T-Chip technology

IPC-M10R800-A3399C

Six-core Industry Panel Computer

Version	Date	Updated content
V1.0	2018-10-27	Original version

Directory

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

IPC-M10R800-A3399C Six-core Industry Panel Computer, Based on AIO-3399C high-performance open source platform and adopts capacitive 10-point touch screen, full-view HD display and industrial-grade enclosure, dustproof, anti-jamming and capable of long-term stable operation. Moreover, it supports 4K hardware acceleration, dual-screen identical display/dual-screen differential display and has rich interface for easy connection of various industrial equipment.

It is equipped with ARM Cortex-A72 architecture, six-core 64-bit high-performance processor, frequency up to 1.8GHz, integrates quad-core Mali-T860 GPU, supports H.265 HEVC and VP9, H.264 encoding, 4K HDR, and has the maximum support of 4K hardware decoding.

It adopts 10.1-inch IPS high-end screen of 800 x 1280 resolution, supports dual-screen identical display/dual-screen differential display and full-view HD display with fine color saturation and high-quality HD image.

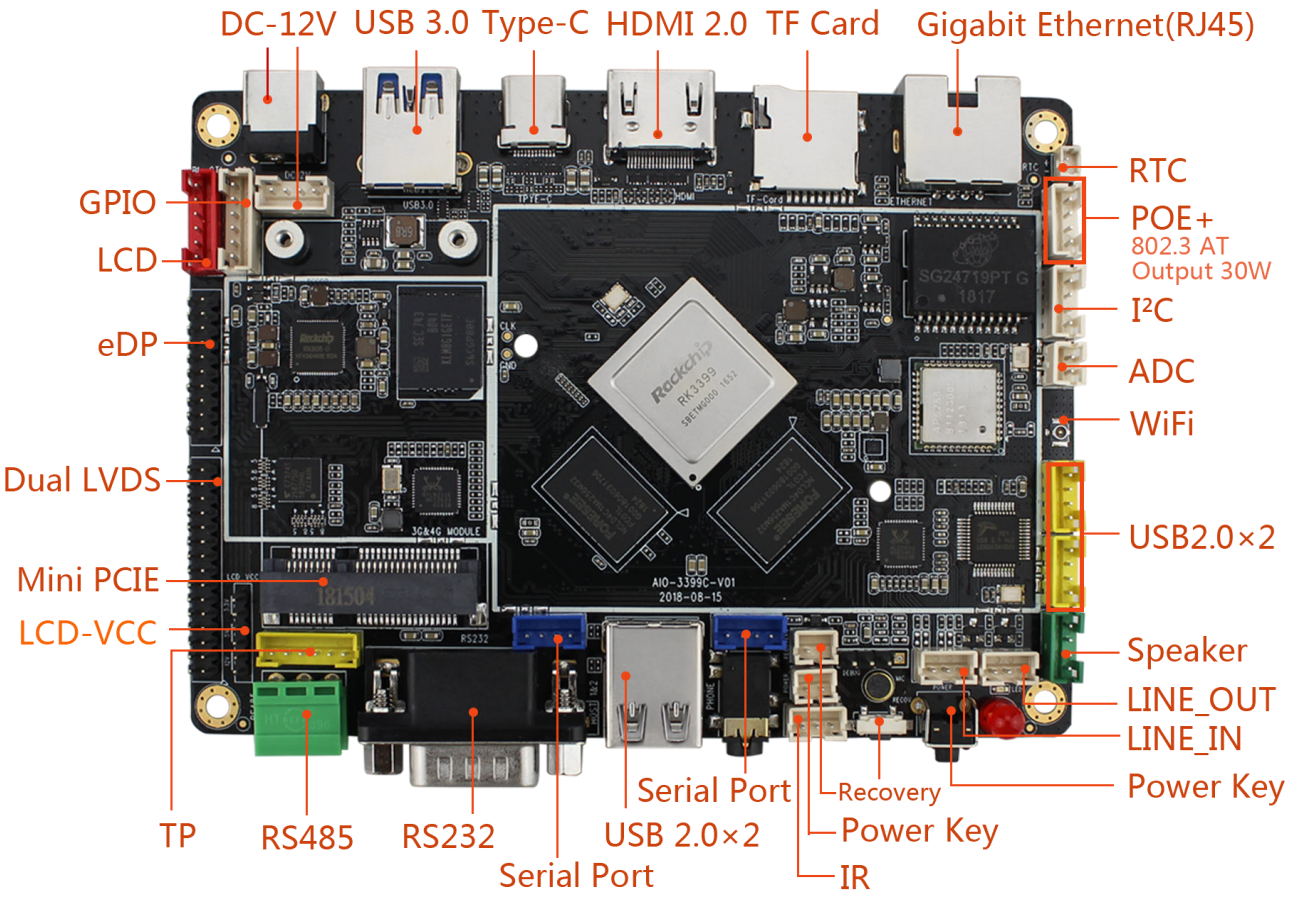
G+G capacitive touch screen, supporting 10-point touch, high sensitivity touch, stable operation, and offering better touch experience to you.

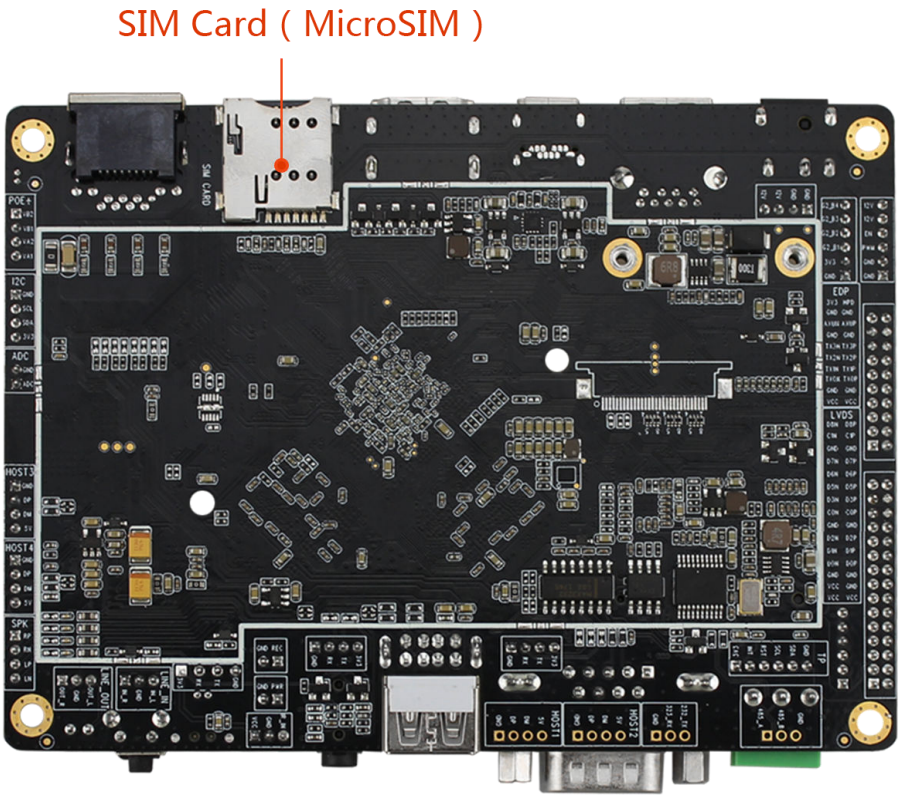
Equipped with industrial grade metal case, fanless design, dustproof, shockproof, anti-jamming, anti-aging wear, effective cooling design, high-temperature resistance. It can long-term stable work.

It has rich interfaces such as LAN, HDMI, Type-C, RS485, RS232, etc., which is convenient for connecting various industrial equipment to meet various application scenarios. Provides source code, tutorials, technical materials and development tools for easy download and use.

1.2 Interface description

1.3 Mainboard Interface





2.Hardware Specifications

2.1 Main Specifications

Specification	
CPU	RK3399，Dual-core(Cortex-A72)+ Quad-core(Cortex-A53), frequency up to 1.8 GHz
GPU	Quad-core ARM Mali-T860 Support OpenGL ES 1.1/2.0 /3.0, OpenVG1.1, OpenCL, Directx11
DDR	2GB / 4GB Dual-channel LP DDR4
Storage	8GB / 16GB High-Speed eMMC, TF Card
Network	Gigabit Ethernet（RJ45 interface） On-board WIFI / BT module, support 2.4GHz / 5GHzdual-band WiFi, 802.11a/b/g/n/ac protocol Support Bluetooth 4.1 Mini PCIe（Used to expand 3G/4G modules, use with Micro SIM card slot）
Multimedia	Support 4K VP9 and 4K 10bits H265/H264video decoding, up to 60fps 1080P Multi-format video decoding（VC-1，MPEG-1/2/4，VP8） 1080P video encoding, Support H.264，VP8 formats Video post processor: deinterlacing, denoising, edge/ detail/ color optimization
Display	HDMI2.0 support 4K 60Hz display, support HDCP 1.4/2.2 Support DisplayPort 1.2（4 lines, up to 4K 60Hz） Dual VOP display: Resolution support 4096X2160 and 2560X1600 Support dual-screen identical display/dual-screen differential display Main board Scalable: eDP 1.3（4 lines 10.8Gbps）, dual LVDS（6/8 bit, up to 24-bit 1920×1200 resolution） Support single channel MIPI DSI, up to 1920x1080 resolution（Customized board interface）
Other	Support USB3.0 HOST and Type-C interface ADC×1, SPI / GPIO, Controllable LED×2, I²C×1, Gravity sensor×1（Scalable）
Audio	1xPHONE，2xSPEAKER（L/R）, 1xLINE-IN，1xLINE-OUT
USB	Type-C（OTG）, 1 x USB3.0，4 x USB2.0（Interface×2，socket×2）
Key	Power（Key×1, socket×1）, Recover（Key×1, socket×1）
Serial port	RS232×1, RS485×1, Debug serial port×1, Onboard TTL×2
IR	With a one-way infrared receiver, Support infrared remote control
OS	Support Android, Linux system
Power	DC 12V-2A（DC5.5 × 2.1mm）

2.2 Display Performance

Type	Parameter
Screen	10.1 inch IPS screen
Resolution	1280 × 800 Pixel (16:10)
Touch Screen	Capacitive 10-point touch screen
Brightness	200 cd/m2

2.3 Visual parameter

Angle	Parameter	Min	Max
θL	Φ=180° (9 o’ clock)	80	85
θR	Φ=0° (3 o’ clock)	80	85
θT	Φ=90° (12’ clock)	80	85
θB	Φ=270° (6’ clock)	80	85

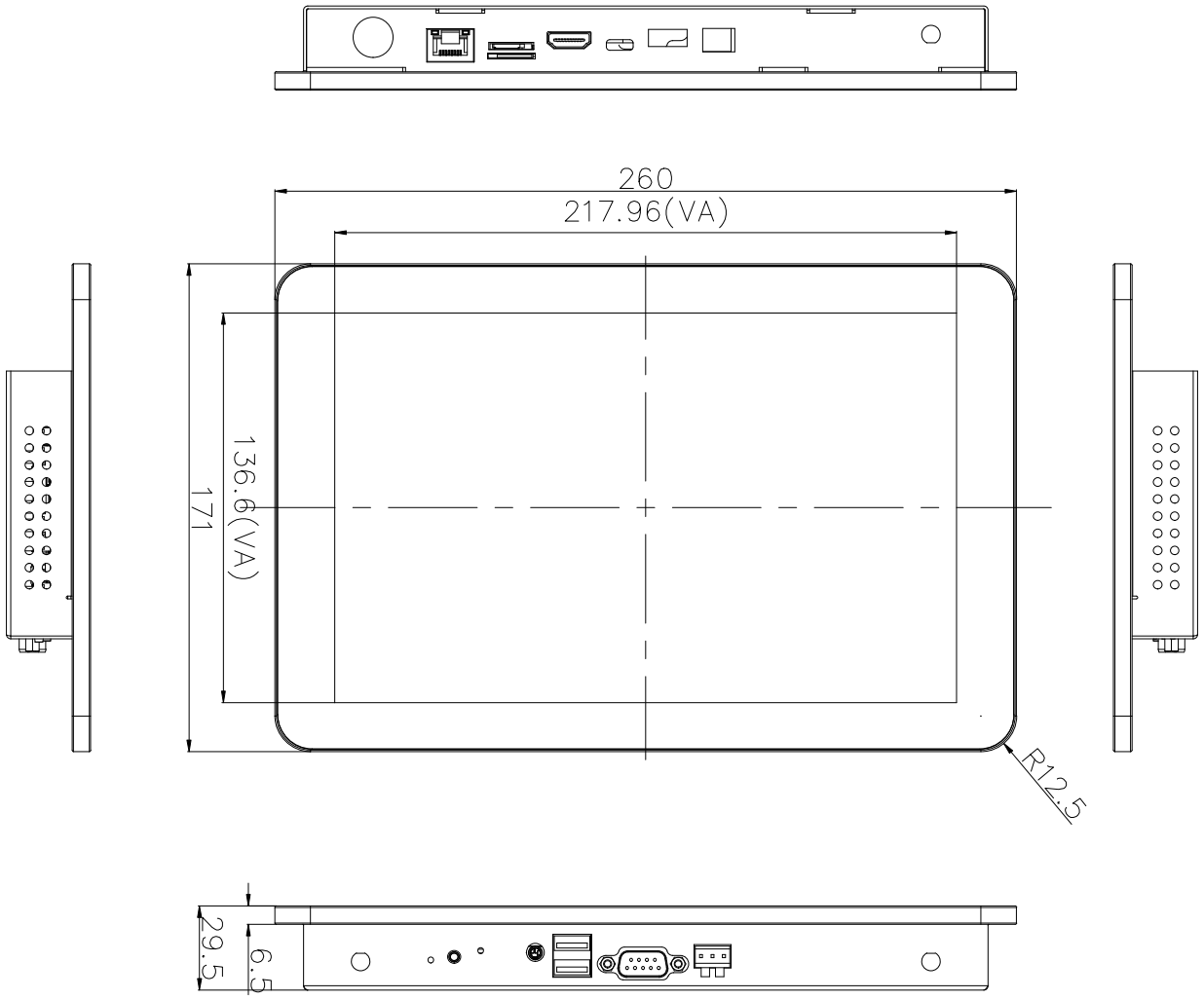
2.4 Environmental Parameter

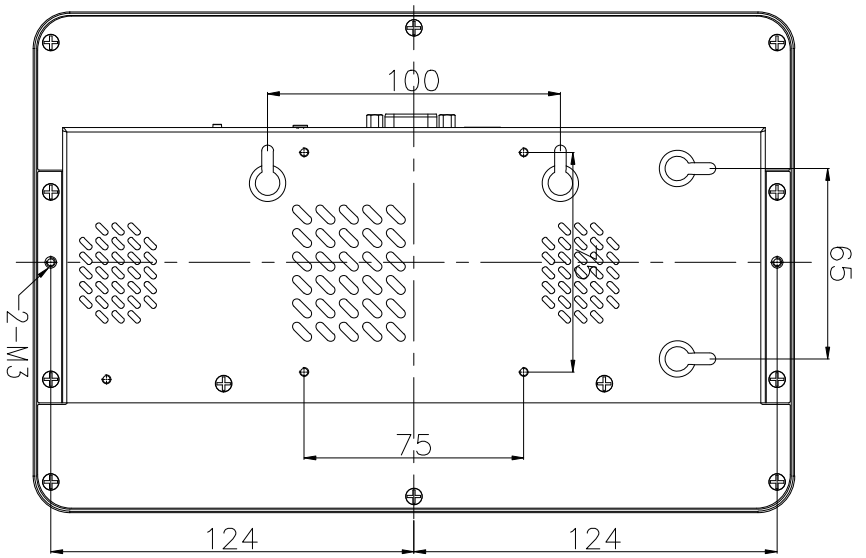
Type	Min	Typical	Max
Operating Temperature	-20 ℃	25 ℃	60 ℃
Storage Temperature	-40 ℃	25 ℃	125 ℃

2.5 Appearance Structure

Type	Min
Size	260 x 171 x 29.5 mm

3. Size





更改内容	日期		10.1寸工业平板 AIO3399C	
	2018.10			
				mm
				>A2<

Firefly 天启智能科技有限公司 T-CHIP INTELLIGENT TECHNOLOGY CO.,LTD.

4. Appendix

1 .Source code acquisition

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

2 .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