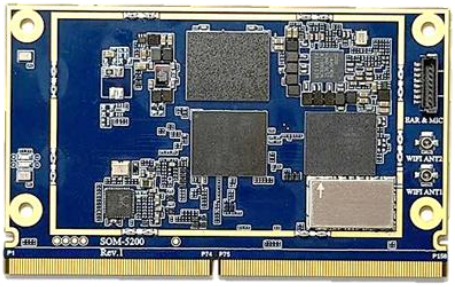
SOM Modules

VIA

SOM-5200

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

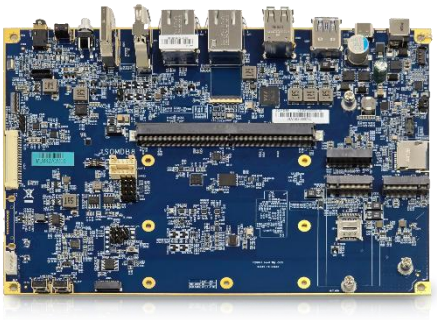


Features

- 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

Model Name	SOM-5200
Processor	MediaTek Genio 520 Octa-Core Processor - Two Cortex-A78 @ 2.2GHz - Six Cortex-A55 @ 2.0GHz
System Memory	8GB/16GB LPDDR5X SDRAM (1 x LPDDR5X)
Storage	64GB/128GB UFS Flash Memory
Graphics	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
AI Processor	MediaTek NPU 850 (supports up to 10 TOPS)
WiFi	Mediatek MT6631XN/B Wi-Fi 6 Transceiver
Ethernet	Integrated single-port Gigabit Ethernet Transceiver
PMIC/Audio Codec	MediaTek MT6365
Display	1 set of MIPI DSI 4D1C (MIPI C/D PHY) - C-PHY: 2.0Gbps - D-PHY: 2.5Gbps 1 set of 4-Lane eDP 1.4b-TX supporting 5.4Gbps per lane
Supported I/O through Golden Finger	1 MIPI DSI 1 eDP 2 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 Watchdog Management, GPIO, PWR with GND
Onboard I/O	1 Audio connector for Headphone out, Line out and MIC-in 2 Digital MICs
Operating System	Android 15, Yocto 5.0, Debian 13
Operating Temperature	0°C ~ 60°C
Operating Humidity	0% ~ 95% (relative humidity; non-condensing)
Form Factor	SMARC 2.2 82mm x 50mm (3.22" x 2")
Compliance	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 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 Audio connector (supports headphone-out, line-out and MIC-in) 1 RTC battery connector 2 4-wire UART connectors (TX/RX/CTS/RTS) 1 WDT select pin header 1 12V DC-in power connector 1 2-Lane MIPI-CSI2 connector 1 Console connector 1 1x3pin MCU BSL mode 1 1x3pin MCU FW update 1 MCU reset button
Front I/O	1 Volume+ button 1 Volume- button 1 MicroSD card slot
Back I/O	2 USB 2.0 Type A ports 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 1 USB Type C connector (for image download) 1 DP connector
Power Supply	12V DC-in
Operating Temperature	0°C ~ 60°C
Operating Humidity	0% ~ 95% (relative humidity ; non-condensing)
Form Factor	205 x 140mm (8.07"x 5.27")