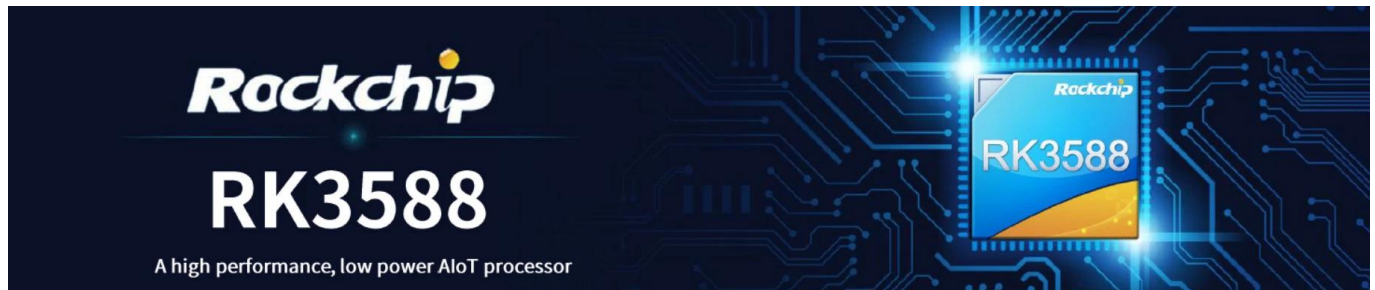


# Rockchip RK3588 Octa Core 8K Ultra HD



## Overview

Product Name	Rockchip RK3588 TV Box
Processor	rockchip rk3588 octa-core 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 M-Profile High Performance
NPU	6 TOPS (int4/int8/int16/fp16/bf16/tf32 mixed)
RAM	4GB LPDDR4X (2GB*2 32-bit 3200MHz 32GB)
Storage	32GB
Connectivity	802.11 AX/AC/A/B/G/N
OS	Android 12
Power	5.0W

## Connectivity

USB	1* Type-C (12V 2A)
Storage	1* TF
Storage	1* PCIE
Storage	1* SATA
RTC	CR1220
UART	2* UART
Network	1* 10/100/1000 MBPS RJ45
Network	802.11 AX/AC/A/B/G/N
USB	1* USB3.0
USB	1* USB2.0
USB	1* USB2.0 4 ports
LED	1* LED
LCD	1* MIPI 32 pins 32-bit
LCD	1* EDP 16 pins 16-bit
Display	1* HD 2.1 8K@60Hz
Display	1* DP 1.4 4K@60Hz
Display	1* MIPI-CSI ((1080P 30FPS)
Display	1* HD 2.0 4K@60Hz
Display	1* L/R (3.5mm 3.5V)
Display	1* SPK
Display	7* GPIO 3.3V
Display	4* I2C 3 pins 3.3V
Display	1* ADC
Display	2* PWM
Display	1* 5V

## 꺆꺆꺆꺆꺆꺆 꺆꺆꺆꺆

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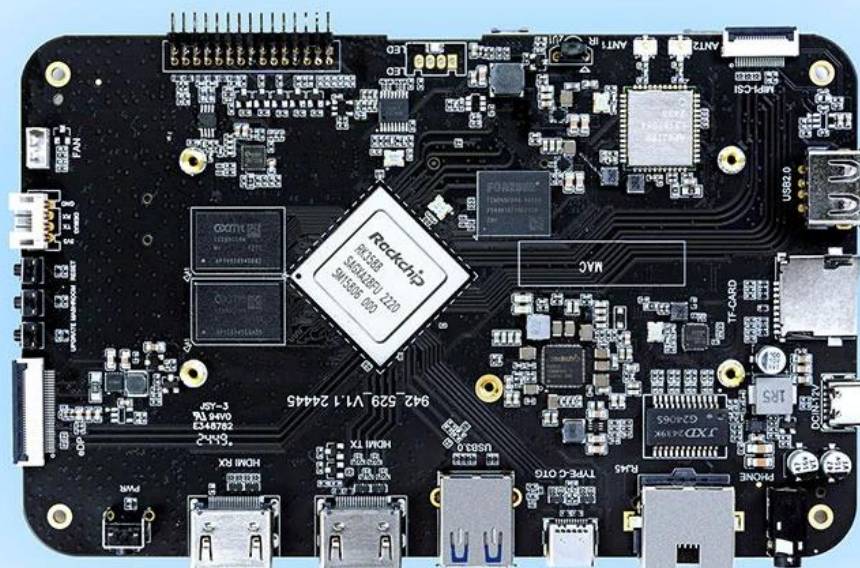
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RTC

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## 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 Codec**  
H.265 HEVC



**4~32GB RAM**  
**8~128GB ROM**



**WiFi6**  
**1000M LAN**



**BT5.x**



**Android/Linux**

# RK3588---Next-Generation Flagship AIoT CPU

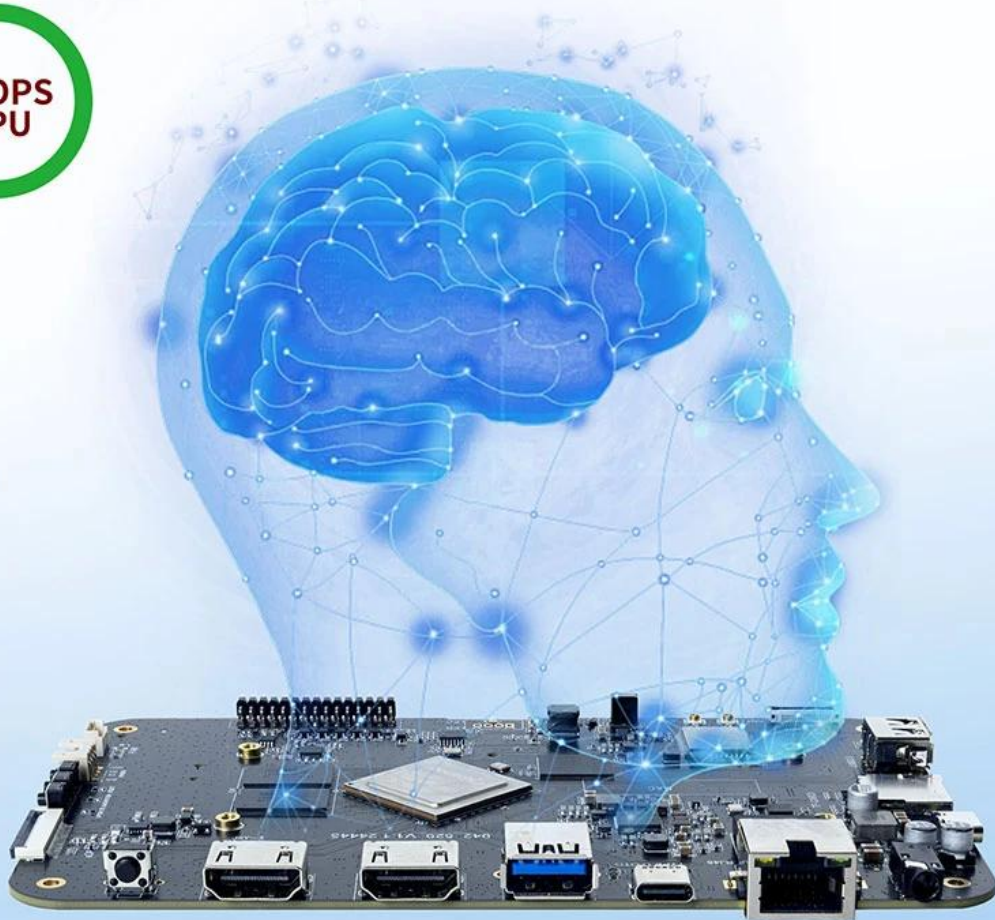
Powered by the RK3588 octa-core 64-bit chipset, with ARM Mali-G610 MP4 GPU and 6TOPs AI NPU for superior AI performance and expanded possibilities.





# 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.



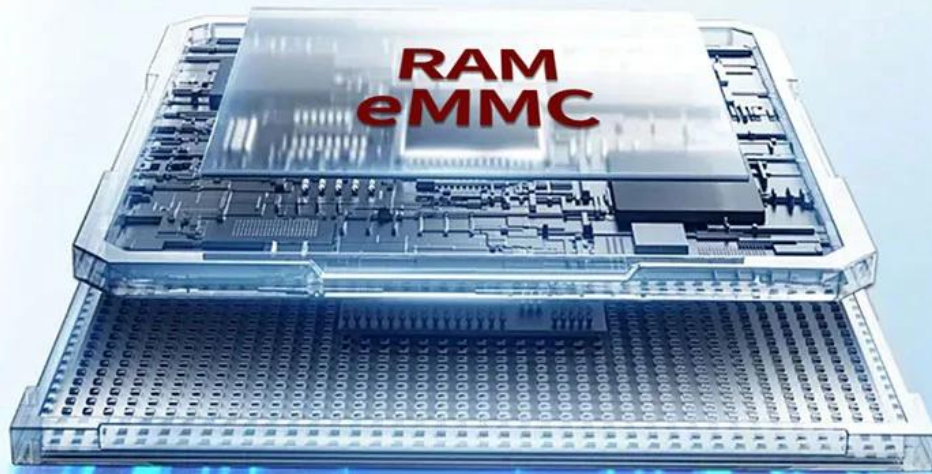
## 8K Video Encoding & Decoding

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.

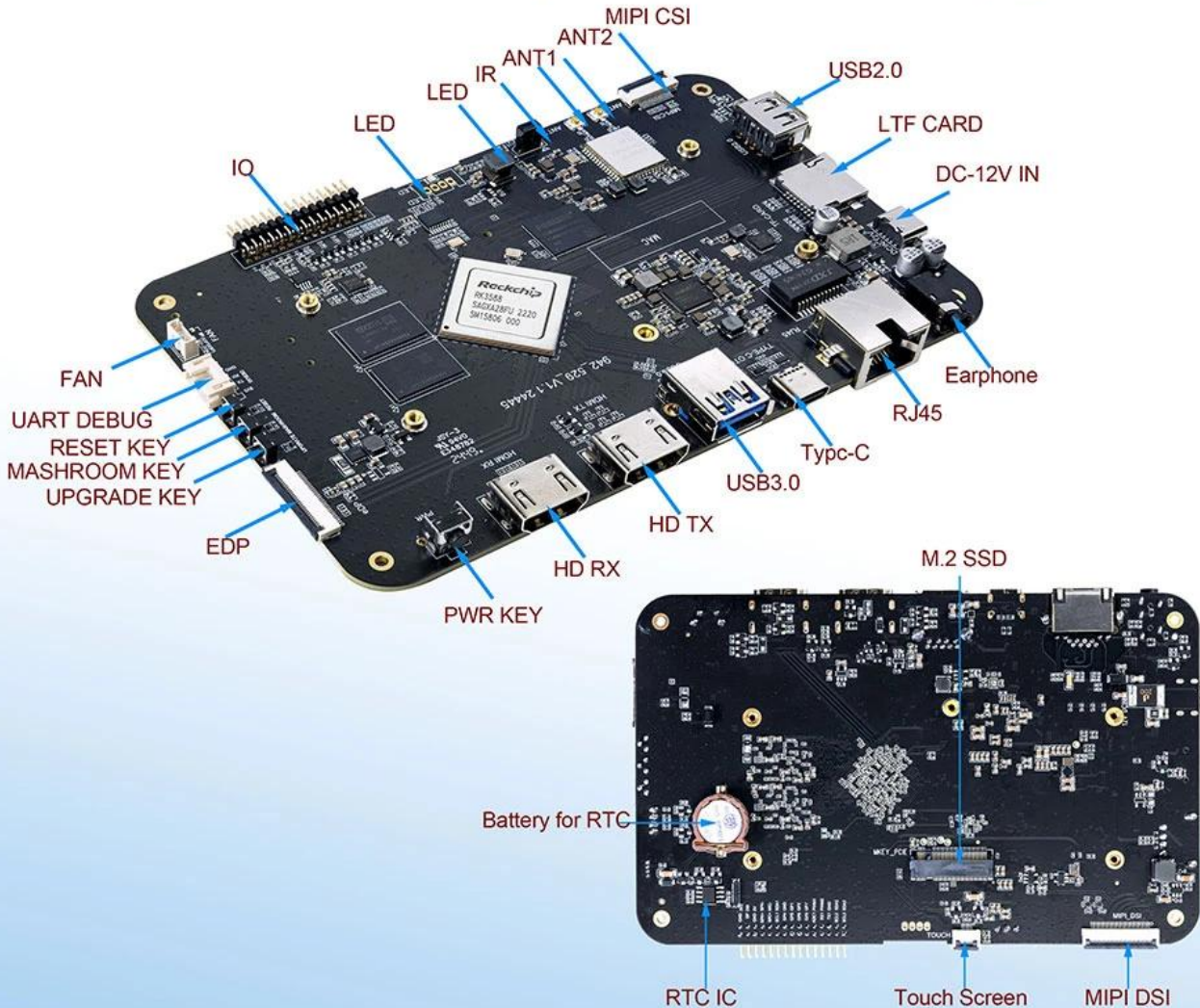


32GB  
128GB



## 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.



Rockchip TV Board

Rockchip TV Board Processor\* RK3588 Octa-Core Processor (Quad Core Cortex-A76 + Quad Core Cortex-A55) + Rockchip TV Board Display\* NA + Rockchip TV Board GPU Mali-G610 + Rockchip TV Board NPU 6 Tops. + Rockchip TV Board

8 :nm LP.

\*Rockchip TV Board LCD: MIPI + Rockchip TV Board EDP. + Rockchip TV Board

Rockchip TV Board I2C.

\*Rockchip TV Board TF + Rockchip TV Board PCIe. + Rockchip TV Board

Rockchip TV Board UART + Rockchip TV Board GPIO. + Rockchip TV Board

\*Android 12 OS

Rockchip TV Board Android AI + Rockchip TV Board Rockchip RK3588 Octa Core + Rockchip TV Board Android + Rockchip TV Board





