VT-SBC35-G700 Single Board Computer

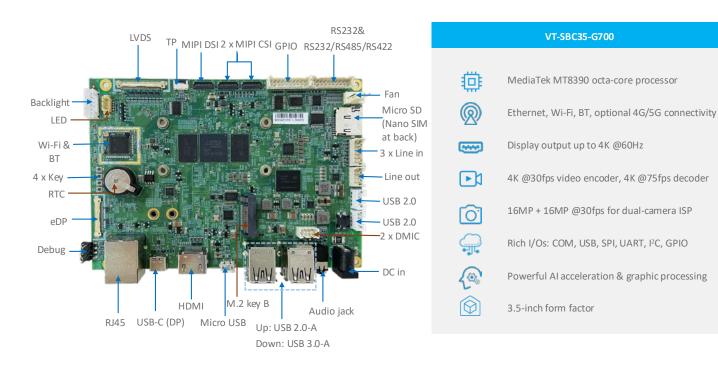


Product Brief

Adopting the 3.5-inch form factor, VT-SBC35-G700 single board computer is powered by the MediaTek MT8390 processor that combines two high-performance Cortex-A78 cores with six power-efficient Cortex-A55 cores, striking a balance between power and performance for a wide range of IoT applications. It integrates an Arm Mali-G57 GPU for enhanced 2D/3D graphic acceleration, with support for Vulkan[®] 1.1, OpenGL ES 3.2, and OpenCL[™] 2.2. It supports 4K @75fps video decoding following the AV1/VP9/HEVC/H.264 formats and 4K @30fps video encoding following the HEVC/H.264 formats. The HiFi 5 audio DSP offers efficient pre-/post-processing capability for audio and video contents. In addition, the Tensilica VP6 APU backed by MediaTek Deep Learning Accelerator (MDLA 3.0), offering 4.4 TOPS AI performance for demanding imaging, computer vision, and neural network applications.

VT-SBC35-G700 boasts versatile display output options that enable dual displays in extended mode. It provides an RJ45 Ethernet jack and a combo Wi-Fi 5 and Bluetooth 5.0 chip for IoT connectivity. The board offers an M.2 Key B slot is for expansion of either Wi-Fi 6 and Bluetooth 5.2 or 4G/5G cellular connectivity. VT-SBC35-G700 is designed for diverse application scenarios such as smart retail, edge AI, IoT gateways, HMI, and smart fitness.

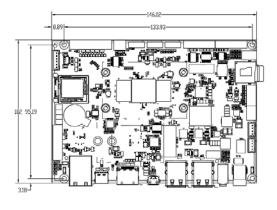
Exterior and Features



VT-SBC35-G700 Single Board Computer Datasheet

		VT-SBC35-	G700			
System	СРU	MediaTek MT8390, Dual-core ARM Cortex-A78 (2.2 GHz) processor + Hexa-core ARM Cortex-A55 (2.0 GHz) processor				
	GPU	Arm Mali-G57				
	APU	4.4 TOPS, Tensilica VP6 + MediaTek Deep Learning Accelerator (MDLA 3.0)				
	Audio DSP	HiFi 5				
	Memory	4GB 64-bit LPDDR4x				
	Storage	64GB eMMC 5.1 Optional: SSD expans		SSD expansion (M.2 Key B)		
Communication	Ethernet	1 x RJ45, 10/100/1000N	/bps			
	Wireless	Wi-Fi 5 + BT 5.0 Optional: Wi-Fi 6 & BT 5.2 or 4G/5G (M.2 Key				
Media	Display (Dual-display extended mode supported)	1 x HDMI 2.0, up to 4K @60Hz				
		1 x MIPI DSI/Dual LVDS, up to 2K @30Hz				
		1 x eDP, up to 2K @60Hz				
		1 x DisplayPort over USB Type-C, up to 4K @60Hz				
	Audio	1 x 3.5mm Combo audio jack 1 x Line out connector		2 x DMIC 3 x Line in connector		
	Camera					
	Touch	2 x MIPI CSI-2, ISP: 32MP @30fps (single cam.) / 16MP + 16MP @30fps (dual cam.) 1 x TP connector				
				2		
	Serial	2 x RS232 connector		2 x RS232/RS422/RS485 connector		
	USB	2 x USB 2.0 Type-A 2 x USB 3.0 Type-A	2 x USB 2.0 connector	1 x Micro USB 2.0 (Debug) 1 x USB 3.0 Type-C (DisplayPort)		
	GPIO header	12 x GPIO (Max.), including 1 x SPI, 1 x UART (3.3V, with RTS/CTS), 2 x $\rm I^2C$				
I/Os	Fan	1 x Fan connector				
.,	UART	1 x Debug UART (1.8V)				
	SD & SIM	1 x Micro SD slot		1 x Nano SIM slot		
	RTC	Supported				
	WDT	Supported				
Expansion	M.2 Key B	1 x M.2 key B (2242, PCle 2.0 for SSD or 3052, USB 3.0 for 4G/5G or PCle 2.0 for Wi-Fi 6 & BT5.2)				
System control	Key & LED	4 x Key (Home, Reset, Volume, Power)		2 x LED connector		
Power	Input	12V/3A DC (via the DC jack or USB Type-C)				
Software	Operating system	Android 13, Linux Yocto				
Mechanical	Dimensions	146mm x 102mm				
Environment Condition	Temperature	Operating: -20°C~+70°C (Optional: -40°C~+80°C)		Storage: -40°C~+85°C (Optional: -55°C~+85°C)		
	Humidity	5%-95% RH (Non-condensing)				
	Certification	FCC, ISED, CE				

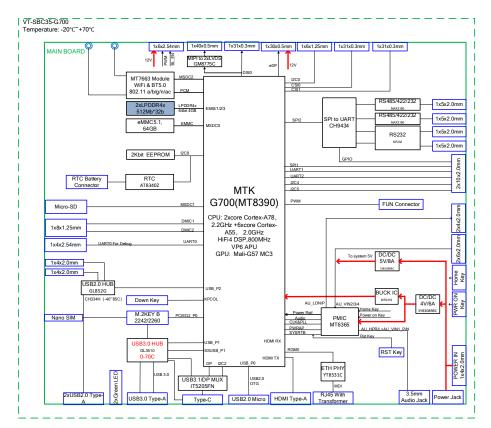
Product Outlines





Vantron | Embedded in your success, Embedded in your better life World-leading provider of embedded/IoT products and solutions

Block Diagram



Ordering Information

Ordering No.	СРИ	I/Os	Connectivity
VT-SBC35-G700		HDMI, MIPI DSI/LVDS, eDP, DP, MIPI CSI,	Ethernet, Wi-Fi 5 & BT 5.0
VT-SBC35-G700-W6	MediaTek MT8390	RS232, RS232/485/422, USB-A, USB-C,	Ethernet, Wi-Fi 6 & BT 5.2
VT-SBC35-G700-4G	octa-core processor	Micro USB, SPI, UART, I ² C, GPIO	Ethernet, Wi-Fi 5 & BT 5.0, 4G

* More variants with cellular and Wi-Fi features are available, please contact the sales executive for details.

Packing list		
VT- SBC35-G700 single board computer	1	Wi-Fi 6 8
12V 3A power adapter & power cable	1 kit	4G modu

Optional accessories

Wi-Fi 6 & Bluetooth 5.2 module, 2 x antenna / 4G module, 2 x antenna / 5G module, 4 x antenna

Since its establishment in 2002 by two Silicon Valley entrepreneurs, Vantron Technology has been at the forefront of the connected IoT devices and IoT platform solutions. Today, Vantron boasts a global customer base that includes many Fortune Global 500 companies. Its product lines cover edge intelligent hardware, IoT communication devices, industrial displays and BlueSphere cloud platforms.

With over 20 years of experience in R&D of intelligent edge hardware, Vantron has provided users with diverse embedded solutions featuring ARM and X86 architectures. Its offerings range from Linux, Android to Windows, from embedded to desktop level, and from gateways to servers. In addition, it provides users with system trimming, driver transplantation and more to cater to the unique needs of its users.

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