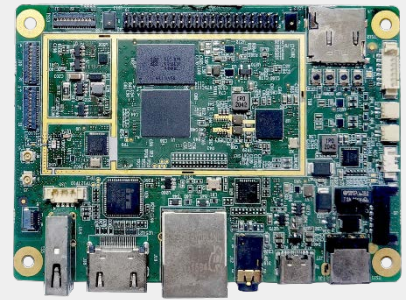# VT-SBC-G350 Single Board Computer

## Product Brief

VT-SBC-G350 Single Board Computer features a thinner and smaller form factor that is easy to integrate. It is powered by MTK® MT8365 (G350) processor, which integrates a fast 2GHz quad-core ARM Cortex-53 CPU and a high-performance ARM Mali-G52 GPU to deliver powerful Edge AI processing with extremely low power consumption. The board supports up to 13MP high-definition camera, which, combined with the high-definition video encoding and decoding technology, provides outstanding visual experience. Better yet, it provides rich on-board interfaces and customer expansion options to meet different application scenarios including smart retail, self-service terminals, industrial automation, intelligent medical health, and digital media.

Featuring high flexibility and high performance, the board could work under extreme environments with extended temperatures ranging from -20℃ to +60℃, making it a reliable industrial IoT solution.

Exterior and Features
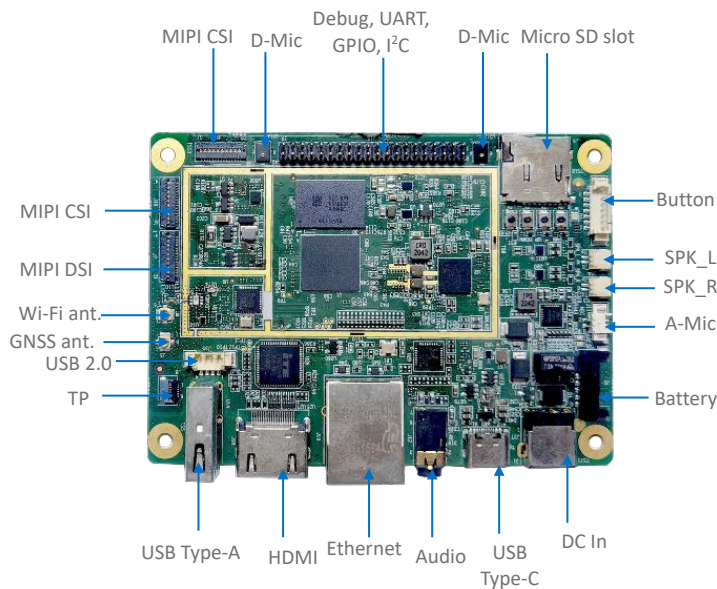
VT-SBC-G350

	Android 10 or higher, Linux support
	Up to 4GB LPDDR4-3200
	Rich interfaces, flexible expansion
	Wi-Fi & BT/ETH connectivity
	High-definition video encoding and decoding
	G sensor
	RTC & watchdog
	USB 2.0
	Wide temperature range supported

VT-SBC-G350 Single Board Computer Datasheet

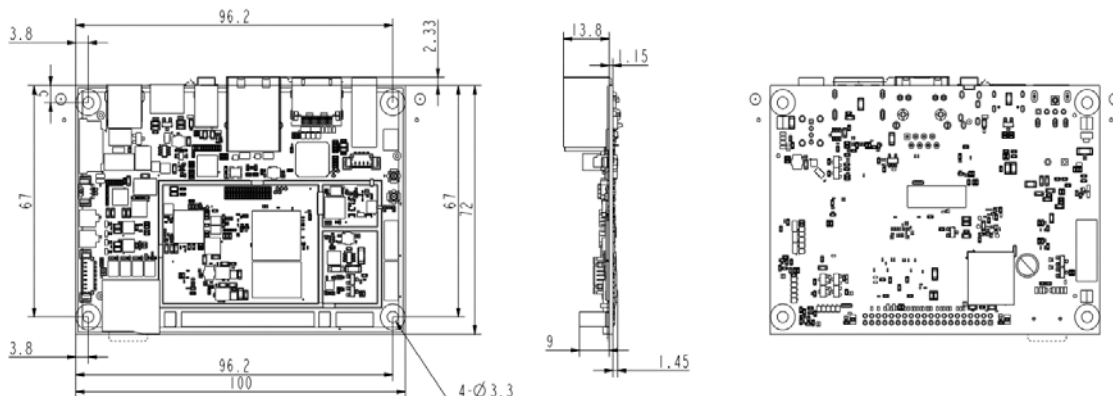| VT-SBC-G350			
System	CPU	MTK MT8365 (G350), Quad-core ARM Cortex-A53, 2.0GHz (Max)	
	GPU	Mali-G52, 3D graphic accelerator, capable of processing 57.6 GFLOPS and 1600M pixel/s, 600MHz	
	Memory	2GB LPDDR4-3200, up to 4GB	
	Storage	16GB eMMC 5.1, up to 64GB 2Kb EEPROM	1 x Micro SD slot (SDIO 3.0)
	PMIC	MT6390	
Communication	Ethernet	1 x RJ45, 10/100Mbps, RTL8201 (Ethernet PHY), not for simultaneous use with HDMI	
	Wi-Fi & BT	Wi-Fi 802.11 a/b/g/n/ac + BT 5.0	
	GNSS	GPS + Glonass + Beidou/Galileo	
Media	Display	1 x 4-Lane MIPI DSI, up to 1920 x 1080	1 x HDMI (Type-A), up to 1920 x 1080 (Not for simultaneous use with RJ45)
	Camera	2 x 4-Lane MIPI CSI, 13 MP, 1080P/60fps video decoder	
	Audio	1 x A-Mic to PMIC 2 x D-Mic to AP (CPU), noise reduction	1 x 3.5mm combo audio jack 2 x 1.2W Speaker connector
I/Os	Serial	2 x UART for communication	1 x UART for debugging
	USB	1 x USB 2.0 Type-C (OTG supported)	1 x USB 2.0 Type-A
		1 x USB 2.0 connector	
	GPIO	4 x GPIO	
	RTC	Supported, powered by an external battery	
	Watchdog	Supported	
Expansion	I^2C	1 x I^2C for TP	1 x I^2C for external communication
System Control	Button	1 x ON/OFF button	1 x Reset button
		2 x Volume button (+ & -)	1 x Button connector
Sensor	G-sensor	3-Axis G-sensor	
Power	Input	12V DC	1 x Power jack
Software	Operating system	Android 10 or higher, Linux (support by request)	
	Device management platform	BlueSphere MDM (Optional)	
	OTA tool	BlueSphere OTA (Optional)	
Mechanical	Dimensions	100mm x 75mm	
	Cooling mode	Fanless	
Environment Condition	Temperature	Operating: -20℃~+60℃	Storage: -40℃~+85℃
	Humidity	5%-95% RH	
	Certification	FCC (part 15 class B)	ESD (contact: ±4KV and air: ±8KV)

Product Outlines

Block Diagram

Temperature:-20~+60℃
OS: Android 10 or higher, Linux

☐ : IC Chip
☐ : Connector

(Block diagram components: Display Connector 1x31x0.3mm 4Lane MIPI /LVDS signal, Modle:FPC031003-31LG, MIPI support up to 1920x1080, LVDS support up to 1080x720; 1x6x0.5mm TP connector; WIFI/BT/GPS/FM RF Chip MT6631N 802.11 a/b/g/n/ac BT5.0 GPS/Gloness/BD; LNA; FILTER; WIFI/BT/GPS ANT; 2GB LPDDR4-3200 Optional up to 4GB; eMMC5.1, 16GB; 2Kbit EEPROM; Micro SD Socket; 1x4x1.25mm SMT Connector; 2x4x1.0mm SMT Connector; 2x20x2.0mm THR Connector; USB2.0 Type-A; Vol+ Button; Vol- Button; Micro USB; MTK: MT8365 ARM Cortex-A53 Qaud_Core Low Power Processor 2.0GHz Mali-G52 GPU core 600MHz 14nm Hardware Watchdog; Front Camera 1x31x0.3mm; Rear Camera 1x31x0.3mm; DPI to HMDI IT66121FN; HDMI Type-A; Ethernet PHY RTL8201F; RJ45; D-MIC; D-MIC; 1x2x1.25mm A-MIC; Audio Codec MT6390 AW8737SCSR; Audio Jack 3.5mm 4-sections; AMP; CON; AMP; CON; Support 2x1W/8R speaker; PMIC RTC; Power Button; Reset; 26M; Charger RT9466; Battery Con; G-sensor MMA8452; Power Con)

Ordering Information

Ordering No.	Chipset	Memory	Storage	Description
VT-SBC-G350	MT8365 (G350)	2GB LPDDR4	16GB eMMC	MIPI DSI, HDMI/RJ 45, MIPI CSI, UART, USB, I^{2}C, GPIO, Mic, Speaker, Audio

* More variants are available, please contact the sales executive for details.

Packing list	
VT-SBC-G350 single board computer	1
Wi-Fi and BT antenna	1

Optional accessories	
Power adapter	1
Power cord	1

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.