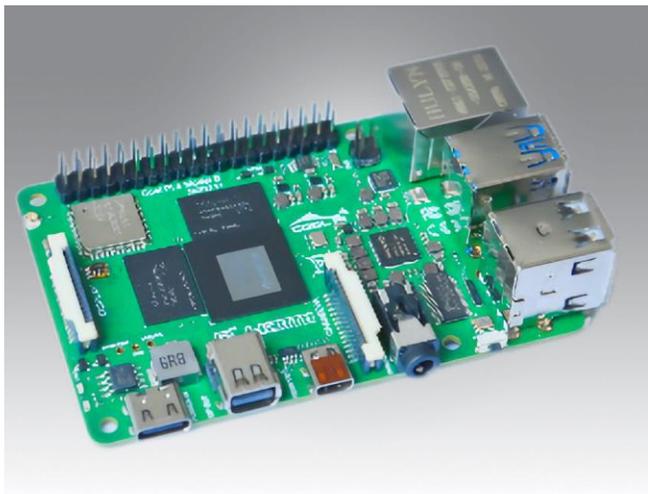# CoolPi 4 Model B

Rockchip ARM RK3588S SBC

Features

- RK3588S ARM Quad Cortex-A76 and Quad Cortex-A55 2.4 GHz
- Onboard 2/4/8/16GB LPDDR4 memory and 32/64/128GB eMMC(Option)
- 1 x HDMI(8K 60fps), 1 x DP(4K 60fps), 1 x MIPI DSI
- 6T NPU support
- 2 x USB3.0, 2 x USB2.0 ,1 x GbE, 40 x GPIOs
- WIFI/BT support
- RTC support
- Debian11 support
- Android12 support
- Ubuntu22 support
- Yocto support
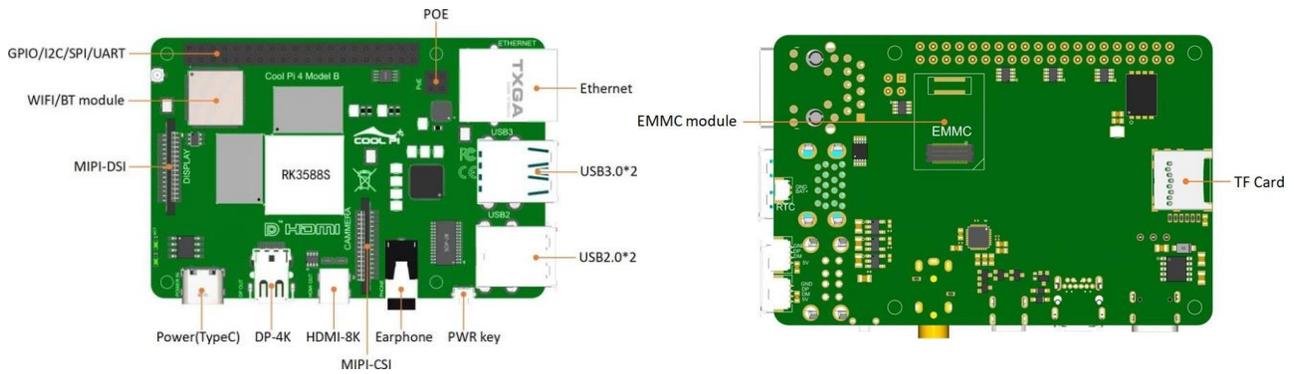- System Compatible with Raspberry Pi

Introdution

Cool PI 4B adopts integrated version, PCB adopts 10 layer process design, uses mini-HDMI interface to reduce the board area, and the highest support by 8K@60fps. Adopt Mini-DP interface and support by 4K@60fps, MIPI -CSI and MIPI -DSI interfaces are reserved , which can be directly used for the development of various intelligent products and accelerate the product landing.

The cool PI 4B uses Rockchips's latest flagship SOC chip RK3588s. RK3588s is a general-purpose SoC based on Arm architecture , integrating Quad core Cortex -a76 and Quad core Cortex -a55. Frequency is as high as 2.4 GHz. G610 MP 4 graphics processor is adopted , integrated independent 8K video hardware encoder and hardware decoder. Internally integrated with the third generation NPU processor, the computing power is up to 6Tops, which can meet the computing power requirements of most artificial intelligence models.

Specifications

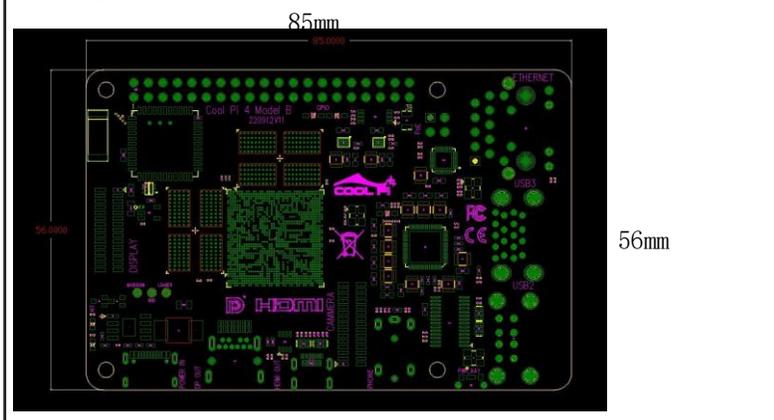| Processor	CPU	Rockchip RK3588S ARM dual Cortex-A76 and quad Cortex-A55 2.4 GHz
Memory	Capacity	2GB/4GB/8GB/16GB
Graphics	Graphics Engine H/W Video Codec	Mali-G610(OpenGL ES3.2 / OpenCL2.2 / Vulkan1.1) Decoder: up to 8K@60fps Encoder: up to 8K@30fps Support H.265/AVS2/VP9/H.264/AV1
Ethernet	Chipset Speed	RTL8111HS 10/100/1000 Mbps
IO	USB AUDIO SPDIF I2C CAN SPI PWM UART GPIO MIPI CSI MIPI DSI Button	2 x USB3.0 & 2 x USB2.0 by Type A 1 x Earphone Support by pin header Support by pin header Support by pin header Support by pin header Support by pin header Support by pin header Support by pin header (3V3 TTL) Support Support Support power on
Wireless	Wifi Bluetooth	Support 5G/2.4G BT5.0
Power	Power Supply Voltage Power Type	5V/12V DC-in

Block Diagram

Ordering Information

Part Number	CPU	Memory	Flash	HDMI	DP	DSI	LAN	CSI	SATA	USB	SD	Operating Temperature
RCP-4B-2GNO	RK3588S	2GB		1	1		1			4	1	0 ~ 70 °C
RCP-4B-4GNO	RK3588S	4GB		1	1		1			4	1	0 ~ 70 °C
RCP-4B-8GNO	RK3588S	8GB		1	1		1			4	1	0 ~ 70 °C
RCP-4B-16GNO	RK3588S	16GB		1	1		1			4	1	0 ~ 70 °C

Dimensions

External I/O