

# Thundercomm

## RUBi Pi Introduction

Product Brief Version1  
Jan 2025

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# RUBi Pi Overview



# Brand Positioning

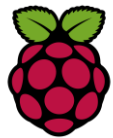


**“The world's leading Qualcomm open-source ecosystem dev kit provider.”**

RUBIK Pi is powered by Qualcomm chipset and offers advanced on-device AI capabilities. Its hardware interfaces are compatible with Raspberry Pi accessories, facilitating seamless platform switching. The official community and comprehensive documents further accelerate the development of a robust ecosystem.



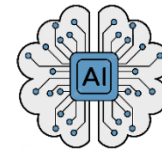
The closest Qualcomm ecosystem partner



Compatible with Raspberry Pi ecosystem



Independent open-source community operation



Outstanding AI performance



Multiple OS support



Comprehensive documentation and tools



**RUBi Pi 3 Product Introduction**

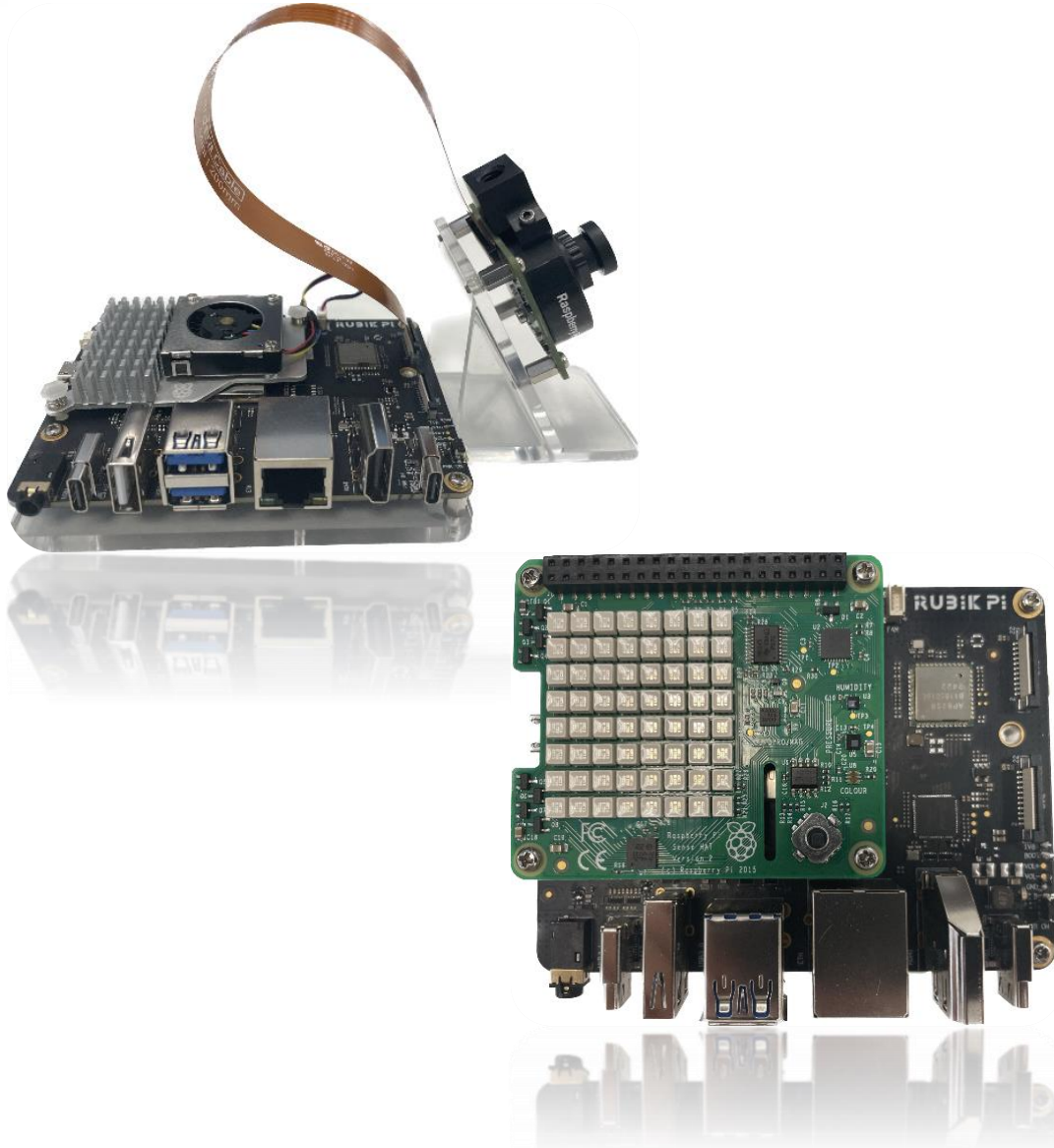
# RUBIK Pi 3 Competitiveness

Item	RUBIK Pi 3	Raspberry Pi 5 + AI Kit	Raspberry Pi 5	Orange Pi 5 Plus
SOC	Qualcomm - QCS 6490	Raspberry Pi 5 + Hailo-8L	Broadcom BCM2712	Rockchip – RK 3588
Process	6nm	16nm	16nm	8nm
CPU	CPU670 built on Arm V8 1 x GoldP@2.7GHz 3 x Gold@2.4GHz 4 x Silver@1.9GHz	4x Arm A76@2.4GHz	4x Arm A76@2.4GHz	4 x Arm A76@2.4GHz 4 x Arm A55@1.8GHz
GPU	Adreno 643	VideoCore VII	VideoCore VII	Mail G610MP4
AI	12.5 Tops	13 Tops	Null	6 Tops
RAM	8GB LPDDR4X	8GB LPDDR4X	8GB LPDDR4X	8GB LPDDR4/4X
ROM	128GB UFS2.x	NA (need to purchase external SD card separately)		
Size	75mm x 100mm	85 mm x 56 mm	85 mm x 56 mm	75mm x 100mm
OS	Qualcomm Linux Android Canonical Ubuntu for Qualcomm Platforms WOS ...	Raspberry Pi OS Android Ubuntu Media Play OS ...	Raspberry Pi OS Android Ubuntu Media Play OS ...	Orange Pi OS Ubuntu Debian Android OpenWRT ...

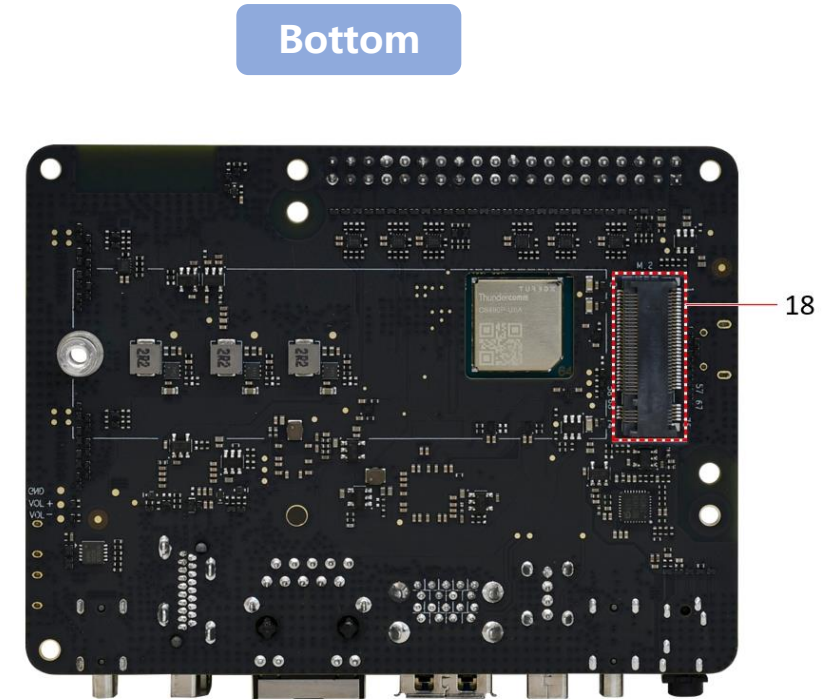
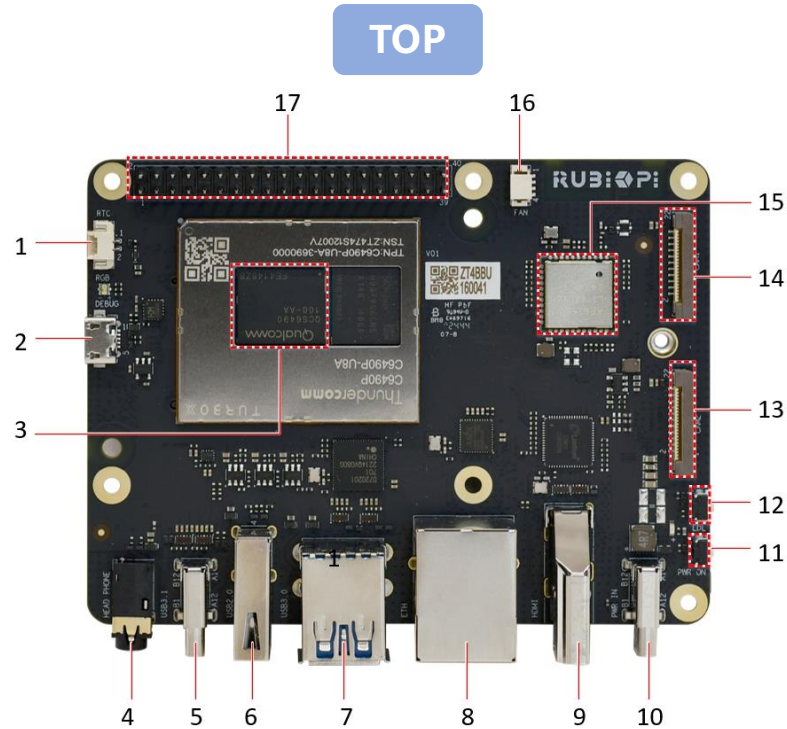
- The indicators highlighted in blue are the advantages of RUBIK Pi 3 over competitors;
- Other competitors need to purchase separately SD card as ROM for operation;

# RUBiK Pi 3 Product Definition

*\*subject to change*



Category	Description
<b>Platform</b>	TurboX C6490P SOM
<b>AI</b>	12.5 Tops
<b>Storage</b>	uMCP 8GB+128GB; LPDDR4x+UFS 2.x
<b>Display</b>	1 * HDMI 1.4 Output (4K@30FPS) 1 * DP Over USB Type-C(4K@60FPS)
<b>Camera</b>	2 * MiPi CSI D-PHY 4 lane Input
<b>Audio</b>	1 * 3.5mm Headphone Jack 1 * HDMI OUT with Audio
<b>Connectivity</b>	1 * USB Type-C (USB3.1 Gen 1) 2 * USB Type-A (USB3.0) 1 * USB Type-A (USB2.0 Host/Device) 1 * RJ45 1000M Ethernet 1 * UART for Debug (Over Micro USB) 1 * M.2 M Key Connector for SSD 1 * 40 Pin Connector(1 * I2S, 1 * PWM, 2 * I2C, 3 * I2C or SPI or UART)
<b>Wireless</b>	1 * Tx/1 Rx 802.11 ac/a/b/g/n Wi-Fi(WiFi 5) + BT 5.2
<b>Other</b>	1 * Power On Button 1 * EDL Button 1 * RGB LED RTC Battery Connector PWM Fan Connector
<b>Power in</b>	12V3A Input Over USB Type-C PD
<b>Size</b>	100mm x 75mm
<b>OS</b>	Linux Upstream, Android 13



No.	Interface	No.	Interface	No.	Interface
1	RTC Connector	7	2 x USB Type A (USB 3.0)	13	Camera Connector 1
2	Micro USB (UART Debug)	8	RJ45 1000M Ethernet	14	Camera Connector 2
3	TurboX C6490P SOM	9	HDMI Out	15	Wifi/BT Module
4	3.5mm Headphone Jack	10	PD over Type C (12V3A)	16	Fan Connector
5	USB Type C with DP (USB 3.1)	11	Power on Button	17	40 Pin Connector
6	USB Type A (USB 2.0)	12	EDL Button	18	M.2 M-Key Connector

Components	PN	Description	Vendor	SW Product	Link
<b>Camera Module</b>	Raspberry Pi High Quality Camera	12.3 megapixel Sony IMX477 sensor, M12 Mount, additional Lens needed	Raspberry Pi	Linux, A13	<a href="https://www.raspberrypi.com/products/raspberry-pi-high-quality-camera/">https://www.raspberrypi.com/products/raspberry-pi-high-quality-camera/</a>
	Raspberry Pi Camera Module 2	Sony IMX219 8-megapixel sensor	Raspberry Pi	Linux, A13	<a href="https://www.raspberrypi.com/products/camera-module-v2/">https://www.raspberrypi.com/products/camera-module-v2/</a>
	Raspberry Pi Camera Module 3	Sony IMX708 12-megapixel sensor	Raspberry Pi	Linux, A13	<a href="https://www.raspberrypi.com/products/camera-module-3/">https://www.raspberrypi.com/products/camera-module-3/</a>
	Raspberry Pi Camera Cable	Shielded cable to connect a CSI camera to the 22-way FPC connector on Raspberry Pi 5	Raspberry Pi	Linux, A13	<a href="https://www.raspberrypi.com/products/camera-cable/">https://www.raspberrypi.com/products/camera-cable/</a>
<b>Add-on boards</b>	Sense HAT	The Sense HAT is an add-on board that gives your RUBIK Pi 3 an array of sensing capabilities.	Raspberry Pi	Linux, A13	<a href="https://www.raspberrypi.com/products/sense-hat/">https://www.raspberrypi.com/products/sense-hat/</a>
<b>Power Supply</b>	Raspberry Pi USB-C Power Supply	Raspberry Pi 27W USB-C Power Supply	Raspberry Pi	Linux, A13	<a href="https://www.raspberrypi.com/products/27w-power-supply/">https://www.raspberrypi.com/products/27w-power-supply/</a>
	UGREEN USB-C Power Supply	UGREEN 65W USB-C Power Supply	UGREEN	Linux, A13	<a href="https://item.jd.com/100041440170.html">https://item.jd.com/100041440170.html</a>
<b>Display Pannel</b>	ISP HDMI OUT Panel	7" ISP HDMI OUT Panel, touch function via USB-A	LOBOROBOT	Linux, A13	<a href="https://detail.tmall.com/item.htm?_u=j94ucjbb114&amp;id=683025543197&amp;spm=a1z09.2.0.0.5f182e8dnYCIJS">https://detail.tmall.com/item.htm?_u=j94ucjbb114&amp;id=683025543197&amp;spm=a1z09.2.0.0.5f182e8dnYCIJS</a>







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Empowering Every IoT Device with Our Technology

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