

# Rockchip RK3588 12 LCD 4K 8K HD AI



## Processor Specifications

Rockchip RK3588	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 1.1,1.2,2.0
NPU	6 TOPS(int4/int8/int16/FP16/BF16/TF32)
RAM	4GB LPDDR4X(2GB*2), 32GB
WiFi	WiFi, 802.11 ax/ac/a/b/g/n
Bluetooth	Bluetooth 12
USB	USB 5.0

## Connectivity and I/O

Power	C (12V/2A)
Storage	1*TF, 1*PCIE
Expansion	1* USB 4
RTC	CR1220
UART	2*UART
Ethernet	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
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
GPIO	7*GPIO, 3.3V
I2C	4*I2C, 3V
ADC	1*ADC
PWM	2*PWM
Other	1*5V

## Additional 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.



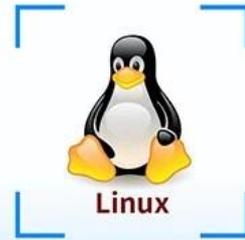
# Powerful Network

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.



# 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 □□

□□□ **Rockchip RK3588** □□ □□ □□□□□ **12 LCD** □□□□ □□ □□ □□□ □□□□, □□□ □□□□□, □□□□ □□□□ □□□ □□ □□□□. 4K/8K Ultra HD □□ □ AI □□□□ □□□ □□□ □□□ □ □□□ □□ □ □□□□□□□□ □□□ □□ □□□ □□□□□ □□□□□.

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□ □□□□ □□□ □□□ **Rockchip RK3588** □□□□ **CPU**, □□□□ □□□□ □□□□ □□□□ □□□□□□. 4□□ Cortex-A76 □□□□ 4

Rockchip RK3588 搭载 Cortex-A55 处理器，支持 4K/8K 视频播放，GPU 支持 HDR 视频播放。

### 4K/8K 视频 HD 播放

Rockchip RK3588 支持 4K 和 8K 视频 HD 播放。支持 HDR 视频播放，支持 4K/8K 视频播放。

### 支持 Android 12 OS

Rockchip RK3588 支持 Android 12 OS，支持 64 位应用，支持 Android 12 OS。

### 支持 AI 应用

Rockchip RK3588 支持 AI 应用，支持 AI 应用，支持 AI 应用。

### 支持多种接口

Rockchip RK3588 支持 HDMI, USB, PCIe, WiFi 6 等多种接口，支持 IoT 应用。

### 支持 Rockchip RK3588 LCD

Rockchip RK3588 LCD 支持多种分辨率，支持多种分辨率。

- 支持 4K/8K 视频播放。
- 支持 HDR 视频播放。
- 支持 AI 应用。
- 支持 Android 12 OS。
- 支持多种接口。

### 支持多种分辨率

Rockchip RK3588 LCD 支持多种分辨率，支持多种分辨率。

### 支持 Android 12 OS

Rockchip RK3588 支持 Android 12 OS，支持 Android 12 OS。

### 支持 AI 应用

Rockchip RK3588 支持 AI 应用，支持 AI 应用。

### 支持

Rockchip RK3588 支持 Android 12 LCD，支持 AI 应用。

Rockchip RK3588 支持多种分辨率，支持多种分辨率。