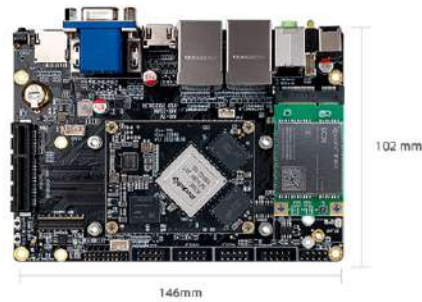


# Specifications



## Basic Specifications

|                   |   |
|-------------------|---|
| SOC               | RockChip RK3588J  |
| CPU               | Octa-core 64-bit (4×Cortex-A76+4×Cortex-A55), 8nm lithography process, frequency up to 2.2GHz   |
| GPU               | ARM Mali-G610 MP4 quad-core GPU<br>Support OpenGL ES3.2 / OpenCL 2.2 / Vulkan1.1, 450 GFLOPS  |
| NPU               | NPU computing power up to 6 TOPS<br>Support INT4/INT8/INT16 mixed operation<br>Support framework switching of TensorFlow / MXNet / PyTorch / Caffe  |
| ISP               | Integrated 48MP ISP with HDR&3DNR   |
| VPU               | Video decoding:<br>8K@60fps H.265/VP9/AVS2<br>8K@30fps H.264 AVC/MVC<br>4K@60fps AV1<br>1080P@60fps MPEG-2-1/VC-1/VP8<br><br>Video encoding:<br>8K@30fps encoding, support H.265 / H.264<br>*Up to 32-channel 1080P@30fps decoding and 16-channel 1080P@30fps encoding can be achieved. |
| RAM               | 4GB/8GB/16GB (Up to 32GB optional) 64bit LPDDR4/LPDDR4x/LPDDR5 (industrial grade)   |
| Storage           | 16GB/32GB/64GB/128GB eMMC (industrial grade)  |
| Storage Expansion | M.2 SATA3.0 SSD (2242), TF Card Slot×1  |

## Hardware Specifications

|          |   |
|----------|---|
| Ethernet | 2 * 1000Mbps Ethernet (RJ45)  |
| Wireless | 2.4GHz/5GHz dual band WiFi 6 (802.11a/b/g/n/ac/ax), Bluetooth 5.0<br>Extended to 5G/4G LTE  |
| Display  | Video output:<br>1 * HDMI2.1 (8K@60fps or 4K@120fps)<br>1 * DP1.4 (8K@30fps, Via USB-C)<br>1 * VGA (1080P@60fps)<br>1 * eDP1.3 (4K@60Hz)<br>2 * MIPI-DSI (4K@60fps)<br>* Up to six-screen output with different displays<br><br>Video input:<br>1 * HDMI-IN (4K@60fps), support HDCP 2.3<br>1 * MIPI_CSI0 (1*4Lane or 2*2Lane, 30P-0.5mm)<br>1 * BTB (1*MIPI_CSI1 (4Lane) or 2*MIPI_CSI1 (2Lane) + 2*MIPI_D/C (4-Lane DPHY v2.0 or 3-Lane CPHY V1.1)) |

|                  |   |
|------------------|---|
| Audio            | <p>Audio output:</p> <ul style="list-style-type: none"> <li>1 * HDMI2.1 audio output</li> <li>1 * DP1.4 audio output</li> <li>1 * Phone audio output</li> </ul> <p>Audio input:</p> <ul style="list-style-type: none"> <li>1 * Line-in input (pin header)</li> <li>1 * Mic input</li> </ul> |
| PCIe             | 1 * PCIe3.0 (4 lanes)   |
| USB              | 4 * USB3.1(Gen1), 3 * USB2.0 (pin header), 1 * USB-C (OTG/DP1.4)  |
| Power            | DC12V (DC5.5*2.1mm, above 12V-2A power recommended)   |
| Other Interfaces | 2 * RS232, RS485, CAN, Debug,<br>20P-2.0 pin header (GPIO, ADC, SPI, I2C and LED REV PWR IRST)  |

### OS/Software

|    |   |
|----|---|
| OS | Android 12.0, Ubuntu Desktop and Server, Debian11 and Buildroot<br>RTLinux (delivering excellent real-time performance) |
|----|---|

### General

|                   |  |
|-------------------|--|
| Dimension         | 146mm×102mm×37.5mm   |
| Weight            | ≈200g  |
| Power Consumption | <p>Idle: ≈0.72W (12V/60mA)</p> <p>Typical: ≈2.4W (12V/200mA)</p> <p>Max: ≈14.4W (12V/1200mA)</p> |
| Environment       | <p>Operating Temperature: -40°C- 85°C</p> <p>Storage Humidity: 10% – 80 %</p>                    |