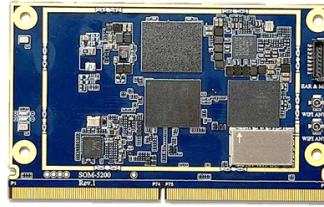


## SOM Modules

# VIA SOM-5200

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



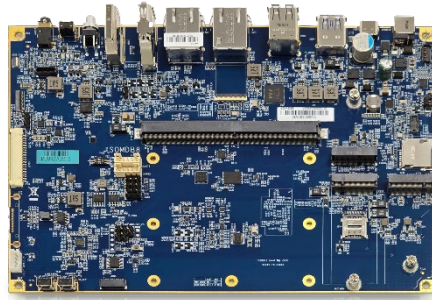
## Features

- 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>	<b>SOM-5200</b>
<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

Model Name	SOMDB8 Carrier Board
HDMI	Single Chip 4-Lane DisplayPort 1.4 to HDMI 2.1 Converter with Embedded MCU
Ethernet	GbE USB 3.0 Ethernet Network Interface Controller
Audio Amplifier	3W Audio Power Amplifier with Shutdown Mode
USB	USB 3.1 Gen1 Hub Controller
High-Speed Signal Switches	8-to-4 differential channel multiplexer/demultiplexer switch 2:1 MIPI 4-Lane data switch
Power Delivery	USB Type C and USB PD Controller
Power Management IC	MediaTek MT6375
MCU	Mixed-signal microcontrollers with CAN-FD interface
Onboard I/O	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
Front I/O	1 Volume+ button 1 Volume- button 1 MicroSD card slot
Back I/O	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
Power Supply	12V DC-in or USB 5VDC
Operating Temperature	0°C ~ 60°C
Operating Humidity	0% ~ 95% (relative humidity ; non-condensing)
Form Factor	151mm x 134mm (5.94" x 5.28")