



AIO-3288C

All In One Board Specifications

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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.

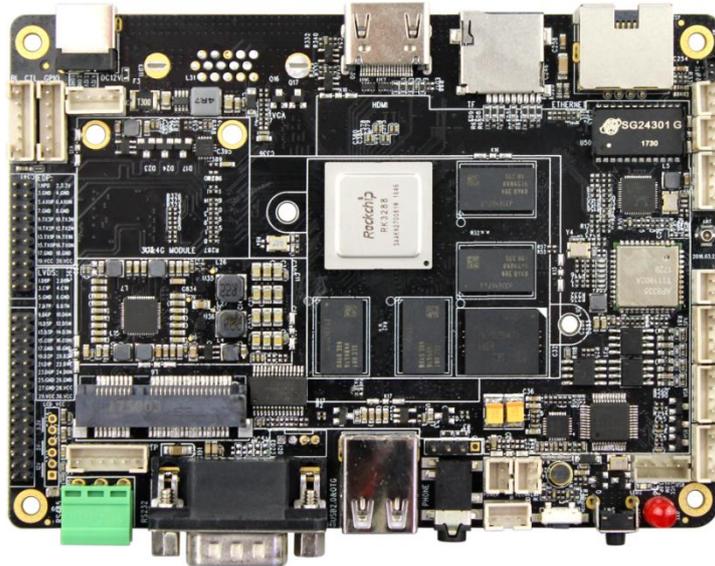
Firefly team has more than 60 research and development members and has the research and development capabilities in schematic design, PCB layout, mainboard production, embedded development, system development, application program development, etc., which accelerates the research and development process 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.

1. Product Overview

1.1 Overview

AIO-3288C is based on RK3288 chip platform, with quad-core ARM Cortex-A17 and Mali-T764 GPU, frequency up to 1.8GHz, has excellent chip performance. The main board with dual LVDS, EDP, HDMI , VGA (Extensible) , The board is integrated with MINI PCIE connector and SIM holder, which can be connected to 3G and 4G mobile communication modules. including RS232 and RS485 interfaces, which is convenient to be connected to various industrial equipments.

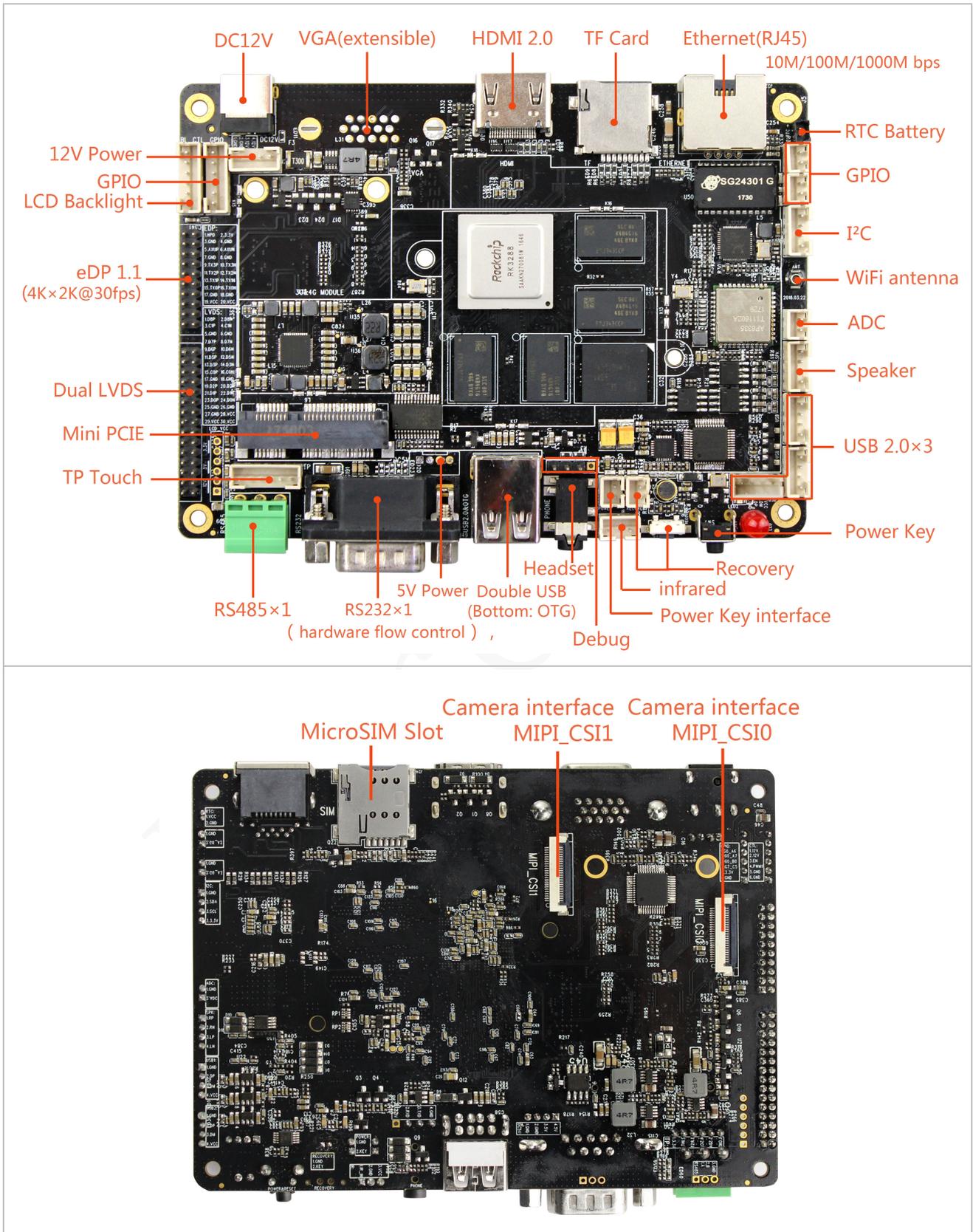


It supports a full range of system software: Android, Linux and Ubuntu, Its open source feature allows secondary development for enterprises, facilitating R&D and shortening the product development cycle.

1.2 Application Scenarios

			
Vending machines	Commercial display	Medical equipment	Amusement equipment
			
Mobile POS machines	Interactive printer	smart robot	Industrial PC

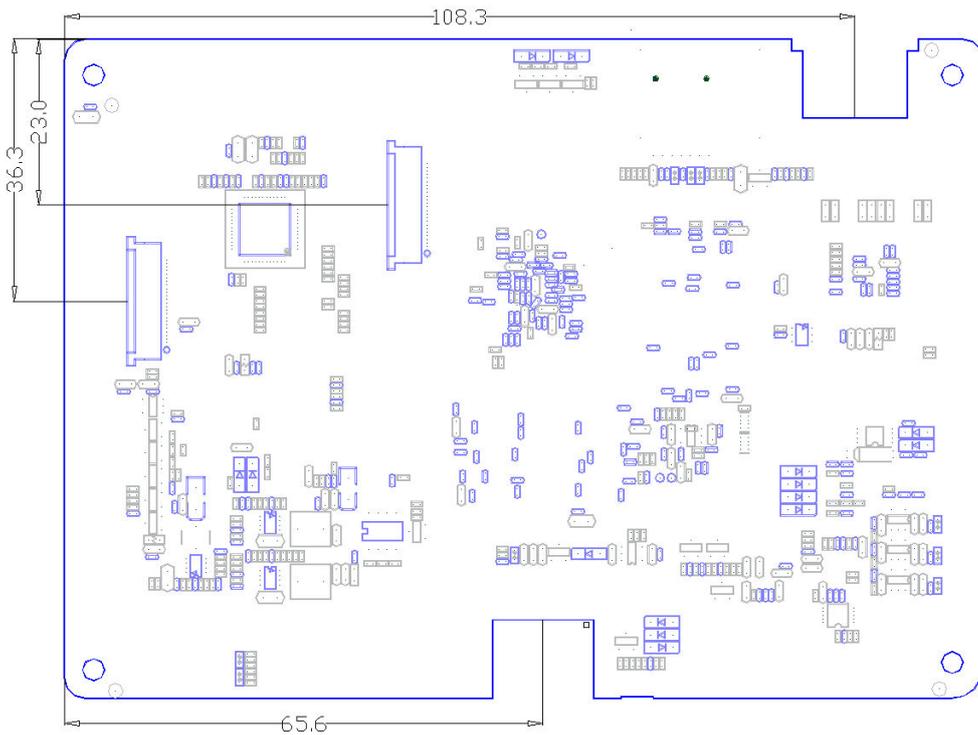
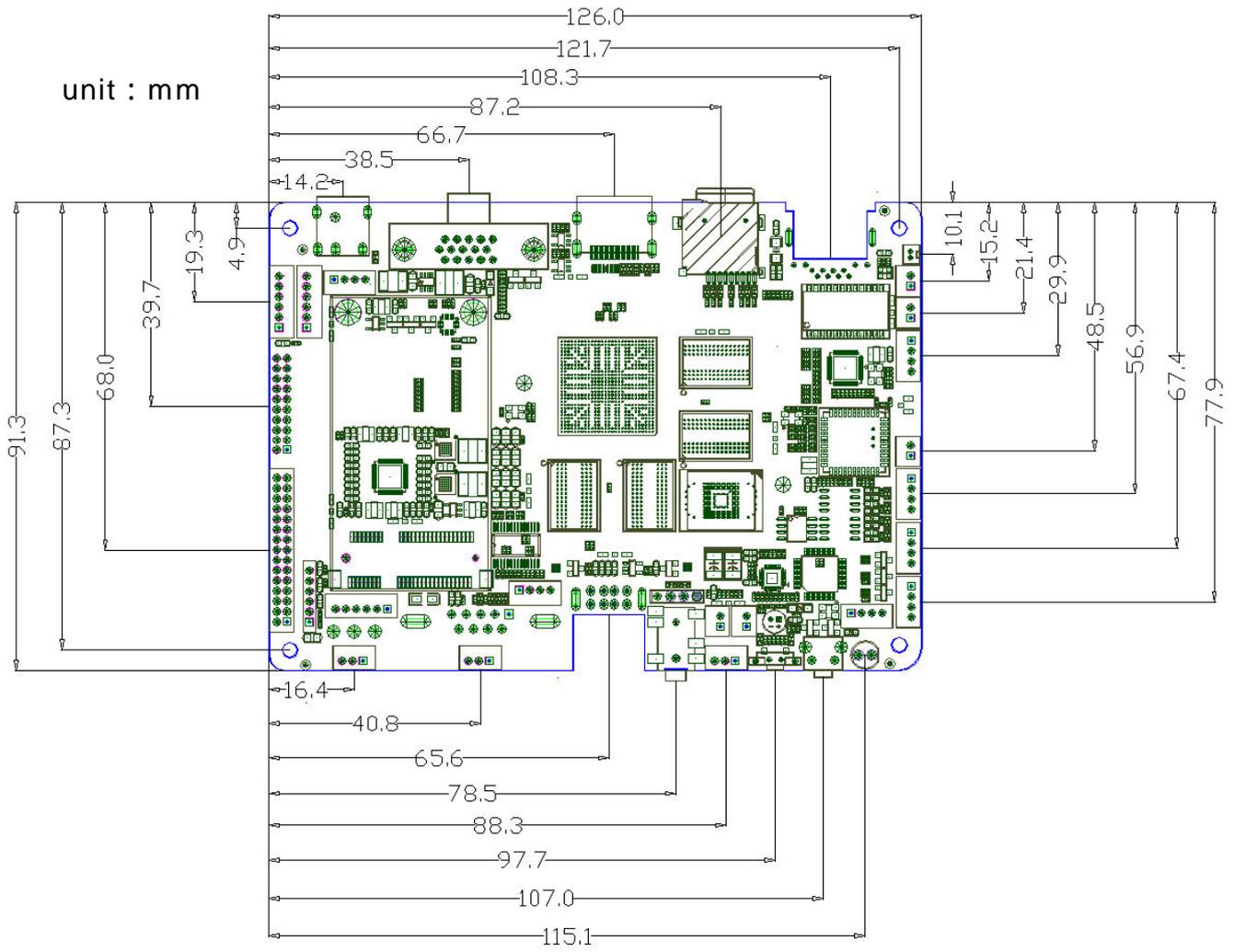
1.3 Interface description



2. Hardware Specifications

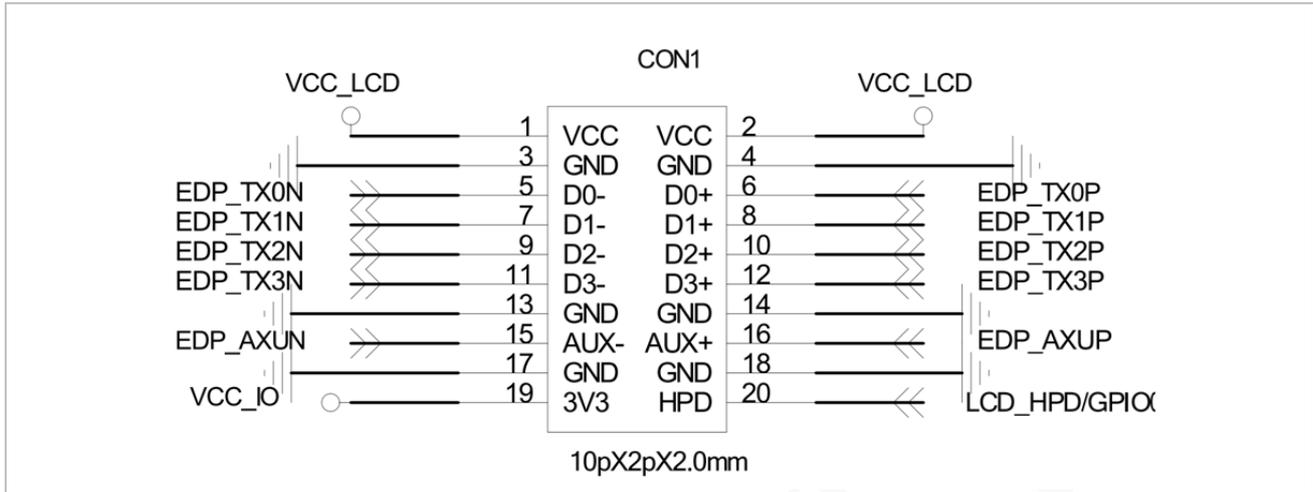
Types	Specifications
CPU	RK3288 Quad-core Cortex-A17 , Up to 1.8G Hz
GPU	Support Mali-T764 GPU, AFBC (Frame Buffer Compression) Support OpenGL ES 1.1/2.0/3.1, OpenCL, DirectX9.3、 Embedded high-performance 2D acceleration hardware
DDR	2GB dual channel DDR3
Memory	8GB eMMC 5.1、 Support MicroSD (TF) Card
Multimedia	Support 4K 10bits VP9/H265/H264, Support 4K video decoding up to 60fps
	1080P multi-format video decoding (VC-1, MPEG-1/2/4, VP8)
	Support the encoding of 1080P videos with H.264 and VP8 formats
	Video post processor: deinterlacing, denoising, edge/ detail/ color optimization
Display	Dual LVDS : Support 1080P@60Hz LCD screen
	eDP1.1 : Support 4Kx2K@32fps
	HDMI 2.0 : Support 4K 60Hz display , Support HDCP 1.4/2.2
	VGA interface (extensible) : Support 1080P@60Hz Output
Audio	1 x HDMI audio output、 1 x Headset、 1 x Double channel speaker (8Ω/2W)
Camera	2x MIPI-CSI Camera Port
Interface	GPIO、 eDP、 LVDS、 USB、 ADC、 I2C、 Key、 Voltage input and output interface
Network	10/100/1000Mbps Ethernet (RJ45 interface)
	On-board WIFI/BT module , Support Single frequency WiFi 2.4GHz , Support 802.11 b/g/n protoco, Support Bluetooth 4.2l
	Mobile Network : Built-in WCDMA,EVDO,4G universal version
RTC	Built-in RTC real-time clock (timer switch supported)
USB	1xUSB_OTG , 1xUSB_HOST, 3xUSB socket
Serial port	1xRS232 (hardware flow control) , 1xRS485
infrared	With a one-way infrared receiver, it has the function of infrared remote control.
OS	Android 5.1、 Linux、 Ubuntu operating system
Input power	12V/2A
Size	126 mm x 91.3mm

3. PCB Size



4. Interface definition

4.1 EDP interface



No.	Definition	Attribute	Description
1	VCC_LCD	power output	3.3V/5V/12V
2	VCC_LCD	power output	3.3V/5V/12V
3	GND1	GND	GND
4	GND2	GND	GND
5	EDP_TX0N	signal output	EDP data channe0 negative
6	EDP_TX0P	signal output	EDP data channe0 positive
7	EDP_TX1N	signal output	EDP data channe1 negative
8	EDP_TX1P	signal output	EDP data channe1 positive
9	EDP_TX2N	signal output	EDP data channe2 negative
10	EDP_TX2P	signal output	EDP data channe2 positive
11	EDP_TX3N	signal output	EDP data channe3 negative
12	EDP_TX3P	signal output	EDP data channe3 positive
13	GND3	GND	GND
14	GND4	GND	GND
15	EDP_AUXN	signal output	EDP accessory channel negative
16	EDP_AUXP	signal output	EDP accessory channel positive
17	GND5	GND	GND
18	GND6	GND	GND
19	VCC_3V0	power output	3.3VOutput
20	LCD_HPDP	Input/output	GPIO Input/output

5. Appendix

5.1 Source code acquisition

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

5.2 Contact us



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