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| **AI Boards** | **ROC-RK3588S-PC** | **TB-RK3399ProD** |
| **SoC** | **RockChip RK3588S** | **RockChip RK3399Pro** |
| **CPU** | 8-core 64-bit (4×Cortex-A76+4×Cortex-A55), 8nm lithography process frequency up to 2.4GHz | Big.Little architecture: Dual Cortex-A72 + Quad Cortex-A53, 64-bit CPU  Frequency is up to 1.8GHz |
| **GPU** | -ARM Mali-G610 MP4 quad-core GPU  -Support OpenGL ES3.2 / OpenCL 2.2 / Vulkan1.1, 450 GFLOPS | Mali-T860MP4 GPU, OpenGL ES1.1/2.0/3.0/3.1, OpenVG1.1, OpenCL, DX11  Supports AFBC (ARM Frame Buffer Compression) |
| **NPU** | -NPU computing power up to 6 TOPS  -Support INT4/INT8/INT16 mixed operation，  -Support framework switching of TensorFlow / MXNet / PyTorch / Caffe | Support 8-bit/16-bit Inference  Support TensorFlow、TensorFlow lite、Pytorch、Caffe、Mxnet、Darknet、Onnx Model  NPU 3.0 |
| **Storage** | 16GB/32GB/64GB/128GB eMMC | 16GB/32GB eMMC |
| **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 | 4K VP9 and 4K 10bits H265/H264 video decoders, up to 60fps  1080P other video decoders (VC-1, MPEG-1/2/4, VP8)  1080P video encoders for H.264 and VP8  Video post processor: de-interlace, de-noise, enhancement for edge/detail/color  **Display:**  HDMI2.0(Type-A) for 4K/60fps with HDCP1.4/2.2  Display Port 1.2(Type-A), up to 4K@60fps MIPI interface, support 1920\*1080@60fps  eDP1.3, support 2K@60fps |
| **RAM** | 4GB/8GB/16GB 64bit LPDDR4/LPDDR4x/LPDDR5 (Up to 32GB optional) | 3GB/6GB LPDDR3 |
| **Camera** | 2 × 2 lane MIPI-CSI input or 1×4 lane MIPI-CSI  -Integrated 48MP ISP with HDR&3DNR | Support dual channel MIPI-CSI camera interface, Maximum 13Mpixel or dual 8Mpixel） |
| **OS** | -Android：Android 12.0  -Linux：Ubuntu Desktop, Ubuntu Server, Debian11, Buildroot, RTLinux  -Kylin Linux, UOS, etc.  \*Supports UEFI Boot | Pre-installed Android and Linux system, support dual system  boot and one-button OS switching  Android 9.0 |
| **Wireless** | -Support 2.4GHz, 5GHz dual-band Wi-Fi, 802.11 a/b/g/n/ac protocol  -Support Bluetooth 4.2 (BLE) | Support 2.4G WiFi，support 802.11b/g/n potocol  Support Bluetooth4.2 |
| **Power Consumption** | -Idle: ≈0.42W (12V/35mA)  -Typical: ≈2.25W (12V/190mA)  -Max: ≈12W (12V/1000mA) | ------ |
| **Price** | -4GB+32GB, $219 / 1279 RMB  - 8G+64GB, $299 / 1779 RMB  -16G+128GB $ 409 / 2479 RMB  (Taobao Price) | Around: 1900 RMB |

RK3399和3588对比表\_Comparison Table of RK3399 and 3588

**ROC-RK3588S-PC**





