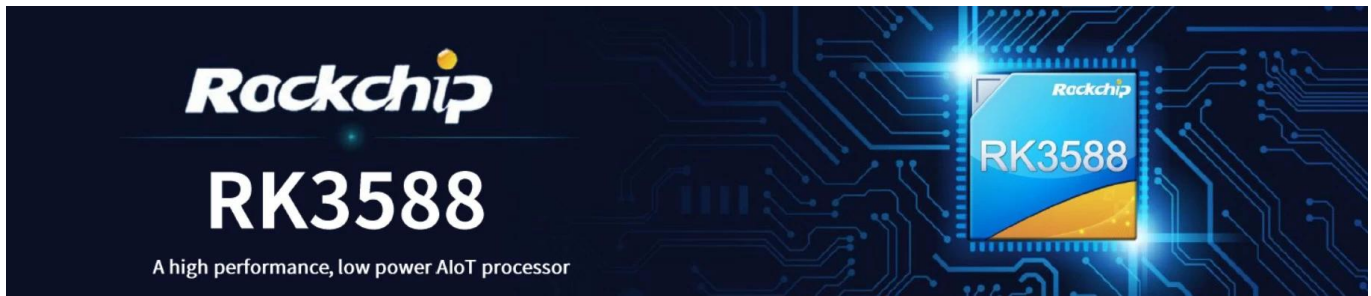


# 8K AI TV



Processor	Rockchip RK3588 AIoT 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
NPU	6 S(int4/int8/int16/FP16/BF16/TF32)
RAM	4GB LPDDR4X(2GB*2, 32GB)
Cache	32G
WiFi	WiFi, 802.11 ax/ac/a/b/g/n
OS	12
IO	5.0

Power	C (12V/2A)
Storage	1*TF, 1*PCIE
IO	1* USB
RTC	CR1220
UART	2*UART
Network	1* 10/100/1000Mbps RJ45, 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
Display	1*HD, HD 2.1 8K@60Hz, 1*DP, DP1.4 4K@60Hz, 1*MIPI-CSI
Camera	1*HD, HD 2.0 4K@60Hz
Audio	1*L/R, 1*SPK, 7*GPIO, 3.3V, 4*I2C, 3V, 1*ADC, 2*PWM, 1*5V

Other specifications and details.

Codec: MPEG-1, MPEG-2, MPEG-4, H.263, H.264, H.265, VC-1, VP9, VP8, MVC AV1@MMU

Video & Audio

Video: 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)

Network

Network: 10/100/1000Mbps Ethernet; AP6275P

WiFi

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

Display

Display: LT 5.0; BT; BLE; HDMI TX: 8K@60fps(7680x4320);  
EDP: 4K@60fps(3840x2160);  
MIPI CSI: 4K@60fps(3840x2160);  
DP(type-c): 4K@60fps(3840x2160)

Camera

Camera: HDMI RX: 4K@60fps(3840\*2160);  
MIPI DSI; PIP(picture-in-picture)

RTC

RTC: HYM8563; Real-time clock

# 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**

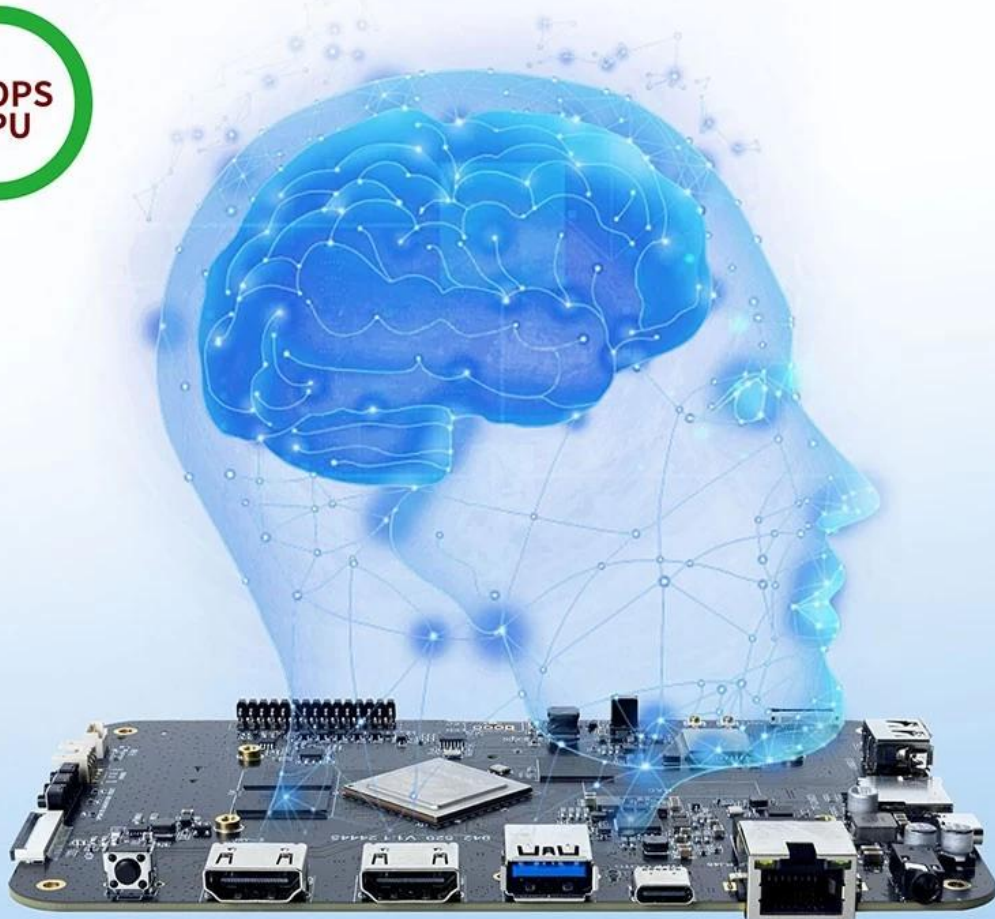
# RK3588---Next-Generation Flagship AIoT CPU

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.



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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 □□□□□□ □□□□ □□□□□□.
- \*□□ □□□□ □□□□ TF □□ □□ PCIE □□□□□ □□□□□□.
- \*□□ □□ □ □□ □□, □□ □□ UART □□ □□ □ □□ □ □□□ 7□□ GPIO□ □□□□□□.
- \*□□□□□□ 12 OS □□

□□□ **8K** □□□□ **AI** □□ □□□ □□ □□□ □□□ **TV** □□ □□□□□□ □□□□ □□□ □□□ □□□ □□□ □□□ □□□ □□□□□□□□. □□□□ □□ □□□□ □□ □□□□ □□ □□□ □□ □□□□□□□□ □□□ □□□□□□□□ □□□□□□.

## 8K Ultra HD

8K Ultra HD resolution provides unparalleled clarity and detail. Experience content in 8K resolution, 4K, and HD. Supports HDR10+, Dolby Vision, and Dolby Atmos. Includes AI-powered image enhancement.

## AI

AI-powered TV features enhance your viewing experience with intelligent image and sound processing.

- AI Image Enhancement: Boosts contrast and sharpens details.
- AI Sound Enhancement: Optimizes audio for different content.
- AI Voice Control: IoT-enabled voice control for smart home integration.

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AI-powered TV features enhance your viewing experience with intelligent image and sound processing. Includes AI-powered image enhancement, AI-powered sound enhancement, and AI-powered voice control. Supports AI-powered image enhancement, AI-powered sound enhancement, and AI-powered voice control. Includes AI-powered image enhancement, AI-powered sound enhancement, and AI-powered voice control.

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- AI Image Enhancement: Boosts contrast and sharpens details.
- HDMI 2.1: Supports 8K resolution and HDR10+.
- USB 3.0 & USB-C: Supports 8K resolution and HDR10+.
- AI Voice Control: IoT-enabled voice control for smart home integration.

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## OS

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