seeed studio Powered by Raspberry Pi

reComputer R1000

The reComputer R1000 is a high-performance and cost-effective **edge IoT controller** based on Raspberry Pi solution. It features **dual Ethernet interfaces** and **three isolated RS485** interfaces, supporting **Modbus UDP/TCP and BACnet protocols**, which makes it a perfect fit for **smart building and energy management**, such as controlling HVAC systems and other subsystems like lighting, sensors, and access control. With powerful IoT expansion capabilities, reComputer R1000 is integrated with **various wireless transmission capabilities** such as **4G, LoRa®, Zigbee, Wi-Fi, and BLE** through internal slots.

Features

Powerful Performance
Raspberry Pi CM4, quad-core A72, up to 8GB RAM and 32GB eMMC

Multiple Industrial Interfaces
3x RS485, 2x Ethernet Ports, 1x HDMI, 3x USB2.0

Versatile Wireless Options
Support Wi-Fi, BLE, LoRaWAN®, Zigbee, 4G LTE

Perfect Fit for Building Automation System
Support BACnet & Modbus Protocols to ensure interoperability

Safety and Reliablity
Hardware Watch Dog, UPS, EMC protection, 6-year lifetime, 2-year warranty

Flexible, Affordable, and Easy to Use
Low Cost to Start PoC, Easy Scale
From PoC to Production

BACnet
Modbus

Application

Specification

	Parameter	Description
Hardware Spec	Model	R1000
	CPU	Raspberry Pi CM4, Quad-core Cortex-A72@ 1.5GHz
	Operating System	Raspbian, Debian, Yocto, Buildroot
	RAM	1GB/ 2GB/ 4GB/ 8GB
	eMMC	8GB/ 16GB/ 32GB
System Spec	Input	2-pin Terminal Block
	PoE	IEEE 802.3af Standard 12W PoE*
	Supply Voltage	12~24V AC/ 9~36V DC
	Power Consumption	Idle: 2.88W; Full Load: 5.52W
	Power Switch	No
	Reboot Switch	Yes
Interface	Ethernet	1 x 10/100/1000 Mbps IEEE 1588-2008 (supports PoE*); 1 x 10/100 Mbps IEEE802.3/ 802.3u
	USB	2 x USB-A 2.0 Host; 1 x USB-C 2.0 (for update OS)
	RS485	3 x 3-pin Terminal Block (isolated)
	HDMI	1 x HDMI 2.0
	SIM Card Slot	1 x Standard SIM card slot
	M.2 Slot	1 x M.2 NVMe SSD Slot 2280-M Key
	LED	6 x LED indicators
	Buzzer	1
	Reset Button	1
Wireless Communication	Wi-Fi 2.4/5.0 GHz	On-chip Wifi
	BLE 5.0	On-chip BLE
	LoRa®	USB LoRa®*/ SPI LoRa®*
	4G Cellular	4G LTE*
	Zigbee	USB Zigbee*
Standards	EMC	ESD: EN61000-4-2, Level 3; EFT: EN61000-4-4, Level 2; Surge: EN61000-4-5, Level 2
	Certification	CE, FCC, TELEC, RoHS; REACH
Ambient Conditions	Ingress Protection	IP40
	Operating Temperature	-30~70 °C
	Operating Humidity	10~95% RH
	Storage Temperature	-40~80 °C
	Supercapacitor UPS	SuperCAP UPS LTC3350 Module*
Others	Hardware Watch Dog	1~255s
	RTC	High Accuracy RTC
	Security	Encryption Chip TPM2.0*/ ATECC608A
	Heat Dissipation	Fanless
	Warranty	2 years
	Production Lifetime	Until at least December 2030
Statement		Options marked with * require additional purchase according to accerrories list.

Accessories

Item		Product	Product Name	SKU
LoRa® Module	Must be used together for LoRaWAN® Function		Region optional LoRaWAN® Gateway Module(SPI)-US915	114992969
			Region optional LoRaWAN® Gateway Module(SPI)-EU868	114993268
			Region optional LoRaWAN® Gateway Module(USB)-US915	114992991
			Region optional LoRaWAN® Gateway Module(USB)-EU868	114992628
LoRa® Antenna			LoRa® Antenna Kit - 868-915 MHz	110061501
Wi-Fi/BLE Antenna	This accessory is required for WiFi function		Raspberry Pi Compute Module 4 Antenna Kit	114992364
4G Module	4G antenna with 4G module for 4G function, GPS antenna with 4G module for GPS function		LTE Cat 4 EC25-AFXGA-mini-PCIe Module - for North American	113991134
			LTE Cat 4 EC25-EUXGR-mini-PCIe Module - for EMEA and Thai	113991135
			LTE Cat 4 EC25-AUXGR-mini-PCIe Module - for Australia	113991174
			LTE Cat 4 EC25-EFA-mini-PCIe Module - for Thai	113991214
			LTE Cat 4 EC25-EMGA-mini-PCIe Module - for Malaysia	113991234
4G Antenna			4G Antenna Kit for 4G module	110061502
GPS Antenna			GPS Antenna Kit for EC25 4G Module	110061521
Encryption Chip TPM2.0			TPM2.0 Module with infineon SLB9670	114993114
SSD Card			NVMe M.2 2280 SSD 1TB	112990267
			512GB NVMe M.2 PCIe Gen3x4 2280 Internal SSD	112990247
			256GB NVMe M.2 PCIe Gen3x4 2280 Internal SSD	112990246
			128GB NVMe M.2 PCIe Gen3x4 2280 Internal SSD	112990226
PoE	This module needs to be soldered onto the carrier board of the reComputer R1000		MQ7813T120 PoE Module Kit for reTerminal DM	110991925
Power Adapter			Power Adapter-American	110061505
			Power Adapter-European	110061506

seeed studio Powered by Raspberry Pi

Customization Service

Customize, innovate, and make reComputer R1000 today!

The reComputer R1000, powered by Raspberry Pi CM4, is an open-source, flexible, and user-friendly edge IoT controller solution. Tailor it to your needs and application scenarios with Seeed's R&D resources, agile supply chain and extensive manufacturing capabilities. With over 14+ years of experience as an open-source hardware manufacturer and an official Raspberry Pi® design partner, Seeed have produced over 8,000 different types of products in-house.

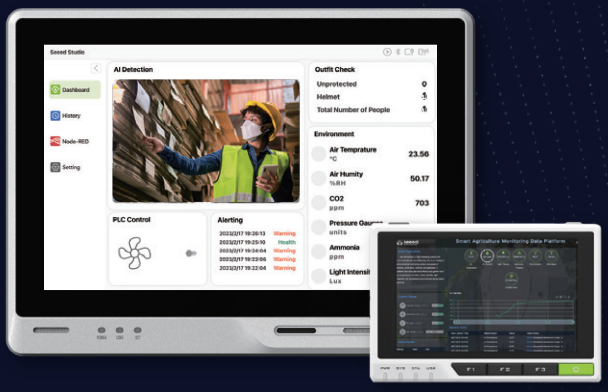
For further information about customizations, welcome you to directly reach out at edge@seeed.cc, we will provide prompt reply.

- Customize Logo
- Flash Firmware
- Branding and Labeling
- Certifications
- Add/Remove Functional Modules
- Modify I/O Ports
- Design Enclosure

More Raspberry Pi-powered IoT Edge Devices

HMI

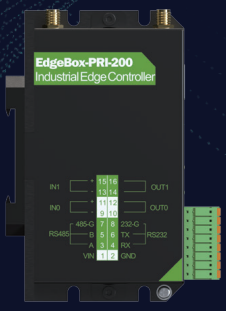
reTerminal & reTerminal DM



Comparison Table of reTerminal Series

Controller

EdgeBox-RPI-200



Comparison Table of EdgeBox Series

Contact

Email: distribution@seeed.cc
Tel: +86 755 86095676
Official Website: seeedstudio.com

Discuss your customization inquiry based on reComputer with us at edge@seeed.cc
Know More about Seeed Studio's Raspberry Pi-powered Devices: https://www.seeedstudio.com/raspberry-pi

Raspberry Pi Series Catalog

Raspberry Pi Success Case