

Basic Specifications

SOC	RockChip RK3588S
CPU	8-core 64-bit (4×Cortex-A76+4×Cortex-A55), 8nm lithography process, frequency 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 (PCIe2.0), can expand with 2242 NVMe SSD, 1 × TF Card

Hardware Specifications

Wireless	Support 2.4GHz, 5GHz dual-band WiFi, 802.11 a/b/g/n/ac protocol Support Bluetooth 4.2 (BLE)
Ethernet	1 × 1000Mbps Ethernet (RJ45)
Display	1 × HDMI2.1 (8K@60fps or 4K@120fps) 2 × MIPI-DSI (4K@60fps) 1 × DP1.4 (8K@30fps) *Achieve up to four-screen output with different displays
Camera	2 × 2 lane MIPI-CSI input or 1×4 lane MIPI-CSI
Audio	Audio output: 1 × 3.5mm audio jack (Support Mic recording) 1 × HDMI2.1 audio output 1 × DP1.4 audio output Audio input: 1 × Line-In input 1 × Mic input (2P-1.25mm)
PCIE	1 × M.2 (PCIe2.0), can expand with 2242 PCIe2.0 NVMe SSD
USB	1 × USB3.0 (Limit 1A) 3 × USB2.0 (Limit 500mA) (2 of them are connected to 20 pin header) 1 × USB-C multi-function interface (USB3.0 OTG / DP1.4) (Limit 2A)
Other Interfaces	1 × Fan (5V/4P-1.25mm) 1 × Debug (3P-2.0mm) 1 × 20P-2.0mm pin header (LINE-OUT, 2×USB2.0, UART, SPI, GPIO, ADC, VCC (5V/3.3V/1.8V))
Power	DC12V voltage input (DC5.5×2.1mm)

OS/Software

OS	Android: Android 12.0 Linux: Ubuntu Desktop, Ubuntu Server, Debian11, Buildroot, RTLinux Kylin Linux, UOS, etc. *Supports UEFI Boot
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General

Size	90mm × 60mm
Weight	≈50g (no peripheral devices)
Power Consumption	Idle: ≈0.42W (12V/35mA) Typical: ≈2.25W (12V/190mA) Max: ≈12W (12V/1000mA)
Environment	Operating Temperature: -20°C~60°C Storage Temperature: -20°C~70°C Storage Humidity: -40%~70 %



