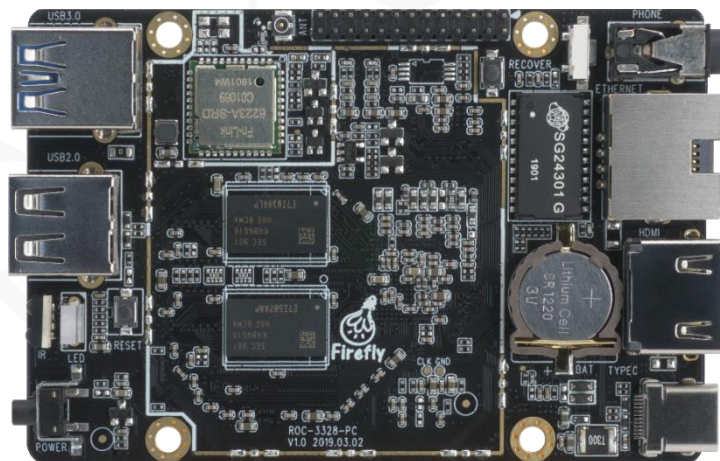




T-CHIP TECHNOLOGY

ROC-3328-PC Specification V1.0



Version	Date	Updated content
V1.0	2019-05-13	Original version



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1. Overview

1. Quad-core 64-bit Processor

It's equipped with RK3328 quad-core Cortex-A53 64-bit processor, frequency up to 1.5GHz, built-in quad-core Mali-450 GPU which with powerful graphics processing capabilities, and supports OpenGL ES1.1/2.0, OpenVG1.1.

2. Powerful Hardware Decoding Capability

It supports 4K VP9, 4K 10bits H265/H264 video decoding, up to 60fps, and supports 1080P (VC-1, MPEG-1/2/4, VP8) multi-format video decoding, 1080P H.264/H.265 format video encoding.

3. Rich Expansion Interface

With USB3.0, I2C, GPIO, I2S, 26Pin and other expansion interfaces.

4. Support For Multiple OS

ROC-RK3328-PC can run Android, Ubuntu, Linux+QT operation systems, the performance is stable and reliable.

5. Cost-effective Mini PC

ROC-RK3328-PC main board is combined with high-quality metal casing to become a cost-effective Mini PC, with efficient heat dissipation, dustproof and shockproof, compact and portable.

6. Open Source

Open SDK, tutorials, technical materials and development tools to make development easier and more convenient.

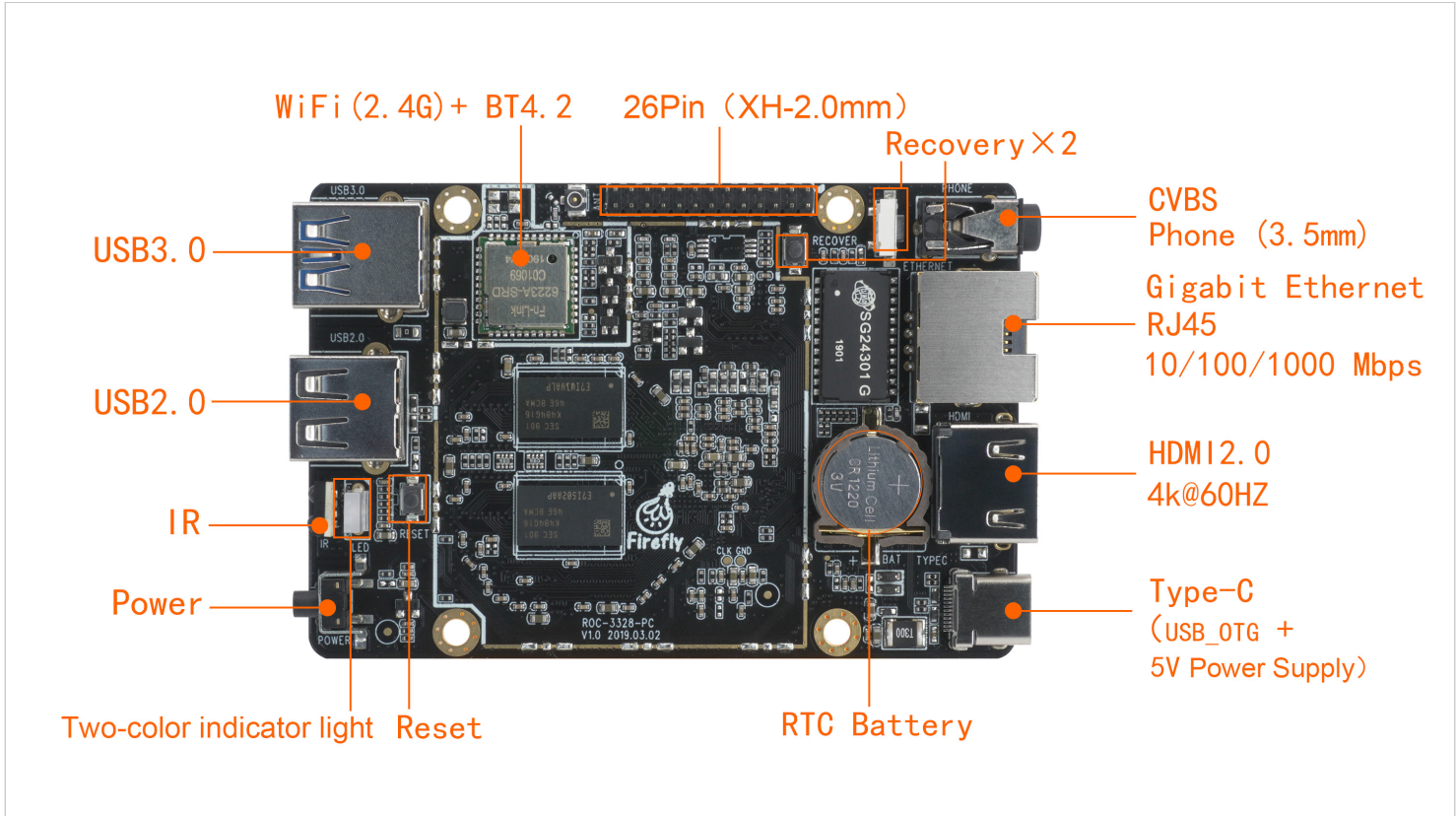
7. Application

ROC-3328-PC is suitable for Mini PC, gaming equipment, commercial display equipment, medical equipment, vending machines, industrial computers, etc.

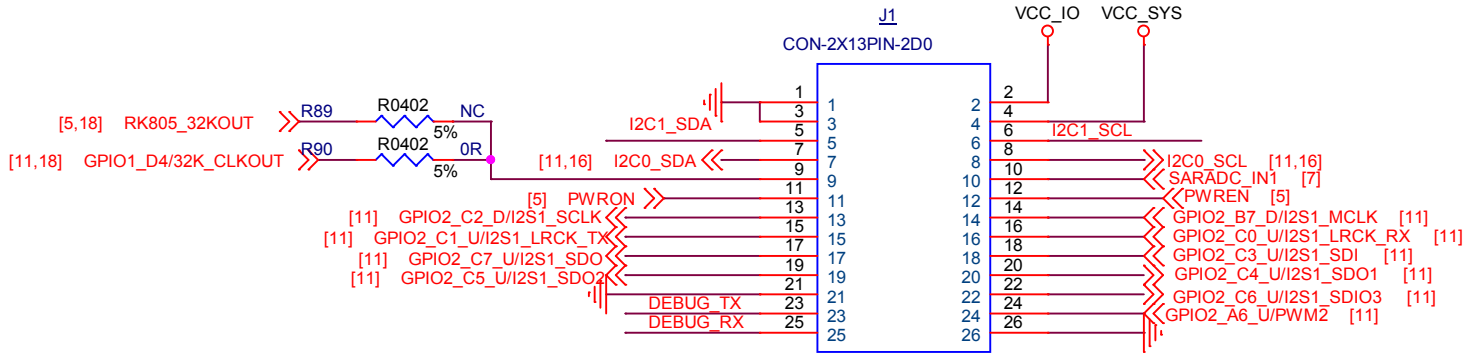
2. Specification

Specification	
SOC	Rockchip RK3328
CPU	Quad-core ARM® Cortex-A53 64-bit processor, frequency up to 1.5GHz
GPU	ARM Mali-450 MP2 GPU Support OpenGL ES1.1/2.0, OpenVG1.1
VPU	Support 4K VP9 and 4K 10bits H265/H264 video decoding, up to 60fps 1080P multi-format video decoding (WMV, MPEG-1/2/4, VP9, H.264, H.265) 1080P video coding, support H.264/H.265 Video postprocessor: de-interlacing, denoising, edge / detail / color optimization
NPU	Computing power up to 2.8 TOPS , peak up to 5.6Tops , 9.3Tops/W ultra-high efficiency Support PLAI (PyTorch) and MDK (Caffe) model training tools Follow-up support TensorFlow Support Image Classification Model VGG-16(GNet1)、 GNet18 and Gnetfc Support Target Detection Model: SSD (Based on VGG)
RAM	DDR3 (1GB / 2GB / 4GB)
Storage	eMMC 5.1 (8GB/16GB/32GB/64GB/128GB) Support MLC NAND
Hardware Features	
Ethernet	10 / 100 /1000 MbpsEthernet interface (RJ45)
WiFi	Support 2.4GHz WiFi , 802.11a/b/g/n Support Bluetooth 4.2
Display	1 x HDMI 2.0, support 4K@60Hz output 1 x CVBS, in accordance with 480i, 576i standard
Audio	1 x HDMI , 1 x Phone for audio output
USB	USB 2.0 Host × 1、 USB 3.0 × 1、 USB_OTG × 1
Interface	Support GPIO (I2S , I2C , ADC)
Debug	Debug × 1
Power	DC input voltage 5V (Via Type-C)
Power consumption	Min: 0.45W (5V/90mA), Normal: 2W(5V/400mA), Max: 5W(5V/1000mA)
OS / Software	
OS	Android, Linux+QT, Ubuntu
Appearance	
Size	Mini Size : 90 mm × 60 mm
PCB	6-layer board design

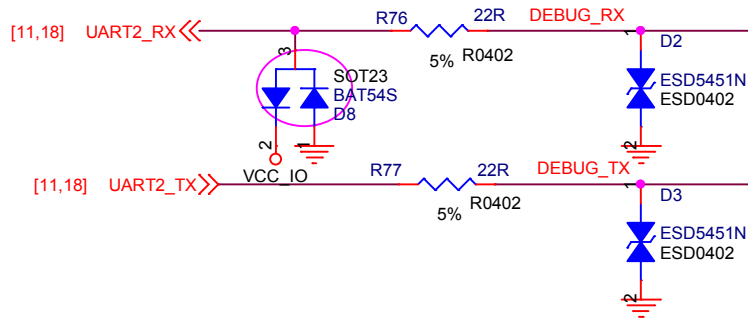
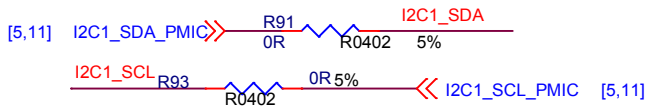
3. Interface Description



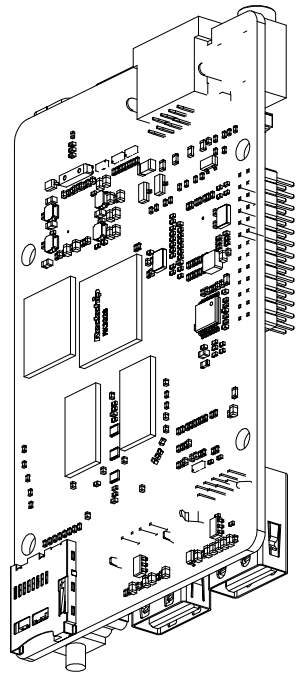
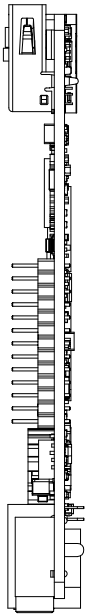
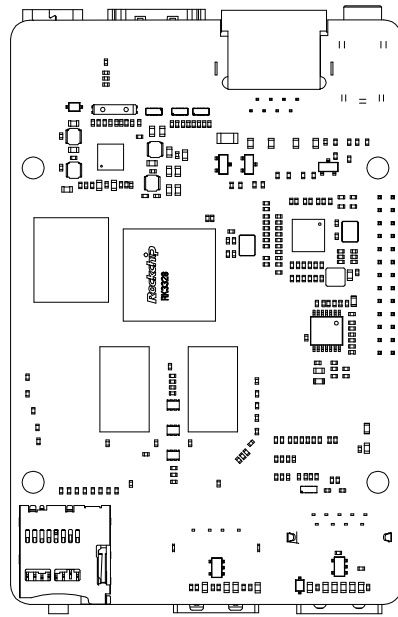
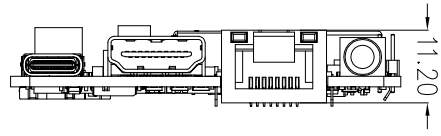
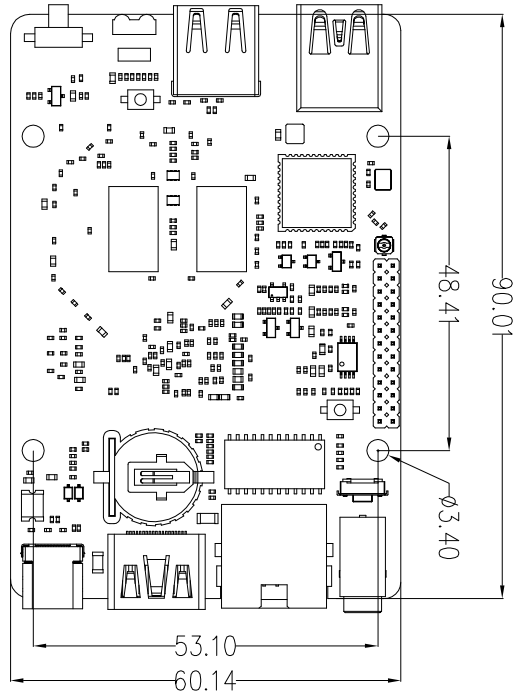
Interface Description (26Pin)




2019.03.02



4. PCB Size



更改内容	日期	ROC-RK3328-PC	
	2019.04		mm
			>A2<
 天津智能科技有限公司 T-CHIP INTELLIGENT TECHNOLOGY CO.,LTD.			



Appendix

1. Company Profile

T-Chip Intelligent Technology Co., Ltd. was founded in 2005. It has more than 10 years of research and development experience in scientific and technological products, has 6 invention patents and more than 30 computer software copyrights, and is a national high-tech enterprise. We focus on the research and development, design, production and sales of open source intelligent hardware, internet of things and digital audio products, and provide the overall solution for intelligent hardware products meanwhile.



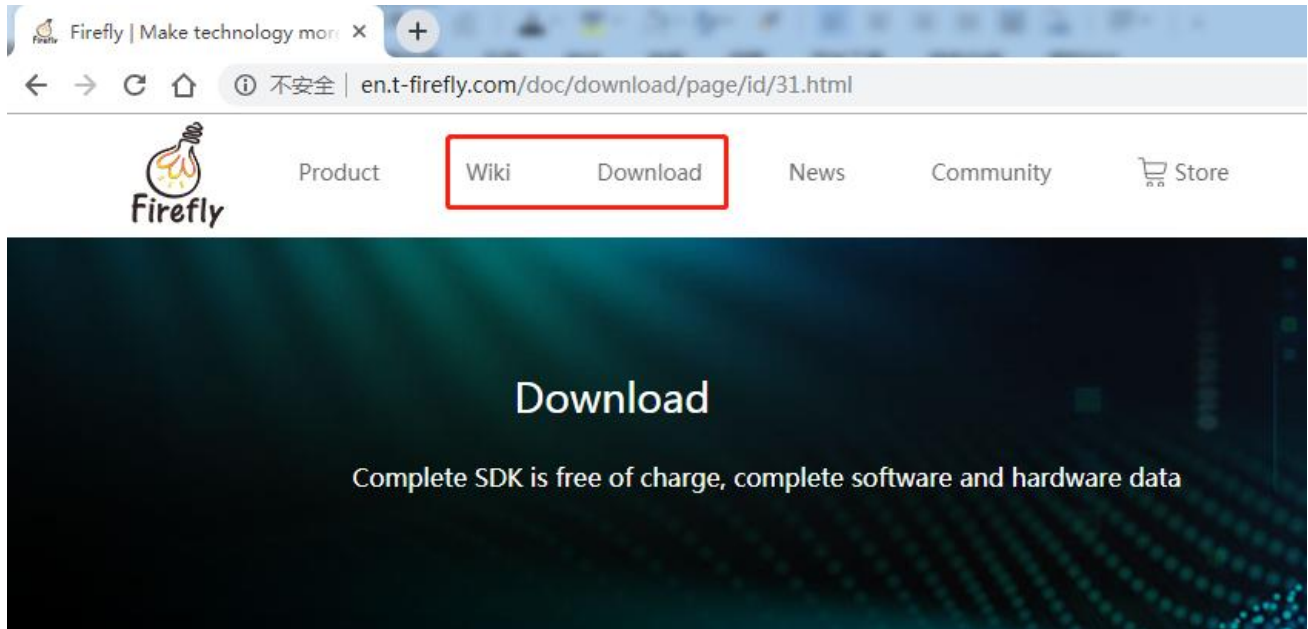
Firefly is a brand owned by T-chip Technology. It operates open source products, open source communities and online stores. It has a large number of enterprise users and developer users, and its products are well received by users. Firefly open source products include open source boards, core boards, industry mainboards, etc. The open-source board series is the recommended board card by chip original factory Rockchip and obtain the support of native SDK. The core boards and industrial mainboards are widely used in commercial displays, advertisement integrated machines, intelligent POS, face recognition terminals, internet of things, intelligent cities, etc. At present, there are more than 100,000 users, including over 2,000 enterprise users. And well-known users include ARM, Google, Baidu, Tencent, Alibaba, etc.

Firefly team has more than 60 research and development members and has the research and development capabilities in schematic design, PCB layout, mainboard production, embedded development, system development, application program development, etc., which accelerates the research and development process for many technology entrepreneurs and start-ups, and provides professional technical services..


" Make technology more simple, Make life more intelligent " is the idea of Firefly team. We hope to make the research and development of various technology products efficient and simple, and let intelligent technology integrate in our lives through the open source products and technical services of Firefly.

2. Source code acquisition

Please visit the official website : ([please click here](#))



3.Contact Us

	Company	T-chip Intelligent Technology Co.,Ltd.
	Address	Room 2101,No.1Hongyu Building, #57 Zhongshan 4Rd, East District, Zhongshan, Guangdong
	Mobile	(+86) 186 8811 7175
	National service hotline	4001-511-533
	Telephone	0760-89881218
	Zip code	528400
	Business	sales@t-firefly.com
	Website	www.t-firefly.com