

AIB-3588

Industrial Embedded Computer



Product Features

- RK3588 octa-core 64-bit (A76+A55) processor with integrated 6Tops NPU.
- supports 8K@60fps H.265/VP9 video decoding and 8K@30fps H.265/H.264 video encoding.
- Built-in HDMI®, GPIO, CAN, RS485, USB2.0/3.0, RS232, and more.
- Supports up to 32GB RAM, 8~128GB eMMC optional, customizable based on customer needs.
- Seamless connectivity: Gigabit Ethernet, WiFi6, Bluetooth, 5G/4G LTE.
- Industrial-grade design for stable 24/7 operation in a wide temperature range (-40~85°C).

Specification

System Information

Processor	Rockchip RK3588, Quad-core Cortex-A76 and Quad-core Cortex-A55
System Memory	4GB 64bit LPDDR4/LPDDR4x/LPDDR5 up to 32GB
GPU	Mali-G610 MP4 quad-core GPU OpenGL ES 1.1/2.0/3.1/3.2、 Vulkan 1.1、 OpenCL 2.2, 450 GFLOPS

Storage

SD Card	x1
eMMC	16GB (8GB/32GB/64GB/128GB optional) eMMC

Extended I/O interface

Extended I/O interface	1 infrared remote control receiver, × 1 DC 5V voltage output, × 1 DC 3.3V voltage output
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I/O

USB Port	1 x USB Host3.0, 2 x USB Host2.0, 1 x USB OTG 2.0
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RS232	× 1 ±5~±15V
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RS485	× 1 TIA485/EIA-485-A -7~+12V
CAN	× 1 ISO11898-2:2016 and SAE J2284-1 to SAE J2284-5ESD保护(8kV IEC and HBM) 5Mbit/s
GPIO	× 4 3.3V level ±15KV (air) ±10KV (contact)
TTL	× 1 3.3V level ±15KV (air) ±10KV (contact)
SIM	× 1 Micro SIM Card
LED	× 4 Power, Ethernet network, WiFi, 4G

Network

Ethernet	Support 1000/100/10 Mbps transmission speeds
WiFi	support 2.4GHz, 5GHz dual-band WiFi, 802.11 a/b/g/n/ac (802.11ax optional) protocols Support Bluetooth 4.0 wireless technology (BLE support)
2G/3G/4G/LTE	LTE for EU、LTE for AU、LTE for US(Optional)

Video Output

HDMI® Output	1 x HDMI®2.1 8K@60fps or 4K@120fps
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Video Input

HDMI® Input	1 x HDMI®2.1 4K@60fps
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Power Requirement

DC Input Voltage	DC Input Voltage 12V(DC5.5 × 2.1mm)
Power wastage	Standby power consumption: approx. 0.42W (12V/35mA) Typical power consumption: approx. 2.25W (12V/190mA) Maximum power consumption: approx. 12W (12V/1000mA)

Software Support

OS	Android12.0 (first)、Linux Ubuntu Desktop、Linux Ubuntu Server、Debian11.0、Buildroot、RTLinux
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Mechanical & Environmental

Operating Temp.	-40~85°C
Storage Temp.	-40~85°C
Operating Humidity	10%~90%
Dimension (W x L x H)	160mm×125.5mm×48mm



A STELIAU TECHNOLOGY COMPANY

Singel 3 | B-2550 Kontich | Belgium | Tel.+32(0)3 458 30 33
info@alcom.be | www.alcom.be

Rivium 1e straat 52 | 2909 LE Capelle aan den IJssel | The Netherlands
Tel.+31(0)10 288 25 00 | info@alcom.nl | www.alcom.nl

