# **Rockchip RK3588** □□ □□12 **LCD** □□□ **4K 8K** □□□ **AI** □□□□

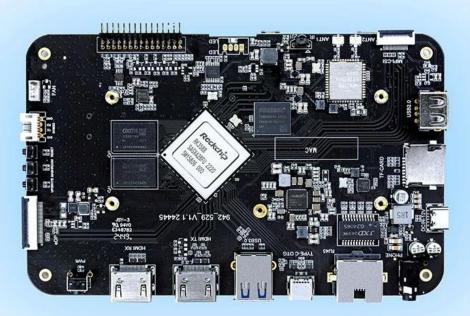


ПП ПП Rockchip RK3588 ∏ ARM∏∏ Cortex-A76 @2.4GHz ∏∏ Cortex-A55@1.8GHz ARM Mali-G610 MC4∏OpenGL ES 1.1/2.0/3.1/3.2∏Vulkan 1.1∏1.2∏OpenCL  $1.1 \square 1.2 \square 2.0 \square \square \square \square \square 2D \square \square \square \square$ 6 TOPS $\square\square$ int4/int8/int16/FP16/BF16/TF32 $\square\square$ 4GB LPDDR4X∏2GB\*2∏∏∏∏32GB∏ ПП □□ □□□□ □□□802.11 ax/ac/a/b/g/n  $\Box\Box12$ □□5.0 Type-C [[[]12V/2A[] 1\*TF□□ 1\*PCIE∏∏∏∏ 1\* 0000000 ППППППП ПП 2\*UART∏∏ 1\* 10/100/1000 Mbps RJ45 □□ ПППП 1\*USB3.0□□ USB∏∏ 1\*USB2.0∏∏ 1\* USB2.0 □□ □□ 4-Pin □□ LED[[[[ 1\*□□LED□□□ 1\*00032000MIPI00 1\*\_\_\_30\_\_\_EDP\_\_ 1\*MIPI-CSI 1\*□□□ ПППП 1\*SPK 7\*GPIO∏3.3V∏∏ 4\*I2C[]3V[][][][][] 1\*0000 2\*0000 1\*5V[[[[[ 

H.264 AVC/MVC Main10 L6.0 VP9 Profile0/2 L6.1∏∏8K@60fps(7680\*4320))∏ H.265 HEVC/MVC Main10 L6.1 AVS2 Profile 0/2 L10.2.6∏∏8K@60fps(7680\*4320)∏  $MPEG-1 \sqcap \sqcap \sqcap MP \sqcap 1080 p@60 fps(1920*1088) \sqcap$ VC-1 | T | AP level 3 | 1080 p @ 60 fps (1920\*1088) | 1080 p @ 60 fps (1920\*1088) VP8[[2 [] 1080p@60fps(1920\*1088) □□□RTL8111HS ППП \_\_\_\_10/100/1000 Mbps ПППАР6275Р OBT 5.0000000BT0000000 HDMI TX □□□□ 8K@60fps(7680x4320)□ EDP [[[]] 4K@60fps(3840x2160)[]  $DP(type-c) \square \square \square 4K@ 60fps(3840x2160) \square$ MIPI DSI □□□□HYM8563 

### **High-Performance AI Development Board**

The RK3588 is a flagship AloT chip built on 8nm LP process, featuring an octa-core CPU (up to 2.4GHz), ARM Mali-G610 MP4 GPU, and a 6TOPs NPU for Al acceleration. It also integrates a 48MP ISP with HDR & 3DNR, supporting major deep learning frameworks for enhanced Al performance.





RK3588 0cta-core CPU



Mali-G610 MC4 1GHz GPU



6Tops NPU



8K Codec H.265 HEVC



4~32GB RAM 8~128GB ROM

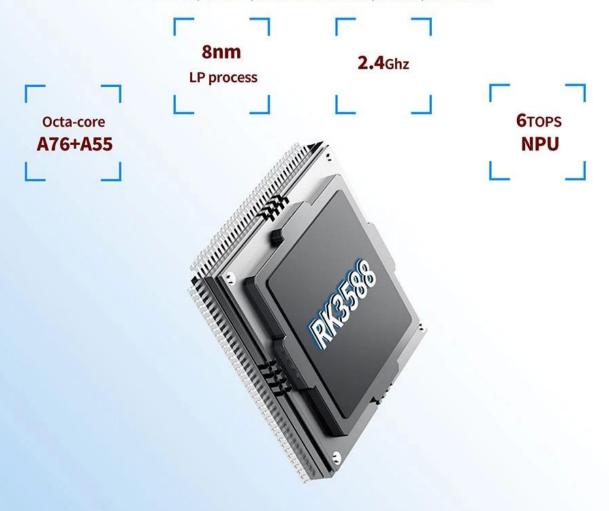


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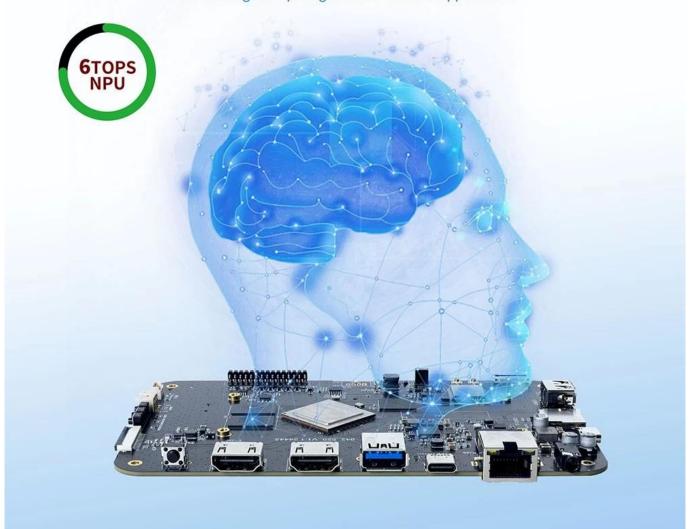
# **RK3588---Next-Generation Flagship AIoT CPU**

Powered by the RK3588 octa-core 64-bit chipset, with ARM Mali-G610 MP4 GPU and 6TOPs AI NPU for superior AI performance and expanded possibilities.



### **6 TOPS Powerful Computing Boosts AI Applications**

Powerful NPU with 6TOPS performance, supporting INT4/INT8/INT16 operations. Compatible with TensorFlow, MXNet, PyTorch, Caffe, and more. Efficiently accelerates convolution and traditional image processing operations like Gaussian filter, median filter, Laplacian, and Sobel, ideal for edge computing and vision control applications.



# **8K Video Encoding & Decoding**

Supports 8K@60fps H.265/VP9 decoding and 8K@30fps H.265/H.264 encoding, with up to 32x 1080P@30fps decoding and 16x 1080P@30fps encoding. Delivers stunning 8K video quality.



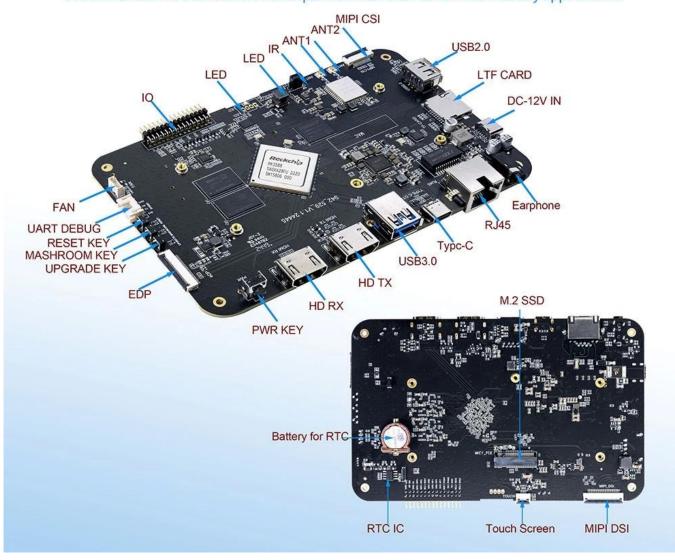
#### 32GB Large RAM & 128GB EMMC

Up to 32GB RAM and 128GB eMMC storage, surpassing previous memory limits for faster response and meeting the demands of high-memory, high-storage applications.



## **Rich Expansion Interfaces**

Multiple video output and input interfaces support simultaneous 8K@60fps video output and 4K@60fps video input. It also supports quad-screen display for high-definition interactive scenarios. The board offers rich expansion interfaces for diverse industry applications.



#### **Powerful Network**

Onboard Gigabit Ethernet, dual-band WiFi 6 (2.4GHz/5GHz), and Bluetooth 5.3 ensure seamless network connectivity and flexible support for various application needs.



#### **Open System Architecture**

Multi-system compatibility supporting Android 12 and Debian 11, with deep customization of the Linux kernel for remote upgrades and management, enhancing operational efficiency and ease.



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- \*\_\_\_8nm LP\_
- \*\_\_\_\_EDP\_
- \*00 TF 00 PCIE 00000000000
- \*\_\_\_\_GPIO\_\_\_\_
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CPU
4K/8K RK3588 4K _ 8K = ===========================
Android 12
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