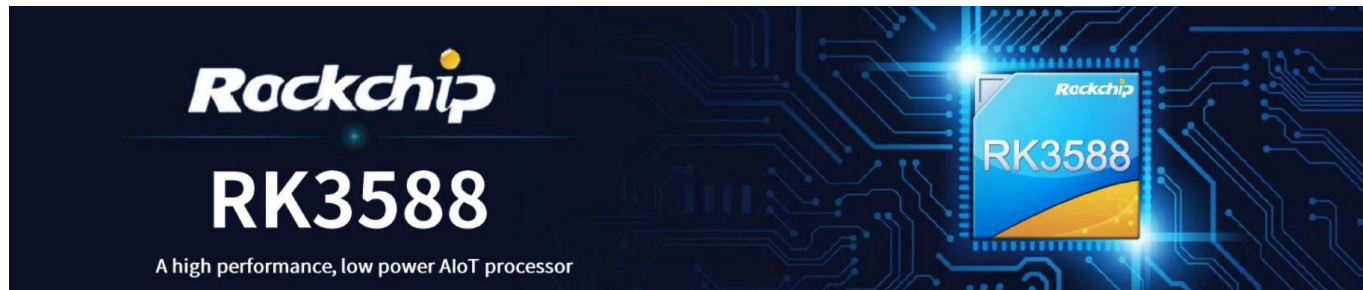


Rockchip RK3588 Octa Core 12 LCD 4K 8K Ultra HD AI



OS	Android Rockchip RK3588
Processor	Rockchip RK3588 ARM 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
RAM	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
Expansion	1 - PCIE
GPIO	1 -
UART	CR1220
UART	2 -
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
LED	1 - LED
Display	1 - MIPI 32
Display	1 - EDP Dual-cChannel 30
Display	1 - HD 2.1 8K @ 60Hz
Display	1 - DP DP1.4 4K @ 60Hz
Display	1 - MIPI-CSI
Display	1 - HD 2.0 4K @ 60Hz
Display	1 -
Display	1 - L/R (3.5)
Display	1 -
Display	7 - GPIO, 3.3V
Display	4 - I2C, 3V, 3.3V
Display	1 -
Display	2 -
Display	1-5V

Additional specifications and details for the Rockchip RK3588 processor.

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

2.4GHz 5GHz

Wireless:

MU-MIMO

BT:

5.BT 5.0

BT

BLE

BT

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Display:

HDMI_TX 8K@60fps(7680x4320)

EDP 4K@60fps(3840x2160)

MIPI_CSI 4K@60fps(3840x2160)

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

Display:

HDMI_RX 4K@60fps(3840-2160)

MIPI_DSI

PIP

HYM8563

Camera:

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

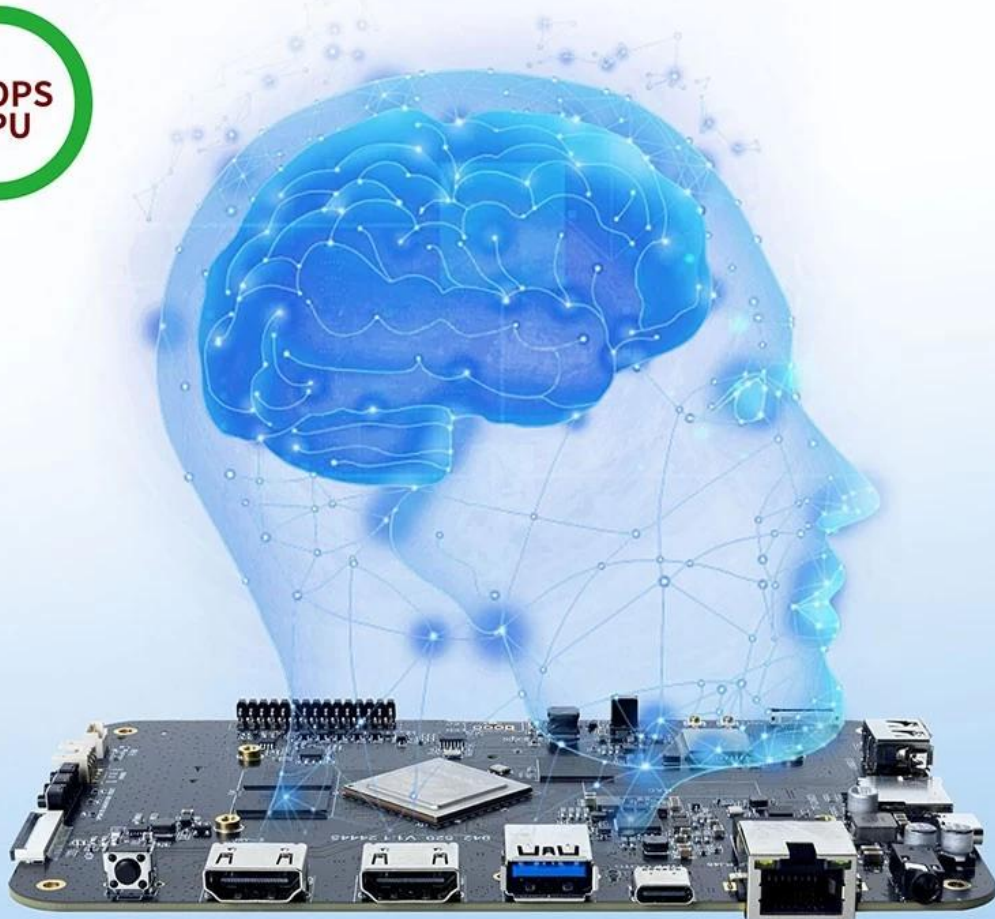
RK3588---Next-Generation Flagship AIoT CPU

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 RK3588

- CPU ARM Octa-core RK3588 (Quad Core Cortex-A76 2.4 GHz 2.4 GHz Quad Core Cortex-A55)
- GPU Mali-G610 Quad Core
- NPU 6TOPs
- Process: 8nm LP
- Display: LCD (MIPI, EDP)
- I2C
- TF, PCIE
- UART, GPIO
- Android 12

Rockchip RK3588 12 Octa-Core

Rockchip RK3588 4K/8K Ultra HD AI

Octa-Core Rockchip RK3588 Cortex-A76 Cortex-A55 GPU

4K/8K HDR

Android 12

AI

HDMI, USB, PCIe, WiFi 6 IoT

LCD Rockchip RK3588

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