

Edge AI Systems

VIA ARTiGO A5000

Fanless ultra-compact Octo-Core ARM system for Edge AI applications



Features

- High-performance MediaTek Genio 700 Octa-Core processor
- Powerful and efficient MediaTek Deep Learning Accelerator (MDLA) 3.0 and Cadence® Tensilica® Vision P6 NPU supporting up to 4 TOPS
- 4K hardware accelerated H.265/H.264 video encoding and decoding
- Dual-band Wi-Fi 6
- AHD camera and LVDS touch display panel support for Edge deployments

Specifications

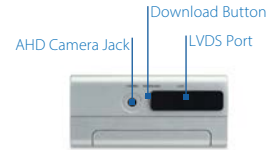
Model Name	ATG-A5000-LE08A0	ATG-A5000-LE48A0	ATG-A5000-LE58A0
Processor	MediaTek Genio 700 Octa-Core Processor - Two Cortex-A78 @ 2.2GHz - Six Cortex-A55 @ 2.0GHz		
System Memory	8GB LPDDR4X (2 x DRAM)		
Storage	16GB eMMC Flash Memory		
Graphics	ARM Mali-G57 MC3 High Performance GPU Graphics engine supporting OpenGL® ES 1.1/2.0/3.2, OpenCL ES 2.2, and Vulkan 1.0/1.1 hardware acceleration Supports H.265 and H.264 video decoding up to 4K@75fps and video encoding up to 4K@30fps		
AI Processor	MediaTek Deep Learning Accelerator (MDLA) 3.0 and Cadence® Tensilica® Vision P6 NPU (supports up to 4 TOPS)		
Audio DSP	Cadence® Tensilica® HiFi 5 DSP		
Wireless Connectivity	Dual-band Wi-Fi 6 only	Dual-band Wi-Fi 6 4G LTE	Dual-band Wi-Fi 6 5G
Audio	MediaTek MT6365		
USB	VIA VL817 USB 3.1 Gen1 Hub Controller		
Video	Integrated HDMI 2.0b Transmitter		
Ethernet	Realtek RTL8211F(I)-CG Gigabit Ethernet Transceiver		
Onboard I/O	2 Internal RF antennas for Wi-Fi		
Front Panel I/O	1 MicroSD Card Slot		
Right Panel I/O	1 LVDS port for display and touch panels 1 Download button 1 2.5mm AHD camera jack		
Back Panel I/O	1 HDMI port 2 USB 3.1 ports 1 Micro USB 2.0 OTG port 1 Gigabit Ethernet port 1 3.5mm headphone jack (supports Headphone-out and MIC-in) 1 Power button with LED 1 Reset button 1 12V DC-in power connector		
Bottom Panel I/O	1 UART connector for debugging	1 Nano SIM card slot 1 UART connector for debugging	
Power Supply	12V DC-in		
Operating System	Android 13, Yocto 4.0, Debian 12		
Operating Temperature	-20°C ~ 60°C		
Operating Humidity	0~95% (relative humidity; non-condensing)		
Mechanical Construction	Metal or Plastic Chassis		
Dimensions	118.61mm(W) x 37.6mm(H) x 82.20mm(D)		
Compliance	CE, FCC, BSMI, NCC, UKCA, TELEC		



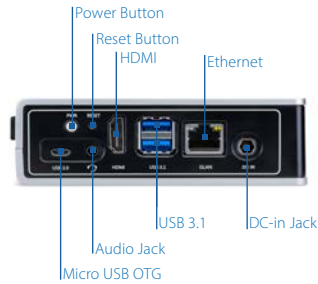
Front Panel I/O



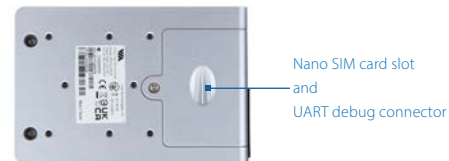
Right Panel I/O



Back Panel I/O



Bottom Panel I/O



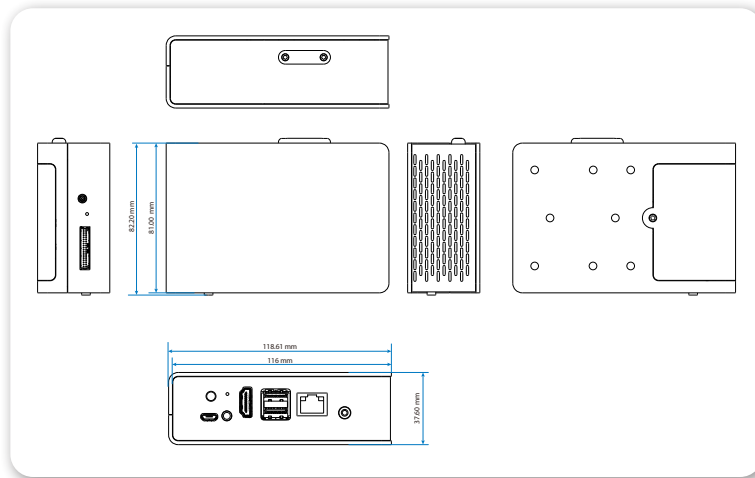
Ordering Information

Part Number	SoC Frequency	Description
ATG-A5000-LE08A0	MediaTek Genio 700 Octa-Core SoC @ 2.2GHz/2.0GHz	VIA ARTiGO A5000 system with 2.2/2.0GHz MediaTek Genio 700 Octa-Core SoC, 8GB LPDDR4X DRAM, 16GB eMMC, HDMI, LVDS, AHD camera jack, GLAN, 2 USB 3.1, Micro USB 2.0, Audio jack, Wi-Fi 6, MicroSD card slot, 12V DC-in
ATG-A5000-LE48A0 (for Japan only)	MediaTek Genio 700 Octa-Core SoC @ 2.2GHz/2.0GHz	VIA ARTiGO A5000 system with 2.2/2.0GHz MediaTek Genio 700 Octa-Core SoC, 8GB LPDDR4X DRAM, 16GB eMMC, HDMI, LVDS, AHD camera jack, GLAN, 2 USB 3.1, Micro USB 2.0, Audio jack, Wi-Fi 6, 4G LTE, Nano SIM card slot, MicroSD card slot, 12V DC-in
ATG-A5000-LE58A0 (for Japan only)	MediaTek Genio 700 Octa-Core SoC @ 2.2GHz/2.0GHz	VIA ARTiGO A5000 system with 2.2/2.0GHz MediaTek Genio 700 Octa-Core SoC, 8GB LPDDR4X DRAM, 16GB eMMC, HDMI, LVDS, AHD camera jack, GLAN, 2 USB 3.1, Micro USB 2.0, Audio jack, Wi-Fi 6, 5G, Nano SIM card slot, MicroSD card slot, 12V DC-in

Optional Accessories

Camera Option	
Part Number	Description
ATG-AX000-CM00A0	1080P AHD camera and cable
Display Options	
Part Number	Description
ATG-AX000-LP15A0	15.6" LVDS display panel with cable
ATG-AX000-LP05A0	5" LVDS touch display panel with cable
Development Option	
Part Number	Description
10GNN00000020	Debug card and cable

Dimensions



Packing List

Items

- ARTiGO A5000 system
- 12V 6.67A AC-to-DC adapter
- Power cord (Japan type)