

# GKBOX-68A V1.0

## Specification

AI computing box



## Modification History

Version	Modified Content	Modified by	Verified by	Date
V1.0	Established	Xiao Fengjie		2025-07-02

## Declaration

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# Chapter 1 Product Overview

## 1.1 Industry Applications

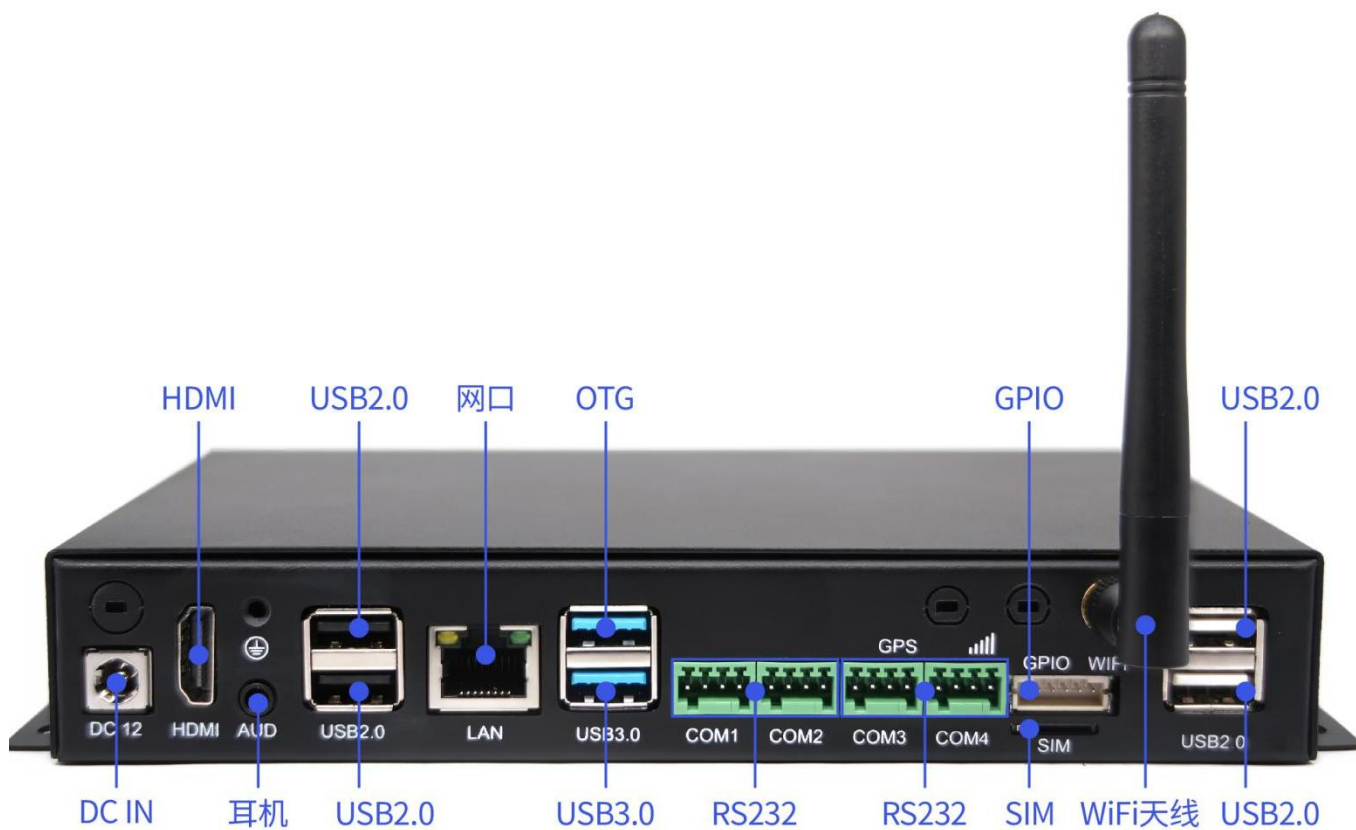
This product is an AI-powered industrial computing box powered by the high-performance RK3568 quad-core processor (2.0GHz), an integrated 1TOPS NPU, and the Android 11.0 operating system. It features a wide range of onboard interfaces and powerful expansion capabilities. It is widely applicable in industrial automation control (PLC/HMI), smart terminals (self-service/retail/kiosks), power energy management systems, and IoT communication gateways.

## 1.2 Appearance and Interface Diagram

Appearance diagram:



**Interface diagram:**



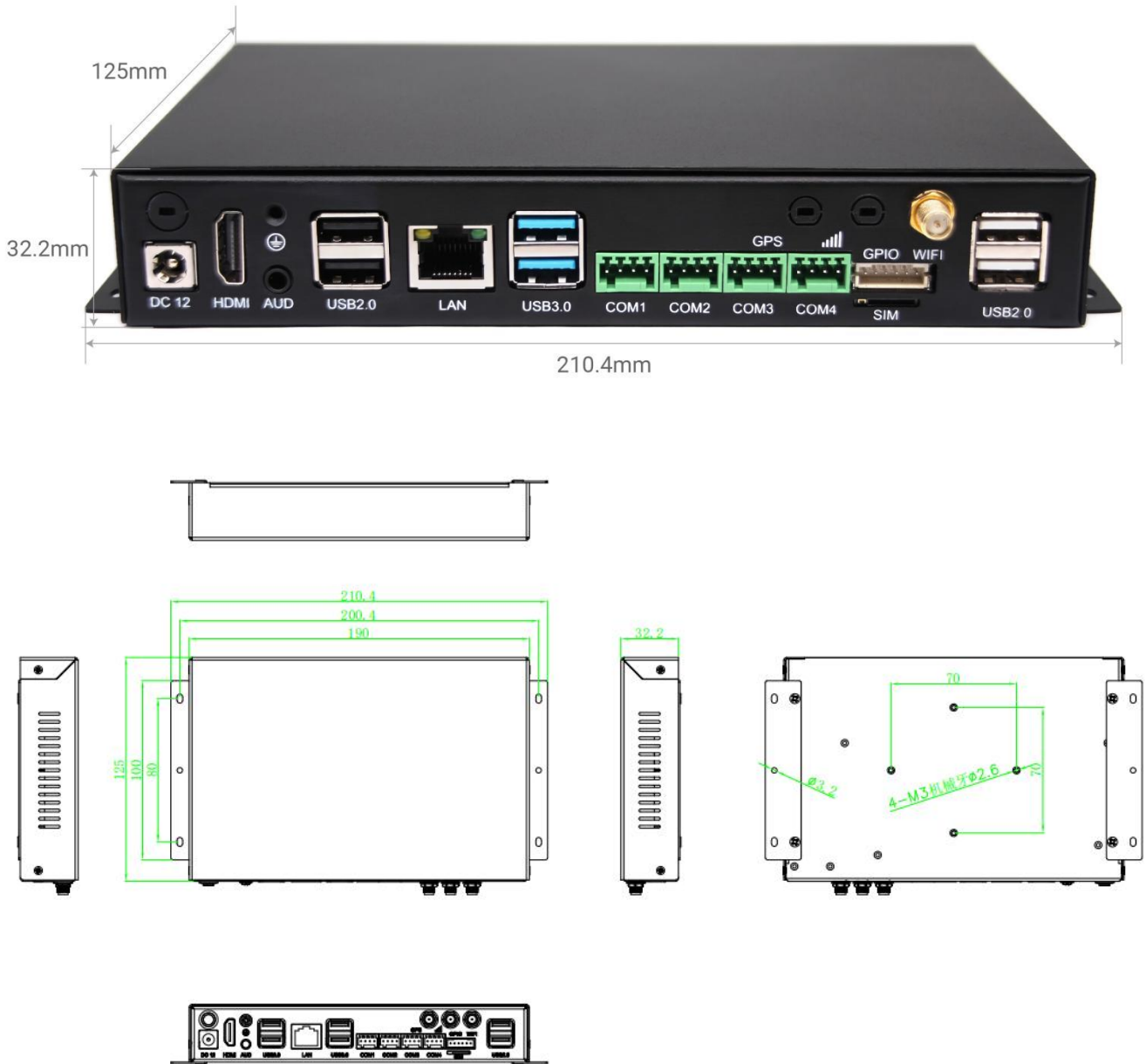
# Chapter 2 Product Specifications

## 2.1 Specifications Table

Product Parameters		
Core parameters	CPU	RK3568,4 cores (Cortex-A55) , with the maximum frequency of 2.0GHz
	GPU	Mali-G52 2EE MC2
	Local storage	16GB (optional 32GB/64GB/128GB)
	DDR memory	2GB (optional 4GB/8GB)
Network	WiFi	2.4G WIFI
	Bluetooth	BT4.2
	4G	Support 4G module to access the Internet
	Ethernet	1*10M/100M/1000M adaptive Ethernet
	Antenna	1 SMA antenna interface: WiFi antenna*1
Display port	HDMI OUT	Support 1*HDMI output, with the maximum resolution of 4Kx2K@60Hz.
External port	USB 3.0	1*USB3.0 (USB_HOST limit to 1.5A)
	USB 2.0	4*USB2.0 (limit to1A)
	USB-OTG	1*USB3.0 (OTG by default, limit to 1.5A)
	Audio interface	adapt 3.5mm, four-section headphone jack
	RS232	4*RS232 interface, adapt 4PIN2.0mm Phoenix terminal (two of which can be configured as RS485)
	I/O	4*GPIO, 2*output by default, 2*input
	SIM card	1*Nano-SIM card interface, supports various standards (depending on 4G module) Nano-SIM card size: 12mm x 9mm Implementation standards: ETSI TS 102 221 V11.0.0
Internal port	SATA	Support 1*standard SATA interface, standard SATA3.0 interface, and supports multiple SATA hard drives (internal interface)
Electrical source	Input voltage	DC 12V (±10%)
	Static power consumption	0.3W (TYP.)
	Fan	12V fan

Environment parameters	Working temperature	0°C~60°C
	Working humidity	8%~90%RH, no condensation
	Storage temperature	-20°C~70°C, it is recommended to store at room temperature
	Storage humidity	10%~95%RH
Reliability	vibration protection	IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis
	surge guard	IEC 60068-2-27, half sine wave, lasting 11ms
	EM Selectrostatic disturbance resistance	GB17626.2-2018 IEC61000-4-2 42 level 4 standard Contact discharge 4KV/ air discharge 8KV
	EMS lightning surge	GB17626.5-2019 ±2KV
	Certification	/
	Waterproof	/
Appearance information	Size	210.4(H)*125(W)*32.2(D)mm
	Appearance color	black frosted shell
	installation mode	Level surface placement or wall mounting
Packing list	box*1、instruction *1、certificate*1 (Actual shipment is more accurate.)	

## 2.2 Product Size Diagram (Unit: MM)

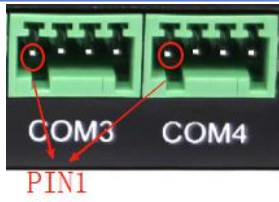


# Chapter 3 The Description of Non-standard Interfaces

## 3.1 The definition of non-standard multi-function connector interface

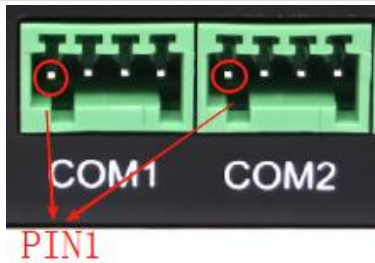
### 1、COM3/COM4 equals to RS232 port, the definition is as follows:

Serial number	definition	property	Description
1	GND	Ground wire	Ground wire
2	232-RX	input	232-RX
3	232-TX	output	232-TX
4	VCC	power supply	5Voutput




### 2、COM1/COM2 equals to RS232 port (It can be converted to RS485. Please refer to the motherboard specification for details.) , the definition is as follows:

Serial number	definition	property	Description
1	GND	Ground wire	Ground wire
2	485-B/232-RX	input/出	485-B/232-RX
3	485-A/232-TX	input/出	485-A/232-TX
4	VCC	power supply	5Voutput



### 3、The definition of GPIO port is as follows:

Serial number	definition	property	Description
1	VCC	power supply	3.3Voutput
2	I/O	output	GPIO-5
3	I/O	output	GPIO-6
4	I/O	input	GPIO-7
5	I/O	input	GPIO-8
6	GND	Ground wire	Ground wire



## Chapter 4 Notes

Please read the instructions and safety matters of this guide carefully, and strictly implement them during the use. This will help prevent damage to the host machine, prolong the service life, ensure your normal use and host maintenance, and ensure your personal safety.

- Please read the relevant documents that are attached with the random document first. If there are inserts, please read them first.
- Follow all safety warnings and signs on this product.
- Please use the original power adapter or only the power type indicated for this product.
- In the case of thunderstorms, please do not plug or unplug network cables, power cables and other conductors that may be connected to the outside world.
- Please unplug the power before cleaning this product. Please do not use liquid, spray or wet cloth for cleaning.
- Please do not dismantle the machine without permission, and do not try to repair this product by yourself. Please have an authorized professional do this work.
- Do not place the host near a heat source.
- Pay attention to moisture protection, do not splash water or other liquids on the host, if the following situation occurs, please immediately unplug the power of the host.
- The following special conditions require professional maintenance personnel to repair.
  1. Power cord or plug damaged.
  2. Conductive liquid splashed into the product.
  3. Product drop or serious damage to product shell.
  4. The product has unknown errors or obvious performance changes, which cannot be eliminated after conventional troubleshooting.

### Statement:

1.Specifications are subject to change without prior notice. Our company reserves the final right to

interpret the instructions in this manual.

2. The product may malfunction when exposed to strong radio interference (such as electromagnetic fields, static electricity, or line noise). Please ensure the product is used in a normal environment.

# Chapter 5 Common Troubleshooting

All products are rigorously tested before leaving the factory. They are durable and reliable.

Problems you encounter during use may be due to settings or operations you have set up. Or they may be due to device compatibility issues. This troubleshooting guide helps you quickly resolve simple operational issues or identify the causes of maintenance issues.

1	The host does not enter the system after starting up.	1.Please confirm that the power supply of the host and monitor is normal, and whether the host adapter is powered on. 2. Check whether the status indicator is correct. 3.Some models require a button to start up.
2	The host shuts down automatically for no reason.	1.Check whether the power supply is disconnected and whether the power adapter is loose. 2.Whether to set the timer on and off. 3.Whether the application terminal is turned off actively.
3	The host restarts automatically for no reason.	Check whether the one-key restore button is located near the outside of the board (normally it should be near the inside of the board).
4	When playing video,there only exists images without any sound	Check that the audio output Settings are matched (Codec/HDMI) and whether it is muted or not.
5	The network is not connected.	Check whether the network connection or router is normal, and whether the network parameter setting is normal.

## Note:

1) If the host accidentally gets water or conductive liquid, please immediately cut off the power supply and dry the liquid with paper towels. Do not use a hot hair dryer. In case of serious situation, it is recommended to contact the after-sales service for consultation or send it for inspection and maintenance immediately.

2) If the mainframe slips and causes the shell deformation and damage, or the motherboard is damaged, please contact the after-sales service immediately for maintenance.