AGX32-8F1E1
Specification

Document History

Version	Date	Description of Change	Applicable hardware version
V1.0	May 10, 2022	Initial Release	V1.0

Electronic components and circuits are very sensitive to electrostatic discharge, although the company will do anti-static protection design on the main interface of the board when designing circuit board products, but it is difficult to do anti-static safety protection for all components and circuits. Therefore, it is recommended to follow ESD safety precautions when handling any circuit board component. ESD protection measures include but are not limited to the following:

➢ During transportation or storage, place the card in an ESD bag and do not take it out until installation.

➢ Release the static electricity before touching the board. Wear a discharge grounding wrist strap.

➢ Operate the circuit board only in electrostatic discharge safety area.

➢ Avoid moving circuit boards in carpeted areas.

➢ Avoid direct contact with electronic components on the board by edge contact.

Precautions and after-sales maintenance

Matters needing attention

◆ Before using the product, please read this manual carefully and keep it properly for future reference;

◆ Please pay attention to and follow all warnings and guidelines marked on the product;

◆ Please use this product in a cool, dry and clean place;

◆ Do not use this product in the environment of alternating cold and heat to avoid condensation and damage to internal components;

◆ Do not splash any liquid on the product. It is forbidden to use organic solvent or corrosive liquid to clean the product;

◆ Do not use this product in dusty and messy environment. If it is not used for a long time, please pack the product;

◆ Do not use it in an environment with excessive vibration. Any falling or knocking may damage the lines and components

◆ Do not plug and unplug the core board and peripheral modules when the power is on;

◆ Do not repair or disassemble the product by yourself. If the product fails, contact the company for repair in time;

◆ Do not modify or use unauthorized accessories by yourself, and the damage caused will not be guaranteed;

After sales maintenance

1. Warranty period

Bottom plate and core plate: 3 years (non-human damage)

2. Contact information

Address: room 718, financial science and trade building, No. 15, ShangDi Information Road , Haidian District, Beijing

◆ Addressee：RMA

◆ Telephone：010-62962285

◆ Mailing instructions: contact the sales personnel of the company in advance, and arrange technicians to verify and eliminate the errors caused by miss operation as soon as possible. After verification, please mail the equipment to the company. When mailing, please attach a list of items and the cause of failure for easy verification, so as to avoid loss and loss in the process of express delivery.

ADDRESS
Room 718, Financial Kemao Building, 15 Shangdi Xinxi Road, Haidian District, Beijing

TELEPHONE
+86-010-62962285   400-127-3302

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Chapter 1. Product introduction

Agx32-8F1E1 is a product with NVIDIA ® Jetson ™ AGX Xavier core module is a vertical industrial computer. The main interfaces are designed for electrostatic safety protection, with rich external interfaces, and the internal interface devices adopt wide temperature models.

Agx32-8F1E1 standard model adopts a highly reliable power application scheme, equipped with Buffalo Jinqiang 300 switching power supply, and the rated power can reach 300W. The vertical ITX chassis can be equipped with standard PCIE function expansion card through the internal carrier board, and the carrier board PCIE slot supports PCIE X8.

1.1 product characteristics

➢ Factory pre installed AGX Xavier core module.

➢ 1 full speed usb3 1 type a connector.

➢ 1 micro USB connector.

➢ Two Gigabit Ethernet (10 / 100 / 1000 Base-T) RJ45 connectors (one of which is optional).

➢ 1 m.2 connector, supporting 2280 storage devices.

➢ 1 HDMI 2.0 interface (up to 6gbps, 24bpp, 4096x2160@60Hz).

➢ 1 work indicator.

➢ 1 micro SD card slot.

➢ 1 full length minipcie connector.

➢ It can support power on self start or key start (default power on self start).

➢ Onboard reset and recovery buttons.

➢ 2 can bus interfaces with onboard transceiver.

➢ Two RS-232 level serial ports and one 3.3V level debug serial port (UART).

➢ Four 3.3V bit programmable gpios.

> ➢ 1 group of SPI signals at 3.3V level and 2 groups of I2C signals at 3.3V level.

> ➢ Product size: 391mm × 303mm × 185 mm.

> ➢ Power requirements: 220V.

> ➢ Operating temperature: - 20 ~ + 85 ℃.
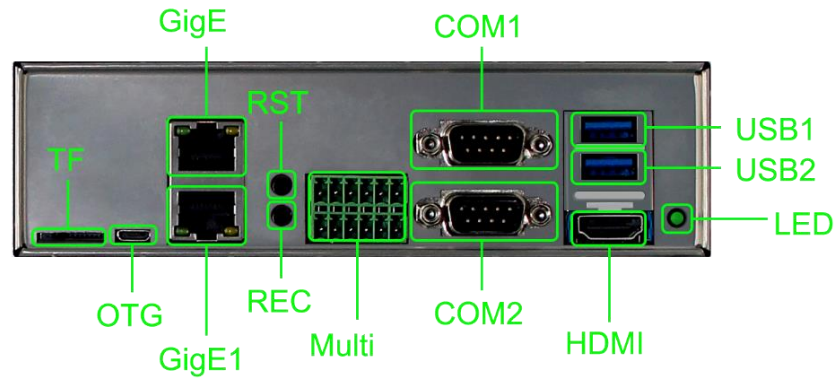
> ➢ Weight: 7700g.

1.2 Ordering information

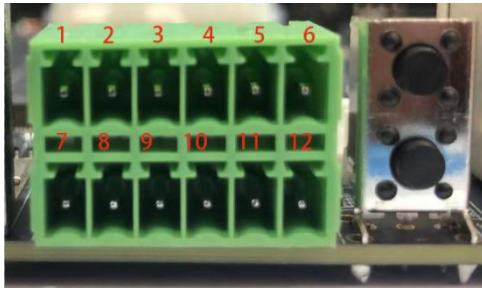| Order model	Function description
AGX32-8F211	With NVIDIA Jetson ™ Rack AI industrial computer of AGX Xavier series core module

Taobao store address: https://shop333807435.taobao.com/

JD store address: https://mall.jd.com/index-11467104.html?from=pc

Address of Ali international station: https://plink-ai.en.alibaba.com/

Chapter 2. Function and location of external interface

2. 1 Interface function description

Connector	Function description
USB1	Type a usb3 0 standard connector, supporting usb3 1 function and
USB2	Type a usb3 0 standard connector, only supports USB2 0 function
LED	System power indicator
HDMI	Type a HDMI display output interface
COM1	DB9 connector, RS232 level standard interface, corresponding device file name: /dev/ttyTHS1
COM2	DB9 connector, RS232 level standard interface, corresponding device file name: /dev/THS0
REC	Press and hold the recovery key, and then power on to make the device
RST	Reset button
GigE 、GigE1	10 / 100 / 1000m adaptive RJ45 network interface, GigE is optional, please contact the sales department if necessary
OTG	Type B micro USB interface is used for OTG function output of
TF	Micro TF Card Holder
Multi	Multifunctional IO interface The signal pin sequence of this interface is shown in the figure below. The mapping number of GPIO08 in the system is 256 The mapping number of GPIO09 in the system is 257 The mapping number of GPIO17 in the system is 417 The mapping number of GPIO27 in the system is 393

Multifunctional IO interface table:

Pin	signal	Pin	signal
1	CAN1_H	2	3.3V
3	CAN1_L	4	GND
5	GND	6	GPIO08
7	CAN0_H	8	GPIO09
9	CAN0_L	10	GPIO17
11	GND	12	GPIO27(PWM)

Chapter 3. Usage method

3.1 Operation method of the whole machine

a) Ensure that all external systems are powered off

b) Install the necessary external cables. (E.g display cable connected to HDMI monitor, power input cable supplying power to the system, USB cable connecting keyboard and mouse...)

c) Connect the power cord to the power supply.

d) AGX32-8F1E1 It can be set as default automatic power on or switch on. Please consult the sales and technical personnel of our company for specific methods.

3.2 Recovery mode

Jetson core module can work in normal mode and recovery mode. In recovery mode, file system update, kernel update, boot loader update, BCT update and other operations can be carried out.

The steps to enter the recovery mode are as follows:

a) Turn off the system power supply.

b) Use micro USB cable to connect OTG port of AGX32-8F1E1 and USB port of Jetson development host.

c) Press and hold the recovery key (REC) to supply power to the system. After power supply, keep the rec key pressed for more than 3 seconds, and then release the recovery key

d) The system enters the recovery mode, and subsequent operations can be carried out at this time.