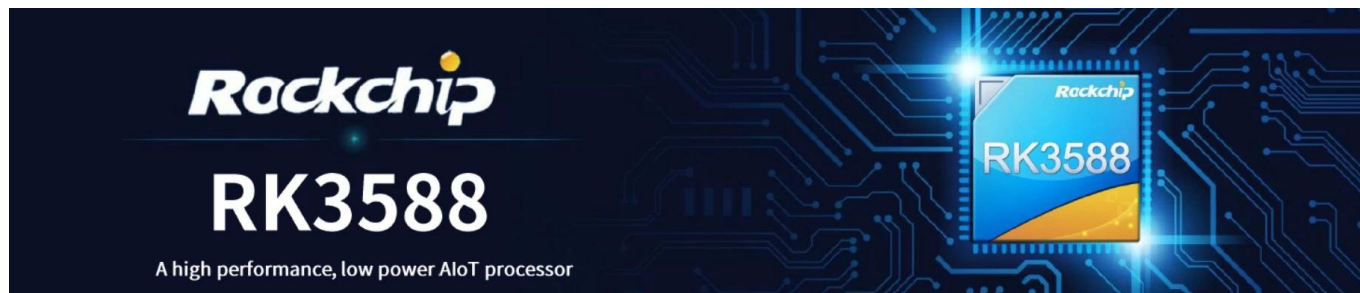


# Top Internet TV Box with 8K Resolution and AI-Powered Features



## Specifications

Model No.	Rockchip RK3588 Internet TV Box
CPU	Rockchip RK3588 Octa-Core ARM, Quad-Core Cortex-A76 @2.4GHz and Quad-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 Embedded high performance 2D image acceleration module
NPU	6 TOPS (Supports int4/int8/int16/FP16/BF16/TF32 Acceleration)
RAM	4GB LPDDR4X (2GB*2, Supports up to 32GB)
ROM	32G
WiFi	Built-in WiFi Module, 802.11 ax/ac/a/b/g/n
OS	Android 12
Bluetooth	Bluetooth 5.0

## Hardware Interface

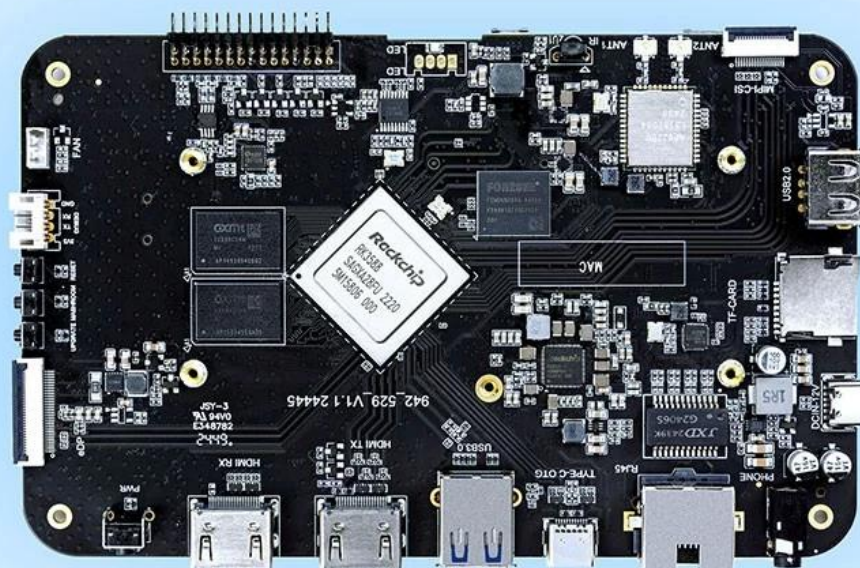
Power input	Type-C Port (12V/2A)
Storage Extension	1*TF Card Slot 1*PCIE Hard Disk Data Port
Remote Control	1* Infrared Remote Control Receiver
RTC Battery	CR1220 Button Battery Onboard
Serial Port	2*UART Serial Port
Ethernet	1* 10/100/1000 Mbps RJ45 Port
WiFi	Built-in WiFi Module, 802.11 ax/ac/a/b/g/n
USB Port	1*USB3.0 Port 1*USB2.0 Port 1* USB2.0 Port Reserved 4-Pin socket
LED Indicator	1*Three-Color LED Indicator
LCD Interface	1*Four-Channel 32-Pin Sequential MIPI interface 1*Dual-cChannel 30-Pin Sequential EDP interface
Video Output Interface	1*HD Output Port, Support HD 2.1 up to 8K@60Hz output 1*DP Output Port, Support DP1.4 up to 4K@60Hz output
Video input	1*MIPI-CSI (dual-channel) 1*HD input Port, Supports up to HD 2.0 4K@60Hz input 1*MIC
Audio interface	1*L/R, Left and Right Sound Channel Output (3.5mm Headset Port) 1*SPK 7*GPIO, 3.3V Voltage 4*I2C, 3V Voltage, Support Touch Screen
Other interfaces	1*ADC 2*PWM 1*5V Cooling Fan

## Software Performance

Video&Audio CODEC	<p>Decoding Performance:  Supports MPEG-1, MPEG-2, MPEG-4, H.263, H.264, H.265, VC-1, VP9, VP8, MVC and AV1@MMU embedded real-time video decoding;  Multi-channel parallel decoding, supporting lower resolutions;  H.264 AVC/MVC Main10 L6.0: support 8K@30fps(7680*4320);  VP9 Profile0/2 L6.1: Support 8K@60fps(7680*4320));  H. 265 HEVC/MVC Main10 L6.1: support 8K@60fps(7680*4320);  AVS2 Profile 0/2 L10.2.6: Support 8K@60fps(7680*4320);  AV1 main configuration file 8/10bit L5.3: Support 4K@60fps(3840*2160);  The MPEG-2 supports up to MP: 1080p@60fps(1920*1088);  The MPEG-1 supports up to MP: 1080p@60fps(1920*1088);  VC-1 supports up to AP level3: 1080p@60fps(1920*1088);  VP8 version2 1080p@60fps(1920*1088)  Multi-Channel Audio Decoding: MP3,AAC,FLAC,WAV and other mainstream audio formats.  Module: RTL8111HS</p>
Ethernet	<p>Performance: Support 10/100/1000 Mbps, providing stable and fast wired connection performance.  Function: Support auto-negotiation function to automatically identify and configure network speed and duplex mode.  Module: AP6275P  WiFi specifications:  Support 802.11ax/ac/a/b/g/n for high-speed wireless network connectivity of up to 2.4 Gbps.  Support 2.4GHz and 5GHz dual frequency bands, optimize signal intensity and interference minimize.</p>
WiFi & BT	<p>Support MU-MIMO technology to improve the data transmission efficiency during multi-user connection.  BT specifications:  BT 5.0, support all traditional BT features and high-speed transmission.  Support BLE (bluetooth low energy) technology.  Support multiple BT devices to connect simultaneously, ensuring stable connections and efficient communication..</p>
Display Output	<p>HDMI_TX supports up to 8K@60fps(7680x4320).  EDP supports up to 4K@60fps(3840x2160).  MIPI_CSI supports up to 4K@60fps(3840x2160).  DP(type-c) supports up to 4K@ 60fps(3840x2160).  Can be applied scene multi-screen display, different screen multi-display.  HDMI_RX supports up to 4K@60fps(3840*2160).</p>
Input source	<p>MIPI_DSI(for camera)  Suitable for PIP (picture-in-picture),conference machines and embedded external input source applications.  Chipset: HYM8563</p>
RTC	<p>This chip can maintain time operation through an external battery when the system is powered off, making it suitable for any application scenario that requires continuous tracking of time after power failure. It has basic alarm and timer functions, allowing you to set wake-up commands, which can be applied to timed on/off operations.</p>

## 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

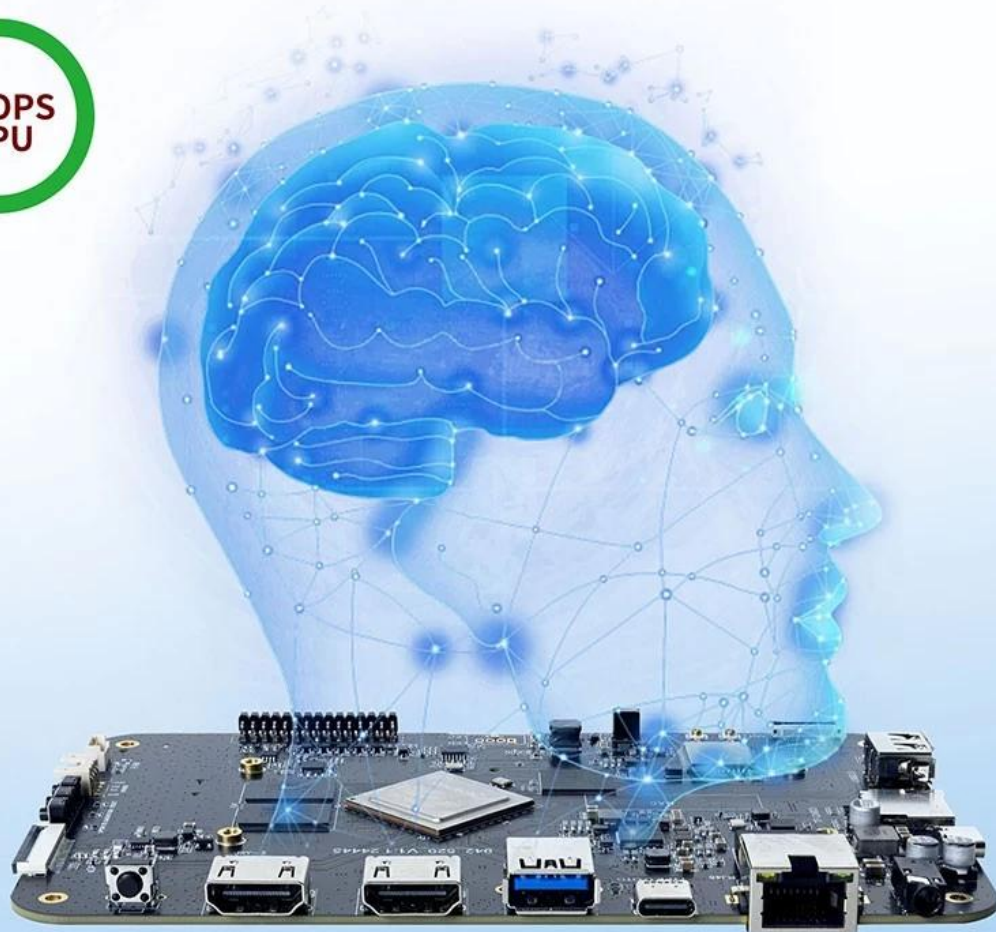
Powered by the RK3588 octa-core 64-bit chipset, with ARM Mali-G610 MP4 GPU and 6TOPs AI NPU for superior AI performance and expanded possibilities.





# 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.

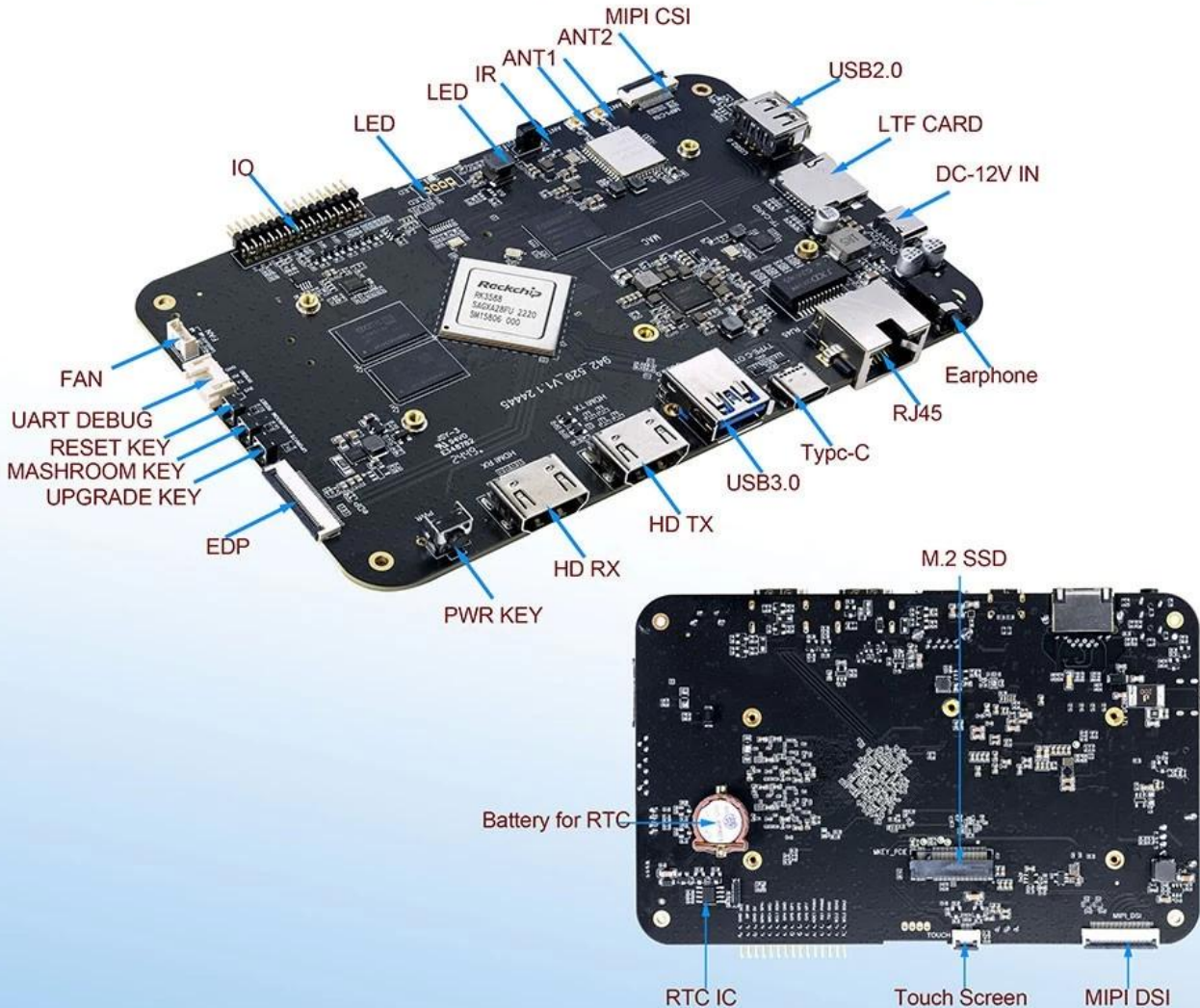


32GB  
128GB



## 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.



## Main Features

- \*The CPU is RK3588 Octa-core ARM processor (Quad Core Cortex-A76 and Quad Core Cortex-A55), with a maximum main frequency up to 2.4 GHz. It features with quad core Mali-G610 GPU, NPU computing power reaches 6TOPs with powerful performance.
- \*Manufacturing process: 8nm LP.
- \*With various LCD screen interfaces: four-channel MIPI, dual-channel EDP.
- \*Touch screen supporting the I2C interface.
- \*Support for TF card or PCIE drives as an additional storage extension.
- \*With multiple input and output extension, dual-channel UART serial port and seven-channel GPIO for input and output.
- \*With Android 12 OS

The **Top Internet TV Box with 8K Resolution and AI-Powered Features** is the ultimate digital

media solution for both entertainment enthusiasts and tech-savvy professionals. Combining cutting-edge hardware with advanced software capabilities, this TV box redefines home entertainment and smart home applications.

### Exceptional 8K Ultra HD Resolution

Immerse yourself in a world of unparalleled visual clarity with **8K Ultra HD resolution**. Every frame is rendered with lifelike detail, vibrant colors, and stunning contrast. Whether you're streaming the latest movies, gaming, or using interactive apps, the visual performance sets a new standard.

### AI-Powered Functionality

This Internet TV box takes intelligence to the next level with built-in AI capabilities. Enjoy features like:

- **Voice Control:** Navigate menus and apps effortlessly.
- **Personalized Recommendations:** Discover content tailored to your preferences.
- **Smart Home Integration:** Control IoT devices and automate home settings.

These AI-powered features enhance usability, making the device an essential part of any modern smart home.

### Robust Performance with Advanced Processor

At the core of this device is a **powerful multi-core processor** designed to handle demanding tasks. Whether you're multitasking between apps, streaming in high resolution, or gaming, the processor ensures smooth and lag-free performance. The integrated GPU supports high-quality graphics for an immersive experience.

### High-Speed Connectivity

Stay connected with cutting-edge technologies, including:

- **WiFi 6:** Enjoy lightning-fast and stable internet connections.
- **HDMI 2.1:** Deliver seamless 8K video output to compatible displays.
- **USB 3.0 and USB-C:** Transfer data quickly and connect peripherals with ease.
- **Bluetooth 5.0:** Pair with wireless devices like headphones, keyboards, and controllers.

These connectivity options ensure the device adapts to any modern setup, making it versatile for entertainment, gaming, or productivity.

### Ample Storage and Memory

The device features **4GB of RAM** and **32GB of internal storage**, ensuring quick app launches and smooth multitasking. Expandable storage options make it ideal for users with extensive media libraries or professional workflows.

### Optimized for Android OS

Running on the **Android operating system**, the TV box offers access to the Google Play Store, giving you thousands of apps to choose from. From streaming platforms to productivity tools, the device caters to every need. The intuitive interface ensures effortless navigation and customization.



## Energy-Efficient Design

The sleek, compact design of the TV box complements its energy-efficient components. Not only does it save space in your entertainment center, but it also minimizes power consumption, making it an eco-friendly choice.

## Applications

This Internet TV box is ideal for:

- **Home Entertainment:** Stream movies, TV shows, and music in stunning 8K quality.
- **Gaming:** Experience responsive gameplay with high-quality graphics.
- **Smart Home Integration:** Manage IoT devices and automate routines.
- **Professional Use:** Enhance presentations and workflows with advanced features.

## Conclusion

The **Top [Internet TV Box](#) with 8K Resolution and AI-Powered Features** is more than just a media player—it's a comprehensive solution for entertainment, gaming, and smart home integration. With its advanced capabilities, robust performance, and sleek design, it's the perfect choice for anyone looking to elevate their digital experience