

## SOM Evaluation Kits

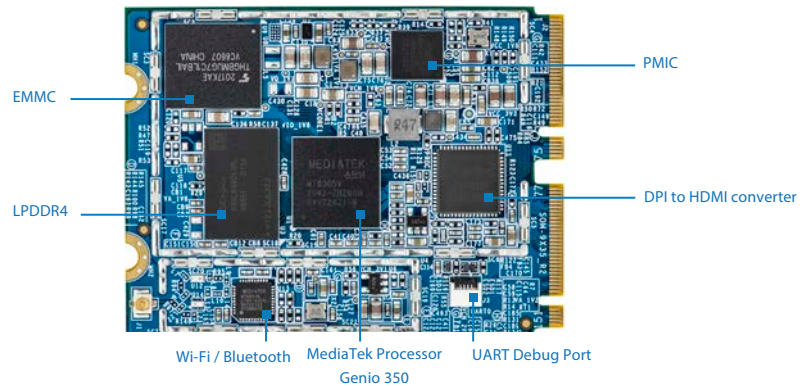
### VIA SOM-3000

Fanless low-power platform for Edge AI applications with Quad-Core MediaTek Genio 350 SoC

#### Features

- High-performance MediaTek Genio 350 Quad-Core SoC
- Integrated AI processor for Edge AI applications
- Dual-band 802.11ac Wi-Fi with Bluetooth 5.0
- Dual MIPI camera and display support
- Optional 4G LTE mobile broadband support with onboard miniPCIe and SIM card slots

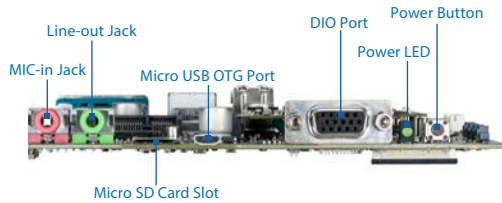
#### Board Placement



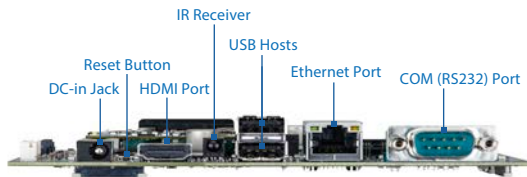
#### Specifications

<b>Model Name</b>	<b>SOM-3000</b>
<b>Processor</b>	2.0GHz MediaTek Genio 350 Cortex-A53 Quad-Core SoC
<b>System Memory</b>	2GB LPDDR4 SDRAM
<b>Storage</b>	16GB eMMC Flash Memory
<b>Graphics</b>	ARM Mali-G52 3EE MC1 GPU 3D graphics accelerator capable of processing 1600M pixel/sec @ 800MHz Graphics engine supporting OpenGL® ES 3.2, OpenCL ES 2.0, and Vulkan 1.1 hardware acceleration Supports H.265 and H.264 video decoding up to 1080p @ 60fps Supports Cadence Tensilica Vision P6 and HiFi4
<b>Wireless Connectivity</b>	MediaTek MT6631 Dual band (2.4GHz & 5GHz) single stream Wi-Fi 802.11 a/b/g/n/ac RF Bluetooth 5.0
<b>PMIC/Audio Codec</b>	MediaTek MT6357/MT6390
<b>HDMI</b>	Lontium LT8618SXB Digital Parallel Interface to HDMI 1.4 transmitter
<b>Supported I/O through Golden Finger</b>	1 4-Lane MIPI DSI 2 4-Lane MIPI CSI 1 HDMI 1.4 1 USB 2.0 Host 1 USB 2.0 OTG 1 SPI 3 I2C 2 UART 2 MIC-in 1 Line-out 1 ADC 1 SDIO 3.0 6 GPIO 2 PWM 1 Battery Gas Gauge 1 3.4 ~ 4.2V DC-in
<b>Onboard I/O</b>	1 RF I-PEX (for RF antenna for Wi-Fi and Bluetooth) 1 Debug UART (for USB to UART debug board)
<b>Operating System</b>	Android 12, Yocto 3.1
<b>Operating Temperature</b>	0°C ~ 60°C
<b>Operating Humidity</b>	0% ~ 95% (relative humidity ; non-condensing)
<b>PCBA Form Factor</b>	60mm x 45mm
<b>Top heat spreader size</b>	50mm x 32mm
<b>Bottom heat spreader size</b>	48mm x 43mm
<b>Dimensions (with two-sided heat spreader)</b>	60mm x 45mm x 6.8mm (W x D x H)
<b>Compliance</b>	CE, FCC, TELEC, UKCA

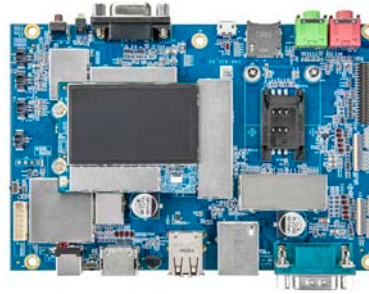
### VAB-935 Carrier Board Front Panel I/O



### VAB-935 Carrier Board Back Panel I/O



### VAB-935 Carrier Board



## Specifications

<b>Model Name</b>	<b>VAB-935 Carrier Board</b>
<b>USB</b>	Genesys GL852GT-MNG USB 2.0 MTT HUB
<b>LAN</b>	Realtek RTL8152BNI-VB-CG USB 2.0 to 10/100M Ethernet controller
<b>Onboard I/O</b>	<ul style="list-style-type: none"> <li>2 4-lane MIPI CSI connectors</li> <li>1 4-lane MIPI DSI connector</li> <li>1 Capacitive touch panel connector</li> <li>1 RTC battery connector</li> <li>1 Battery charger connector</li> <li>1 miniPCIe slot for 4G with GNSS</li> <li>1 SIM card slot</li> <li>1 Download button</li> <li>1 MIC connector</li> <li>2 Speaker connectors</li> <li>1 MCU upgrade connector</li> <li>1 I/O expansion connector (supports GPIO x 5, I2C x1, UART x1, SPI x1, PWM x 2, ADC x 1 from SOM-3000, and GPIO x 11 from Expander IC)</li> <li>2 M.2 connectors for VIA SOM-3000 module</li> </ul>
<b>Front Panel I/O</b>	<ul style="list-style-type: none"> <li>1 Micro USB 2.0 OTG port</li> <li>1 DIO port supporting 10 GPIO with 3.3V power</li> <li>1 Micro SD card slot</li> <li>2 Audio jacks : Line-out and MIC-in</li> <li>1 Power LED</li> <li>1 Power button</li> </ul>
<b>Back Panel I/O</b>	<ul style="list-style-type: none"> <li>1 HDMI port (supports 720p @ 60Hz)</li> <li>2 USB 2.0 ports</li> <li>1 COM port for RS232 (TX/RX)</li> <li>1 10/100Mbps Ethernet port</li> <li>1 DC-in jack</li> <li>1 Reset Button</li> <li>1 IR Receiver</li> </ul>
<b>Power Supply</b>	<ul style="list-style-type: none"> <li>12V DC-in (support 9V~15V)</li> <li>2-cell 8.4V Lion battery (optional)</li> </ul>
<b>Operation System</b>	Android 12, Yocto 3.1
<b>Operating Temperature</b>	0°C ~ 60°C
<b>Operating Humidity</b>	0% ~ 95% (relative humidity ; non-condensing)
<b>Form Factor</b>	3.5" SBC, 14.6cm x 10.2cm (5.75" x 4.02")

## Ordering Information

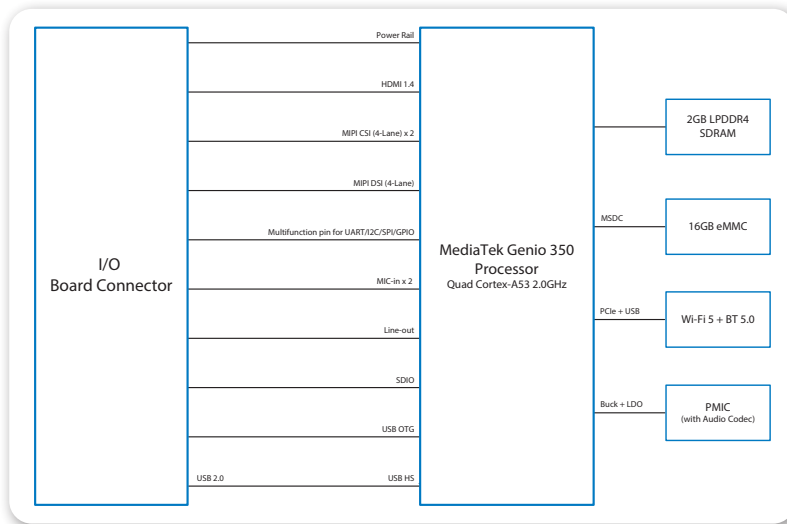
Part Number	SoC Frequency	Description
STK-SOM935-00A0	MediaTek Genio 350 Quad-Core SoC @ 2.0GHz	VIA SOM-3000 Evaluation Kit with VIA SOM-3000 module, VIA VAB-935 carrier board and accessory kit

## Optional Accessories

### Wireless Module Options

Part Number	Description
EMIO-2573-00A0	4G LTE mobile broadband miniPCIe module with two antennas and assembly (USA and Canada)

## Block Diagram



## Evaluation Kit Packing List

Items
VIA SOM-3000 module
VIA VAB-935 carrier board
7" MIPI LCD and touch panel
2.4G/5G Wi-Fi antenna
4 PIN FFC cable
13MP CMOS sensor camera module
2 x 2W Speakers
Microphone
3V, 240mAh RTC battery
USB to UART debug board
12V AC power adapter

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