# Rockchip RK3588: Elevate Your Viewing with an Internet TV Box Built for Speed



#### **Specifications**

Model No. Rockchip RK3588 Internet TV Box

CPU Rockchip RK3588 8nm process, quad-core Cortex-A76 + quad-core Cortex-A55

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)

RAM 4GB/8GB (64bit LPDDR4/LPDDR4x) ROM 32G/64G/128G/256G (eMMC5.0/ 5.1)

Type IEEE 802.11a/b/g/n/ac/ax

WiFi Frequency Wi-Fi6 2.4GHz/5.8GHz ( PCIe v3.0)

Antenna Type 2T2R

OS Android 12 and Multi-Language

Bluetooth Bluetooth 5.0

#### Video&Audio CODEC

Video Codec

\* Real-time video decoder of

MPEG-1,MPEG-2,MPEG-4,H.263,H.264,H.265,VC-1,VP9,VP8 MVC,AV1

\* MMU Embedded

\* Multi-channel decoder in parallel for less resolution \* H.264 AVC/MVC Main10 L6.0 : 8K@30fps (7680x4320)

\* VP9 Profile0/2 L6.1 : 8K@60fps (7680x4320)

\* H.265 HEVC/MVC Main10 L6.1 : 8K@60fps (7680x4320)

\* AVS2 Profile0/2 L10.2.6 : 8K@60fps (7680x4320)

\* AV1 Main Profile 8/10bit L5.3: 4K@60fps (3840x2160)

\* MPEG-2 up to MP: 1080p@60fps (1920x1088)

\* MPEG-1 up to MP: 1080p@60fps (1920x1088)

\* VC-1 up to AP level 3: 1080p@60fps (1920x1088)

\* VP8 version2: 1080p@60fps (1920x1088)

Video Encoder

\* Real-time H.265/H.264 video encoding

\* Support up to 8K@30fps

\* Multi-channel encoder in parallel for less resolution

\* Dual 16M Pixel ISP with HDR&3DNR

I2S0 with 8 channels

\* Up to 8 channels TX and 8 channels RX path

\* Audio resolution from 16bits to 32bits

\* Sample rate up to 192KHz

Audio Codec \* Provides master and slave work mode, software configurable

\* Support 3 I2S formats (normal, left-justified, right-justified)

\* Support 4 PCM formats (early, late1, late2, late3)

\* Support TDM normal, 1/2 cycle left shift, 1 cycle left shift, 2 cycle left shift, right

shift mode serial audio data transfer

\* I2S, PCM and TDM mode cannot be used at the same time

#### I/O Port

Power Supply DC 12V/2A Power ON: Blue

RTC Support

HDMI

IR Infrared + BT Voice Remote

HDMI OUT 1:HDMI 2.1/7680x4320@60Hz

HDMI OUT 2:HDMI 2.1/4096x2304@60Hz

HDMI IN:HDMI 2.0/HDMI 1.4b 4K x 2K video formats(3840x

2160p@24Hz/25Hz/30Hz and 4096x2160p@24Hz)

Earphone 1\*3.5mm Port

Ethernet 1:1\*1000M(RGMII) Ethernet 2:1\*1000M Ethernet

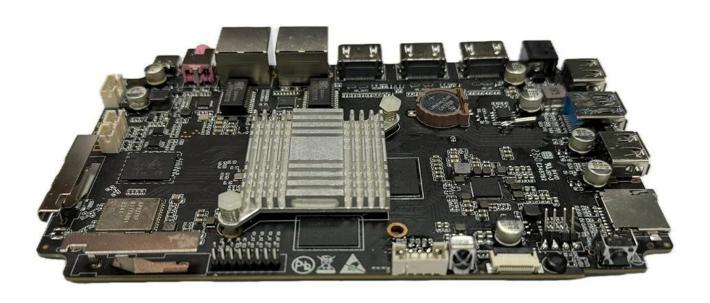
TF Card 1\*TF Card

2\*USB 2.0 (Host) USB port 1\*USB3.0 (Host)

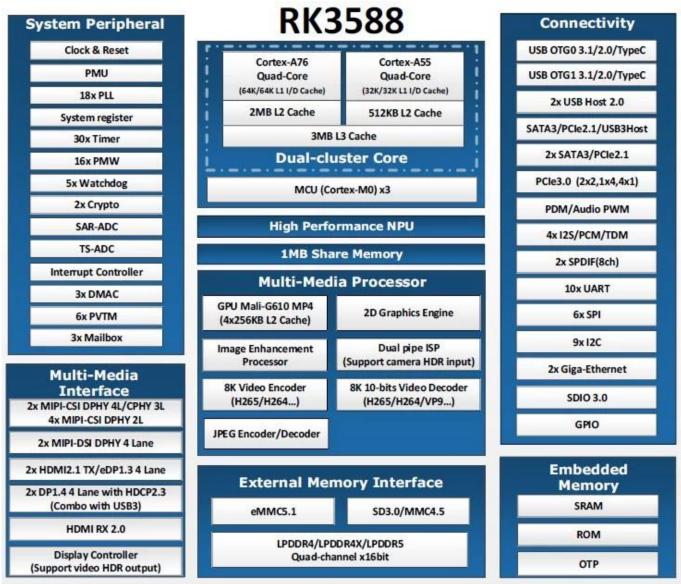
Type-C 1\*Type C 3.0 (Download Port) Supported Devices











**Typical Application Diagram - AIoT** 





#### Introduction

The Rockchip RK3588 Internet TV Box is a state-of-the-art device that brings the future of home entertainment right into your living room. Designed for speed, performance, and visual excellence, this TV box is powered by the Rockchip RK3588 Octa Core processor, one of the most advanced chipsets available in the market. Whether you're a movie enthusiast, a gamer, or someone who loves exploring new apps and services, the RK3588 Internet TV Box is built to meet and exceed your expectations, providing a smooth and enjoyable experience every time.

# **Unmatched Processing Power**

At the heart of this TV box lies the Rockchip RK3588 Octa Core processor, a powerhouse that ensures your device handles even the most demanding tasks with ease. Whether you're streaming 8K Ultra HD content, switching between multiple apps, or playing graphics-intensive games, the RK3588 delivers lightning-fast performance with minimal lag. Complemented by 4GB of RAM, this device offers smooth multitasking capabilities, allowing you to effortlessly navigate through apps and media without any interruptions.

## Stunning 8K Ultra HD Streaming

One of the standout features of the Rockchip RK3588 Internet TV Box is its ability to support 8K Ultra HD streaming. As more 8K content becomes available, having a device capable of delivering this level of detail is essential for the ultimate viewing experience. The RK3588 ensures that every frame is rendered in stunning clarity, with vibrant colors and deep contrasts that make your movies and shows come to life. Whether you're watching the latest blockbuster or revisiting a classic film, the 8K support guarantees that you'll experience your favorite content in the highest possible quality.

## **Advanced Android 12 Operating System**

The RK3588 Internet TV Box runs on Android 12, offering a modern, intuitive user interface that is both easy to use and highly customizable. Android 12 brings several new features and improvements, including enhanced privacy controls, faster performance, and better compatibility with other smart devices. With access to the Google Play Store, you can download a wide range of apps, from popular streaming services like Netflix and Amazon Prime Video to games and productivity tools. The versatility of Android 12 allows you to tailor your TV box experience to your personal preferences, making it more than just a device for watching content.

# WiFi 6: Faster, More Reliable Connectivity

To ensure a seamless streaming experience, the RK3588 Internet TV Box is equipped with WiFi 6 technology, the latest standard in wireless connectivity. WiFi 6 offers faster speeds, greater capacity, and lower latency compared to previous generations, making it ideal for streaming high-definition content without buffering. Whether you're streaming an 8K movie, playing online games,

or browsing the web, WiFi 6 keeps your connection stable and fast, providing a smooth, uninterrupted experience.

# **Versatile Connectivity Options**

In addition to its powerful performance and stunning visuals, the RK3588 Internet TV Box offers a variety of connectivity options to enhance your entertainment setup. With multiple USB ports, HDMI 2.1 for high-definition output, and Bluetooth support, you can connect a wide range of peripherals, such as external storage devices, game controllers, and wireless keyboards. This flexibility allows you to expand the functionality of your TV box, turning it into a central hub for all your digital entertainment needs.

## Conclusion

The Rockchip RK3588 Internet TV Box is more than just a streaming device—it's a comprehensive entertainment solution designed to elevate your viewing experience. With its powerful Octa Core processor, 8K Ultra HD support, Android 12 operating system, and WiFi 6 connectivity, this device offers everything you need for an unparalleled home entertainment experience. Whether you're watching movies, playing games, or exploring new apps, the RK3588 Internet TV Box delivers the performance, speed, and quality you need to enjoy your content to the fullest. Invest in the Rockchip RK3588 today and transform your home entertainment setup with cutting-edge technology and superior performance.