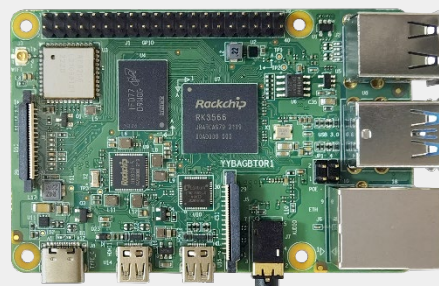


## VT-SBC-RK3566-NT

### Single Board Computer



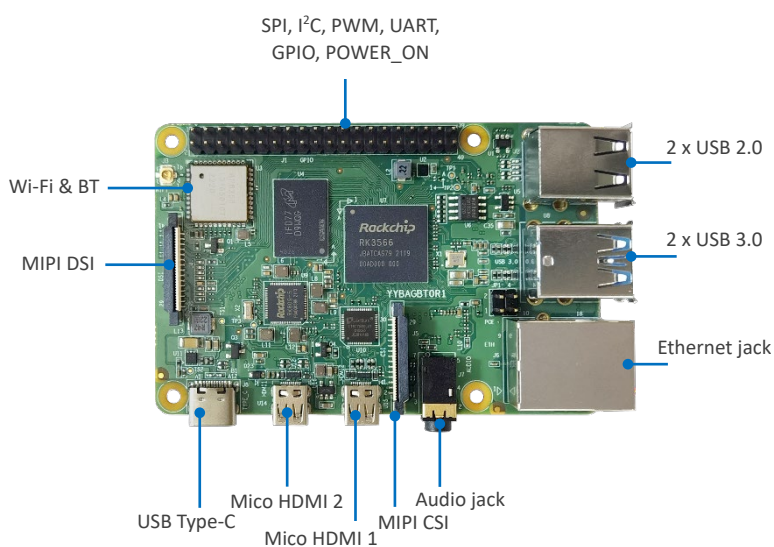
#### Product Brief

As a member of Vantron's NiceLit series embedded board product lines, the VT-SBC-RK3566-NT is powered by the Rockchip RK3566 processor. It integrates a quad-core ARM Cortex-A55 CPU, a high-performance ARM Mali-G52 GPU, and an NPU delivering up to 1 TOPS computing power, enhancing product capabilities in areas such as image recognition and edge computing, thereby empowering developers to build intelligently adaptive systems.

The VT-SBC-RK3566-NT single board computer offers a rich set of interfaces, including MIPI DSI, MIPI CSI, Micro HDMI, USB, audio jack, and UART, ensuring flexible integration and expansion capabilities. Its two Micro HDMI interfaces support display in duplicate mode. With support for H.264/H.265 video codecs, it enables 4K and 1080P display output, making it an ideal choice for digital signage, smart displays, and home entertainment systems.

Vantron's NiceLit series caters to both commercial and industrial fields, providing developers and enterprise customers with high-performance solutions that accelerate time-to-market.

#### Exterior and Features



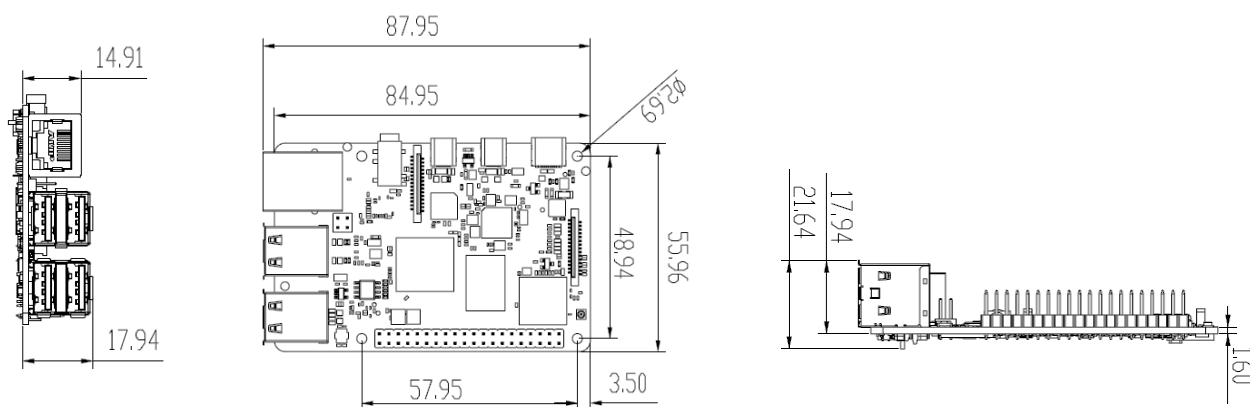
#### VT-SBC-RK3566-NT

-  Rockchip RK3566 Quad-core processor
-  H.265/H.264 video CODEC
-  Up to three displays, dual HDMI in duplicate mode
-  Rich interfaces for flexible expansion
-  Gigabit Ethernet port with PSE support
-  AI acceleration and edge computing
-  Low-power, high-efficiency design
-  Compact, scalable architecture

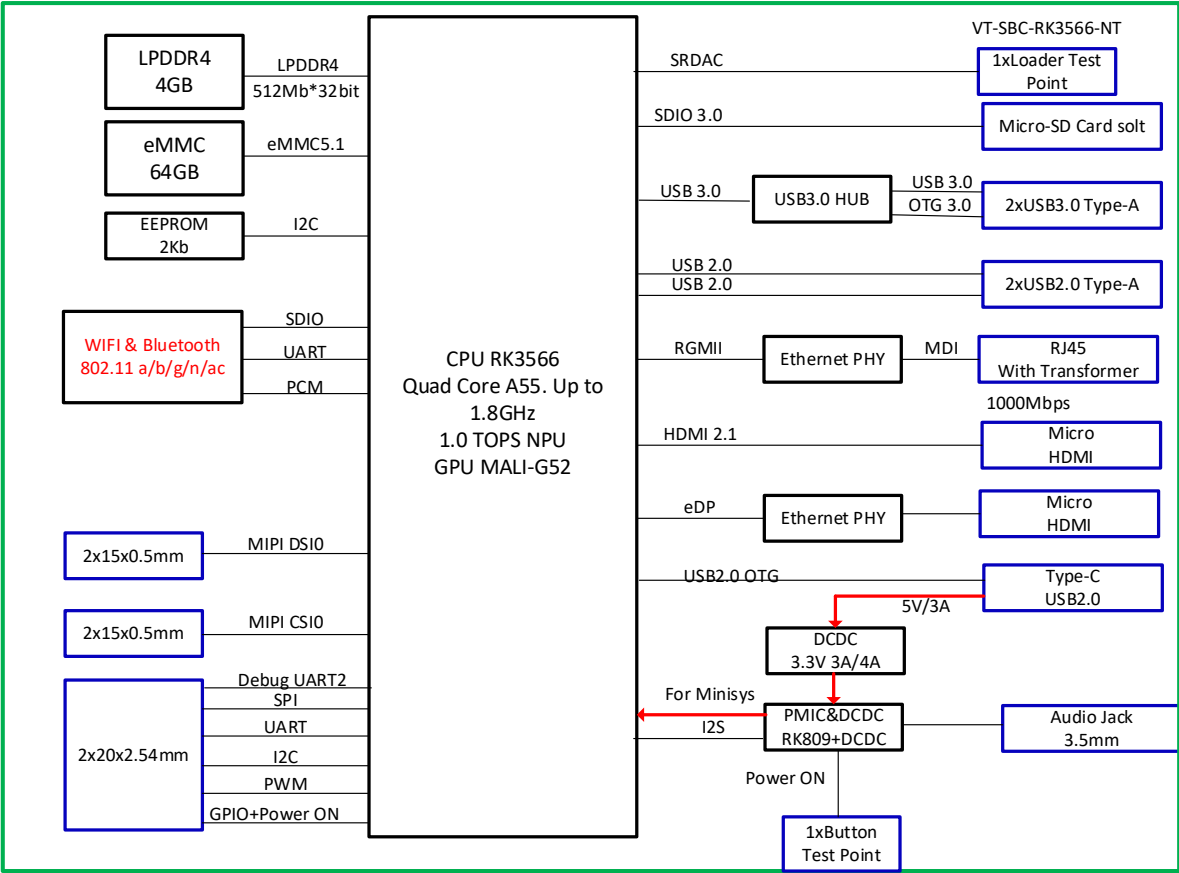
## VT-SBC-RK3566-NT Single Board Computer Datasheet

| VT-SBC-RK3566-NT         |                    |                                                                    |                                       |
|--------------------------|--------------------|--------------------------------------------------------------------|---------------------------------------|
| System                   | CPU                | Rockchip RK3566, Quad-core ARM Cortex-A55 processor, 1.8GHz (Max.) |                                       |
|                          | GPU                | ARM Mali-G52, 600MHz                                               |                                       |
|                          |                    | OpenGL ES1.1/2.0/3.2, OpenCL 2.0, Vulkan 1.1 supported             |                                       |
|                          | NPU                | 1 TOPS, int8/int16/FP16/BF16/BFP16 supported                       |                                       |
|                          | Memory             | 4GB LPDDR4 (Optional: 8GB)                                         |                                       |
| Communication            | Storage            | 64GB eMMC V5.1                                                     | 1 x Micro SD slot                     |
|                          | Ethernet           | 1 x RJ45, 10/100/1000Mbps (PSE supported)                          |                                       |
|                          | Wi-Fi & Bluetooth  | Wi-Fi IEEE 802.11 a/b/g/n/ac + BT 5.0                              |                                       |
| Media                    | Video Processing   | 4K @60fps H.265/H.264 decoder                                      | 1080P @60fps H.265/H.264 encoder      |
|                          | Camera ISP         | Up to 8MP: 4096 × 2304@30fps (HDR, DRC, 2DNR)                      |                                       |
|                          | Display            | 1 x 4-Lane MIPI DSI, up to 1920 x 1080 @60Hz                       |                                       |
|                          |                    | 2 x Micro HDMI 2.0, up to 4K + 1080P (Duplicate mode supported)    |                                       |
|                          | Camera             | 1 x 4-lane MIPI CSI                                                |                                       |
| I/O                      | Audio              | 1 x 3.5mm Combo audio jack (CTIA)                                  |                                       |
|                          | USB                | 2 x USB 3.0 Type- A                                                | 1 x USB 2.0 Type-C (power, data, OTG) |
|                          |                    | 2 x USB 2.0 Type- A                                                |                                       |
|                          | 40-pin GPIO Header | 3 x GPIO                                                           | 2 x PWM                               |
|                          |                    | 3 x I <sup>2</sup> C                                               | 4 x UART (1 x Debug UART)             |
|                          |                    | 2 x SPI                                                            |                                       |
|                          |                    | 1 x POWER_ON                                                       |                                       |
| Power                    | Antenna            | 1 x Wi-Fi & Bluetooth antenna connector (U.FL)                     |                                       |
|                          | Input              | 5V/3A DC, USB Type-C                                               |                                       |
| Software                 | Operating System   | Android, Linux (Support upon request)                              |                                       |
|                          | Device Management  | BlueSphere MDM (Optional for Android version)                      |                                       |
| Mechanical               | Dimensions         | 87.95mm x 55.96mm x 21.64mm                                        |                                       |
|                          | Weight             | 55g (±5g)                                                          |                                       |
| Environmental Conditions | Temperature        | Operating temperature: -20°C ~ +70°C                               | Storage temperature: -40°C~+85°C      |
|                          | Humidity           | 5%-95%RH (Non-condensing)                                          |                                       |

## Product Outlines



Block Diagram



Ordering Information

| Ordering No.       | Memory | Storage | Connectivity               | Display                  |
|--------------------|--------|---------|----------------------------|--------------------------|
| VT-SBC-RK3566-NT-L | 4GB    | 64GB    | Ethernet, Wi-Fi, Bluetooth | MIPI DSI, 2 x Micro HDMI |
| VT-SBC-RK3566-NT-H | 8GB    | 64GB    | Ethernet, Wi-Fi, Bluetooth | MIPI DSI, 2 x Micro HDMI |

| Packing List        |   |
|---------------------|---|
| VT-SBC-RK3566-NT    | 1 |
| 5V=6A Power adapter | 1 |

| Optional Accessory                     |       |
|----------------------------------------|-------|
| Serial-to-USB adapter and cable        | 1 kit |
| USB-C to USB-C + USB-A extension cable | 1     |
| MIPI camera & cable                    | 1 kit |
| Wi-Fi & Bluetooth antenna (U.FL)       | 1     |

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