

Specifications

Basic Specifications	
SOC	RockChip RK3588S
CPU	8-core 64-bit (4xCortex-A76+4xCortex-A55), 8nm lithography process, clock speed up to 2.4GHz
GPU	ARM Mali-G610 MP4 quad-core GPU Support OpenGL ES3.2 / OpenCL 2.2 / Vulkan1.1, 450 GFLOPS
NPU	NPU computing power up to 6 TOPS, Support INT4/INT8/INT16 mixed operation, Support framework switching of TensorFlow / MXNet / PyTorch / Caffe
ISP	Integrated 48MP ISP with HDR&3DNR
VPU	Video decoding: 8K@60fps H.265/VP9/AVS2 8K@30fps H.264 AVC/MVC 4K@60fps AV1 1080P@60fps MPEG-2/1/VC-1/VP8 Video encoding: 8K@30fps encoding, support H.265 / H.264 *Achieve up to 32-channel 1080P@30fps decoding and 16-channel 1080P@30fps encoding
RAM	4GB/8GB/16GB 64bit LPDDR4/LPDDR4x/LPDDR5 (Up to 32GB optional)
Storage	16GB/32GB/64GB/128GB eMMC
Storage Expansion	1 × M.2 SATA3.0, can be expanded with 2242 SATA3.0 SSD 1 × standard SATA3.0, can be expanded with SATA3.0 SSD/HDD 1 × TF Card
Hardware Specifications	
Wireless	Support 802.11ax (WiFi 6) network protocol, compatible with 802.11 a/b/g/n/ac protocol Support 2.4GHz, 5GHz dual-band WiFi Support Bluetooth5.0 (BLE) Support 5G/4G LTE
Ethernet	1 × 1000Mbps Ethernet (RJ45) Support POE (compatible with two optional output power: 60w/30w)
Display	1 × HDMI2.1 (8K@60fps or 4K@120fps) 1 × DP1.4 (8K@30fps) 1 × MIPI_D/C-PHY0_DSI0 - 40P-0.5mm, D-PHY up to 4.5G bps/lane, C-PHY up to 2.0G bps/lane - resolution up to 4K@60Hz 1 × MIPI_D/C-PHY1_DSI1 - 30P-0.5mm, D-PHY up to 4.5G bps/lane, C-PHY up to 2.0 G bps/lane - resolution up to 4K@60Hz * four-screen output with the same display or different displays can be achieved.
Camera	1 × MIPI_DPHY_CSI0 - 30P-0.5mm, 1×4 lane or 2×2 lane, 2.5Gbps/Lane 1 × MIPI_D/C-PHY0_CSI0 - 24P-0.5mm, 1×4Lanes DPHY or 1×3Lanesv CPHY, 2.5Gbps/Lane 1 × MIPI_D/C-PHY1_CSI1 - 24P-0.5mm, 1×4Lanes DPHY or 1×3Lanes CPHY, 2.5Gbps/Lane

Audio	<p>Audio output:</p> <ul style="list-style-type: none"> 1 × HDMI2.1 audio output 1 × DP1.4 audio output 1 × Phone audio output 1 × Speaker output (10W-8Ω Class D) <p>Audio input:</p> <ul style="list-style-type: none"> 1 × Line-In input 1 × MIC input 1 × HDMI audio input
SATA	1 × standard SATA3.0 (expanded with SATA3.0 SSD/HDD)
USB	<ul style="list-style-type: none"> 1 × USB3.0 (current limit: 1A) 2 × USB2.0 Host (current limit: 500mA) 2 × USB2.0 Host (connected to pin header, current limit: 500mA) 1 × multi-function USB-C (USB3.0 / DP1.4) (current limit: 2A)
Power	DC12V input (DC5.5×2.1mm)
Other Interfaces	<ul style="list-style-type: none"> 1 × CAN/RS485 1 × RS232 1 × Debug 1 × FAN(12V 3P-1.25mm) 1 × 20P pin header (I2C, SPI, CAN, SAR, ADC, DC OUT (3.3V/1.8V/5V))
OS/Software	
OS	<p>Android: Android 12.0</p> <p>Linux: Ubuntu Desktop, Ubuntu Server, Debian11, Buildroot, RTLinux, Kylin Linux, UOS, etc.</p> <p>*Support UEFI Boot</p>
General	
Size	156.2mm × 99mm × 40.1mm
Weight	≈175g (no peripheral devices)
Heat Dissipation	cooling fan (Click to view)
Power Consumption	<p>Typical: ≈3.6W (12V/300mA)</p> <p>Max: ≈15W (12V/1250mA)</p>
Environment	<p>Operating Temperature: -20°C ~ 60°C</p> <p>Storage Temperature: -20°C ~ 70°C</p> <p>Storage Humidity: -40% ~ 70 %</p>