

Edge AI Platforms

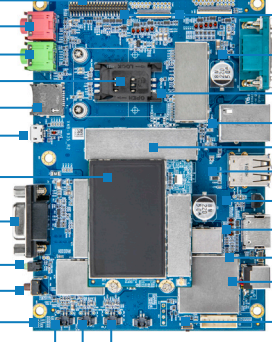
VIA VAB-3000

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



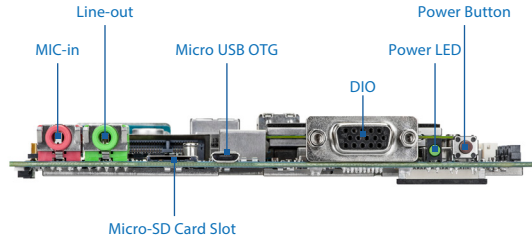
20-pin I/O Expander Header	4-Lane MIPI CSI
MIC-in	COM (RS-232)
Line-out	Mini PCIe Slot
SIM Card Slot	Ethernet
MicroSD Card Slot	M.2 Slot
Micro USB 2.0	USB 2.0
MediaTek Genio 350 Quad-Core SoC	IR Receiver
DIO	HDMI
Power LED	Reset Button
Power Button	DC-in
MIC	2-Cell Li-on Battery
Speakers	RTC Battery

Specifications

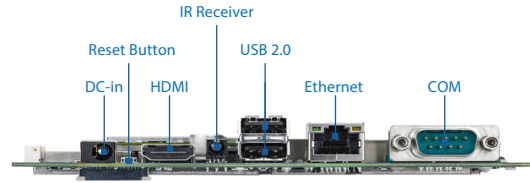
Model Name	VAB-3000
Processor	2.0GHz MediaTek Genio 350 Cortex-A53 quad-core SoC
System Memory	2GB LPDDR4 SDRAM (1GB/4GB optional)
Storage	16GB eMMC 5.1 Flash Memory
Graphics	ARM Mali-G52 3EE MC1 high-performance GPU 3D graphics accelerator - 1600M pixel/sec @ 800MHz Graphics engine supporting OpenGL® 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
Wireless Connectivity	MediaTek MT6631 - Dual band (2.4GHz & 5GHz) single stream Wi-Fi 802.11 a/b/g/n/ac RF - Bluetooth 5.0
Audio	MediaTek MT6357/MT6390
Onboard I/O	2 MIPI CSI 4-lane connectors 1 MIPI DSI 1 6-pin 10.1" touch screen connector (by ODM request) 1 2x15-pin Touch screen connector 1 I/O expansion connector (supports GPIO x 14) 1 UART connector (for debugging) 1 Mini PCIe (supports optional 4G module) 1 SIM card slot 1 RTC battery connector 1 Battery charger connector 2 Speaker connectors; 1 Mic connector 1 MCU upgrade connector 1 Reset button 1 Download button
Front Panel I/O	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
Back Panel I/O	1 HDMI port 2 USB 2.0 ports 1 COM connector for RS-232 (TX/RX) 1 10/100Mbps Ethernet port 1 IR receiver 1 12V DC-in jack
Power Supply	12V DC-in (supports 9V~15V) 2-cell 8.4V Lion battery (optional)
Operating System	Android 10, Yocto 3.1
Operating Temperature	-40°C ~ 85°C



Front Panel I/O



Back Panel I/O



Specifications

Model Name	VAB-3000
Operating Humidity	5% ~ 85% (relative humidity; non-condensing)
Form Factor	14.6cm x 10.2cm (5.75" x 4.02")
Compliance	CE, FCC, TELEC, UKCA

Ordering Information

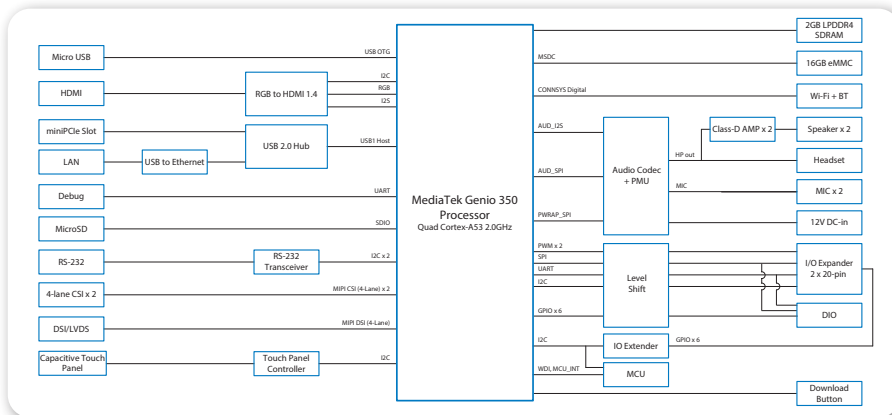
Part Number	SoC Frequency	Description
10GPE20G20020	MediaTek Genio 350 Quad-Core SoC @ 2.0GHz	VAB-3000 3.5" board and SOM module with 2.0GHz MediaTek Genio 350 Cortex-A53 quad-core SoC, 16GB eMMC, 2GB LPDDR4 SDRAM, HDMI, CSI, DSI, 2 USB 2.0, Micro USB 2.0 OTG, DIO, COM, 10/100Mbps Ethernet, Wi-Fi 5 + Bluetooth 5.0, mini PCIe, SIM card slot, Micro SD card slot, 12V DC-in

Optional Accessories

Wireless Module Options

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

Block Diagram



Packing List

Items

VIA VAB-3000 board