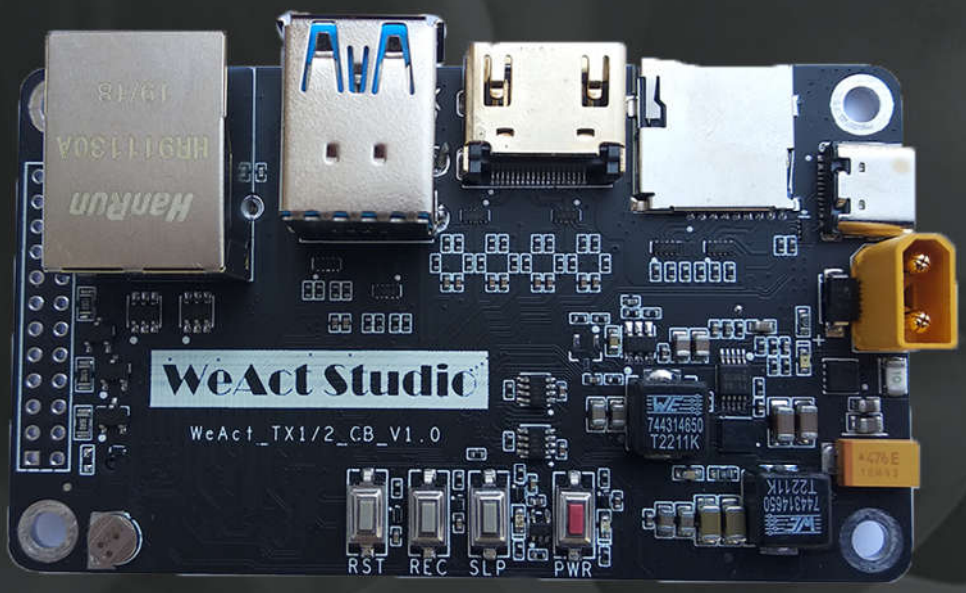

WeAct Studio

TX1/TX2 CARRIER-BOARD

DATASHEET

WeAct Studio

Contents

REVISION HISTORY

Draft Date	Revision	Description	Hardware
2021.2.28	V1.0	1. Init for English	A2

1. PRODUCT PARAMETERS

- This product is the carrier board of **NVIDIA Jetson TX2 / TX2 4G / TX1 series**.
- The power on sequence is strictly designed according to NVIDIA recommendation, with **discharge circuit**.
- Power inlet with **under voltage, over-voltage, over-current protection**, use more safety.
- Support 1-way **Gigabit adaptive network** port for network debugging, data communication, etc.
- Support 2-way **USB3.0** for data transmission.
- Three channels of **USB2.0** are supported, one channel of OTG is used for system burning and data transmission, and the other two channels of host are used for data transmission.
- Support 1-way **HDMI** (1080p) for screen display.
- Support 1-way **MicroSD** for external TF card to use in data storage.
- Support 2-channel **CAN**, 1-channel **SPI**, 2-channel **UART**, 4-channel **IO** and other interfaces to provide more convenient data transmission.
- Equipped with **power on self starting** needle, to meet more application scenarios.
- All interfaces are equipped with **ESD protection** to prevent the carrier from being damaged by static electricity.
- The carrier board with small volume is compact in structure, and its size is only 50mm * 78mm, which is the same as that of the core board.
- Update the device tree of different versions regularly to be compatible with different **Tegra kernel** versions.

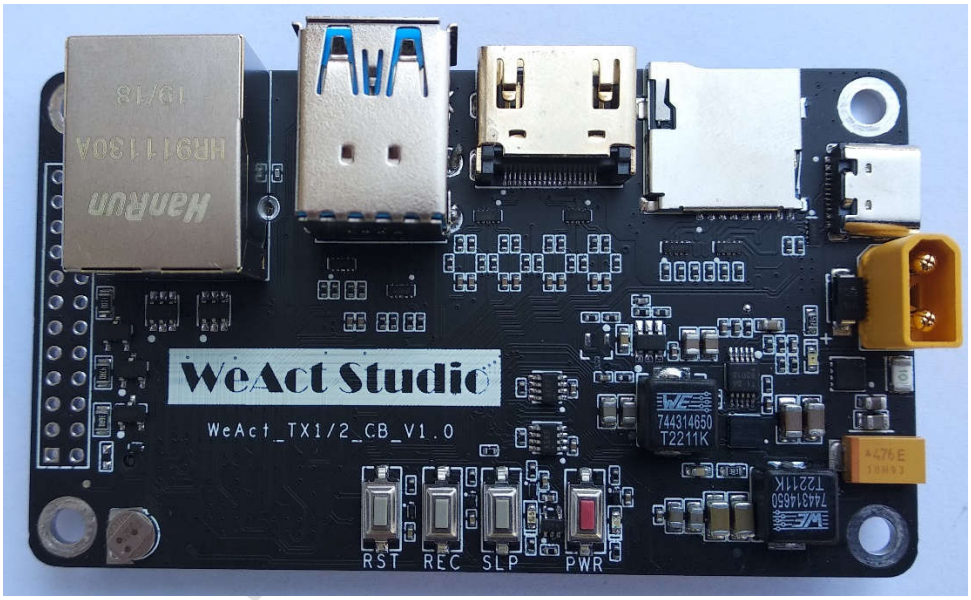

Figure 1. Front view of carrier board

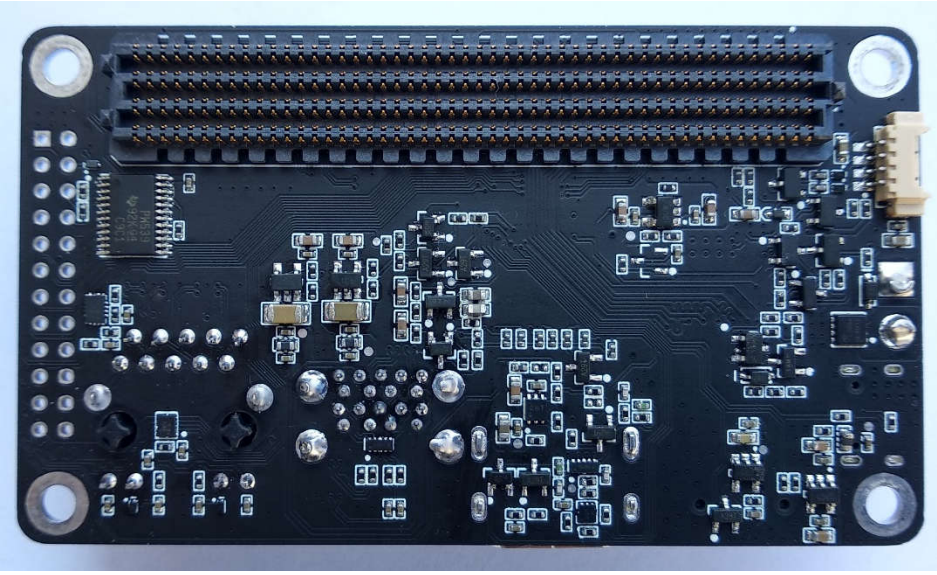

Figure 2. Bottom view of carrier board

2. APPLICATION

√ Deep Learning

√ Machine Vision

√ Laboratory

√ Robot Competition

√ UAV

3. HARDWARE BLOCK DIAGRAM

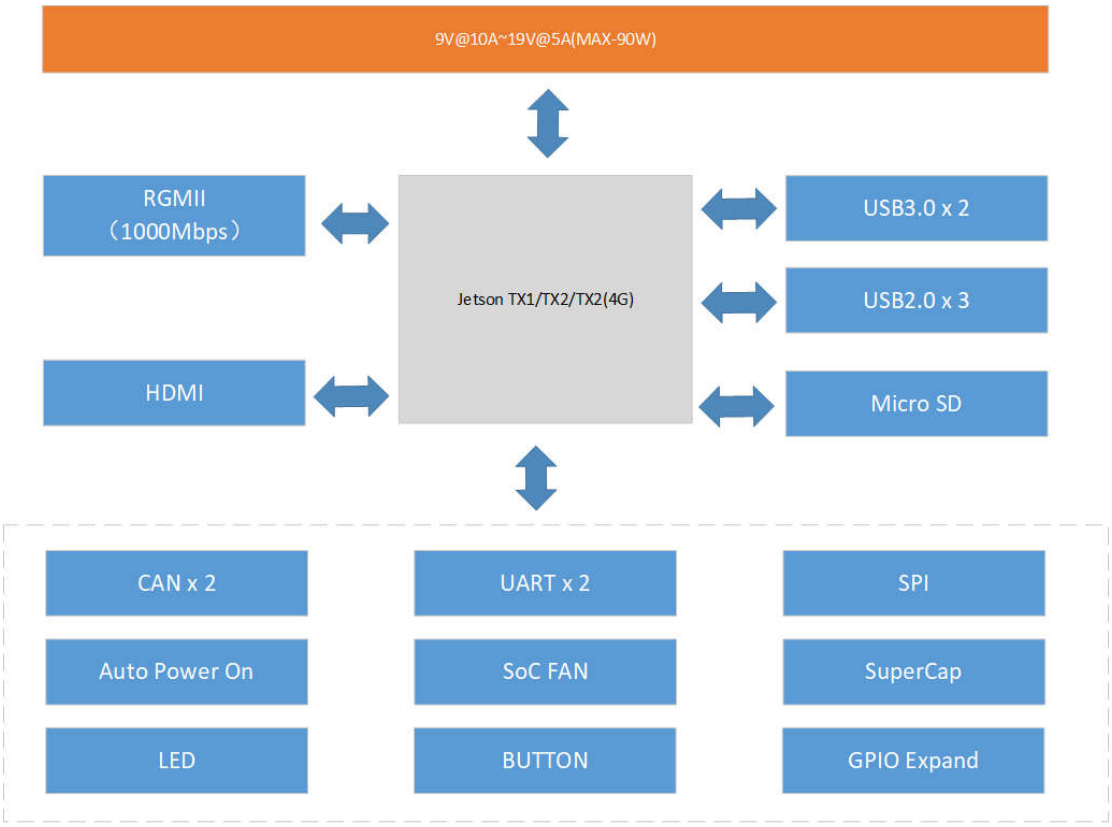

Figure 3. Hardware block diagram of carrier board

4. HARDWARE RESOURCE

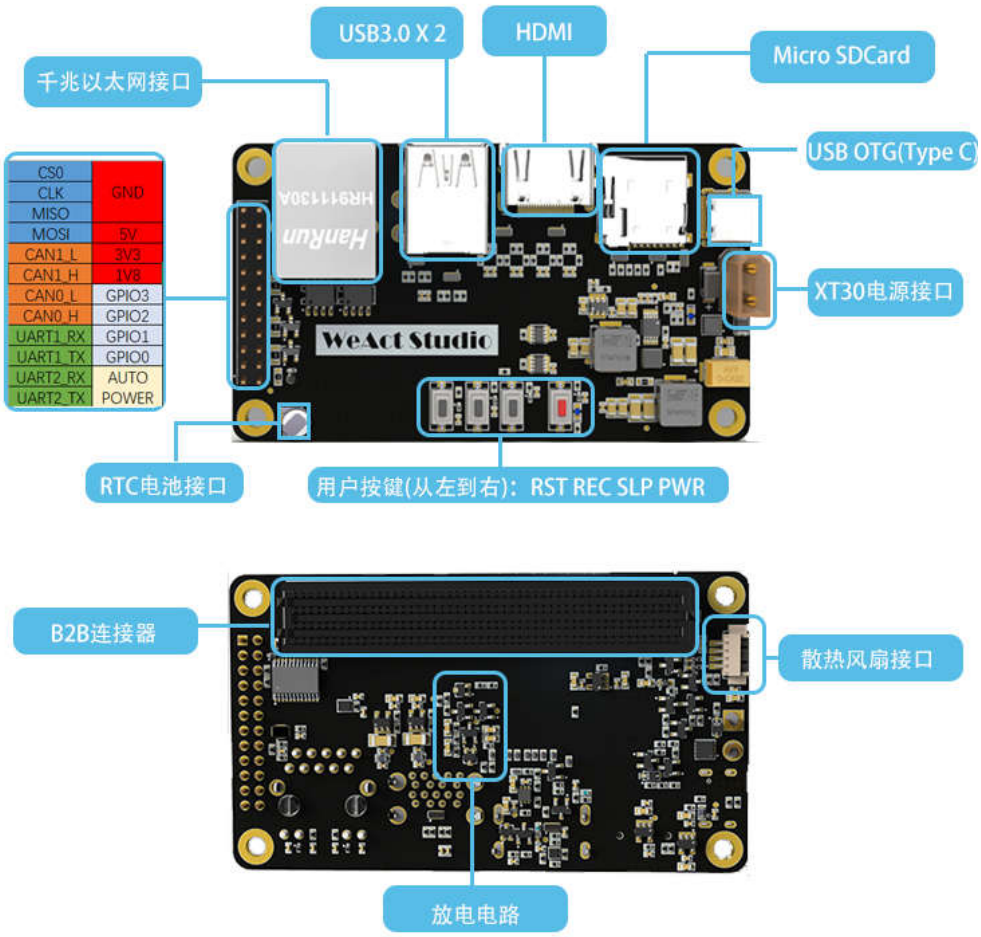

Figure 4. Diagram of hardware resources on the front and back of carrier board

5. HARDWARE PARAMETERS

KEY	1 x Power On Key 1 x Sleep Key 1 x Recovery Key 1 x Reset Key
LED	1 x Power LED（RED） 1 x Running LED（Green）
SD	1 x Mirco SD
USB	1 x USB3.0*2 Connector 1 x USB2,0 OTG TypeC Connector 2 x USB2.0 HOST Connector（With USB3.0）
HDMI	HDMI Type-A Connector
Ethernet	1 x Giga Ethernet Connector
CAN	2 ways，2 x 12P Header
UART	2 ways，2 x 12P Header
GPIO	4 ways，2 x 12P Header
SPI	2 ways，2 x 12P Header
FAN	1 x TX1.25 Connector
Auto Power On	2 x 12P Header
POWER	1 x XT30 Connector
RTC POWER	1 x Super Cap

6. ELECTRICAL

Environment (Work)	Minimum	Typical	Maximum
Temperature	0℃	/	70℃
Voltage	9V	12V	19V

7. MECHANICAL DIMENSION

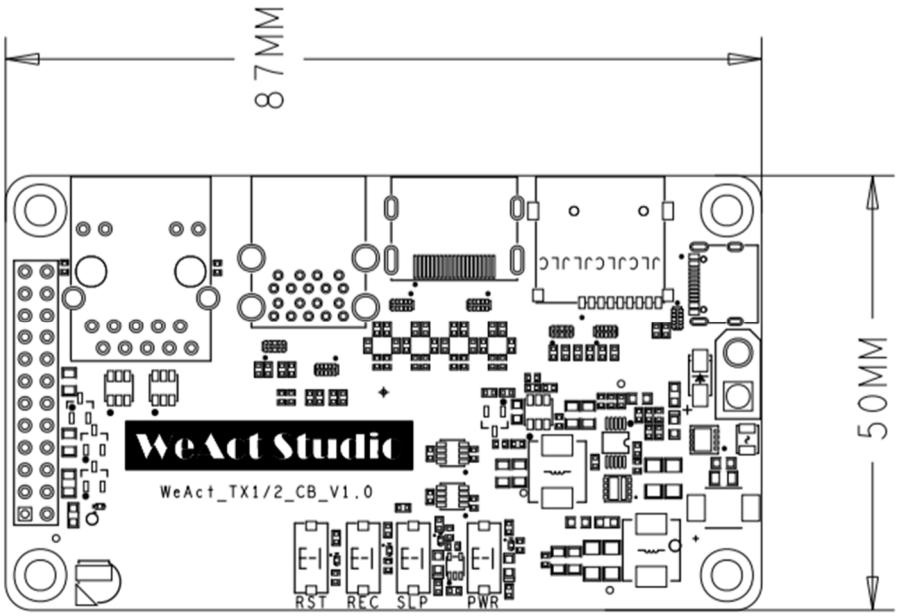

Figure 6. Front mechanical dimension of carrier board

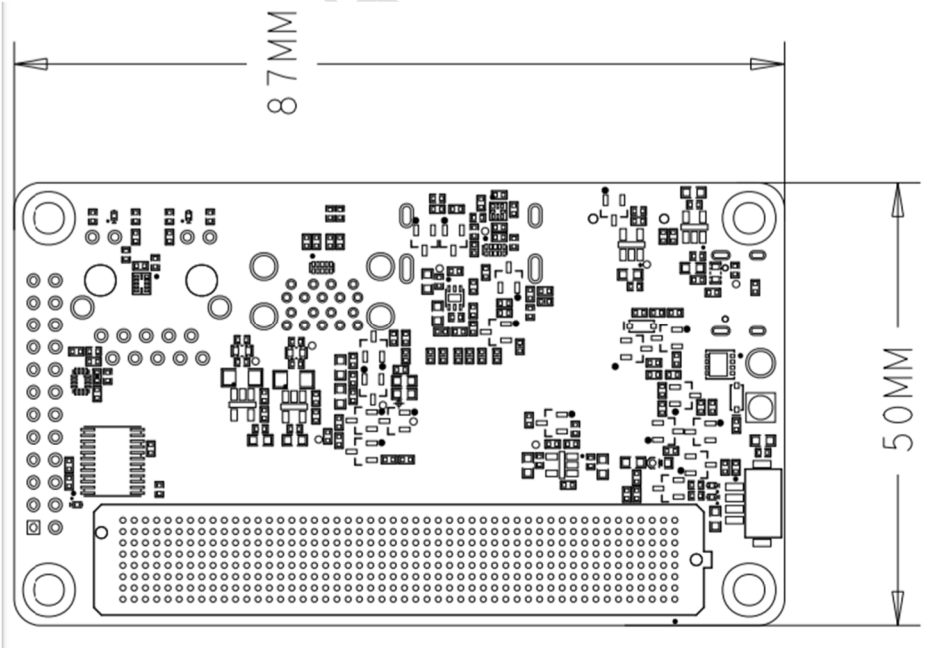

Figure 7. Bottom mechanical dimension of carrier board

8. DEVELOPMENT DOCUMENT

- Provide the pin definition of the carrier board to facilitate developers to modify the device tree.
- Provide equipment tree of each version and update it regularly.
- Provide a variety of flashing, functional operation tutorial.

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