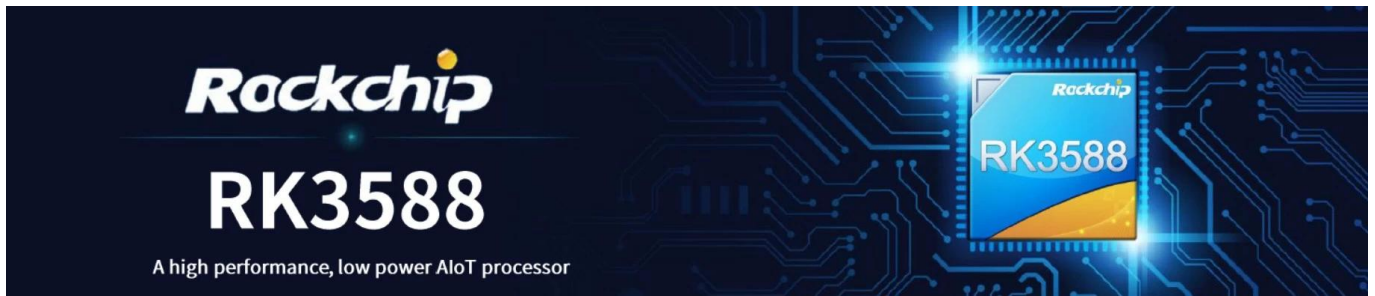


RK3588 CPU 8K HD



品牌	Rockchip RK3588
CPU	Rockchip RK3588 双核 ARM, 双核 Cortex-A76 @2.4GHz 双核 Ccore Cortex-A55@1.8GHz
GPU	ARM Mali-G610 MC4, OpenGL ES 1.1/2.0/3.1/3.2, Vulkan 1.1, 1.2, OpenCL 1.1,1.2,2.0
NPU	6 TOPS(int4/int8/int16/FP16/BF16/TF32 混合)
内存	4GB LPDDR4X(2GB*2, 可选 32GB 选项)
闪存	32G
WiFi	双核 WiFi 双核, 802.11 ax/ac/a/b/g/n
OS	支持 Linux 12
接口	支持 USB 5.0

接口	C口 (12V/2A)
存储	1*TF 存储 存储
接口	1*PCIE 存储 存储 存储
接口	1* 存储 存储 存储
RTC	CR1220 存储 存储
接口	2*UART 存储 存储
接口	1* 10/100/1000Mbps RJ45 存储
WiFi	双核 WiFi 双核, 802.11 ax/ac/a/b/g/n
USB	1*USB3.0 存储 1*USB2.0 存储 1* USB2.0 存储 存储 4核 存储
LED	1*3核 LED 存储
LCD	1*4核 32核 存储 MIPI 存储 1*存储 存储 30核 存储 EDP 存储
接口	1*HD 存储 存储, HD 2.1 存储 8K@60Hz 存储 1*DP 存储 存储, DP1.4 存储 4K@60Hz 存储
接口	1*MIPI-CSI(存储 存储) 1*HD 存储 存储, 存储 HD 2.0 4K@60Hz 存储
接口	1*存储
接口	1*L/R, 存储 存储 存储 存储 存储(3.5mm 存储 存储) 1*SPK
接口	7*GPIO, 3.3V 存储 4*I2C, 3V 存储, 存储 存储
接口	1*ADC 2*PWM 1*5V 存储

接口

Codec: MPEG-1, MPEG-2, MPEG-4, H.263, H.264, H.265, VC-1, VP9, VP8, MVC AV1@MMU
Encoder/Decoder: H.264 AVC/MVC Main10 L6.0: 8K@30fps(7680*4320);

Codec&Encoder

VP9 Profile0/2 L6.1: 8K@60fps(7680*4320);
H.265 HEVC/MVC Main10 L6.1: 8K@60fps(7680*4320);
AVS2 0/2 L10.2.6: 8K@60fps(7680*4320);
AV1 8/10bit L5.3: 4K@60fps(3840*2160);
MPEG-2 MP: 1080p@60fps(1920*1088);
MPEG-1 MP: 1080p@60fps(1920*1088);
VC-1 AP 3: 1080p@60fps(1920*1088);
VP8 2: 1080p@60fps(1920*1088)

Codec

Audio Codec: MP3, AAC, FLAC, WAV
Chip: RTL8111HS
Speed: 10/100/1000Mbps
Chip: AP6275P

WiFi

WiFi: 2.4Gbps, 802.11ax/ac/a/b/g/n, 2.4GHz, 5GHz, MU-MIMO

Video

Video: LT 5.0, BT, BLE, YBT, HDMI_TX (8K@60fps(7680x4320)), EDP (4K@60fps(3840x2160)), MIPI_CSI (4K@60fps(3840x2160)), DP(type-c) (4K@60fps(3840x2160))

IO

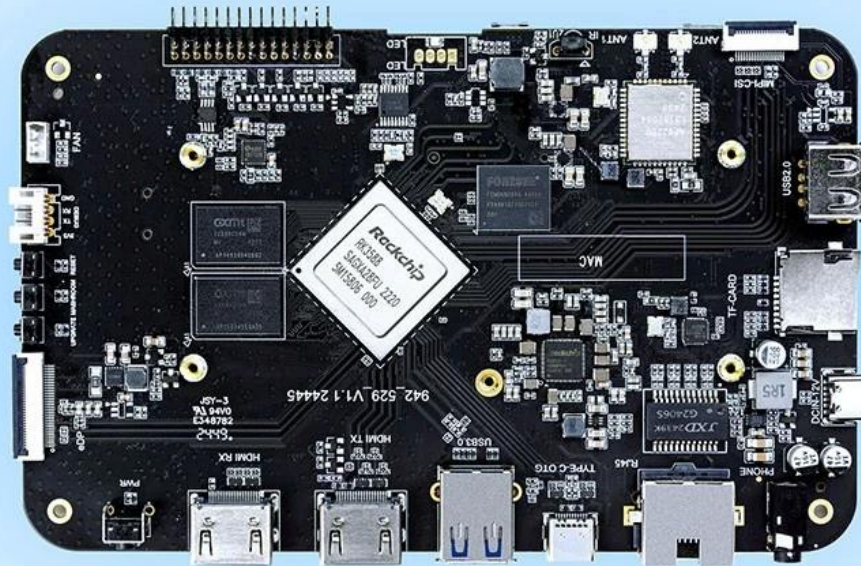
IO: HDMI_RX (4K@60fps(3840*2160)), MIPI_DSI, PIP(picture-in-picture)

RTC

RTC: HYM8563
Real-time clock chip

High-Performance AI Development Board

The RK3588 is a flagship AIoT 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 AI acceleration. It also integrates a 48MP ISP with HDR & 3DNR, supporting major deep learning frameworks for enhanced AI performance.



RK3588
Octa-core CPU



Mali-G610
MC4 1GHz GPU



6Tops
NPU



8K
8K Codec
H.265 HEVC



4~32GB RAM
8~128GB ROM



WiFi6
1000M LAN



BT5.x



Android/Linux

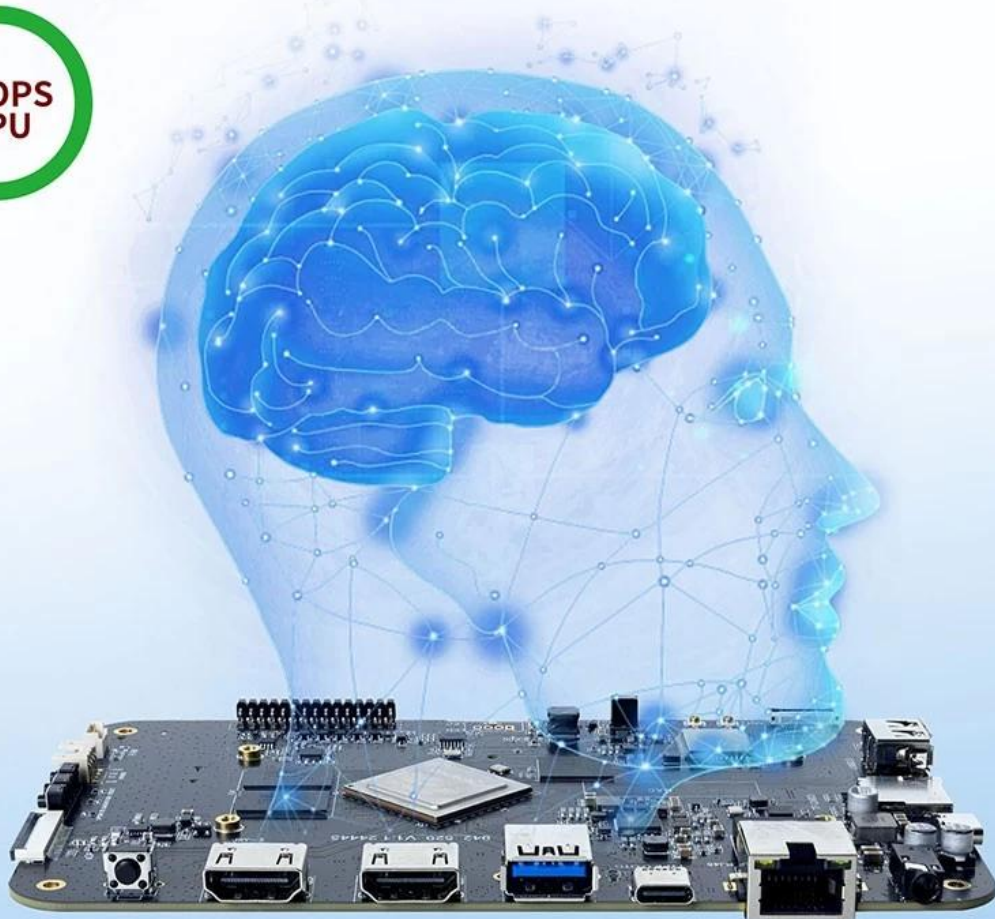
RK3588---Next-Generation Flagship AIoT CPU

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

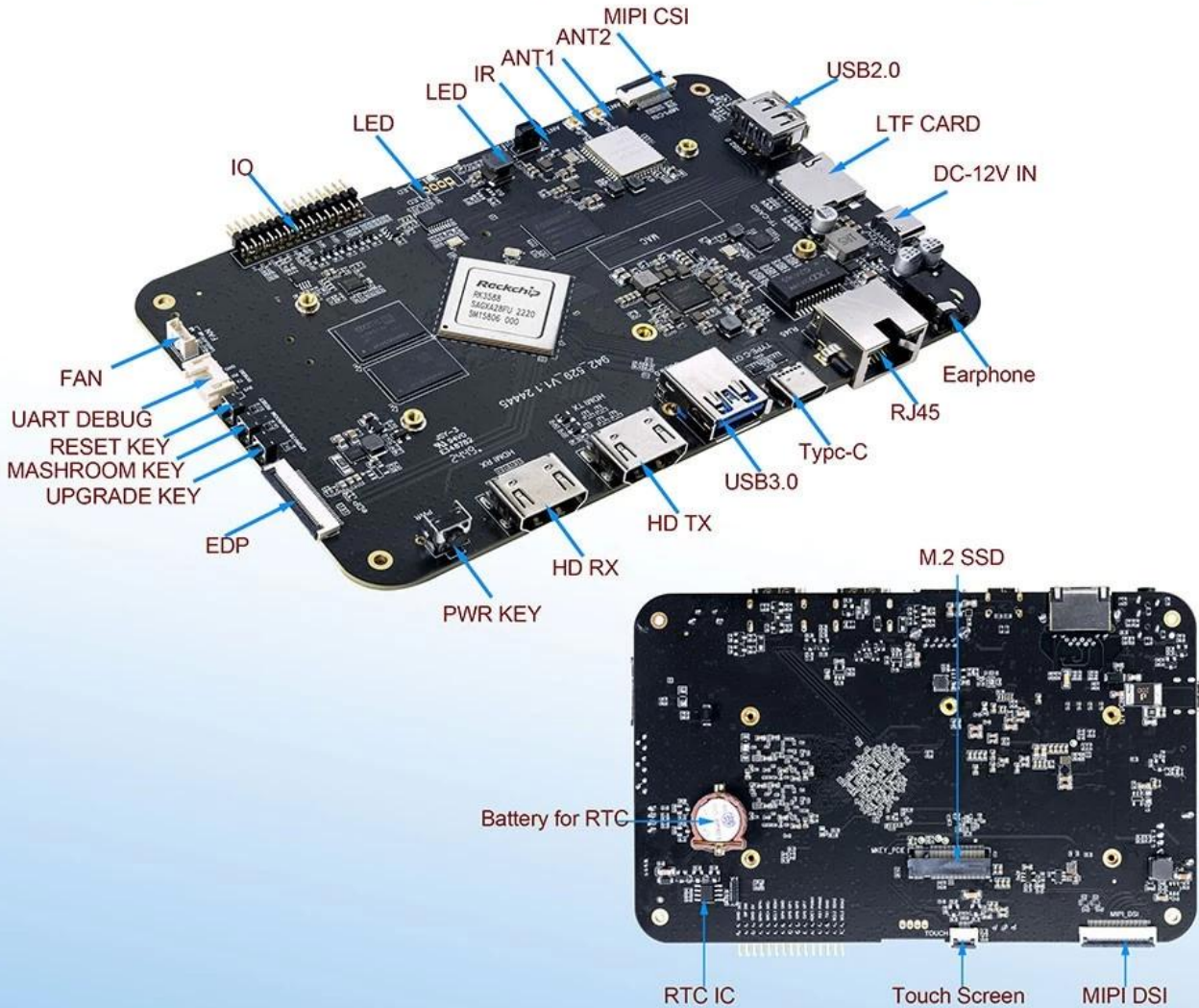
Up to 32GB RAM and 128GB eMMC storage, surpassing previous memory limits for faster response and meeting the demands of high-memory, high-storage applications.



32GB
128GB

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.



□□ □□

*CPU□ RK3588 □□□□ ARM □□□□(Quad Core Cortex-A76 □ Quad Core Cortex-A55)□□ □□ □ □□□ □□ 2.4GHz□□□. □□ □□ Mali-G610 GPU□ □□□□ □□□ NPU □□□ □□□ □□□□ 6TOP□ □□□□□.

*□□ □□: 8nm LP.

*□□□ LCD □□ □□□□□: 4□□ MIPI, □□ □□ EDP.

*I2C □□□□□□ □□□□ □□□□□.

*□□ □□□□ □□□□ TF □□ □□ PCIE □□□□□ □□□□□.

*□□ □□ □ □□ □□, □□ □□ UART □□ □□ □ □□ □ □□ 7□□ GPIO□ □□□□□.

*□□□□□ 12 OS □□

□□□ **RK3588** □□ □□ CPU□ □□□ □□□ **8K Ultra HD** □□□□ □ □□□□□□ □ □□ □□□ □□□ □□□ □□□□□. □□ □ □□□, □□□ □□, □□□ □□□□ □□ □ □□□□□ □□□ □□□□ □□□ □□□ □ □□ □□□ □□□□□.

RK3588 □□ □□ CPU□ □□□ □□

□ □□□□□ □□□ **Rockchip RK3588** □□ □□ □□□□4□□ □□□ Cortex-A76 □□□ 4□□ □□ □□□□ Cortex-A55 □□□ □□□

... 8K Ultra HD 8K Mali-G610 MP4 GPU 8K

8K Ultra HD

8K HD HDR10

6 HDMI 2.1 8K USB-C USB 3.0 5.0

- 6 HDMI 2.1 8K USB-C USB 3.0 5.0

OS

Google Play

4GB RAM 32GB

AI RK3588

AI

RK3588 AI

AI

AI

- AI

AI

AI

AI

RK3588 CPU 8K Ultra HD

AI

8K Ultra HD