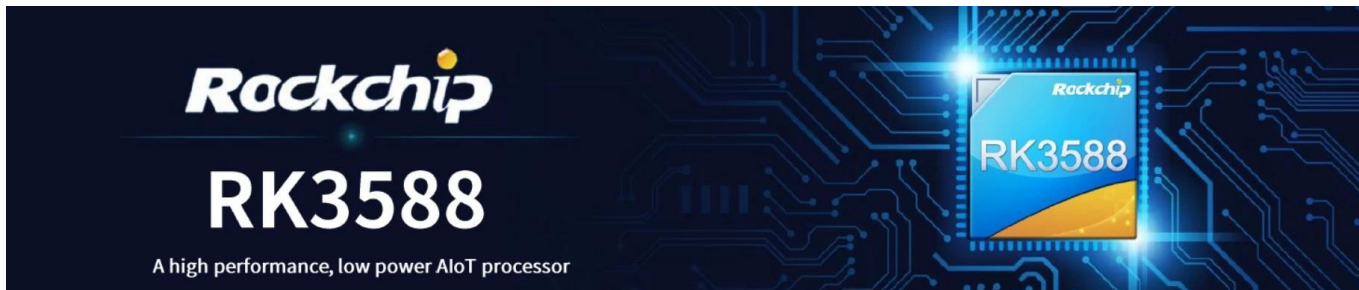


Rockchip RK3588 AI

Rockchip RK3588

12



Processor	Rockchip RK3588
ARM Core	Rockchip RK3588 ARM Quad-Core Cortex-A76 @2.4GHz Quad-Core 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
Cache	6 (int4/int8/int16/FP16/BF16/TF32)
Memory	4GB LPDDR4X (2GB-2 32B)
Storage	32G
Network	802.11 ax/ac/a/b/g/n
Display	12
Audio	5.0

Connectivity	Type-C (12V/2A)
Storage	1 - TF 1 - PCIE
Expansion	1 -
Camera	CR1220
Serial	2 - UART
Network	1-10/100/1000 Mbps RJ45
Network	802.11 ax/ac/a/b/g/n
USB	1 - USB3.0 1 - USB2.0
USB	1 - USB2.0 4
LED	1 - LED
Display	1 - MIPI 32 1 - EDP Dual-cChannel 30
Display	1 - HD 8K @ 60Hz 1 - DP DP1.4 4K @ 60Hz
Display	1 - MIPI-CSI 1 - HD 4K @ 60Hz
Display	1 -
Power	1 - L/R, (3.5 V)
Power	1 -
Power	7 - GPIO, 3.3V
Power	4 - I2C, 3V, 1
Power	1- 2- 1-5V

Video Codec: MPEG-1, MPEG-2, MPEG-4, H.263, H.264, H.265, VC-1, VP9, VP8, MVC AV1@MMU
H.264 AVC/MVC Main10 L6.0: 8K@30fps(7680-4320);
VP9/2 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 8/10 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)

Audio Codec:

MP3, AAC, FLAC, WAV

RTL8111HS

Network:

10/100/1000 Mbps

AP6275P

WiFi:

802.11ax/ac/a/b/g/n

2.4 Gbps, 5GHz

Wireless:

MU-MIMO

BT:

5.BT 5.0

BLE

BT

..

Display:

HDMI_TX 8K@60fps(7680x4320)

EDP 4K@60fps(3840x2160)

MIPI_CSI 4K@60fps(3840x2160)

DP(type-c) 4K@ 60fps(3840x2160)

HDMI_RX 4K@60fps(3840-2160)

Camera:

MIPI_DSI

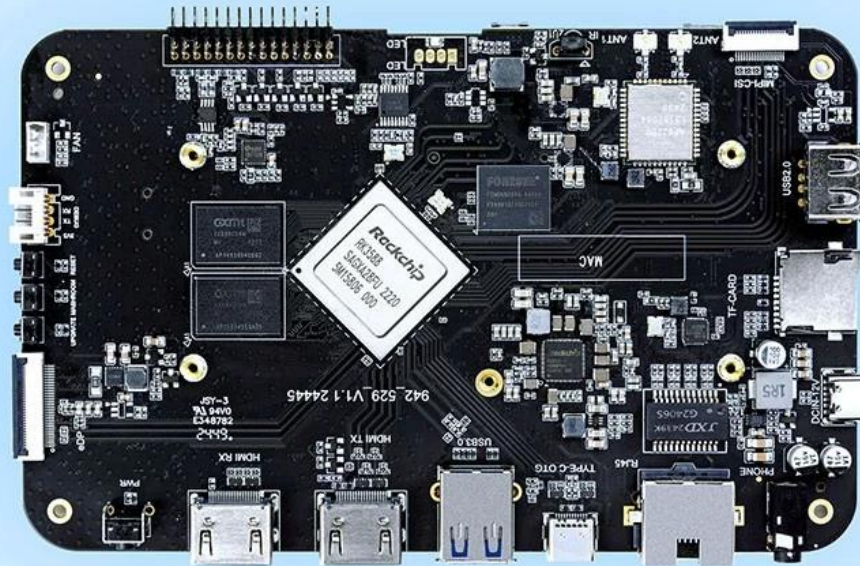
PIP

HYM8563

Other:

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

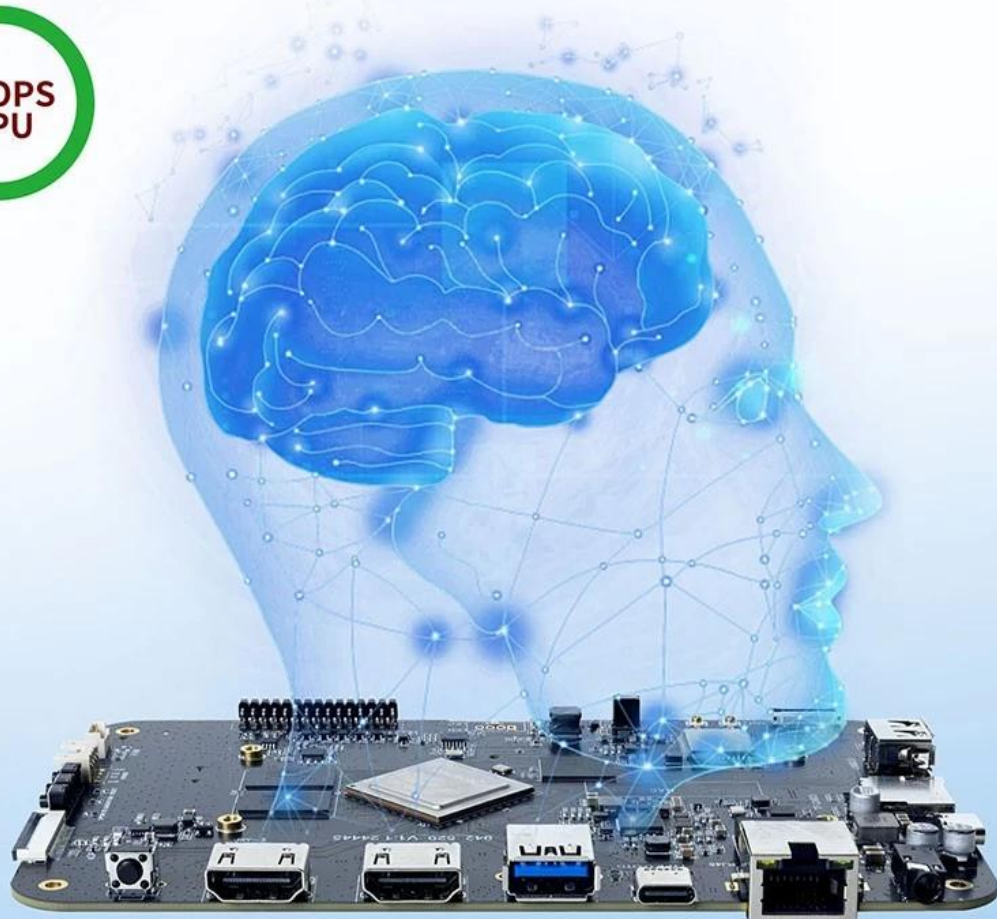
RK3588---Next-Generation Flagship AIoT CPU

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

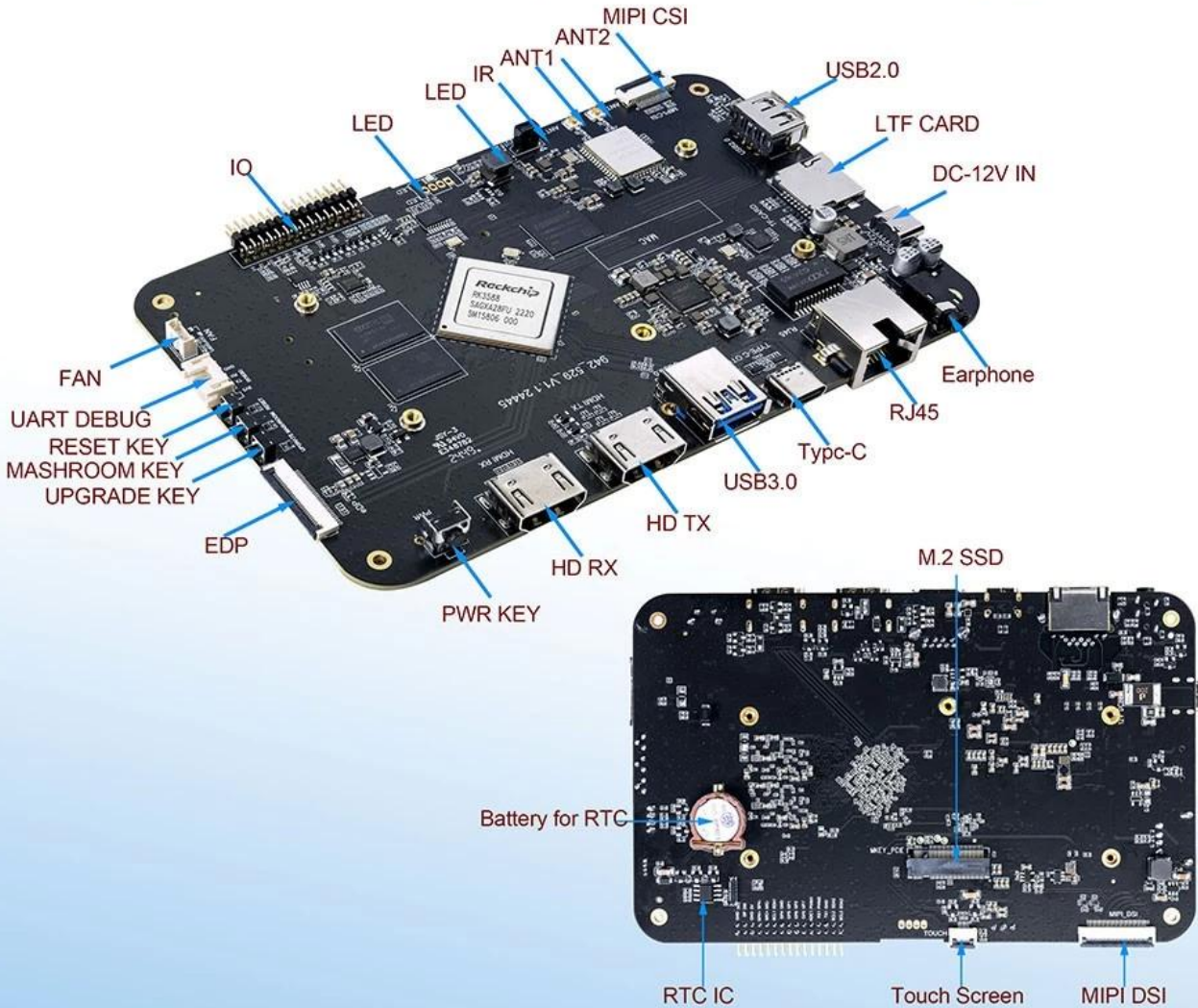
Up to 32GB RAM and 128GB eMMC storage, surpassing previous memory limits for faster response and meeting the demands of high-memory, high-storage applications.



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 Octa-Core AI Cortex-A76 Cortex-A55 -G610 MP4 GPU 8K Ultra HD

Rockchip RK3588 Octa-Core AI Cortex-A76 Cortex-A55 -G610 MP4 GPU 8K Ultra HD

8K Ultra HD 8K HDR10

AI

Android 12 Android 12 Google Play Store

6, 5.0, HDMI 2.1, USB-C PCIe

- AI

- 產品特點: 採用最先進的處理器，提供卓越的性能和流暢的用戶體驗。
- 兼容性: 支持多種主流操作系統，確保您的設備能與各種應用程序完美兼容。

本產品採用最先進的處理器，提供卓越的性能和流暢的用戶體驗。支持多種主流操作系統，確保您的設備能與各種應用程序完美兼容。產品特點: 採用最先進的處理器，提供卓越的性能和流暢的用戶體驗。兼容性: 支持多種主流操作系統，確保您的設備能與各種應用程序完美兼容。

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