

ARM-based EPIC Board

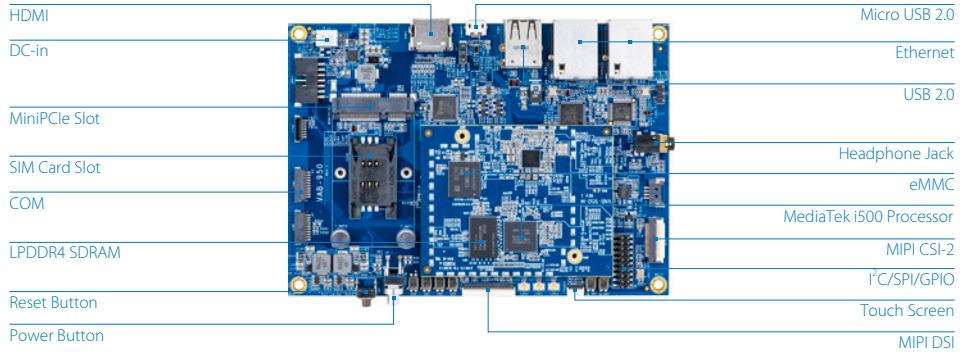
VIA VAB-950

Fanless low-power platform for AIoT applications with octa-core MediaTek i500 processor

Features

- High-performance octa-core MediaTek i500 processor
- Integrated AI processor for AIoT applications
- Full HD hardware accelerated H.265/H.264 video decoding
- Dual-band 802.11ac Wi-Fi with Bluetooth 5.0, plus onboard SIM card slot
- MIPI DSI display, and MIPI CSI-2 camera support

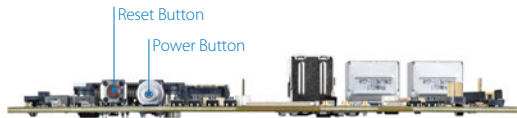
Board Placement



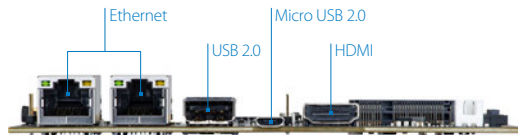
Specifications

Model Name	VAB-950-V2	VAB-950-V4
SOM-9X50 Module	Processor	
	MediaTek i500 octa-core Processor - Four Cortex-A73 @ 2.0GHz - Four Cortex-A53 @ 2.0GHz	
	System Memory	2GB LPDDR4 SDRAM
	Storage	16GB eMMC Flash memory
	Graphics	
	ARM Mali-G72 high-performance GPU 3D graphics accelerator capable of processing 2400M pixel/sec @ 800MHz Graphics engine supporting OpenGL® ES 3.0, OpenCL ES 1.1, and Vulkan 1.0 hardware acceleration Supports H.265 and H.264 video decoding up to 1080p@30fps Supports Cadence Tensilica Vision P6 x2 DSP	
	Supported I/O through IO connector	
	1 HDMI port 1 MIPI DSI connector 1 MIPI CSI-2 connector 1 Multi-function pins for I²C, SPI, GPIO 1 JTAG	
	Form Factor	
	7cm x 5.5cm (2.75" x 2.2")	
Wireless Connectivity	MediaTek MT7668 - 2x2 Dual-band Wi-Fi 802.11ac with MU-MIMO - Bluetooth 5.0	
Audio	MediaTek MT6358	
HDMI	ITE IT66121FN Digital Parallel Interface to HDMI 1.3a transmitter	
USB	TI TS3USB21 High-speed USB 2.0 (480Mbps) 1:2 Multiplexer/Demultiplexer Switch With Single Enable Microchip LAN9514 USB 2.0 to USB hub and 10/100Mbps Ethernet controller	
LAN	ASIX AX88772 USB 2.0 to Fast Ethernet controller	
Onboard I/O	1 COM port (supports RS-232 TX/RX) 1 Debug port (supports RS-232 TX/RX) 1 JTAG connector 1 MIPI DSI connector 1 MIPI CSI-2 connector 1 Touch screen connector (includes I²C for capacitive touch) 1 SIM card slot 1 MiniPCIe slot (supports USB 2.0 connectivity for optional 4G module) 4 Keypad buttons 1 Mono speaker-out connector 1 Miscellaneous pin header (for 1 I²C pair, 1 SPI and 12 GPIOs) 1 Battery charger connector (supports I²C and Gas gauge) 3 IPEX connectors (for RF antennas for Wi-Fi and Bluetooth) 2 USB host/device jumpers 1 12V DC-in connector	
Front Panel I/O	1 Power button with LED 1 Reset button	

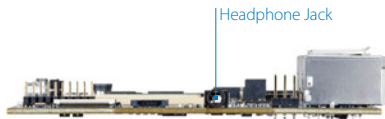
Front Panel I/O



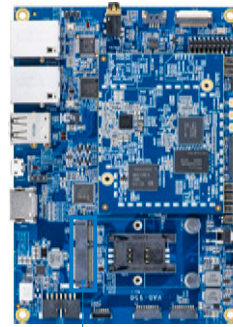
Back Panel I/O



Right Panel I/O



Accessories



10.1" WUXGA 16:10 Color TFT-LCD Panel



EMIO-2574 miniPCIe 4G LTE Mobile Broadband Module

Specifications

Model Name	VAB-950-V2	VAB-950-V4
Back Panel I/O	1 HDMI port 1 USB 2.0 port 1 Micro USB 2.0 port (for OS image upload only) 2 10/100Mbps Ethernet ports	
Right Panel I/O	1 Audio jack (supports Headphone and Mic-in)	
Power Supply	12V DC-in	
Operating System	Android 10, Yocto 2.6	
Operating Temperature	0°C ~ 60°C	
Operating Humidity	0% ~ 95% (relative humidity; non-condensing)	
Form Factor	EPIC, 14cm x 10cm (5.51" x 3.94")	

Ordering Information

Part Number	SoC Frequency	Description
10GMV20620020	MediaTek i500 octa-core Processor @ 2.0GHz/2.0GHz	EPIC board and SOM module with 2.0GHz MediaTek i500 octa-core Processor, 16GB eMMC, 2GB LPDDR4 SDRAM, HDMI, USB 2.0, Micro USB 2.0, DSI, CSI, COM, GPIO, 2 10/100Mbps Ethernet, miniPCIe, SIM card slot, Wi-Fi + Bluetooth 5.0, 12V DC-in
10GMV20610020	MediaTek i500 octa-core Processor @ 2.0GHz/2.0GHz	EPIC board and SOM module with 2.0GHz MediaTek i500 octa-core Processor, 16GB eMMC, 4GB LPDDR4 SDRAM, HDMI, USB 2.0, Micro USB 2.0, DSI, CSI, COM, GPIO, 2 10/100Mbps Ethernet, miniPCIe, SIM card slot, Wi-Fi + Bluetooth 5.0, 12V DC-in
10GMU20600020	MediaTek i500 octa-core Processor @ 2.0GHz/2.0GHz	SOM module with 2.0GHz MediaTek i500 octa-core Processor, 16GB eMMC, 2GB LPDDR4 SDRAM
10GMU20610020	MediaTek i500 octa-core Processor @ 2.0GHz/2.0GHz	SOM module with 2.0GHz MediaTek i500 octa-core Processor, 16GB eMMC, 4GB LPDDR4 SDRAM

Optional Accessories

AC-to-DC Adapter

Part Number	Description
99G63-020516	AC-to-DC adapter, DC 12V, 36W (Power cord not included)

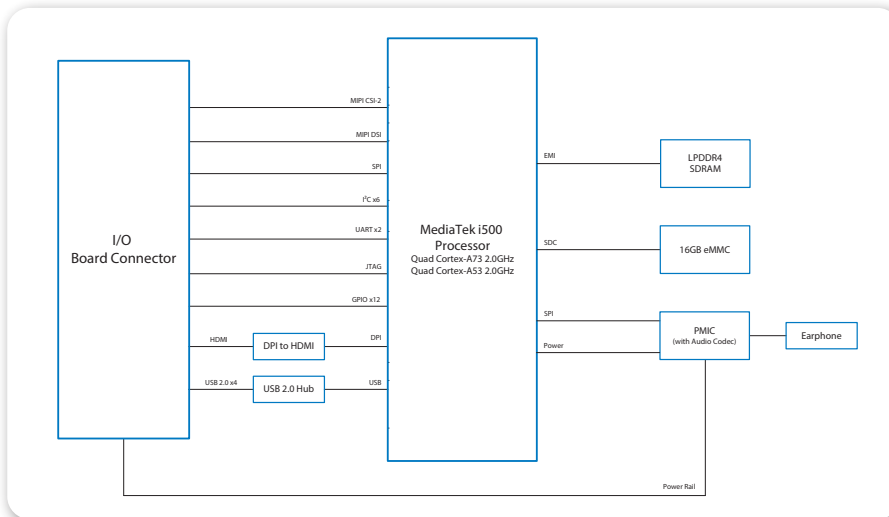
MIPI DSI LCD Panel

Part Number	Description
99G47-01025F	10.1" WUXGA 16:10 Color TFT-LCD with LED Backlight

Wireless Accessories

Part Number	Description
EMIO-2574-00A0	SIM7600JC-H-PCIE 4G LTE mobile broadband full-size miniPCIe module with assembly kit & antenna (for Docomo/KDDI/Softbank)

Block Diagram



Packing List

Items

- VAB-950 board
- DC power jack cable