

# 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

### I/O

**USB Port** 1 × USB Host3.0, 2 × USB Host2.0, 1 × USB OTG 2.0

**RS232** × 1 ±5~±15V

<b>RS485</b>	× 1 TIA485/EIA-485-A -7~+12V
<b>CAN</b>	× 1 ISO11898-2:2016 and SAE J2284-1 to SAE J2284-5ESD保护(8kV IEC and HBM) 5Mbit/s
<b>GPIO</b>	× 4 3.3V level ±15KV (air) ±10KV (contact)
<b>TTL</b>	× 1 3.3V level ±15KV (air) ±10KV (contact)
<b>SIM</b>	× 1 Micro SIM Card
<b>LED</b>	× 4 Power, Ethernet network, WiFi, 4G
<b>Network</b>	
<b>Ethernet</b>	Support 1000/100/10 Mbps transmission speeds
<b>WiFi</b>	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)
<b>2G/3G/4G/LTE</b>	LTE for EU、LTE for AU、LTE for US(Optional)
<b>Video Output</b>	
<b>HDMI® Output</b>	1 x HDMI®2.1 8K@60fps or 4K@120fps
<b>Video Input</b>	
<b>HDMI® Input</b>	1 x HDMI®2.1 4K@60fps
<b>Power Requirement</b>	
<b>DC Input Voltage</b>	DC Input Voltage 12V(DC5.5 × 2.1mm)
<b>Power wastage</b>	Standby power consumption: approx. 0.42W (12V/35mA) Typical power consumption: approx. 2.25W (12V/190mA)  Maximum power consumption: approx. 12W (12V/1000mA)
<b>Software Support</b>	
<b>OS</b>	Android12.0 (first)、Linux Ubuntu Desktop、Linux Ubuntu Server、Debian11.0、Buildroot、RTLinux
<b>Mechanical &amp; Environmental</b>	
<b>Operating Temp.</b>	-40~85°C
<b>Storage Temp.</b>	-40~85°C
<b>Operating Humidity</b>	10%~90%
<b>Dimension (W x L x H)</b>	160mm×125.5mm×48mm



## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

### US

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +1 347 719 4508  
Support: +1 347 719 4508

1309 Coffeen Ave  
Ste 1200  
Sheridan  
WY 82801  
USA

### EMEA

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +44 (0)1785 879 050  
Support: +44 (0)1785 879 050

Unit A5 Douglas Park  
Stone Business Park  
Stone  
ST15 0YJ  
United Kingdom

VAT Number: 120 9546 28  
Business Registration Number: 07699660