

Industrial Computer

100-RTUSRULT-020 Specification



Introduction

100-RTUSRULT-020 adopts a 4-core, 64-bit high-performance ARM architecture CPU design. It operates at a high frequency of up to 2.0GHz and has powerful general computing performance. The product supports various operating systems such as Android, Linux, and Ubuntu, with comprehensive driver support. It features built-in connectivity options like 4G, Ethernet, and WiFi, as well as a variety of interfaces including multiple serial ports, USB 3.0, HDMI, and analog input and output interfaces such as AI and AO. The product is also designed for convenient and quick installation, with options for both DIN rail and wall-mounted installation.

Features

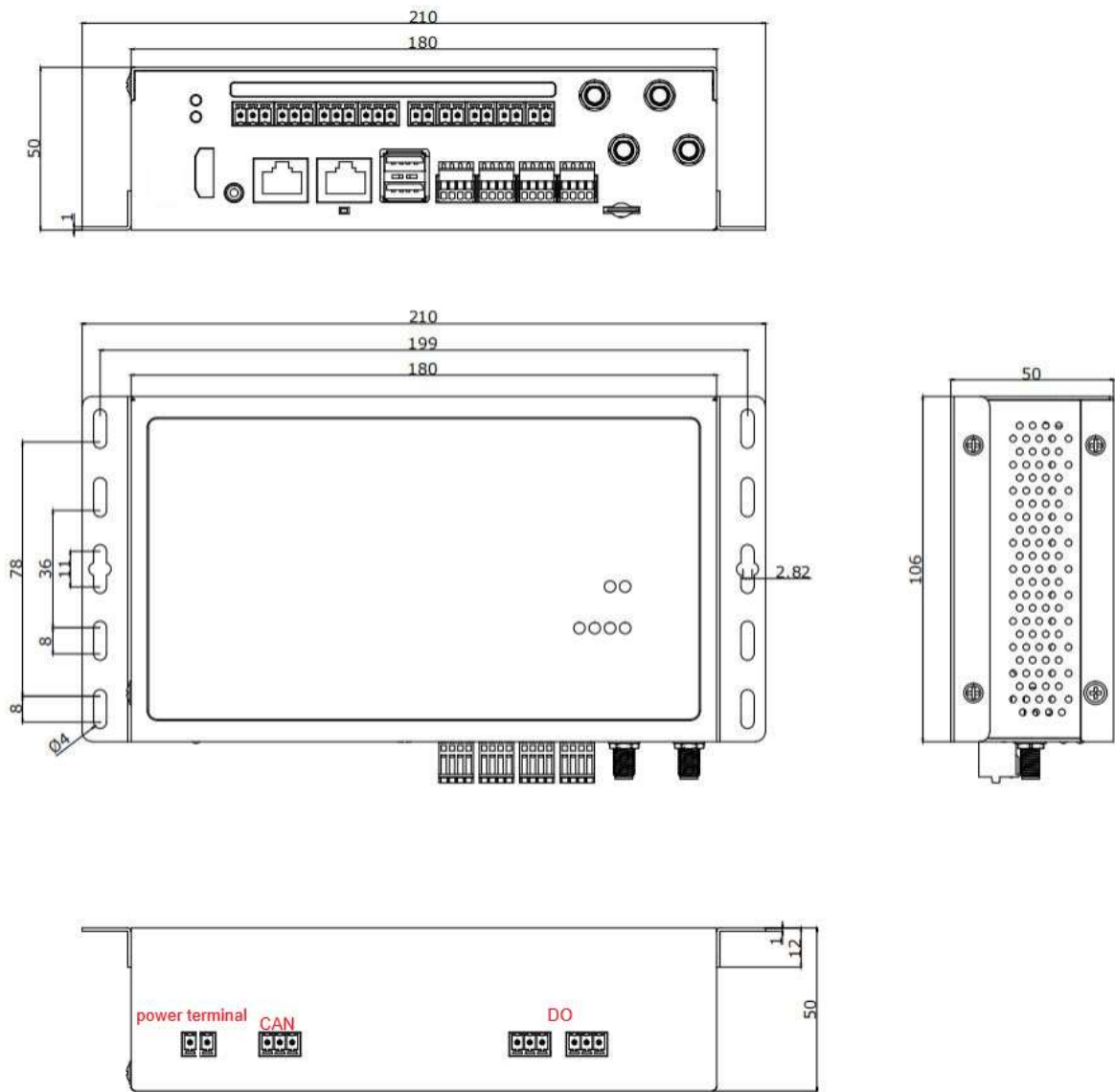
- ARM V8.2-A architecture quad-core 64-bit CPU, with a frequency of 2GHz, delivering high performance and fast operation.
- Dual network support with parallel LTE 4G and Ethernet, ensuring stable network transmission without downtime. It also supports WiFi communication, catering to different network requirements.
- Abundant interfaces including HDMI output, two USB 3.0 ports, and one CAN interface.
- Multiple serial ports, including two RS485 and two RS232 ports, maximizing compatibility with external devices.
- Multiple IO interfaces, including 4 AI (Analog Input), enabling analog signal input.
- Customized expansion boards, allowing for custom expansion of IO, serial ports, USB, and other interfaces.
- Convenient installation with options for mounting on a Din-rail or with ear brackets, providing flexibility.
- Supports GPS positioning.

Specification

Operating System	Ubuntu 20
Processor	Quad-core ARM Cortex-A55 64bit CPU, up to 2.0GHz,RK3568
RAM	DDR4 4GB
Memory	eMMC 32GB
NPU	1TOPS NPU,Support Caffe/Mxnet/TensorFlow/TF Lite/ONNX/Darknet models.
Network Interface	Dual 10/100 Ethernet ports
	2.4GHz Wi-Fi 802.11b/g/n
	2/3/4G mobile network
	Bluetooth
SIM	1*SIM slot Nano-SIM(4FF) / ESIM (Optional)
LTE Frequency Bands	LTE-FDD B1/2/3/4/5/7/8/12/13/20/25/26/28 LTE-TDD B34/38/40/41/66 WCDMA B1/2/4/5/8 GSM/EDGE GSM850/GSM900/GSM1800/GSM1900
GNSS	GPS Protocol: NMEA 0183 Data update rate: 1 Hz by default Sensitivity: Acquisition Autonomous -146 dBm Tracking Autonomous -157 dBm Accuracy: Autonomous @ open sky 2.5 m
Display	1*HDMI OUT 2.0 ,4K 60fps
RTC	Built-in real-time clock battery, supports scheduled power on/off.
USB	1*USB3.0 HOST 1*USB3.0 OTG
LED Indicators	WORK When the device is working properly, it blinks for 1s frequency POW on when the gateway is powered up DIn on when the channel is activated by input signal DOn on when the channel output is activated
Can bus	1 CAN2.0
Button	1*upgrade for OTA,REC
Serial Ports	2*RS232 ,2* RS485 EMC level: IEC61000-4-2 ESD, Level 2, class B, contact 4KV, air 4KV
Serial Signals	RS-232 5V/3.3V(output), TxD, RxD, GND RS-485 5V/3.3V(output),A,B, GND
IO Interfaces	4 DI:dry/wet contact DI voltage range 0-36V (Max. 36V), High 5-36V, Low 0-2V 4 DO:Relay DO Max. 10A-277VAC/28VDC for NO,5A-250VAC for NC 4 AI: Voltage range 0-15v (Max.18V); Analog input Current range 4~20mA (Max. 40mA) EMC level:IEC61000-4-2, Level 2, class B, contact 4KV, air 4KV
Power Supply	12V/2A 2 PIN terminal block EMC level IEC61000-4-2, Level 2, class B, contact 4KV, air 4KV
Operating Temperature	-10 - 70 ° C
Storage Temperature	-20 - 85 ° C
Humidity	5% - 80%
Dimension	210mm*106mm*50mm
Installation	DIN-Rail mounting
Certificate	CE, RoHS (in progress)

Dimensions(Unit:mm) & Interface

单位：MM

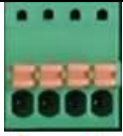


Serial ports identification

Interface	Driver identification
RS485-1	ttyS1
RS485-2	ttyS7
RS232-1	ttyS3
RS232-1	ttyS4

RS232/RS485 Ports(RS485/RS232) seat spacing 2.0MM

NO.	Definition	Property	Description
1	3.3V	Output	3.3V voltage output
2	TX/A	Output	Send (TX/A)
3	RX/B	Input	Receive (RX/B)
4	GND	Ground	Ground wire



Interface definition for your reference



This product complies with the radio interference requirements of the European Community.

Product name: Galooli LTD

Product model: 100-RTUSRULT-020

Manufacturer: Galooli LTD

Frequency Range: BT+BLE: 2402~2480MHz; WiFi 2.4G: 2412~2472MHz; GSM900: 880~915MHz; DCS1800: 1710~1785MHz; WCDMA Band I: 1920-1980 MHz; WCDMA Band VIII: 880-915MHz; FDD Band1: 1920~1980MHz; FDD Band3: 1710~1785MHz; FDD Band7: 2500~2570MHz; FDD Band8: 880~915MHz; FDD Band20: 832~862MHz; FDD Band28: 703-736 MHz; TDD Band34: 2010~2025MHz; TDD Band38: 2570-2620 MHz; TDD Band40: 2300-2400 MHz; GPS L1C/A: 1575.42MHz

Max. Transmit Power: BT: 3.46dBm Max; BLE: 3.81dBm Max; WiFi 2.4G: 15.06dBm Max; GSM900: 27.47dBm Max; GSM1800: 25.22dBm Max; WCDMA Band I: 23.01dBm Max; WCDMA Band VIII: 23.72Bm Max; FDD Band1: 22.66dBm Max; FDD Band3: 22.91dBm Max; FDD Band7: 22.92Bm Max; FDD Band8: 22.73Bm Max; FDD Band20: 24.03dBm Max; FDD Band28: 23.48dBm Max; FDD Band34: 22.56dBm Max; FDD Band38: 22.25dBm Max; FDD Band40: 21.55dBm Max;

SIMPLIFIED EU DECLARATION OF CONFORMITY

The simplified EU declaration of conformity referred to in Article 10(9) shall be provided as follows:

Hereby, Galooli LTD declares that radio equipment type 100-RTUSRULT-020 is in compliance with Directive 2014/53/EU, and this product is allowed to be used in all EU member states. This product can be used across EU member states.

Adapter shall be installed near the equipment and shall be easily accessible.

RF warning statement:

The device has been evaluated to meet general RF exposure requirement. To maintain compliance with RF exposure requirement, use product that maintain a 20cm distance between the device and human body.

FCC STATEMENT :

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.