Vantron VT-SBC-RK66 Single Board Computer User Guide

Contents

Vantron VT-SBC-RK66 Single Board Computer

Product Information

The VT-SBC-RK66 is a multi-functional single board computer developed by Vantron. It runs on the latest Android

11 operating system and is GMS certified, providing seamless access to Google mobile services. Powered by the cost-effective RK3566 quad-core
processor from Rockchip, the board offers high performance and efficiency. It features 4GB of memory and 32GB of eMMC storage, allowing for quick data access and ample capacity to handle large volumes of data. The board also supports various interfaces such as MIPI, LVDS, RS232/485, USB, HDMI, and more, enabling versatile connectivity options for different applications.

Product Usage Instructions

To use the VT-SBC-RK66 single board computer, follow these instructions:

1. Power Supply:
    - Connect the power source to the “Power in” port on the board.
2. Display Connection:
    - If using a MIPI display, connect it to the “Display MIPI” port on the board.
    - If using an LVDS display, connect it to the “Display LVDS” port on the board.
3. Audio Output:
    - For audio output, connect speakers or headphones to the “Audio Speaker” or “Audio Jack” port on the board.
4. Camera Connection:
    - If using a MIPI camera, connect it to the “Camera MIPI” port on the board.
5. Communication Interfaces:
    - For Ethernet connection, use an RJ45 cable to connect to the “LAN” port on the board.
    - For Wi-Fi and Bluetooth connectivity, ensure the built-in Wi-Fi and BT antennas are properly positioned.
    - If using a 4G/LTE module, insert a SIM card into the “SIM slot” on the board.
6. Input/Output Connections:
    - For USB devices, connect them to the available USB ports on the board.
    - If required, connect RS232 or RS485 devices to the respective ports on the board.
    - For GPIO connections, use the provided GPIO pins on the board.
7. Operating System and Software:
    - The board comes pre-installed with Android 11. Optionally, Linux OS can be installed.
    - Device management and configuration can be done using the Vantron BlueSphere software platform.
8. Additional Features:
    - For system reset, use the “Reset” button.
    - The board has various LED indicators for power, system status, and 4G connectivity.
    - A Mini-PCIe slot is available for expansion purposes.

Ensure that the board is operated within the specified temperature and humidity conditions mentioned in the user manual for optimal performance and longevity.

For more information and support, visit the Vantron website: **www.vantrontech.com**

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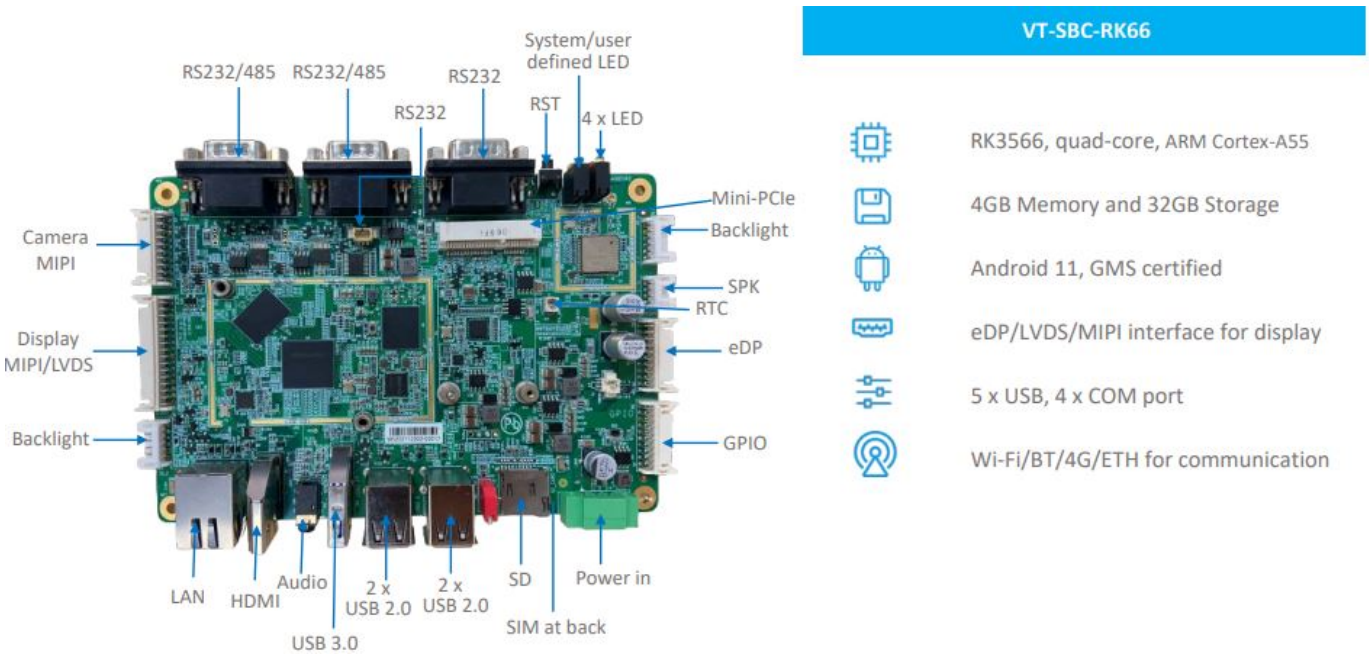
Product Brief Introduction

VT-SBC-RK66 multi-functional single board computer runs the latest Android 11 operating system. The high-performance board is GMS certified to enable customers to have unimpeded access to Google mobile services. The board is powered by RK3566, a cost-effective multi-core processor developed by Rockchip. With 4GB memory and 32GB eMMC storage, it features quick access to data and ultra large capacity. As such, it is capable of dealing with huge volume of data in a timely manner. With plenty of peripheral interfaces, a wide choice of peripherals can be connected for extended applications, including barcode scanners, cameras, barcode printers and keyboard plates. The SBC also supports ultra-high-definition video outputs as it offers a high-performance video engine coupled with HEVC hardware decoding and 1080p/2K video resolution. Moreover, display interfaces of different specifications allow flexible application of the device in intelligent retailing, new retailing, financial self-service terminals, and other scenarios.

Exterior and Features

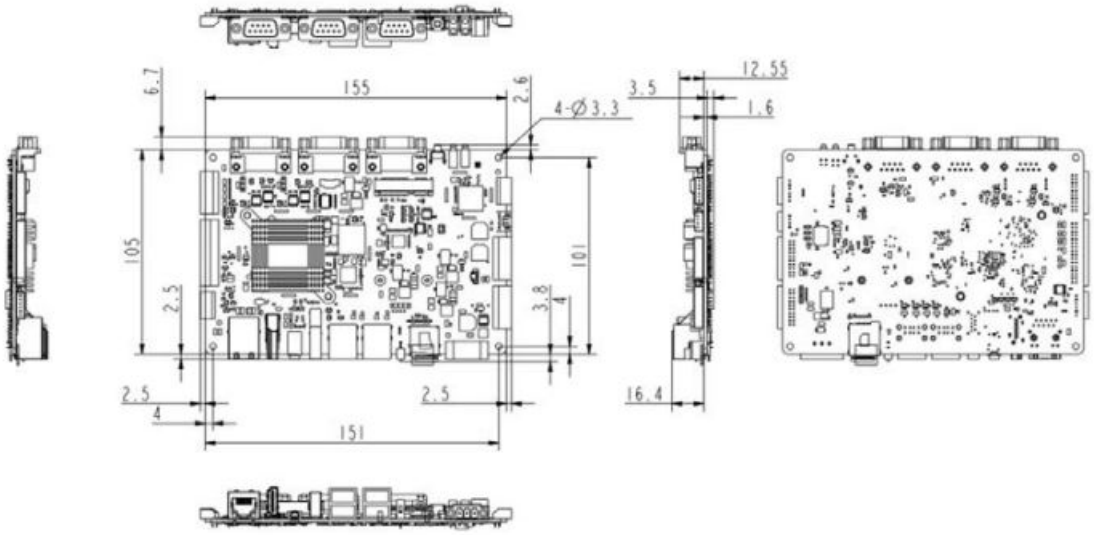


VT-SBC-RK66 Single Board Computer Datasheet

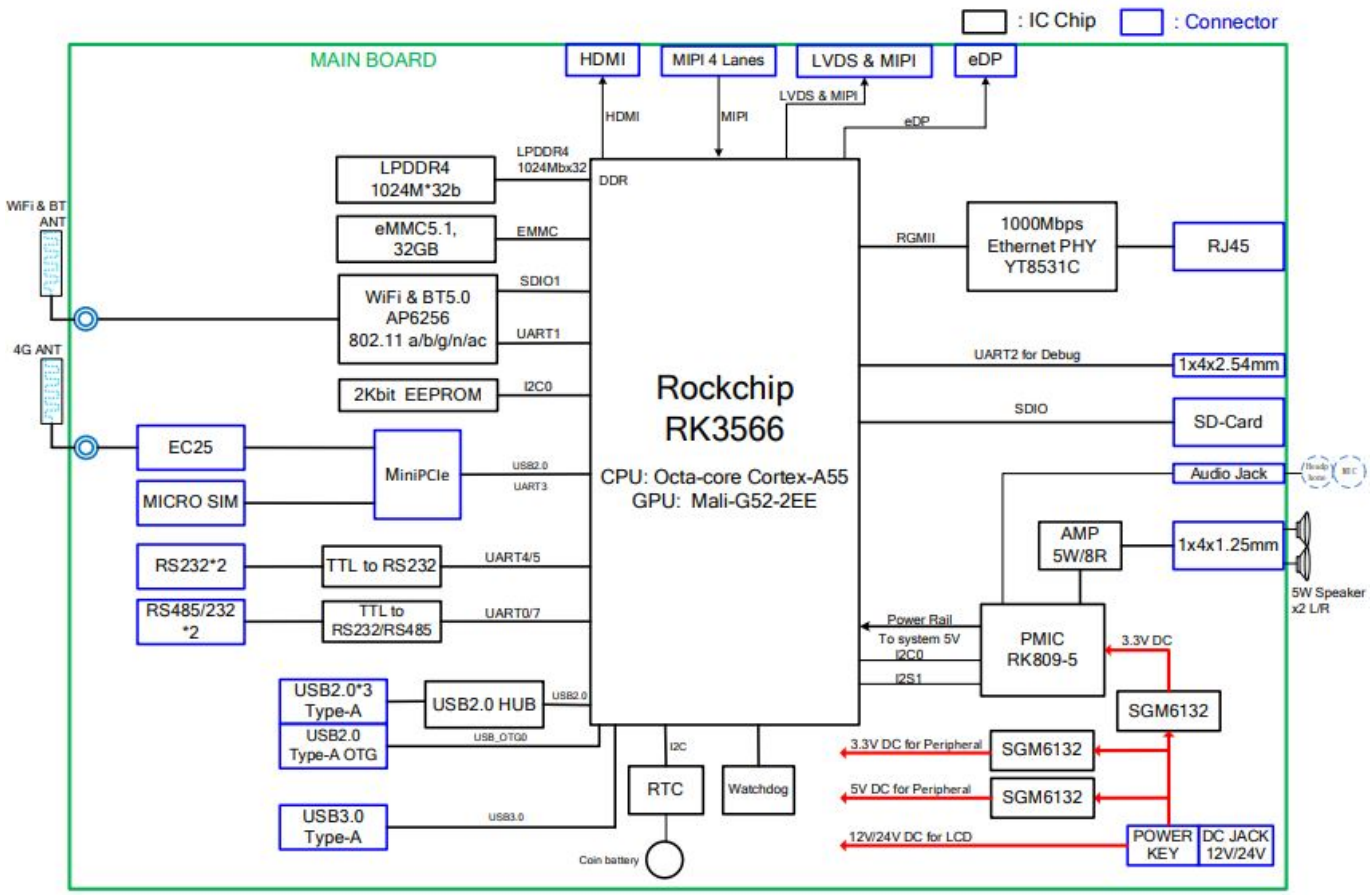
VT-SBC-RK66		
System	CPU	Rockchip RK3566, Quad core, ARM Cortex-A55, 1.8GHz (Max)
	Memory	4GB
	Storage	32GB (up to 128GB) 1 x Micro SD slot (up to 128GB)
Communication	Ethernet	1 x RJ45, 10M/100M/1000Mbps
	Wi-Fi & Bluetooth	Wi-Fi 802.11 a/b/g/n/ac + BT 5.0
	4G/LTE	Supported (expansion by mini PCIe)

Media	Display	1 x HDMI, Type-A, up to 4K ×2 K@60Hz 1 x 4-lane eDP, 2K@60 Hz 1 x 8-lane MIPI DSI connector (including 4 lanes multiplexed with LVDS): single-channel MIPI DSI: 1080P@60Hz, LVDS: 720P @60Hz; du al-channel MIPI DSI: 2K@60Hz	
	Audio	1 x 3.5mm combo audio jack	
	Speaker	1 x Speaker connector	
	Camera	1 x MIPI CSI-2, 2 x 10 x 2.0mm	
I/Os	Serial port	1 x RS232, DB9 2 x RS232/485, DB9	1 x RS232, pin header
	USB	4 x USB 2.0 Type-A (OTG sup ported)	1 x USB 3.0
	SIM slot	1 x SIM card slot	
	GPIO	8 x GPIO, 3.3V	
	RTC	Supported	
	Watchdog	Supported	
Expansion	Mini-PCIe	1 x Mini-PCIe for 4G/LTE module	
System Contr ol	Button	1 x Reset button	
	LED	1 x 4G LED 1 x Power LED	1 x User defined 1 x System LED
Software	OS	Android 11, GMS certified (Optional: Linux OS)	
	Device management plat form	Vantron BlueSphere	
Power	Input	12V/24V 3A DC (±5%), 1 x 3 x 3.81mm terminal	
Mechanical	Dimensions	155mm x 105mm x 21.5mm	
Environment Condition	Temperature	Operating: 0℃~+60℃	Storage: -40℃~+85℃
	Humidity	Operating: RH 5%~95%	Storage: RH 5%~95%
	Certification	FCC	ESD: ±4KV (Contact) and ±8KV (Air)

Product Outlines



Block Diagram



Company Profile

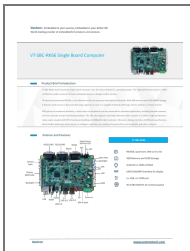
- Since 2002 established by two Silicon Valley entrepreneurs, Vantron Technology has been a pioneer in connected IoT devices and IoT platform solutions. Today, Vantron serves countless customers all over the world, some of them are Fortune 500 companies. Products lines cover edge intelligent hardware, IoT communication devices, industrial displays and the BlueSphere cloud device management platform.
- Vantron has 20 years of experience in R&D of embedded edge intelligent hardware like SOM board and motherboard and provided users with various embedded solutions with ARM and X86 architecture. From Linux to Windows, from embedded to desktop level, from gateway to server. At the same time, we provide our users

with system clipping, driver transplantation and other services.

- Vantron IoT communication devices support the multi-protocol connection of industrial equipment, edge computing of local data. Abundant wired and wireless connectivity make remote operations and maintenance possible. From electricity and transportation to smart retail, medical and warehousing, Vantron IoT communication device can be deployed anywhere in any business section. Vantron believes its IoT solution to help many companies finish their digital transformation, efficiency of manufacturing and productivities have been improved significantly.
- Vantron industrial display systems, ARM and X86 series, are equipped with Rockchip, NXP, MediaTek, Intel and other high-performance processors. It supports various operating systems such as Windows, Linux, and Android. Diverse wireless communications keep your device online all the time. Multiple installation methods make it suitable for a variety of application scenarios. Features like waterproof, dustproof, and shatter resistant guarantee the best performance in any environment.
- Vantron BlueSphere device management platform, a software product, is playing a big role in Vantron overall IoT solution. Today, Vantron puts more focus on offering complete cost-effective, leading-edge yet reliable solutions to help customers carry out their visions.

www.vantrontech.com

Documents / Resources

	Vantron VT-SBC-RK66 Single Board Computer [pdf] User Guide VT-SBC-RK66 Single Board Computer, VT-SBC-RK66, Single Board Computer, Board Computer, Computer

References

- Vantron Technology
- Vantron Technology