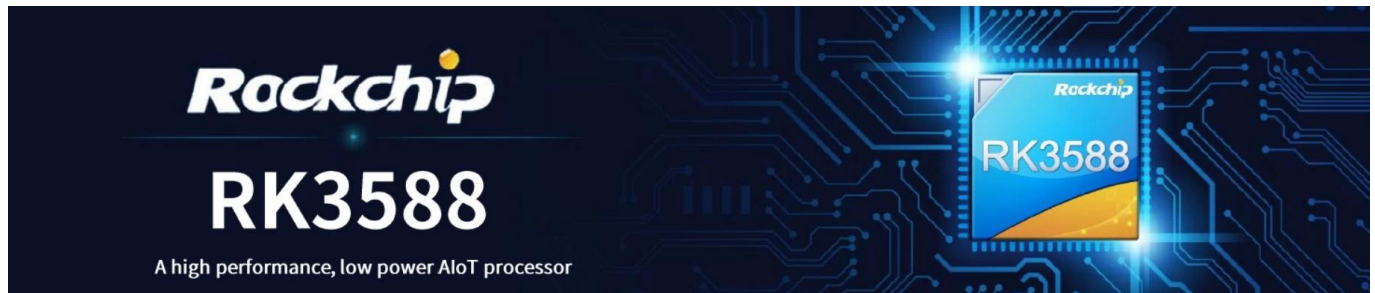


# Best 8K Ultra HD Set Top Box with RK3588 Octa-Core CPU



## Specifications

Model No.	Rockchip RK3588 Set Top 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

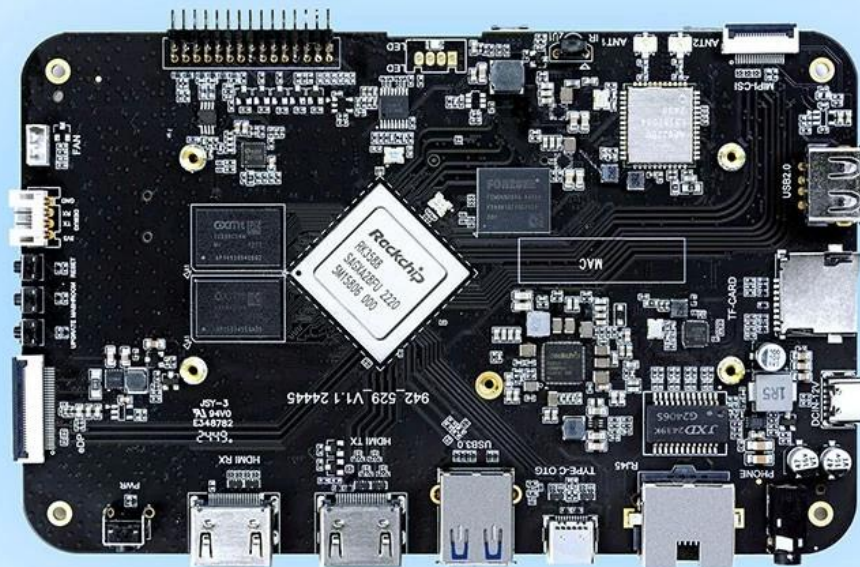
Power input	Type-C Port (12V/2A)
Storage Extension	1*TF Card Slot 1*PCIE Hard Disk Data Port
Remote Control	1* Infrared Remote Control Receiver
RTC Battery	CR1220 Button Battery Onboard
Serial Port	2*UART Serial Port
Ethernet	1* 10/100/1000 Mbps RJ45 Port
WiFi	Built-in WiFi Module, 802.11 ax/ac/a/b/g/n
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
Audio interface	1*MIC 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..  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).  MIPI_DSI(for camera)</p>
Display Output	<p>Suitable for PIP (picture-in-picture),conference machines and embedded external input source applications.  Chipset: HYM8563</p>
Input source	
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

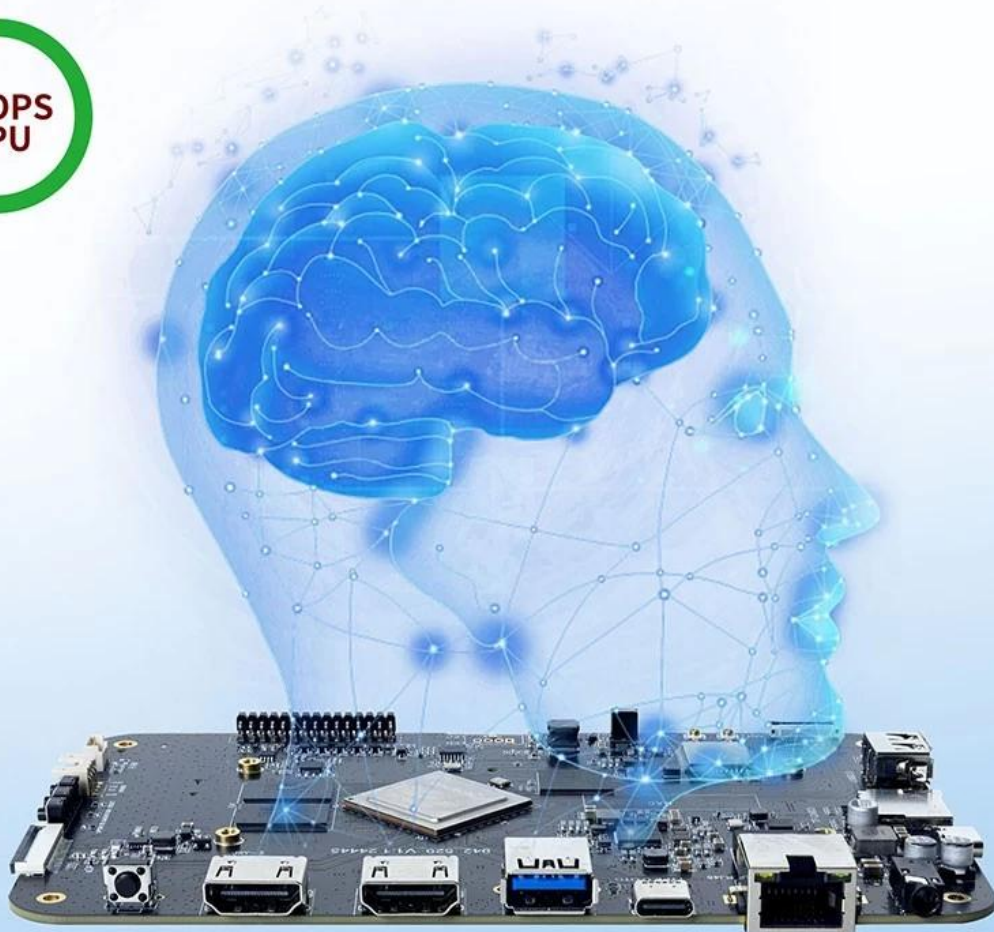
Powered by the RK3588 octa-core 64-bit chipset, with ARM Mali-G610 MP4 GPU and 6TOPs AI NPU for superior AI performance and expanded possibilities.





# 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.

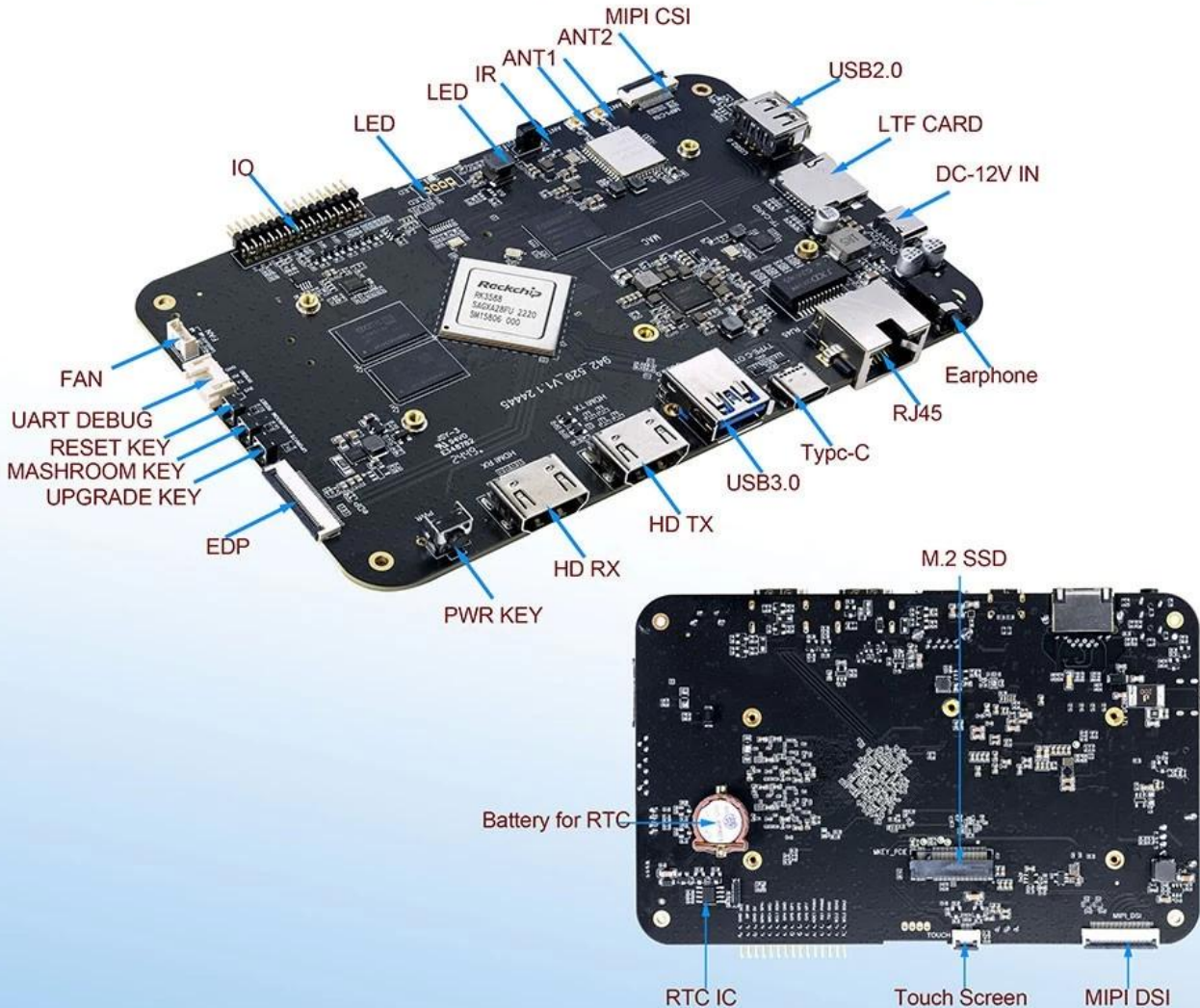


32GB  
128GB



## 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 **Best 8K Ultra HD Set Top Box with RK3588 Octa-Core CPU** is a game-changer in the world of home entertainment and professional digital solutions. With its advanced hardware, cutting-edge features, and sleek design, this set top box redefines what you can achieve with a digital

streaming device.

### **Powerful Performance with RK3588 Octa-Core CPU**

At the heart of this set top box is the **Rockchip RK3588 Octa-Core processor**, which combines four high-performance Cortex-A76 cores and four power-efficient Cortex-A55 cores. This ensures blazing-fast speeds and seamless multitasking, making it perfect for both casual streaming and demanding professional tasks. The integrated **Mali-G610 MP4 GPU** ensures ultra-smooth graphics for 8K visuals and gaming.

### **Immersive 8K Ultra HD Display**

Experience visuals like never before with **8K Ultra HD resolution** and **HDR10+ support**. Every frame is delivered with stunning clarity, vibrant colors, and exceptional contrast. Whether you're watching the latest blockbuster, enjoying immersive gaming, or running professional presentations, this set top box guarantees an unparalleled viewing experience.

### **Enhanced Connectivity for Modern Needs**

Designed for the connected world, this device is equipped with:

- **WiFi 6** for ultra-fast and reliable internet connections.
- **HDMI 2.1** for seamless integration with 8K displays.
- **USB-C and USB 3.0 ports** for high-speed data transfer and peripheral support.
- **Bluetooth 5.0** for connecting wireless devices like keyboards, controllers, and speakers.

### **User-Friendly Android OS**

The device runs on the **Android operating system**, providing access to thousands of apps on the Google Play Store. From streaming platforms to productivity tools, you can customize your experience to suit your entertainment or professional needs.

### **Ample Memory and Storage**

With **4GB RAM** and **32GB ROM**, the set top box ensures quick app launches, smooth multitasking, and plenty of storage for your favorite apps and files. Expandable storage options make it even more versatile, catering to users with large media libraries.

### **AI Capabilities for Smarter Use**

Thanks to the integrated AI processing power of the RK3588, this device supports advanced features like voice recognition, real-time analytics, and intelligent recommendations. These features enhance the usability and functionality of the set top box, making it ideal for smart home setups and interactive business environments.

### **Versatile Applications**

This set top box is designed for a range of applications, including:

- **Home Entertainment:** Stream movies, play games, and access popular apps.
- **Gaming:** Enjoy responsive gameplay with stunning visuals.
- **Digital Signage:** Create impactful presentations for retail and business settings.
- **Professional Use:** Enhance your workflow with productivity tools and real-time analytics.

### **Sleek and Compact Design**

The modern, ultra-thin design of the device fits effortlessly into any setup. Its energy-efficient components ensure low power consumption, making it an eco-friendly choice for both home and business use.



### **Why Choose This Set Top Box?**

The **Best 8K Ultra HD Set Top Box with RK3588 Octa-Core CPU** is an all-in-one solution for entertainment, gaming, and professional needs. Its cutting-edge features, powerful performance, and sleek design make it an essential addition to any modern digital setup.

### **Conclusion**

Elevate your entertainment and productivity with the **8K Ultra HD [Set Top Box](#)**. With its superior hardware, advanced features, and unmatched versatility, it's the perfect device for anyone seeking top-tier performance and quality.