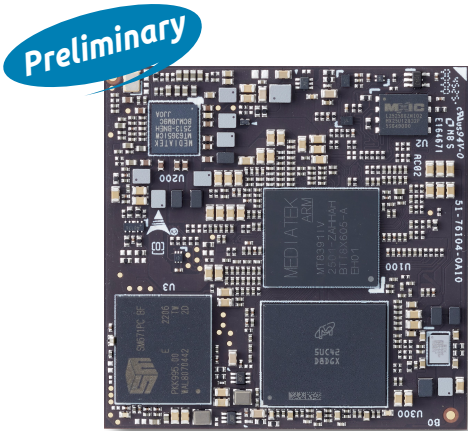
OSM-MTK520

OSM Size-L Module with MediaTek Genio 520 Series



Features

- MediaTek Genio 520 with dual-core Arm Cortex-A78 and hexa-core Cortex-A55
- MediaTek 8th Gen NPU, up to 10 TOPS (system)
- OSM revision 1.2 compliant
- DP, eDP, DSI, LVDS graphic output interfaces
- Rugged operating temperature option : -40°C to 85°C (standard SKU, consumer temperature)
- 10 year product availability
- USB 3.0 / 2.0 interfaces
- Gigabit RGMii Ethernet
- UFS 3.1

Specifications

Core System	SoC	Genio 520 with dual-core Cortex-A78 and hexa-core Cortex-A55 MediaTek 8th Gen NPU
	Memory	2/4/8/16 GB LPDDR5
	L2 Cache	256KB L2 cache per core
	Security	•Arm® TrustZone® •Security Boot (RSA4096) •Crypto Engine •True random number generation RNG

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
	DP	1x DP V1.4, 4 lanes
	eDP	1x eDP V1.4, 4 lanes
	MIPI DSI	1x MIPI DSI, 4 lanes (share-pin with LVDS)
	LVDS	1x LVDS, Single-channel (share-pin with MIPI DSI)
	Camera	2x CSI, 4 lanes • Compatible with the MIPI D-PHY specification v2.1 • Up to 4 data lanes, with a maximum data rate of 2.5 Gbps per lane
System Storage	SDIO	2x SDIO (4-bit), compatible with SD/SDIO standard, up to version 3.0
	UFS	64, 128, 256, or 512 GB (build option) Based on JEDEC Standard Universal Flash Storage version 3.1
Audio	Audio Codec	I^2S audio codec (located on the carrier)
Ethernet	Primary LAN	MAC 10/100/1000 RGMii interface with TSN
Extension Busses	USB	1x USB 3.1, 2x USB 2.0, 1x USB 2.0 OTG
	UART	4x UART interfaces (A: TX/RX/CTS/RTS; C & D: TX/RX; 1x console: TX/RX)
	SPI	3x SPI interfaces
	I^2S	2x I^2S interfaces
	I^2C	2x I^2C interfaces
	GPIO	22x GPIOs with interrupts
Power	Input	5V DC +/-5%
Mechanical and Environmental	Form Factor	SGeT OSM revision 1.2
	Dimensions	OSM Size-L 45x45 mm
	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-202F, Method 213B, Table 213-I, Condition A and Method 214A, Table 214-I, Condition D
	HALT	Thermal Stress, Vibration Stress, Thermal Shock and Combined Test
Operating Systems	Standard Support	Yocto Linux BSP, Android (by project), Ubuntu (by project)

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.

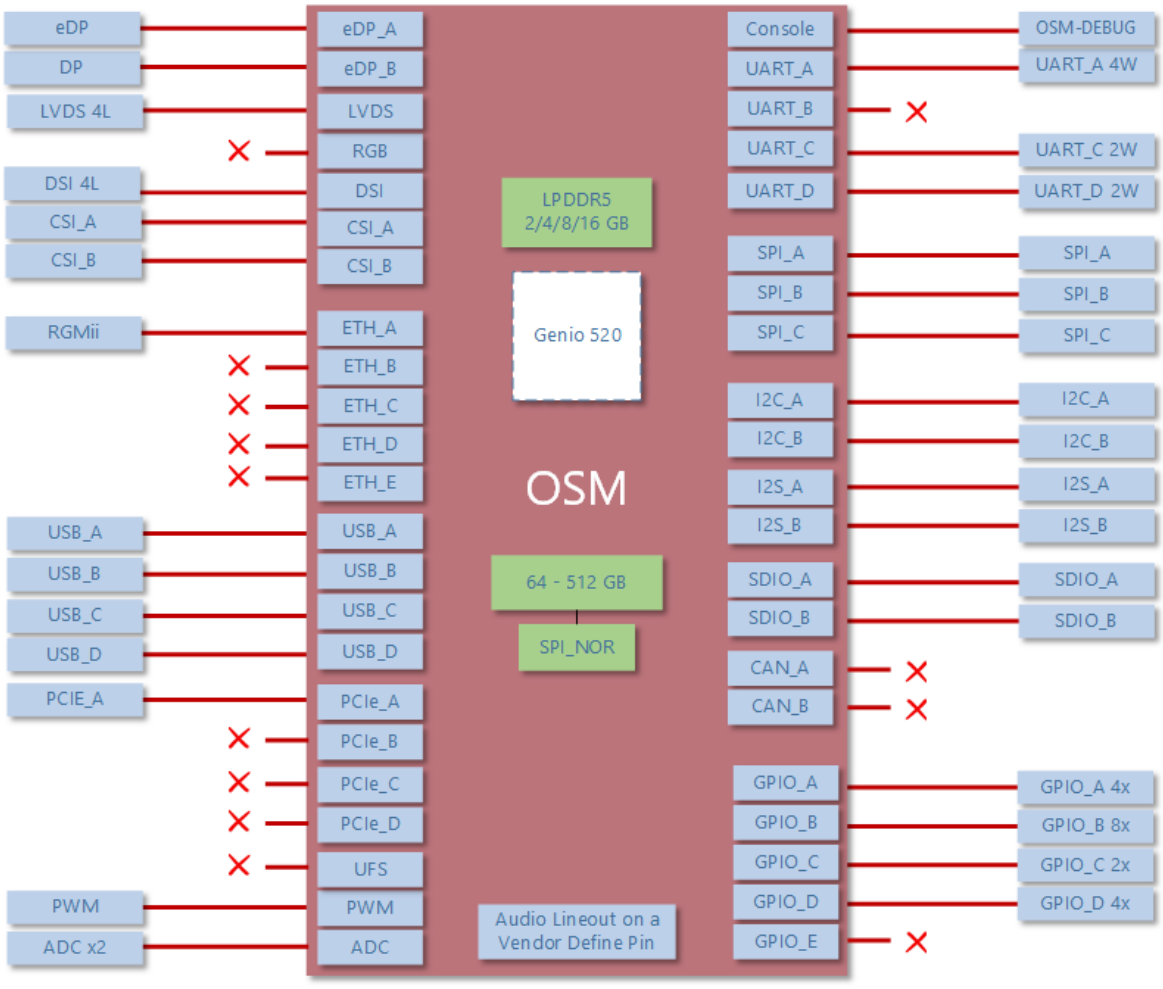
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Ordering Information

Part name	Description/Configuration
OSM-MTK520-4G-64G-CT	OSM module L size with 8 Core Genio 520, NPU, 4 GB LPDDR5, 64 GB UFS, 0°C to 60°C
OSM-MTK520-4G-64G-ER	OSM module L size with 8 Core Genio 520, NPU, 4 GB LPDDR5, 64 GB UFS, -40°C to 85°C

Note: Non-listed configurations are available upon request.

Block diagram



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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