

## Edge AI Platforms

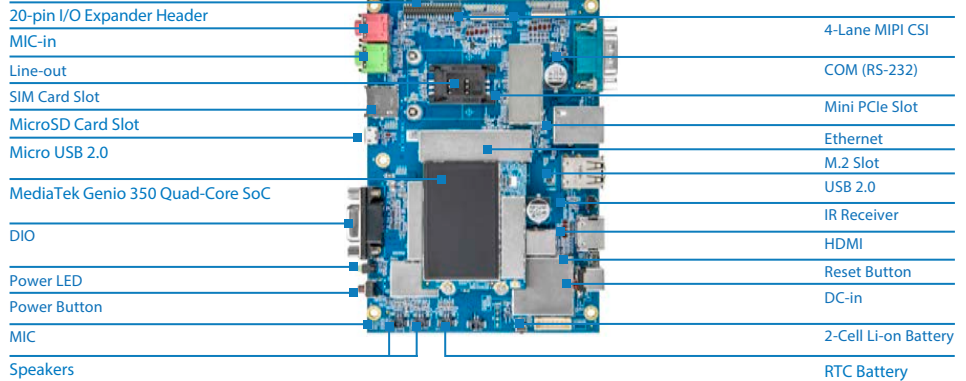
# VIA VAB-3000

Fanless low-power platform for Edge AI applications with flexible I/O and rich connectivity

## Features

- Compact 3.5" SBC Form Factor
- High-performance quad-core MediaTek Genio 350 processor
- Integrated AI processor for Edge AI applications
- Full HD hardware accelerated H.265/H.264 video decoding
- Dual-band 802.11a/b/g/n/ac Wi-Fi with Bluetooth 5.0, plus onboard SIM card slot

## Board Placement

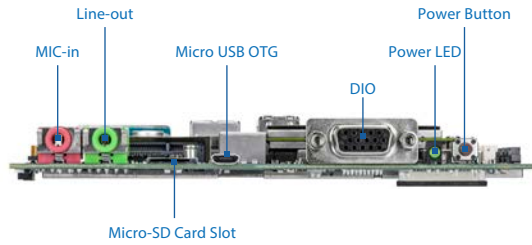


## Specifications

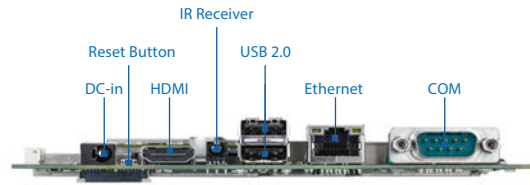
<b>Model Name</b>	<b>VAB-3000</b>
<b>Processor</b>	2.0GHz MediaTek Genio 350 Cortex-A53 quad-core SoC
<b>System Memory</b>	2GB LPDDR4 SDRAM
<b>Storage</b>	16GB eMMC 5.1 Flash Memory
<b>Graphics</b>	ARM Mali-G52 3EE MC1 high-performance GPU 3D graphics accelerator - 1600M pixel/sec @ 800MHz Graphics engine supporting OpenGL® ES 3.0, OpenCL ES 1.1, 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>Audio</b>	MediaTek MT6357/MT6390
<b>Onboard I/O</b>	2 MIPI CSI 4-lane connectors 1 MIPI DSI 4-lane connector 1 Capacitive touch panel connector 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) 1 UART connector (for debugging) 1 miniPCIe (supports optional 4G module with GNSS) 1 SIM card slot 1 RTC battery connector 1 Battery charger connector 2 Speaker connectors and 1 Mic connector 1 MCU upgrade connector 1 Download button
<b>Front Panel I/O</b>	1 Micro SD card slot 1 Micro USB 2.0 OTG port 1 DIO port supporting 10 GPIO with 3.3V power 2 Audio jacks: Line-out and Mic-in 1 Power LED 1 Power button
<b>Back Panel I/O</b>	1 HDMI port (supports 720p @ 60Hz) 2 USB 2.0 ports 1 COM port for RS232 (TX/RX) 1 10/100Mbps Ethernet port 1 DC-in jack 1 Reset Button 1 IR Receiver
<b>Power Supply</b>	12V DC-in (supports 9V~15V) 2-cell 8.4V Lion battery (optional)
<b>Operating System</b>	Android 12, Yocto 3.1
<b>Operating Temperature</b>	0°C ~ 60°C



## Front Panel I/O



## Back Panel I/O



## Specifications

<b>Model Name</b>	<b>VAB-3000</b>
<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")
<b>Compliance</b>	CE, FCC, TELEC, UKCA

## Ordering Information

Part Number	SoC Frequency	Description
10GPE20G20020A0	MediaTek Genio 350 Quad-Core SoC @ 2.0GHz	VAB-3000 3.5" board and SOM module with 2.0GHz MediaTek Genio 350 Cortex-A53 quad-core SoC, 16GB eMMC, 2GB LPDDR4 SDRAM, HDMI, CSI, DSI, 2 USB 2.0, Micro USB 2.0 OTG, DIO, COM, 10/100Mbps Ethernet, Wi-Fi 5 + Bluetooth 5.0, mini PCIe, SIM card slot, Micro SD card slot, 12V DC-in

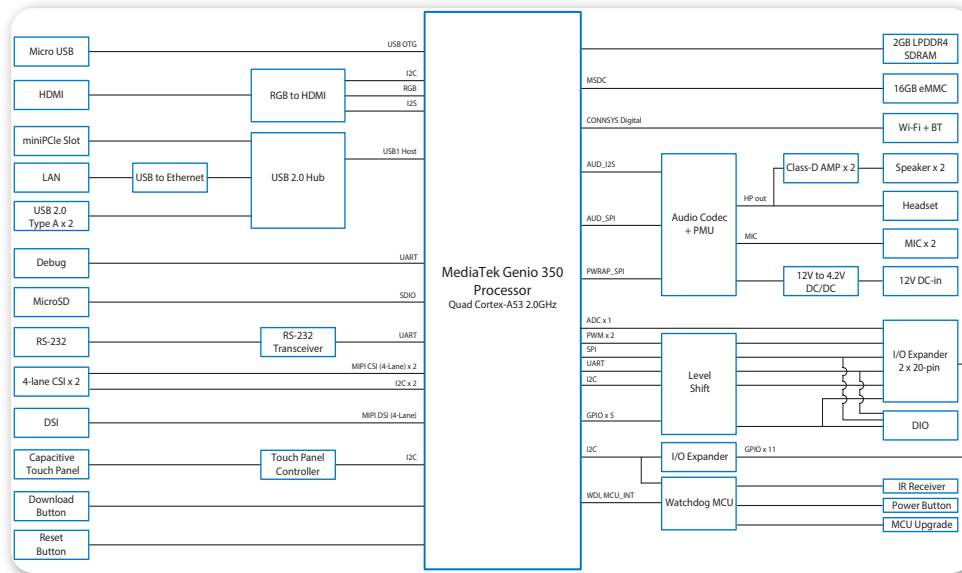
## Optional Accessories

Wireless Module Option	
Part Number	Description
EMIO-2575-00A0	4G LTE mobile broadband miniPCIe module with two antennas and assembly (Japan only)

Development Option	
Part Number	Description
VAB-3000-1D00A0	Development kit including USB to UART debug board and 4-pin FFC cable

## Block Diagram



## Packing List

### Items

VIA VAB-3000 board