7F5E2
Datasheet

Revision	Data	Description of Change	Hardware Version
V1.0	2023-04-14	Initial Release	V1.0

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Preface

Disclaimer

The information contained within this user's guide, including but not limited to any product specification, is subject to change without notice.
Plink assumes no liability for any damages incurred directly or indirectly from any technical or typographical errors or omissions contained herein or for discrepancies between the product and the user's guide.

Customer Support Overview

If you experience any difficulties after using the product, please freely contact us directly.   Our tech can help you with product installation and difficulties.
Our support section is available 24 hours a day, 7 days a week on our website at: http://www.plink-ai.com/en/Jetson.html. Our technical support is always free.

ESD PROTECTED

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

- 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 the matching power adapter to ensure the stability of current and voltage
- 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 resulting damage will not be covered by

warranty

Limited Product Warranty
- Warranty period -Bottom plate and core plate: 3 years (non-human damage)
- Contact information
Contacts: RMA
Address: Room 718, Jinrongkemao Plaza, No. 15 Shangdi Xinxi Road, Haidian District, Beijing, China
E-mail: sales@plink-ai.com
Telephone:+86-010-62962285
- Mailing instructions: Please contact the sale staff of the company in advance, then arrange technicians to verify and eliminate the errors caused by misoperation as soon as possible. After verification, please mail the equipment to the company.
Please attach a list of items and the reason for failure when mailing for easy verification, so as to avoid loss and damage in the process of express delivery.

1. Introduction

The 7F5E2 is a compact AI industrial computer with NVIDIA® Jetson™ Xavier NX series core modules. For industrial deployment applications, the main interface is designed for electrostatic safety protection, and the power supply application scheme of high reliability is adopted. The input power supply has the functions of overvoltage and reverse polarity protection, and has a rich external interface. The internal interface carrier board components are of wide temperature models.

The 7F5E2 adopts fan heat dissipation. The internal design with fan and heat dissipation tooth could provide excellent heat transfer and heat dissipation performance, enabling the system to adapt to higher ambient temperatures. It is suitable for industrial automation, security, new retail, and other scenarios.

The standard 7F5E2 can be configured with 2 full-speed Gigabit Ethernet ports, 1 HDMI display port, 1 USB3.1 Type-port, and 1 USB 2.0 port.

1.1 Product Specifications

➢ 1 x USB3.1 Type-C

➢ 1 x USB2.0 Type-A

➢ 1 x Micro USB

➢ 2 Gigabit Ethernet (10 / 100 / 1000 BASE-T) RJ45

➢ 1 x HDMI 2.0 port (Max 6Gbps，24bpp，4096x2160@60Hz)

➢ Standard 64G extended storage

➢ Recovery Button

➢ Automatic power on

➢ Size：130mm×108mm×45 mm

➢ Power：DC +9V~+24V

➢ Temperature Range： -25~+60℃

1.2 Order Information

Model	Function	PN
7F5E2	Compact AI industrial computer with NVIDIA® Jetson™ Xavier NX 8G series core modules	
7F5E2	Compact AI industrial computer with NVIDIA® Jetson™ Xavier NX 16G series core modules	

Taobao：https://shop333807435.taobao.com/
Jingdong：https://mall.jd.com/index-11467104.html?from=pc
Alibaba：https://plink-ai.en.alibaba.com/

1.3 Optional module parameter information

| Module	Jetson Xavier NX 16GB	Jetson Xavier NX 8GB
AI Performance	21 TOPS	
GPU	384-core NVIDIA Volta™ GPU with 48 Tensor Cores	
CPU	6-core NVIDIA Carmel ARM®v8.2 64-bit CPU	
	6MB L2 + 4MB L3	
Memory	16 GB 128 bit LPDDR4x	8 GB 128 bit LPDDR4x
	59.7GB/s	59.7GB/s
Storage	16 GB eMMC 5.1	
Power	10 w | 15 w| 20 w	
PCIe	1x1 (PCIe 3.0) + 1x4 (PCIe 4.0)，ttl 144 GT/s*	
CSI Camera	Up to 6 cameras (support up to 24 via virtual channel)	
	14 channels (3x4 or 6x2) MIPI CSI-2	
	D-PHY 1.2（up to 30 Gbps）	
Video Encode	2x 4K60 | 4x 4K30 | 10x 1080p60 | 22x 1080p30 (H.265)	
	2x 4K60 | 4x 4K30 | 10x 1080p60 | 20x 1080p30 (H.264)	
Video Decode	2x 8K30 | 6x 4K60 | 12x 4K30 | 22x 1080p60 | 44x 1080p30 (H.265)	
	2x 4K60 | 6x 4K30 | 10x 1080p60 | 22x 1080p30 (H.264)	
Display	2 multi-mode DP 1.4/eDP 1.4/HDMI 2.0	
DL accelerator	2x NVDLA engines	
Vision accelerator	7 channel VLIW vision processor	
Networking	10/100/1000 BASE-T Ethernet	
D.I.M	69.6 mm x 45 mm	

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2 Interface Function Description

Interface ID	Description
9-24V	Lockable power supply input terminal
OTG	Type-B Micro-USB interface for system burning and OTG function output
USB	Type-C Single-layer USB3.1 standard connector
GigE	Two 10/100/1000M adaptive RJ45 network ports
HDMI	TypeA HDMI display and output interface
Power lamp	Power indicator light

3 External interface function and location
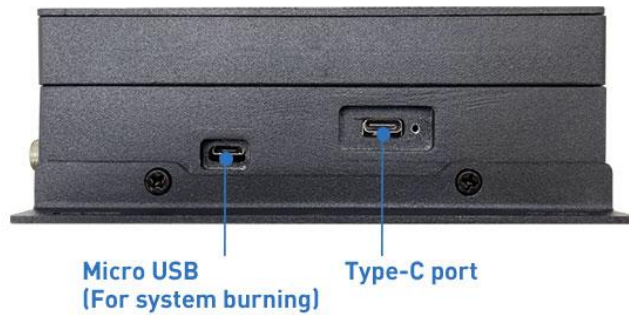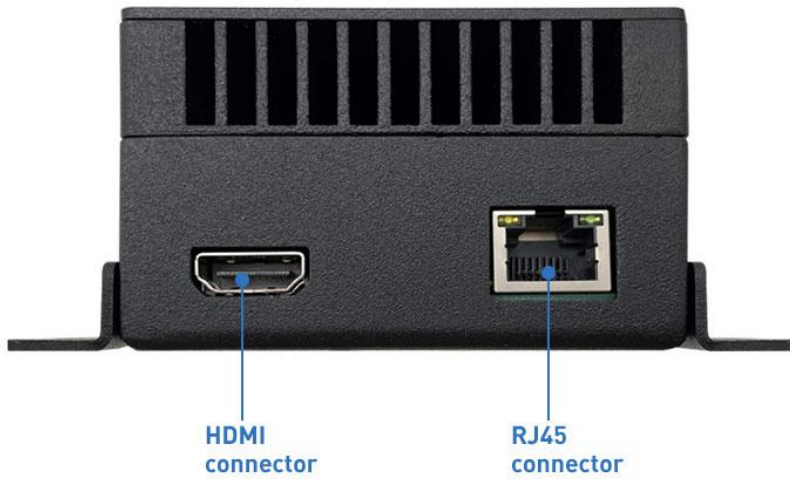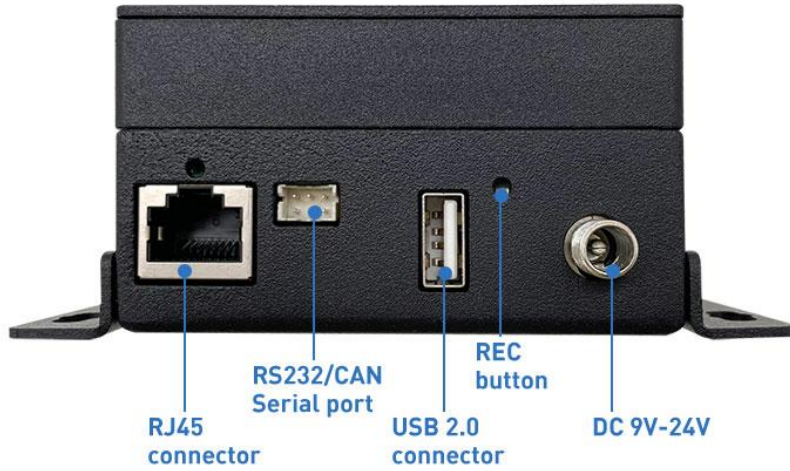
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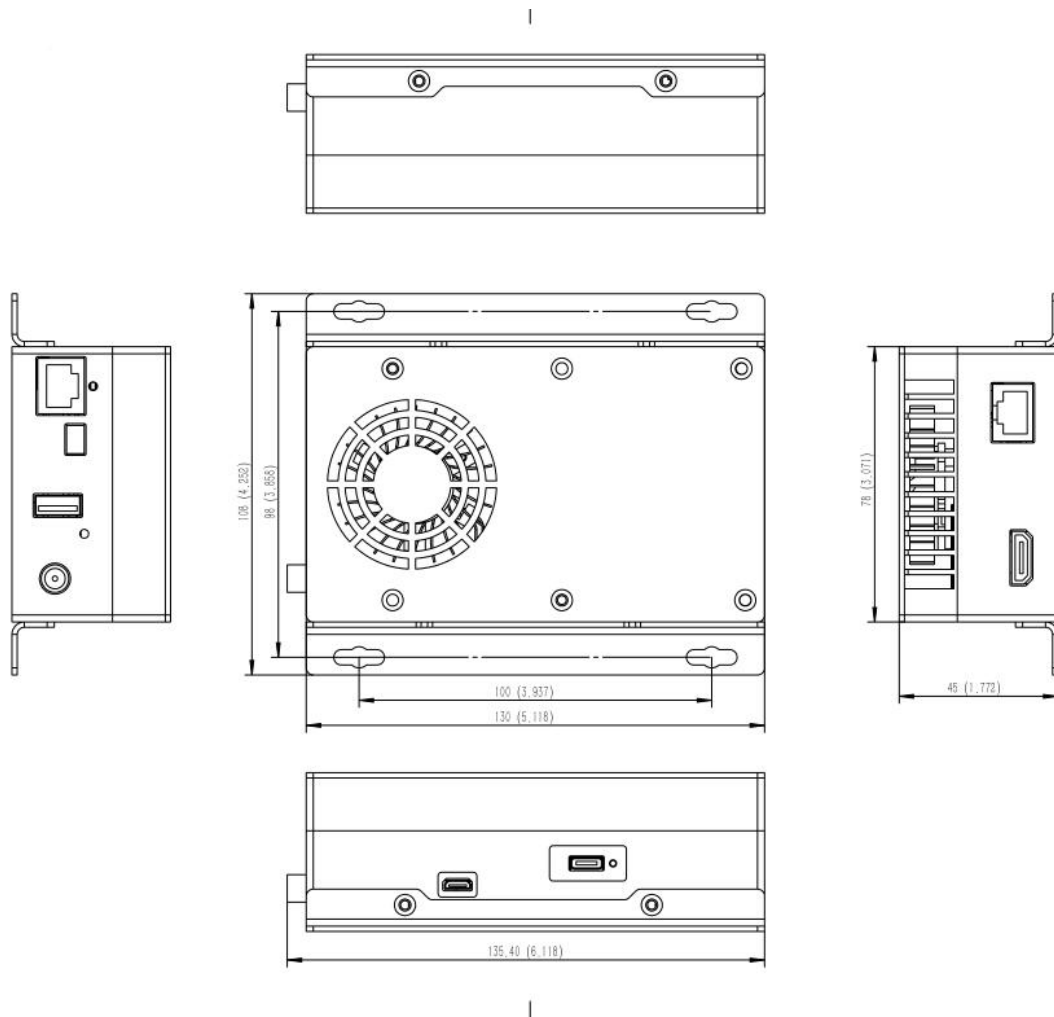
5 Using Method

Use method of the whole machine

a) Ensure that all external systems are powered off
b) Install necessary external cables. (e.g., the display cable to the HDMI monitor, the power input cable to the system, the USB cable to the keyboard and mouse...)
c) Connect the power cable to the power supply.
d) 7F5E2 can be set to automatic power-on by default or switch startup. For details, please consult the sales and technical personnel of the company. It is automatically powered on by default.

Recovery mode

Jetson core module can work in normal mode and Recovery mode. In Recovery mode, it can update file system, kernel, Boot loader, BCT and other operations.
To enter the Recovery mode, perform the following steps:
a) Turn off the power supply to the system.
b) Use Micro-USB cable to connect OTG port of 7F5E2 to USB port of Jetson development host.
c) Press and hold down the Recovery button (REC) to supply power to the system. After the power is supplied, hold the REC button down for more than 3 seconds, and then release the Recovery button
d) When the system enters the Recovery mode, you can perform subsequent operations.