8K □□□□ AI □□ □□□ □□ □□□ □□□ TV □□

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□□□□	Rockchip RK3588 □□□ TV □□
CPU	Rockchip RK3588 □□ □□ ARM, □□ □□ Cortex-A76 @2.4GHz □ □□ 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 □□□□ □□□ 2D □□□ □□ □□
NPU	6 □ □S(int4/int8/int16/FP16/BF16/TF32 □□ □□)
□□	4GB LPDDR4X(2GB*2, □□ 32GB □□)
□□ □□	32G
WiFi	□□ WiFi □□, 802.11 ax/ac/a/b/g/n
OS	□□□□□ 12
□□□□	□□□□ 5.0
□□□□ □□□□□	
□□ □□	C□ □□(12V/2A)
□□□□ □□	1*TF □□ □□ 1*PCIE □□ □□□ □□□ □□
□□ □□	1* □□□ □□ □□ □□□
RTC □□□	CR1220 □□ □□□ □□□
□□ □□	2*UART □□ □□
□□□	1* 10/100/1000Mbps RJ45 □□
WiFi	□□ WiFi □□, 802.11 ax/ac/a/b/g/n
USB □□	1*USB3.0 □□ 1*USB2.0 □□ 1* USB2.0 □□ □□□ 4□ □□
LED □□□	1*3□ LED □□□
LCD □□□□□	1*4□□ 32□ □□ MIPI □□□□□ 1*□□ c□□ 30□ □□ EDP □□□□□
□□□ □□ □□□□□	1*HD □□ □□, HD 2.1 □□ 8K@60Hz □□ □□ 1*DP □□ □□, DP1.4 □□ 4K@60Hz □□ □□
□□□ □□	1*MIPI-CSI(□□ □□) 1*HD □□ □□, □□ HD 2.0 4K@60Hz □□ □□
□□□ □□□□□	1*□□□ 1*L/R, □□ □ □□□ □□□ □□ □□(3.5mm □□□ □□) 1*SPK
□□ □□□□□	7*GPIO, 3.3V □□ 4*I2C, 3V □□, □□□□□ □□ 1*ADC 2*PWM 1*5V □□□
□□□□□ □□	

□□□&□□□ □□	□□□ □□: 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 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) □□ □□ □□□ □□□: MP3,AAC,FLAC,WAV □ □□ □□ □□□ □□.
□□□	□□: RTL8111HS □□: 10/100/1000Mbps□ □□□□ □□□□□ □□ □□ □□ □□□ □□□□□.
WiFi □ □□□□	□□: □□□□ □□□ □□ □□□ □□□□ □□□□ □□□□ □□ □□ □□□ □□□□□. □□: AP6275P WiFi □□: □□ 2.4Gbps□ □□ □□ □□□□ □□□ □□ 802.11ax/ac/a/b/g/n□ □□□□□. 2.4GHz □ 5GHz □□ □□□ □□□ □□□□ □□ □□□ □□□□□ □□□ □□□□□□. □□ □□□ □□ □ □□□ □□ □□□□ □□□□□ □□ MU-MIMO □□□ □□□□□.
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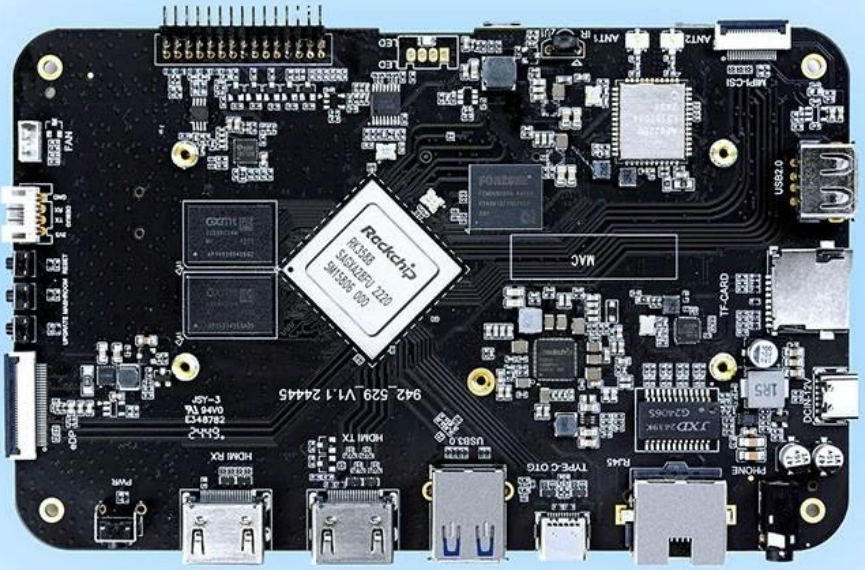
□□□□□ □□	HDMI_TX□ □□ 8K@60fps(7680x4320)□ □□□□□. EDP□ □□ 4K@60fps(3840x2160)□ □□□□□. MIPI_CSI□ □□ 4K@60fps(3840x2160)□ □□□□□. DP(type-c)□ □□ 4K@ 60fps(3840x2160)□ □□□□□. □□ □□ □□ □□□□□, □□□ □□ □□ □□□□□□□ □□□ □ □□□□. HDMI_RX□ □□ 4K@60fps(3840*2160)□ □□□□□.
□□ □□	MIPI_DSI(□□□□) PIP(picture-in-picture), □□ □□ □ □□□ □□ □□ □□ □□□□□□□□ □□□□□.
RTC	□□: HYM8563 □ □□ □□□ □□□ □□ □□ □□ □□□□ □□ □□ □□□ □□□ □ □□□□ □□ □ □□□□ □□ □□□ □□□ □□ □□□□□□ □□□□ □ □□□□□. □□ □□ □ □□□ □□□ □□, □□□ □□/□□ □□□ □□□ □ □□ □□□ □□□ □□□ □ □□□□.

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
0cta-core CPU

Mali-G610
MC4 1GHz GPU

6Tops
NPU

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.

8nm
LP process

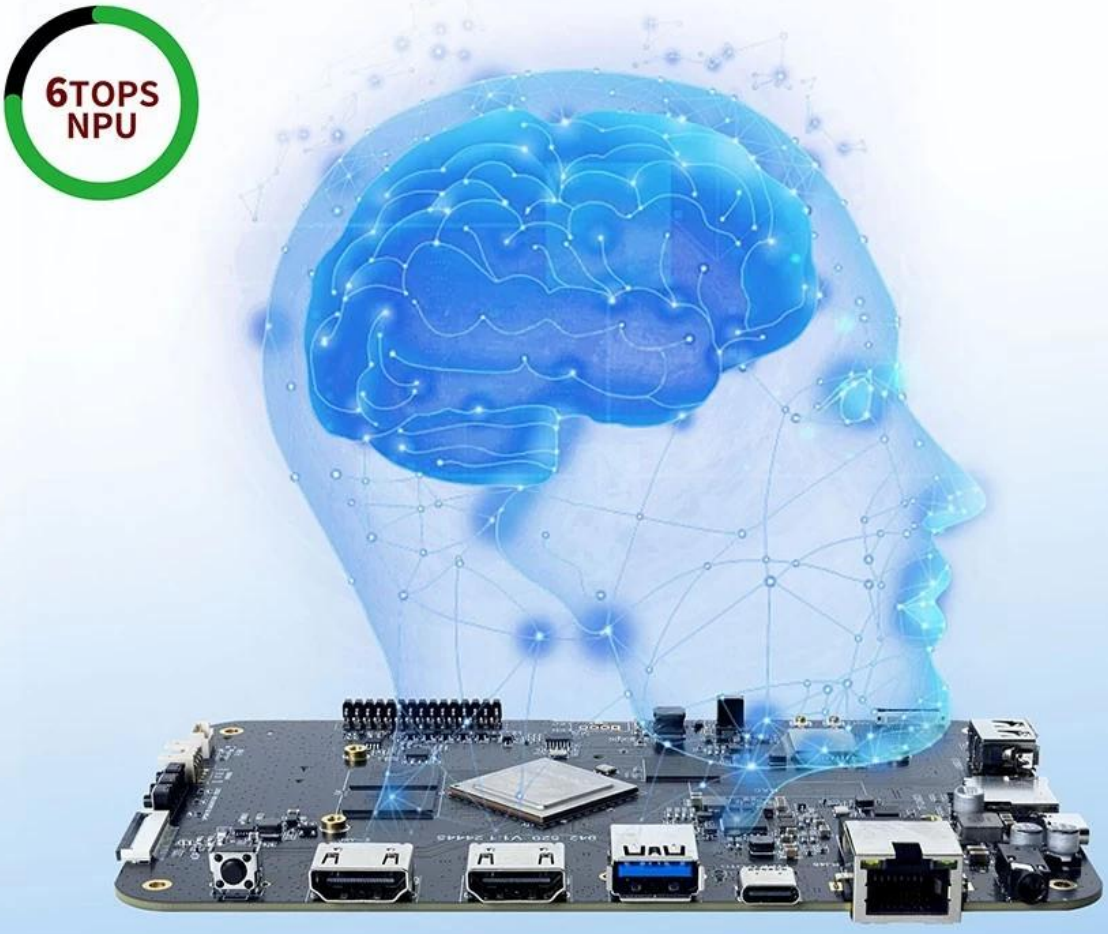
2.4 Ghz

Octa-core
A76+A55

6TOPS
NPU

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

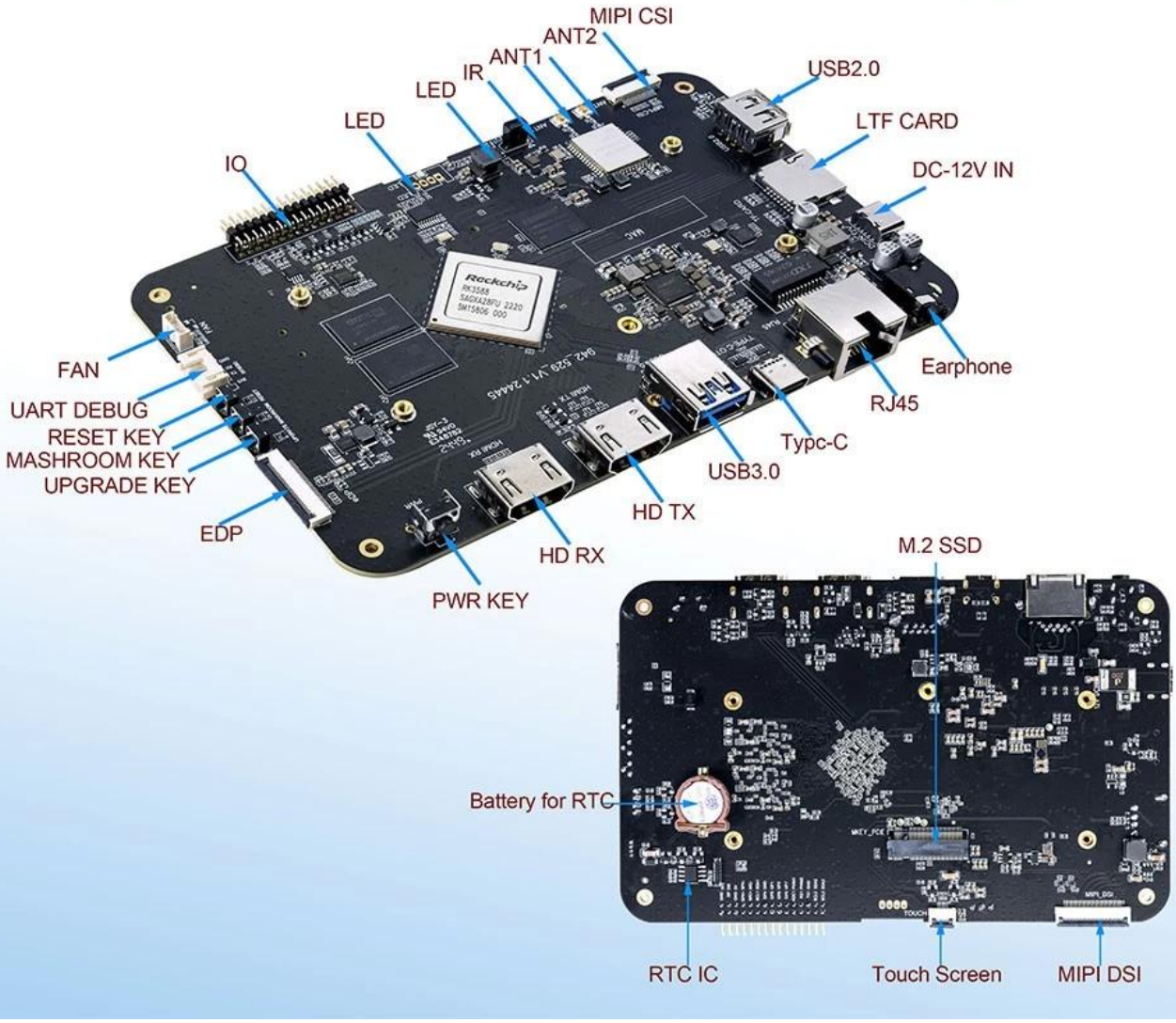
Supports 8K@60fps H.265/VP9 decoding and 8K@30fps H.265/H.264 encoding, with up to 32x 1080P@30fps decoding and 16x 1080P@30fps encoding. Delivers stunning 8K video quality.

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.

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*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 □□□□□□ □□□□ □□□□□.
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- **USB 3.0** □ **USB-C**: □□□□ □□□ □□□□ □□□□□ □□ □□□□□.
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