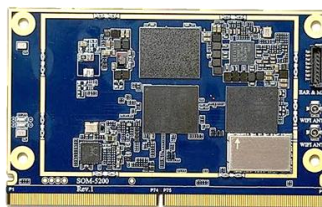


## SOM Modules

# VIA SOM-5200

Fanless low-power platform for Edge AI applications with MediaTek Genio 520 Octa-Core processor



## Features

- Dedicated high-performance Edge AI engine delivering a massive 10 TOPS of powerful on-device processing
- Exceptional power efficiency
- Advanced 4K multimedia and dual full HD display support
- Broad OS support for development (Android, Yocto Linux and Debian)
- Platform scalability & rich I/O connectivity



## Specifications

<b>Model Name</b>	SOM-5200
<b>Processor</b>	MediaTek Genio 520 Octa-Core Processor <ul style="list-style-type: none"><li>- Two Cortex-A78 @ 2.2GHz</li><li>- Six Cortex-A55 @ 2.0GHz</li></ul>
<b>System Memory</b>	8GB/16GB LPDDR5X SDRAM (1 x LPDDR5X)
<b>Storage</b>	128GB UFS Flash Memory
<b>Graphics</b>	ARM Mali-G57 MC2 High Performance GPU Graphics engine supporting OpenGL® ES 1.1/2.0/3.2, OpenCL ES 2.2, Vulkan 1.0/1.1 hardware acceleration Supports H.265 and H.264 video decoding up to 4K@60fps and video encoding up to 4K@30fps
<b>AI Processor</b>	MediaTek NPU 850 (supports up to 10 TOPS)
<b>Ethernet</b>	Integrated single-port Gigabit Ethernet Transceiver
<b>PMIC/Audio Codec</b>	MediaTek MT6365
<b>Display</b>	1 set of MIPI DSI 4D1C (MIPI C/D PHY) <ul style="list-style-type: none"><li>- C-PHY: 2.0Gbps</li><li>- D-PHY: 2.5Gbps</li></ul> 1 set of 4-Lane eDP 1.4b-TX supporting 5.4Gbps per lane
<b>Supported I/O through Golden Finger</b>	1 MIPI DSI 1 eDP 1 MIPI CSI 1 SDIO 2 SPI 2 I2S 6 I2C 4 UART 2 USB 3.2 3 USB 2.0 1 PCIe (1-Lane) 1 Gigabit Ethernet 1 Watchdog Management 1 GPIO 1 PWR with GND
<b>Onboard I/O</b>	1 Audio connector for Headphone out, Line out and MIC-in 2 Digital MICs 1 4-Lane MIPI CSI-2 connector
<b>Operating System</b>	Android 15, Yocto 5.0, Debian 12
<b>Operating Temperature</b>	0°C ~ 60°C
<b>Operating Humidity</b>	0% ~ 95% (relative humidity; non-condensing)
<b>Form Factor</b>	SMARC 2.2 82mm x 50mm (3.22" x 2")
<b>Compliance</b>	CE, FCC, TELEC, UKCA

## Specifications

<b>Model Name</b>	<b>SOMDB8 Carrier Board</b>
<b>HDMI</b>	Single Chip 4-Lane DisplayPort 1.4 to HDMI 2.1 Converter with Embedded MCU
<b>Ethernet</b>	GbE USB 3.0 Ethernet Network Interface Controller
<b>Audio Amplifier</b>	3W Audio Power Amplifier with Shutdown Mode
<b>USB</b>	USB 3.1 Gen1 Hub Controller
<b>High-Speed Signal Switches</b>	8-to-4 differential channel multiplexer/demultiplexer switch 2:1 MIPI 4-Lane data switch
<b>Power Delivery</b>	USB Type C and USB PD Controller
<b>Power Management IC</b>	MediaTek MT6375
<b>MCU</b>	Mixed-signal microcontrollers with CAN-FD interface
<b>Onboard I/O</b>	1 MXM 314-pin connector 1 MIPI DSI connector 1 LVDS single-channel connector (shared with MIPI DSI) 1 HDMI connector 1 4-Lane MIPI CSI-2 connector 1 SIM connector 1 M.2 3052 B-Key Slot (supports USB 3.2/SIM for a LTE/5G module) 1 M.2 2230 E-Key Slot (supports PCIe x 1 for a Wi-Fi module) 1 M.2 2242 M-Key Slot (supports PCIe x 1 for a SSD module) 1 Battery charge connector 1 Audio connector (supports headphone-out, line-out and MIC-in) 1 ADC/GPIO pin header for multiplexed Analog inputs/GPIOs (supported by MCU) 1 RTC battery connector 2 4-wire UART connectors (TX/RX/CTS/RTS) 1 WDT select pin header 1 Console connector 1 DC-in select pin header 1 12V DC-in power connector
<b>Front I/O</b>	1 Volume+ button 1 Volume- button 1 MicroSD card slot
<b>Back I/O</b>	1 USB 3.2 and PD Type C port 1 DisplayPort-over-USB Type C port 2 USB 2.0 Type A ports 1 Micro USB 2.0 port (for image download) 2 GLAN ports 1 9-pin D-sub connector (supports CAN-FD) 1 3.5mm Audio jack (supports Headphone-out and MIC-in) 1 4-way spring clip socket (supports speaker-out) 1 Reset button 1 Power button with LED
<b>Power Supply</b>	12V DC-in or USB 5VDC
<b>Operating Temperature</b>	0°C ~ 60°C
<b>Operating Humidity</b>	0% ~ 95% (relative humidity ; non-condensing)
<b>Form Factor</b>	151mm x 134mm (5.94" x 5.28")