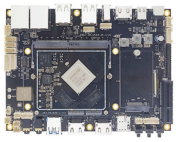

Shenzhen Hugsun Technology MINIPC-RK3588 Development Board Instruction Manual

Contents

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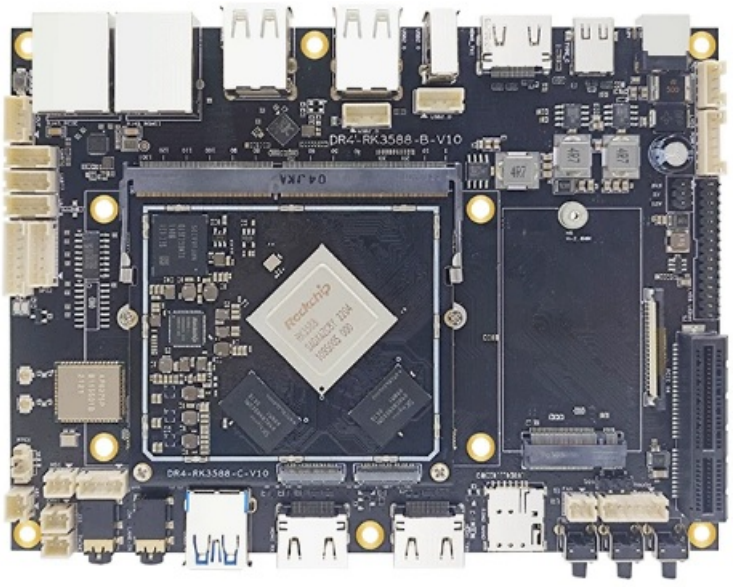


Product introduction

Product overview

- MINIPC-RK3588 is a high-performance product independently developed by Hugsun, using Rockchip eight-core 64-bit high-performance processor: RK3588
  RK3588 is Rockchip's new generation flagship AIoT chip, using 8nmLP process; equipped with eight-core 64-bit CPU, main frequency up to 2.4GHz; integrated ARM
- Mali-G610 MP4 quad-core GPU, built-in AI accelerator NPU, can provide 6Tops computing power, support mainstream The powerful deep learning framework, the powerful RK3588 can bring more optimized performance to various AI application scenarios
- Support 8K@6Ofps H.265/VP9 video decoding and 8K@30fps, H.265/H.264 video encoding ;Powerful video, encoding and decoding capabilities can make the picture 8K high-definition presentation, the picture quality is more delicate
- With HDMI 2.1/HDMI 2.0/DP1.4 multi-channel video output and HDMI IN2.0 video input interface, support multi-channel 8K video output and 4K video input

Onboard Gigabit Ethernet RJ45, 2.4GHz allowing network communication to have a higher rate

Second, product description

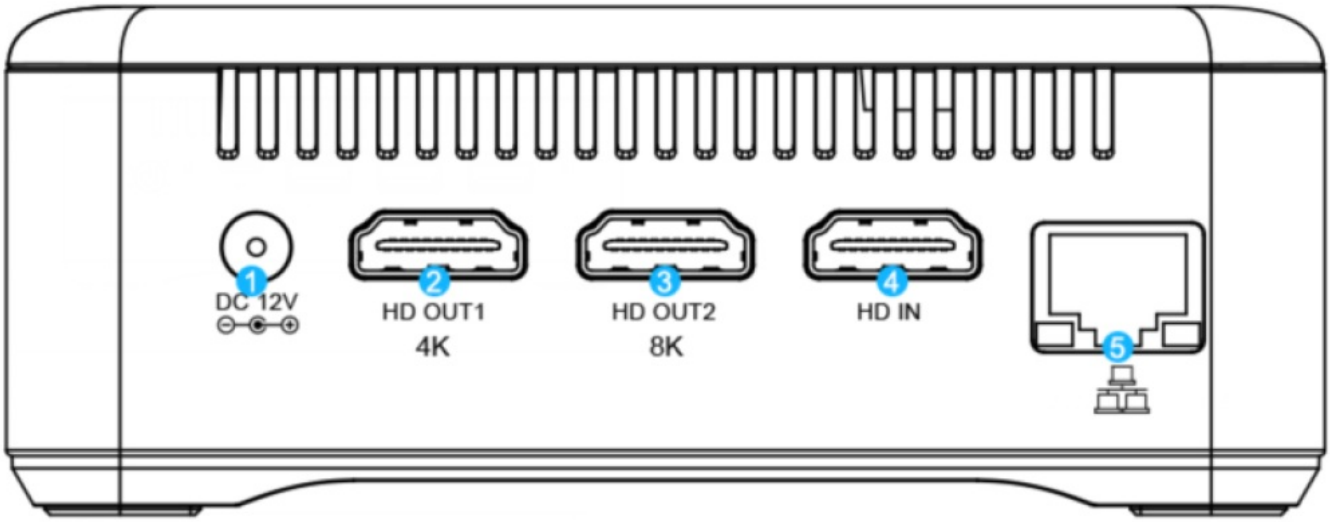
Product Specifications

◆ **CPU**	**Rockchip RK3588**
	Octa-core 64-bit (4xCortex-A76+4xCortex-A55), 8nm advanced technology, main frequency up to 2.4GHz
◆ **GPU**	**ARM Mali-G610 MP4 quad-core GPU**
	Support OpenGL ES3.2 / OpenCL 2.2 /Vulkan1.1, 450 GFLOPS
	Built-in neural network processor NPU, strong AI computing performance
◆ **NPU**	**NPU computing power up to 6 TOPS**
	Support INT4/INT8/INT16 mixed operation
	It can realize network model conversion based on series frameworks such as TensorFlow / MXNet / PyTorch / Caffe
◆ **FLASH**	**16GB/32GB/64GB/128GB eMMC**
◆ **DDR**	**4GB/8GB/16GB 64bit LPDDR4x**

◆ Codec	Video decoding: 8K@6Ofps H.265/VP9/AVS2 8K@30fps H.264 AVC/MVC 4K@60fps AV1 1080P@6Ofps MPEG-2/-1/VC-1/VP8
	Video encoding: 8K@30fps encoding, support H.265 / H.264 *Up to 32 channels of 1080P@30fps decoding and 1 6ch 1080P@30fps encoding
◆ clock	Support RTC power off to save time
◆ show output	HDMI2.1 interface x1, supports up to 8K@60HZ or 4K@120HZ
	HDMI2.0 interface x1, 4K@60HZ
	DP1.4 interface x1, 8K@30fps, multiplexed with USB 3.0
◆ show input	HDMI2.0-IN port x1 (4K@60fps)
◆ network	Ethernet: 10/100/1000M standard RJ-45 interface x1
	2.4GHz
◆ USB	USB 2.0 TYPE-A interface x2
	USB 3.0 TYPE-A interface x1
	USB 3.0 TYPE-C interface x1
◆ Extension	2.5 inch SATA hard disk interface x1

ports	
◆ powersupply	DC input voltage 12V 3A
◆ Operating temperature	-10°C ~ 60°C
◆ System Support	Android Linux ubuntu Linux debian

Product interface



Power Connector

You can insert the DC plug (5.5×2.1MM) of the power supply into the power port of the MINI PC, so that the MINI PC will start up

HDMI OUT Port1

You can connect to monitor by inserting a HDM Cable plug(Type A) into the HDMI Port on your MINI PC.(Note that the output resolution of HDMI1 interface supports up to 4K@60HZ, and there is no sound, the sound is output by HDMI2)

HDMI OUT Port2

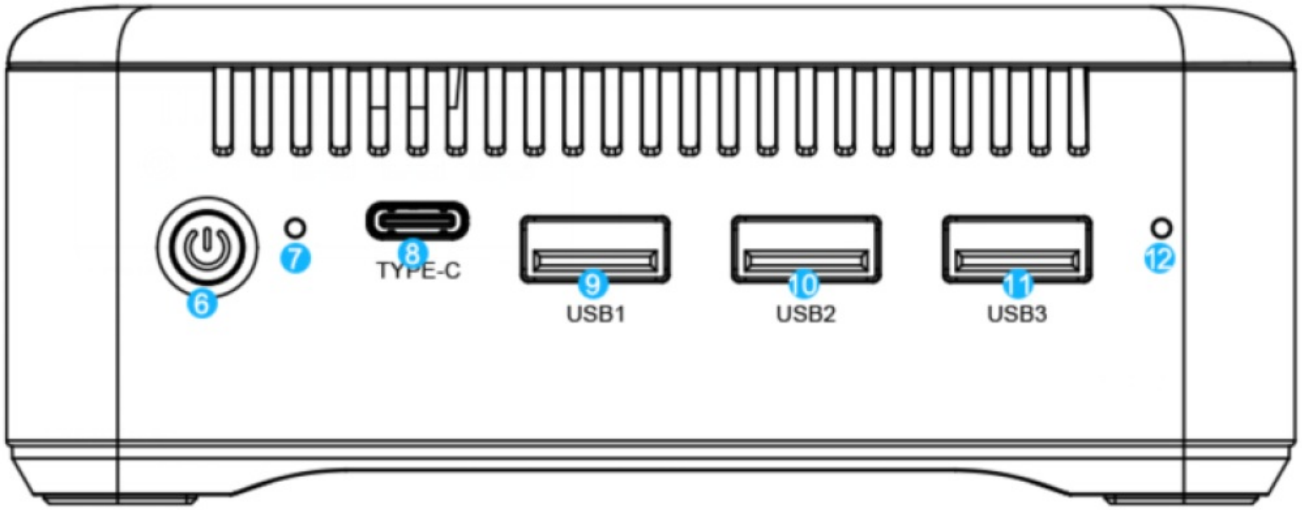
You can connect a monitor by plugging the HDMI cable plug (type A) into the HDMI2 port on the MINI PC. (Note that the HDMI2 interface output resolution supports up to 8K@60HZ or 4K@120HZ)

HDMI IN Port

You can connect other devices by inserting the HDMI cable plug (type A) into the HDMI IN port on the MINI PC, so that the pictures of other devices can be displayed on the MINI PC

Ethernet Port

You can connect to the network by plugging an RJ45 type network cable into the Ethernet port on the MINI PC



Power button

- You can control the startup/standby or shutdown of the MINI PC through this power button.
- In the power-on state, short press the power button, the MINI PC will enter the standby state
- In standby mode, short press the power button, the MINI PC will wake up again
- In the power-on state, press and hold the power button for about 3 seconds, the display screen will pop up the choice of shutdown or restart

upgrade button

You can use sharp objects, such as needles, to withstand the buttons inside, connect the TYPE-C data cable to the MINIPC and the computer, and then connect to the power supply to upgrade the software of the MINI PC

USB Type-C Port

You can connect other devices, such as HUB with Type-C interface, or connect to a computer by plugging the Type-C data cable into the Type-C port on the MINI PC

USB Type-A Port1(USB2.0)

You can plug in a USB flash drive/keyboard or mouse or any other USB type device on this port

USB Type-A Port2(USB2.0)

You can plug in a USB flash drive/keyboard or mouse or any other USB type device on this port

USB Type-A Port2(USB3.0)

You can plug in a USB flash drive/keyboard or mouse or any other USB type device on this port

RESET button

When the device encounters a failure, such as a crash or a program stuck and no response, you can use this button to restart the MINI PC. The method of use is to use a sharp object, such as a needle, to withstand the inside of the MINI PC. button, the MINI PC will restart

FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception,
which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum 20cm distance between the radiator and your body: Use only the supplied antenna.

Documents / Resources

 MINIPC-RK3588Product Manual Shenzhen Hugsun Technology Co.,Ltd.	Shenzhen Hugsun Technology MINIPC-RK3588 Development Board [pdf] Instruction Manual RUPA, 2AH3J-RUPA, 2AH3JRUPA, MINIPC-RK3588 Development Board, MINIPC-RK3588, Development Board