GB LPDDR4, 32 GB eMMC, 0°C to 70°C
OSM-MTK510-4G-32G-ER	OSM Size-L module with Genio 510 SOC , NPU , 4 GB LPDDR4, 32 GB eMMC, -40°C to 85°
I-Pi OSM-MTK510-2G-32G	I-Pi OSM Prototype Kit with OSM-MTK510-2G-32G-CT, EU/US 110/220V to 19V Adapter, USB debug cable

Note: Non-listed configurations are available upon request.



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