



T-Chip technology

Embedded Computer

EC-A3288C

Specifications V1.0



| Version | Date | Updated content |
|---------|------------|------------------|
| V1.0 | 2018-10-17 | Original version |
| | | |



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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

EC-A3288C Quad-core Mini Embedded Computer, Based on AIO-3288C high-performance open-source platform, equipped with industrial case and efficient fanless cooling system, dustproof and anti-interference, stable operation for a long time, supports 4K hardware decoding, compatible with mainstream 5~100 inch display. EC-A3288C is portable and can be flexibly applied to various scenes.

EC-A3288C adopts RK3288 quad-core Cortex-A17 processor, frequency up to 1.8GHz, integrated quad-core Mali-T764 GPU, with powerful multi-thread computing and graphics processing capability, and the performance is stable and reliable.



It supports 4K hardware decoding and can achieve 4Kx2K H.264 and H.265 video hardware decoding, compatible with mainstream 5~100 inch display and supports the dual-screen identical/differential display.

Compact and space-saving design supports multiple installation modes, with RS232(Hardware flow control) and RS485 interfaces, allowing convenient connecting to various industrial equipment.

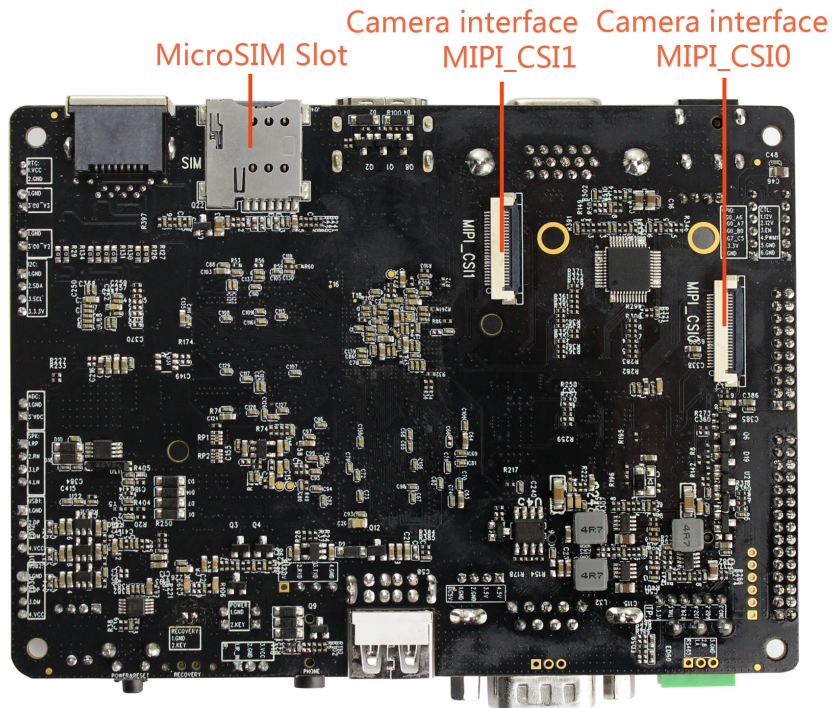
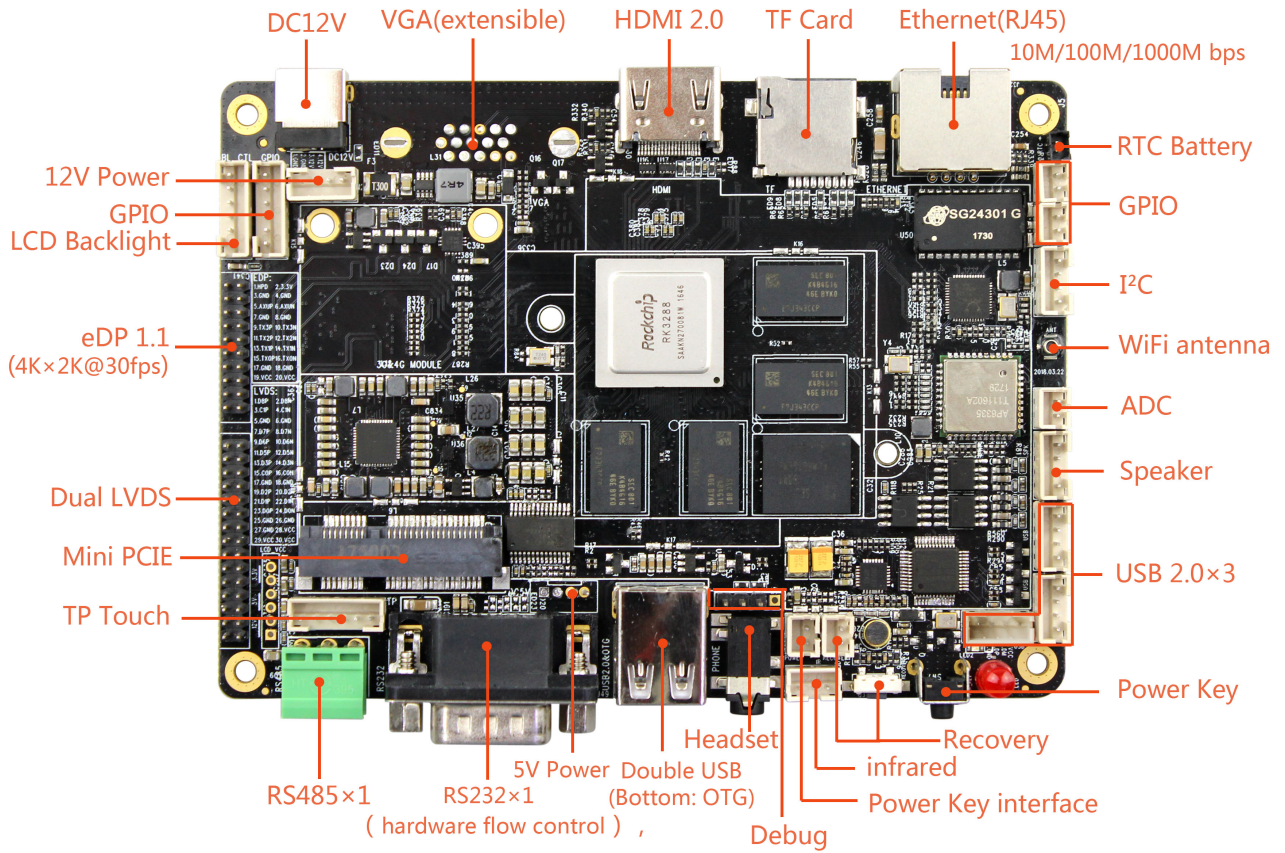
Adopts fanless aluminum alloy structure for high-efficiency cooling, which is dustproof, shockproof and anti-interference, and supports 60°C high-temperature aging, 7x24 stable work.

With HDMI2.0, VGA, LAN, RS485, RS232 and other interfaces. Open SDK, tutorials, technical materials and development tools to make development easier and more convenient.

2. Interface description



Interface description





3. Hardware Specifications

3.1 Main Specifications

| Specification | |
|---------------|--|
| CPU | RK3288 Quad-core Cortex-A17 , frequency up to 1.8G Hz |
| GPU | Mali-T764 GPU, Support 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 |
| Network | Gigabit Ethernet (RJ45) On-board WIFI/BT module, support single-band WiFi 2.4GHz, 802.11 b/g/n protocol On- board MINI PCIE (3G/4G) and SIM slot, scalable 3G/4G mobile communication Support WCDMA,EVDO,4G Full Netcom Support Bluetooth 4.2 |
| Multimedia | Support 4K 10bits VP9/H265/H264 video decoding, up to 60fps 1080P Multi-format video decoding (VC-1, MPEG-1/2/4, VP8) 1080P video decoding, support H.264, VP8 formats Video post processor: deinterlacing, denoising, edge/ detail/ color optimization |
| Display | HDMI 2.0: support 4K 60Hz display, support HDCP 1.4/2.2 VGA: support 1080P@60Hz output Support dual-screen identical/differential display |
| Other | GPIO, eDP, LVDS, USB, ADC, I2C, Key, and voltage input and output interface |
| Audio | 1 x HDMI audio output, 1 x Headset interface, 1 x Two-channel speaker (8Ω /2W) |
| USB | 1 x USB_OTG, 1 x USB_HOST, 3 x USB socket |
| Serial port | RS232×1 (With hardware flow control) , RS485×1, Debug serial port ×1, |
| IR | With a one-way infrared receiver, Support infrared remote control |
| OS | Support Android, Linux, Ubuntu System |
| Power | DC 12V-2A (DC5.5 × 2.1mm) |



3.2 Power Parameter

| Type | Min | Typical | Max |
|-------------------|-----|---------|-------|
| Operating Voltage | 6 v | 12 v | 24v |
| Operating Current | 2A | 1 A | 500mA |

3.3 Environmental Parameter

| Type | Min | Typical | Max |
|-----------------------|--------|---------|--------|
| Operating Temperature | -20 °C | 25 °C | 60 °C |
| Storage Temperature | -40 °C | 25 °C | 125 °C |

3.4 Appearance Structure

| Type | Min |
|------------|-------------------------|
| Size | 160 x 94 x 26 mm |
| Appearance | AL6063 aluminum profile |

5. Appendix

1 .Source code acquisition

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

2 .Contact us



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|--------------------------|---|
| 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 |