

AI Rockchip RK3588 Android



Processor

Processor	Rockchip RK3588
CPU	Rockchip RK3588 ARM Cortex-A76 @2.4GHz 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
AI Acceleration	6 TOPS int4/int8/int16/FP16/BF16/TF32
RAM	4GB LPDDR4X 2GB*2 32GB
Storage	32G
Network	802.11 ax/ac/a/b/g/n
Bluetooth	12
USB	5.0

Connectivity

Port	Type-C 12V/2A
Storage	1*TF 1*PCIE
Expansion	1* M.2
Display	CR1220
Serial	2*UART
Network	1* 10/100/1000 Mbps RJ45 802.11 ax/ac/a/b/g/n
USB	1*USB3.0 1*USB2.0 1* USB2.0 4-Pin
LED	1*LED
Camera	1*32MP MIPI 1*30MP EDP
Display	1*8K@60Hz 1*DP 4K@60Hz
Camera	1*MIPI-CSI 1*4K@60Hz
Audio	1* 1*L/R 3.5mm 1*SPK
GPIO	7*GPIO 3.3V 4*I2C 3V
Power	1* 2* 1*5V

Other Features

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



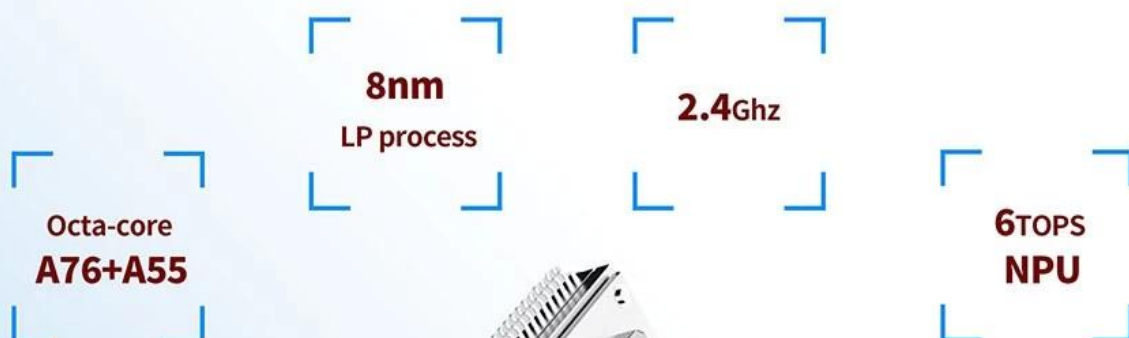
BT5.x



Android/Linux

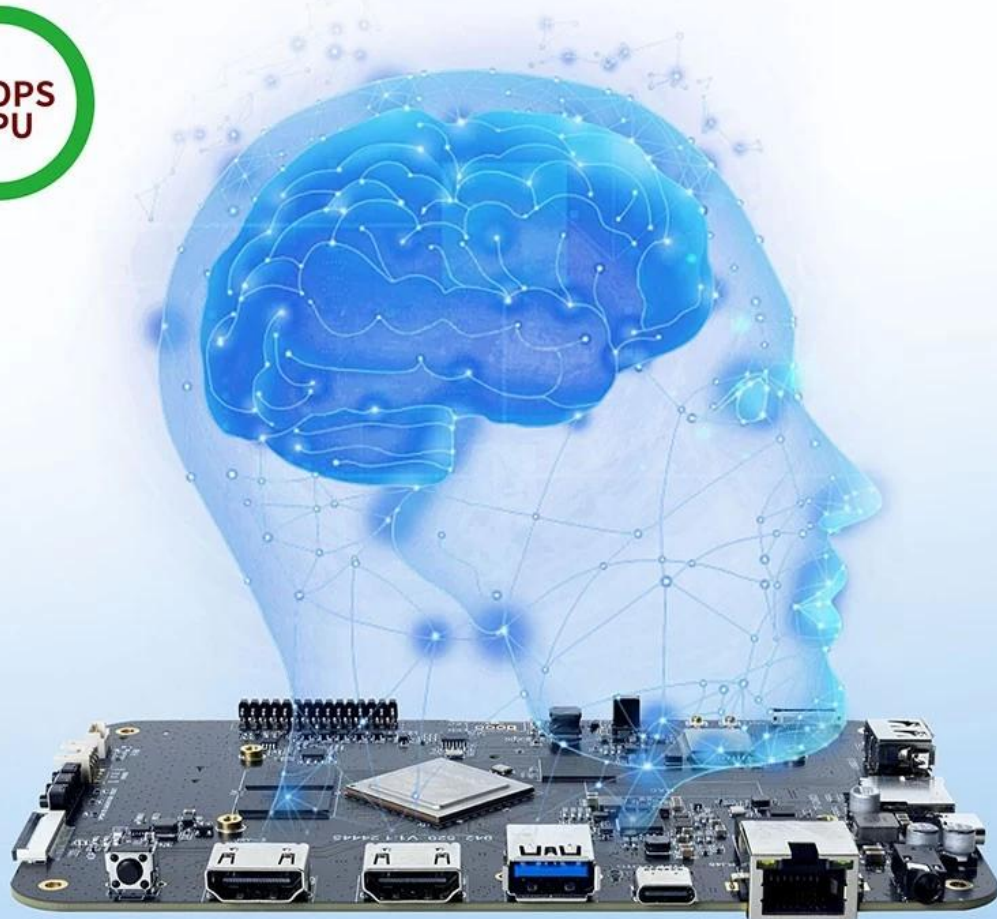
RK3588---Next-Generation Flagship AIoT CPU

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.



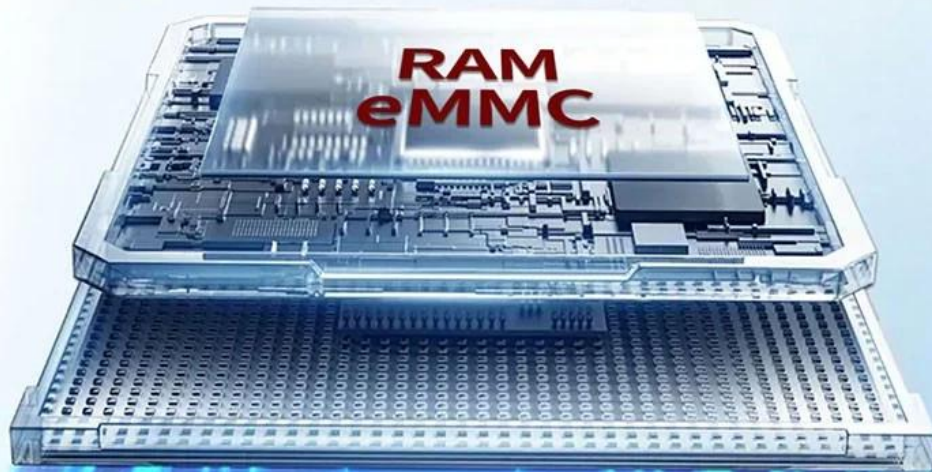
8K Video Encoding & Decoding

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.



Rockchip RK3588 8K 8K Cortex-A76 Cortex-A55 8K 8K

8K

8K HDR10

RK3588 AI

Google Play

WiFi, 5.0 HDMI USB-C PCIe WiFi 6

Android

- 8K

24/7

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