RTSO-3002 Carrier Board
PN：RTSO-3002
Adaptive NVIDIA Jetson Orin NX/Orin Nano
Hardware Version：V1.0

RTSO-3002 is an embedded industrial-grade carrier board specially designed for field deployment of computing power for edge computing of NVIDIA Jetson platform and AI reasoning application. It adopts industrial-grade components and features ultra-long MTBF, rich interface functions, low power consumption and high safety level. The operating temperature ranges from -40℃ to +85℃. Suitable for 7 x 24 hours long time stable operation, can meet a variety of harsh field deployment conditions.

NVIDIA Jetson Orin NX/Orin Nano is a serialized embedded AI processor from Nvidia that offers high performance and low power consumption in a module the size of a credit card. It mainly targets at the edge computing artificial intelligence robot technology and visual AI application scenarios, such as UAV, autonomous guided vehicle (AGV), autonomous mobile robot (AMR), etc., which has broad application prospects.

The RTSO-3002 carrier carries NVIDIA Jetson Orin NX/Orin Nano module, driven by Realtimes RTS Linux4Tegra software support package, constitutes a system solution that can be powered on, and can be directly applied to field deployment.

Feature

- Support NVIDIA Jetson Orin NX/Orin Nano module
- Dual USB3.0 ports, independent Gigabit Ethernet, and Mini HDMI display ports, providing abundant basic ports
-M. 2 Key M interface supports NVME SSD storage;M.2 Key B interface supports 5G communication module access; M.2 Key E interface Supports wifi/BT module access.
- Two MIPI camera ports, supporting HD IMX219 (MIPI) camera access
- Small size, light weight, suitable for embedded edge computing applications

Specifications

PN / Port	RTSO-3002
Compatibility	Jetson Orin NX/Orin Nano
USB	2 x USB3.0 Type A interface, supporting usb2.0 and usb3.0 signals; 1 x Micro USB interface, supporting usb host and usb device modes;
Display	1 x Mini HDMI 2.0 interface
Network	1 x Gigabit Ethernet (10/100/1000Mbps adaptive; Half-duplex/full-duplex adaptive)
M.2	1 x M.2 Key M interface; 1 x M.2 Key B interface; 1 x M.2 Key E interface;
CSI	2 x MIPI interface;
CAN	2 x CAN 2.0;
GPIO	2 x GPI; 2 x GPO;
UART	2 x 3.3V function port UART; 1 x Debug;
I2C	1 x I2C;

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I2S	1 x I2S；
SPI	1 x SPI；
FAN	1 x FAN Port
RTC	1 x RTC Port

Weight

About 70g

Environmental

PN	RTSO-3002
Input voltage	9~20V
Operation temperature	-40~+85℃

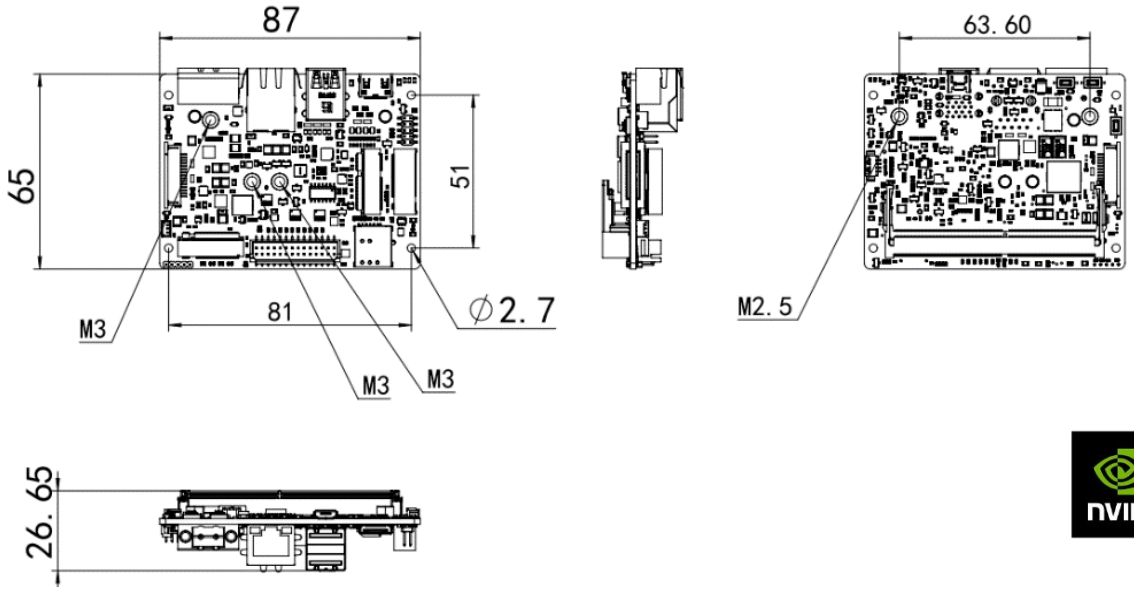
Ordering information

PN	Information
RTSO-3002	RTSO-3002 Carrier Board *1

Recommended Accessories

PN	Information
RPI Camera V2(Option)	Raspberry Pi MIPI Camera*1(8 million pixels, Sony IMX219 module)
SSDPTDdBB40C1024A00(Option)	M.2 Key M Enterprise 128GB SSD storage *1
8265ac(Option)	M.2 key E interface WIFI/ Bluetooth module *1 (including antenna)

Product size and appearance



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