



# EC-A3588JQ

Octa-Core 8K AI Industrial Computer

T-CHIP INTELLIGENCE TECHNOLOGY

V1.0





# Product features



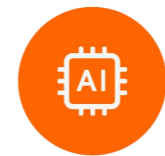
## 8-Core 64bit processor

8-Core 64bit processor RK3588  
8nm lithography process  
up to 2.4GHz



## Super-large 32GB RAM

Up to 32GB RAM  
Support LPDDR4/LPDDR4x/LPDDR5



## 8K H.265 / 6TOPS NPU

OpenGL ES3.2/2.0, Vulkan1.1  
8K@60fps H.265/VP9 Decoding  
8K@30fps H.265/H.264 Encoding  
6TOPS NPU computing power



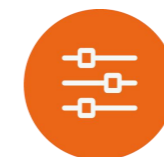
## Network communication

2\*Gigabit Ethernet (1000Mbps)  
2.4G/5G dual-band WiFi6  
Bluetooth5.0  
Capable of 5G/4G LTE expansion



## Operating systems

Android 12.0,  
Ubuntu(Desktop and Server),  
Debian11, Buildroot and  
RTLinux



## A variety of interfaces

HDMI、VGA、DP、HDMI IN、RS485  
RS232、CAN、USB3.0、Audio jack  
MIC、LINE-IN

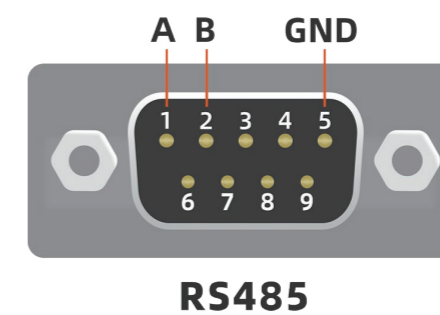
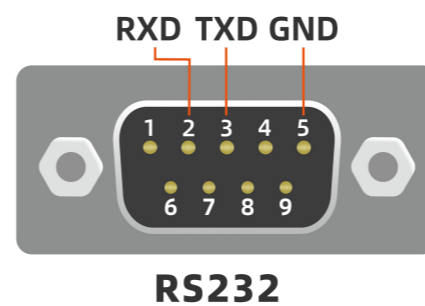
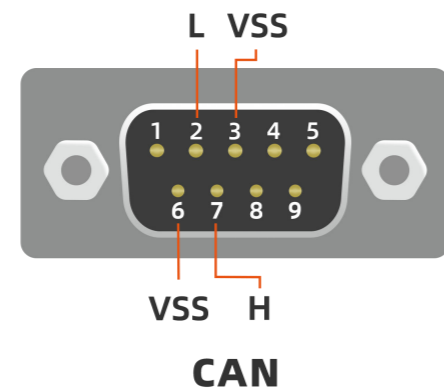
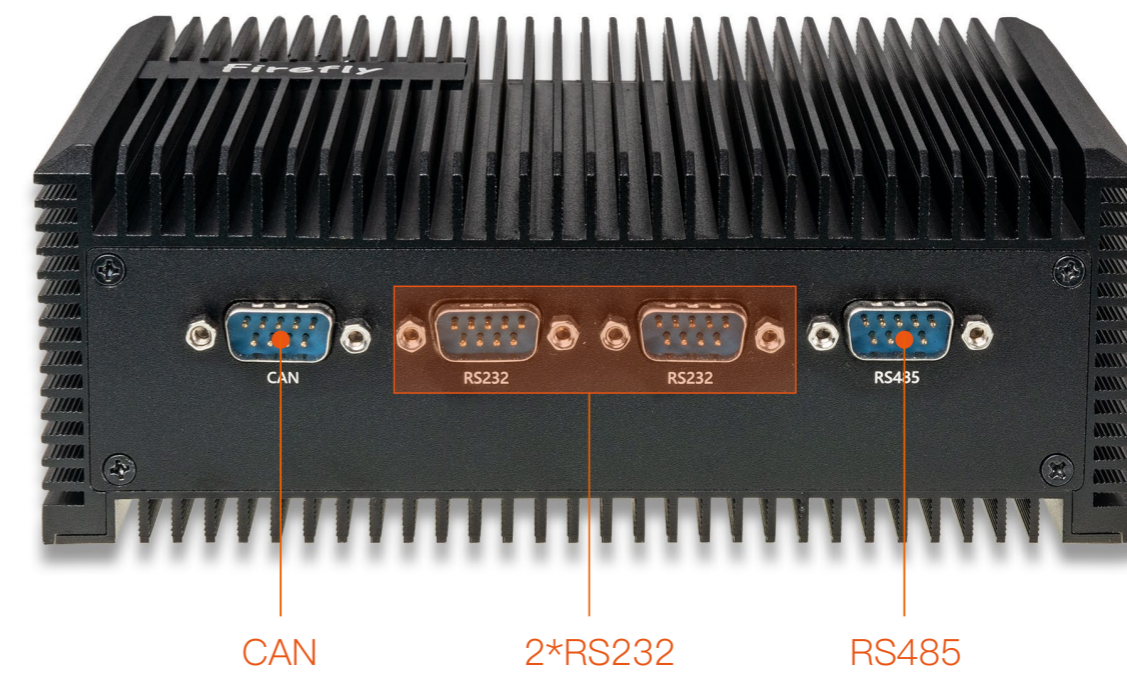
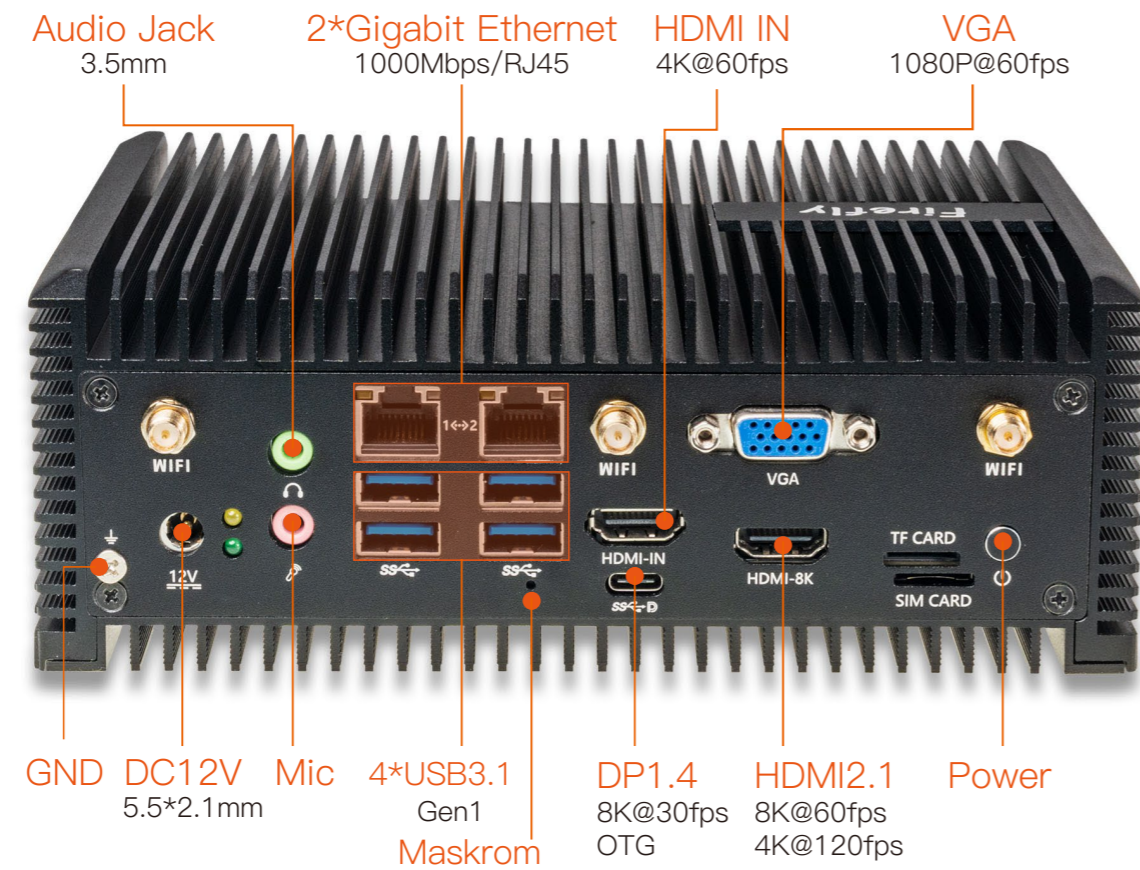
# Specifications



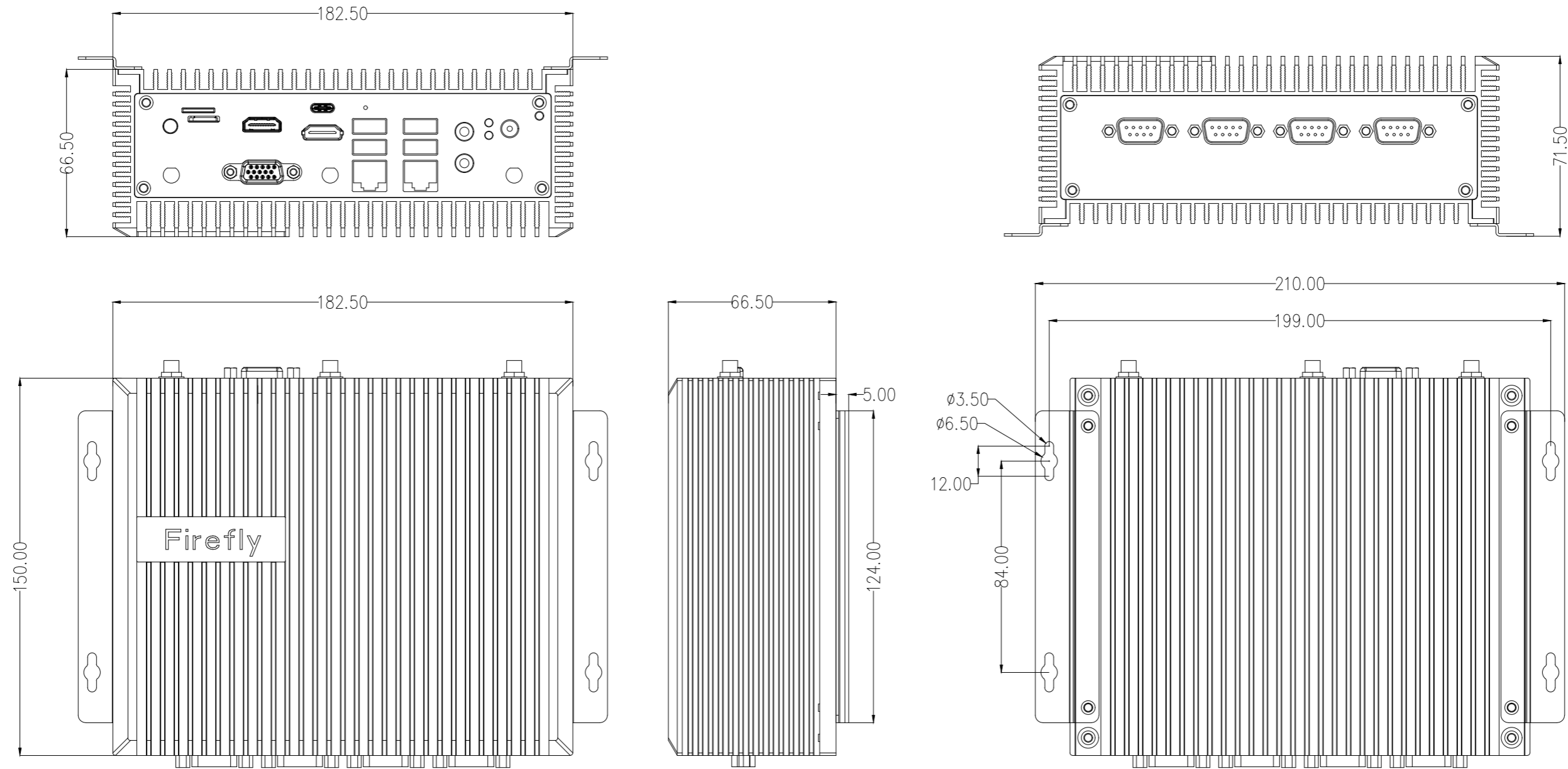
Specifications	
SOC	RockChip RK3588J
CPU	Octa-core 64bit (4xCortex-A76+4xCortex-A55) , 8nm lithography process, up to 2.2GHz
GPU	ARM Mali-G610 MP4 GPU, Support OpenGL ES3.2 / OpenCL 2.2 / Vulkan1.1, 450 GFLOPS
NPU	6 TOPS, Support INT4/INT8/INT16 mixed operation,Support framework switching of TensorFlow / MXNet / PyTorch / Caffe
ISP	Integrated 48MP ISP with HDR&3DNR
VPU	Decoding: 8K@60fps H.265/VP9/AVS2、8K@30fps H.264 AVC/MVC、4K@60fps AV1、1080P@60fps MPEG-2/-1/VC-1/VP8 Encoding: 8K@30fps H.265 / H.264
RAM	4GB/8GB/16GB (up to 32GB) 64bit LPDDR4/LPDDR4x/LPDDR5
Storage	16GB/32GB/64GB/128GB/256GB eMMC
Expanded Storage	1 * M.2 SATA3.0 SSD (2242) or 1 * M.2 PCIe NVMe SSD (2242), 1*TF Card Slot
Network	2 *Gigabit Ethernet (1000Mbps/RJ45)
Wireless	2.4G/5G dual-band WiFi6 (802.11a/b/g/n/ac/ax) , Bluetooth5.0, capable of 5G/4G LTE expansion
Video Output	1 * HDMI2.1 (8K@60fps or 4K@120fps)、1 * DP1.4 (8K@30fps, Via USB-C)、1 * VGA (1080P@60fps)
Video Input	1 * HDMI-IN (4K@60fps), support HDCP 2.3
Audio	1 * HDMI audio output, 1 * DP audio output, 1 * 3.5mm audio jack output, 1 * Mic audio input
USB	4 * USB3.1(Gen1)、1 * USB-C (OTG/DP1.4)
Interface	2 * RS232、1*RS485、1*CAN
Power	DC 12V (5.5*2.1mm, voltage tolerance±5%)
OS	Android 12.0, Ubuntu(Desktop and Server), Debian11, Buildroot and RTLinux
Dimension	182.5mm * 150.0mm * 66.5mm
Weight	≈ 1.77kg
Environment	Operating temperature: -40°C ~ 85°C, Operating humidity: 10% ~ 90% (non-condensing)



# Interface description



# Dimension





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