

seeed studio



Seeed Studio Raspberry Pi Series Catalog

Raspberry Pi®-Based Hardware Pioneer

seeedstudio.com/raspberrypi.html

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Software Compatibility

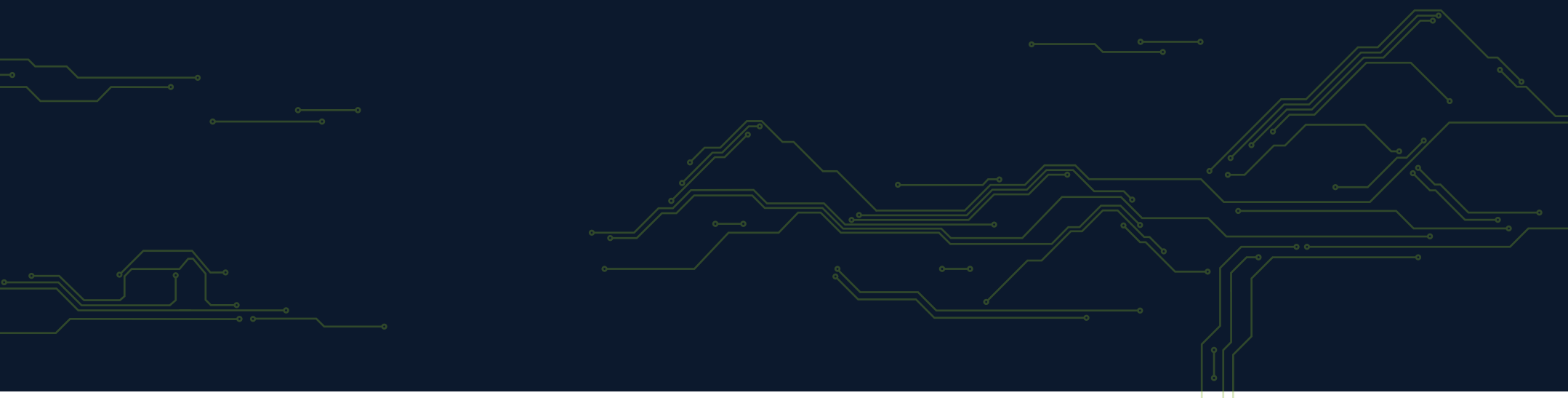
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Introduction

The embedded systems market has been growing significantly recent years, companies must keep up with the pace while bringing products to market faster. To help tackle the above problem, Seeed Studio has been collaborating with global partners on designing and manufacturing advanced hardware solutions.

Our Raspberry Pi-powered devices for home are suitable for home applications owing to their compact design, low power draw, and Raspberry Pi's enriched software ecosystem.

For industrial applications, our Raspberry Pi CM4-powered industrial edge controllers are ideal to be deployed in factories and industrial projects to enhance production efficiency.

As an AIoT hardware service platform, Seeed Studio also provides abundant Raspberry Pi-compatible modules, dev boards, etc to satisfy needs in various real-world scenarios.



Why Raspberry Pi® for Home?

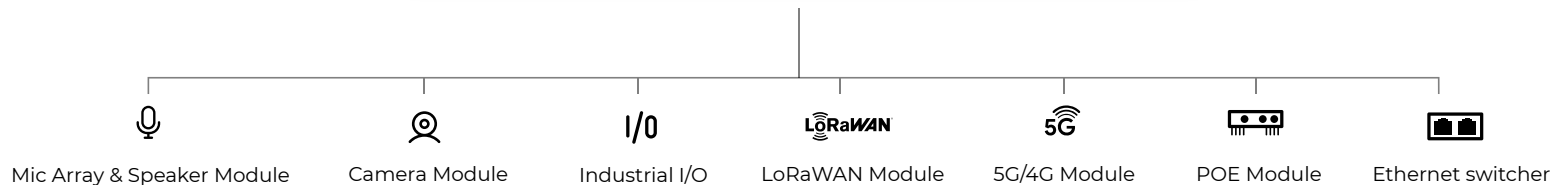
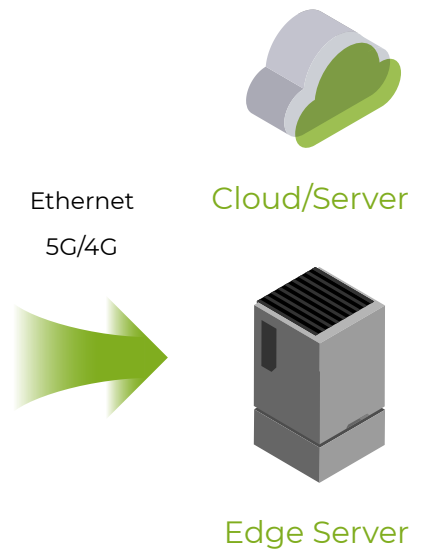
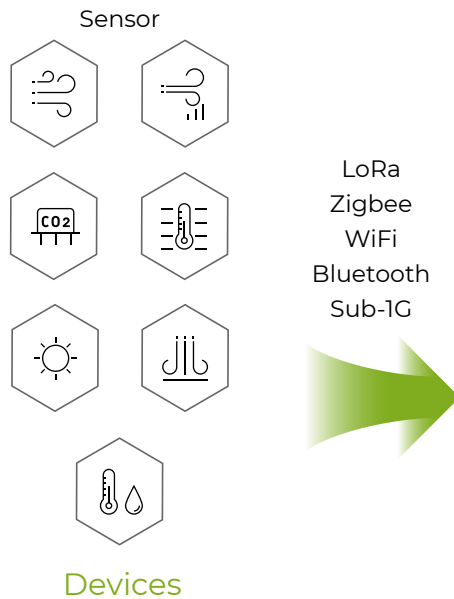
- Multi-Functions in One
- Open Source and Low Cost
- Mature Software Ecosystem
- Easy to Learn with Rich Community Support

How Seeed Studio can Help?

We provide RaspberryPi-powered devices with integrated-design and multi-functioning modules as well as ODM service to facilitate your deployment and installment of home applications.

reTerminal

Raspberry Pi CM4 based HMI facility



Raspberry Pi All in One Board

reTerminal is your hand-size, powerful, ready-to-go, Raspberry Pi CM4-based all in one device, powered by CM4 32GB, integrated with 5-inch IPS multi-touch screen, dual-band Wi-Fi & Bluetooth.



Rich Interfaces and Components

- 2 USB Type-A port
- Gigabit Ethernet
- Micro-HDMI, micro-SD card slot, MIPI camera interface
- Light sensor, accelerometer, buzzer, RTC and programmable buttons



Modular Design

With one industrial high-speed expansion PCIe interface and a Raspberry Pi compatible 40-Pin GPIO connector, easy to use and expand with a large of accessories.

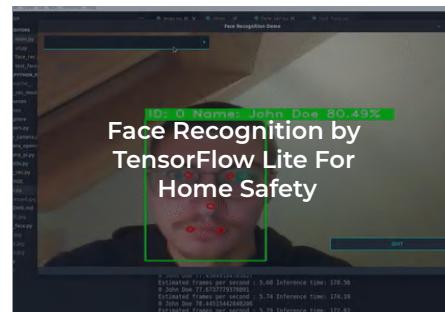
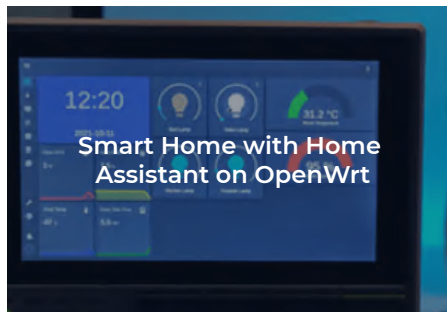


*Supported by an active community

Specifications

Product Name	reTerminal
Dimension & Weight	140 x 95 x 21mm, 400g
SKU	110070048
Certification	CE, FCC, TELEC, RoHS, REACH, UK DoC, EU DoC
Processor	Broadcom BCM2711 quad-core Cortex-A72 (ARM v8)
Memory	4GB (LPDDR4 with on-die ECC) 32GB eMMC
Connectivity	Wi-Fi (2.4GHz and 5.0GHz IEEE 802.11b/g/n/ac); Bluetooth 5.0, BLE
Display	5-inch 720x1280 LCD Capacitive touch panel (support multi-touch)
HDMI	1 x Micro HDMI output (up to 4Kp60 supported)
CSI	1 x 2-lane MIPI CSI camera interface
Multimedia	H.265 (4Kp60 decode); H.264 (1080p60 decode, 1080p30 encode); OpenGL ES 3.0 graphics
Power	Voltage(5V DC); Current(3A(Minimum))
Operating Temperature	0 to 70°C (For the LCD Screen: 0 to 60°C)

Applications



Compatible Softwares



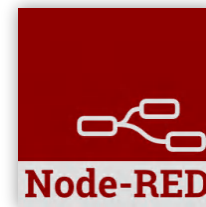
| Home Assistant

Open source home automation that puts local control and privacy first. Powered by a worldwide community of tinkerers and DIY enthusiasts. Perfect to run on a Raspberry Pi.



| TensorFlow Lite

A mobile library for deploying machine learning models on mobile, microcontrollers and other edge devices.



| Node-RED

Node-RED is a programming tool for wiring together hardware devices, APIs and online services in new and interesting ways.



| Grafana

A fully managed observability platform for your applications and infrastructure. Leverage the best open source observability software – including Prometheus, Loki, and Tempo – without the overhead of installing, maintaining, and scaling your observability stack.

Fast and Smooth Experience

Powered by Raspberry Pi Compute Module 4 with 4GB RAM and 32GB eMMC

reRouter

Raspberry Pi CM4 software router with dual Gigabit Ethernet ports

Highly Scalable

Rich interfaces includes dual Gigabit Ethernet ports, Micro-SD card slot, micro-HDMI interface, USB 3.0, MIPI CSI, MIPI DSI



OpenWrt Pre-installed

With OpenWrt, an open-source project for embedded operating systems, reRouter offers more features, performance, and security than a traditional router since it has a filesystem fully writable and includes a package management system.

Unlimited possibilities and perfect solution for Smart Home and IoT applications with OpenWrt!

- Home Theater PC(HTPC)
- Security Home Router
- VPN
- AdBlocker
- Private Network





Specifications

Product Name	reRouter
Dimensions	235x120x65mm
Weight	519g
Certification	CE, FCC, TELEC, RoHS, REACH, UK DoC, EU DoC
Networking	Dual Gigabit Ethernet Connectors
USB	2 x USB 3.0 Ports; 1 x USB 3.0 9-Pin Header
Storage	Micro-SD Card Slot (load system Image for non-eMMC CM4 version)
Camera	1 x MIPI CSI Connector
Display	1 x MIPI DSI Connector; 1 x Micro HDMI Connector
FPC	Interface for I2C and SPI
External Fan	Power connector for Fan
Power	5V/3A using USB Type-C Port

Applications



Why Raspberry Pi® for Industry?

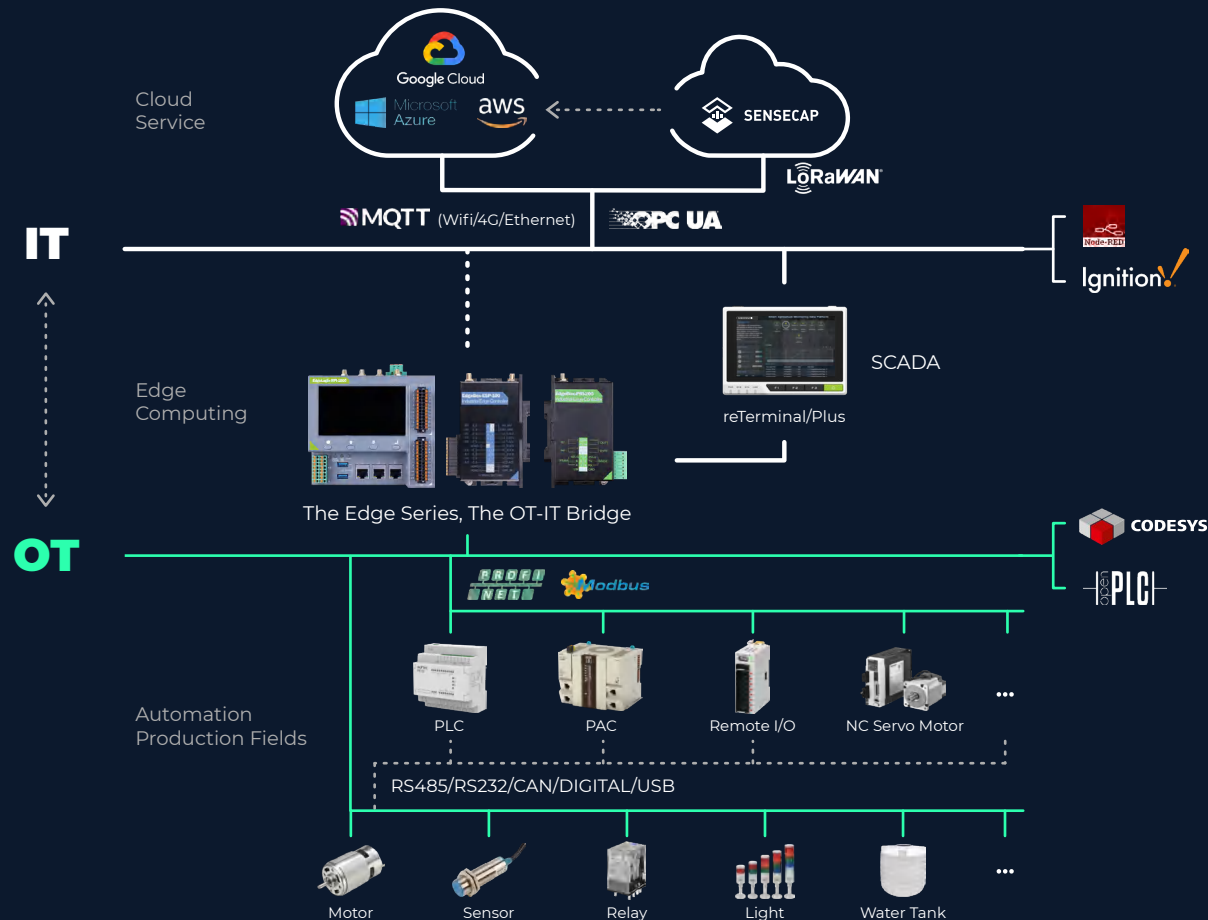
- Powerful Computing Capabilities
- Seamless OT-IT Connection
- Affordable: Low Purchase/Maintenance/Personnel Cost
- Compatible with Open-source Software

How Seeed Studio can Help?

With reliable hardware and device design capabilities, Seeed Studio can provide you with ready-to-use devices and customized solution for industry.

Edge Series for Industry - The OT-IT Bridge

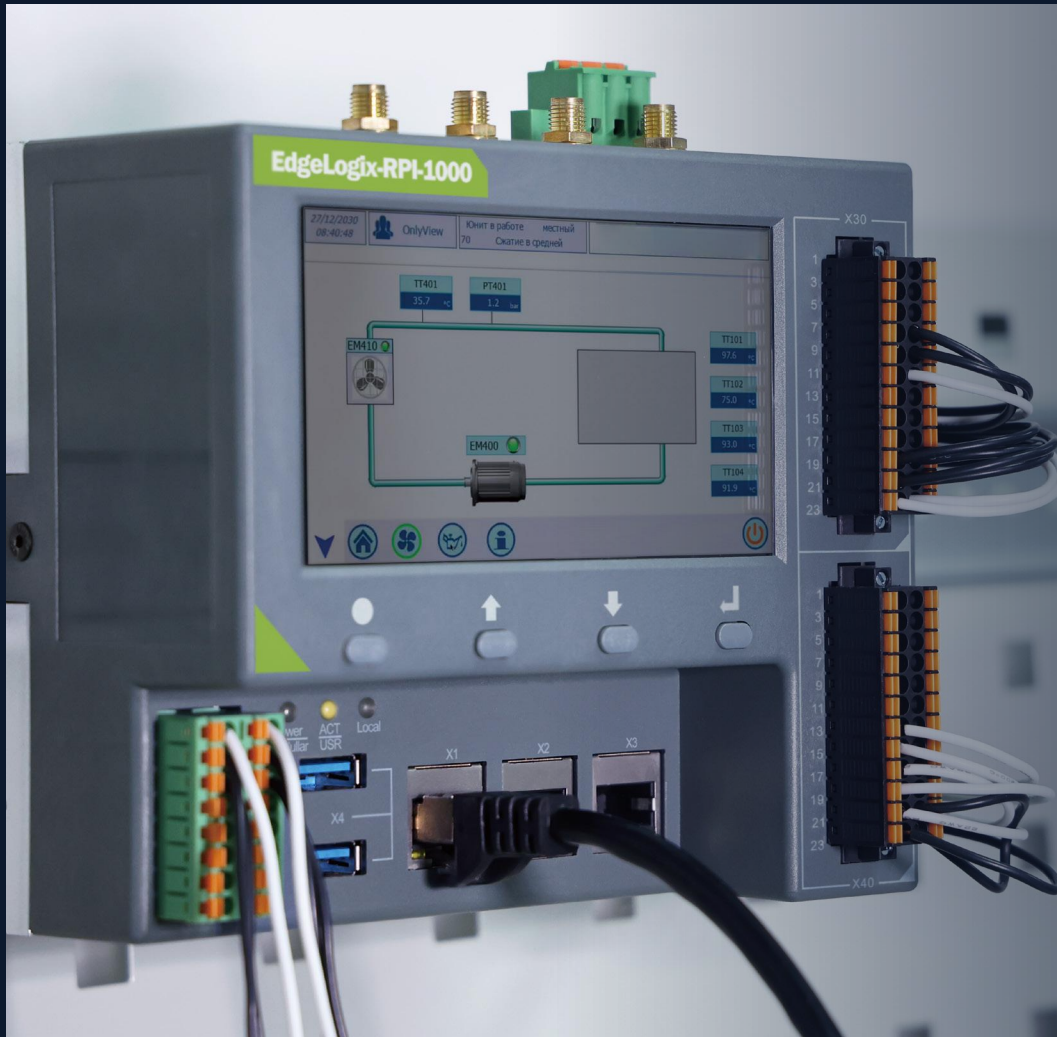
The Edge Series is defined as an OT-IT Bridge for industry scenarios. They function as integrated PLC/PAC, Gateway, and HMI (EdgeLogix), and constitute the SCADA system together with reTerminal/Plus as the Panel PC. It helps traditional controllers, actuators, and data communicate with cloud, providing you the affordable, available and also reliable automation solution.



EdgeLogix-RPI-1000

Raspberry Pi CM4-powered High-performance Modular Industry Controller

A high performance PLC/PAC, IPC, HMI, IIoT gateway all in one device with rich scalability and high-speed fieldbus communication capability



High Performance All-in-one Industrial Controller

A high performance PLC/PAC, IPC, lightweight HMI, IIoT gateway, OPC UA Server and Industry PC all in one device.

Powerful Processors and Flexible OS

Powered by Raspberry Pi Compute Module 4 (CM4), up to 8GB RAM and 32GB eMMC, support Debian, Linux, Ubuntu OS.

Rich IO Resources and Robust Scalability

Up to 24 isolated DI, DO along with RS485, RS232, CAN-FD and 3 Gigabit Ethernet ports. High-speed local BUS extension, supporting additional DIO, ADC, Relay expansion modules.*

Multiple Wireless Capabilities and IT Connectivity

Build-in 2.4G/5G Wifi, BLE, mini-PCIe slot for 4G LTE and LoRaWAN® modules. Built-in IT connectivity: DHCP/DNS, OPC UA and Web service

Industrial Software and Cloud Services Support

Supports IEC 61131-3 with CODESYS, Node-RED, MQTT. Support AWS, Azure cloud services.*

* Expansion modules, and the adaptation of CodeSYS, AWS, and Azure Cloud Services will be available early 2023



 Powered by
Raspberry Pi

Specifications

Product Name	EdgeLogix-RPI-1000
CPU	Quad-core Cortex-A72 CM4 Core @ 1.5GHz
Memory	2GB/4GB/8GB RAM optional
Storage	32GB eMMC
Display	4.3 inches 480 x 800 IPS touch screen
Digital IO	12 x DI (Isolated), 12 x DO (Isolated)
WiFi	2.4 GHz, 5.0 GHz IEEE 802.11 b/g/n/ac
Bluetooth	Bluetooth 5.0, BLE
Cellular	1 x mini-PCIe socket for 4G/LTE with SIM*
LoRaWAN®	1 x mini-PCIe socket for LoRaWAN Module*
Ethernet	3 x 1000M RJ45 Ethernet Port
HDMI	HDMI 2.0 up to 4K@60fps
USB	2 x USB2.0 Type A, 1 x USB2.0 Type C
RS BUS	5 x RS485 (Isolated), 2 x RS232 (Isolated), 1 x RS232
CAN BUS	2 x CAN BUS with CAN-FD (Isolated)
Expansion Modules	DIO/AIO/ADC Modules (in development, estimated to be available in 2023)
Extra Features	RTC, Stand alone Watch dog timer, Atecc608a (optional)
Certifications	CE FCC RoHS UK CA*
Dimensions	140 (W) x 124 (H) x 376 (T) mm
Power Supply	DC 10.8-36 V
Operating Temperature	-20°C to +60°C
Storage Temperature	-40°C to +70 °C

*In Progress

EdgeLogix -RPI-1000-CM4102032 2GB RAM, 32GB eMMC	SKU 102110779	model 1
EdgeLogix -RPI-1000-CM4104032 4GB RAM, 32GB eMMC	SKU 102991734	model 2
EdgeLogix-RPI-1000-CM4108032 8GB RAM, 32GB eMMC	SKU 102110773	model 3

* 4G and LoRaWAN modules not included.

EdgeBox-RPI-200

Raspberry Pi CM4 Based Industrial Edge Computing Controller

A compact PLC, PAC, IIoT gateway all-in-one device with industry-standard protocol.

Powerful Processor

- Powered by Raspberry Pi CM4
- Running up to 1.5GHz, up to 4GB
- RAM and 32GB eMMC

Rich IO & Interface

- 2x isolated DI; 2x isolated DO
- 1x isolated RS485; 1x RS232
- 2x USB2.0 A
- 1x M.2 slot support 2242 NVME SSD
- 1x HDMI 2.0 up to 4k@60fps

Multiple Industrial Protocols

- RS485/RS232
- TCP/IP
- Modbus
- OPC UA
- IEC 61131-3 compliant

Multiple Communication Capabilities

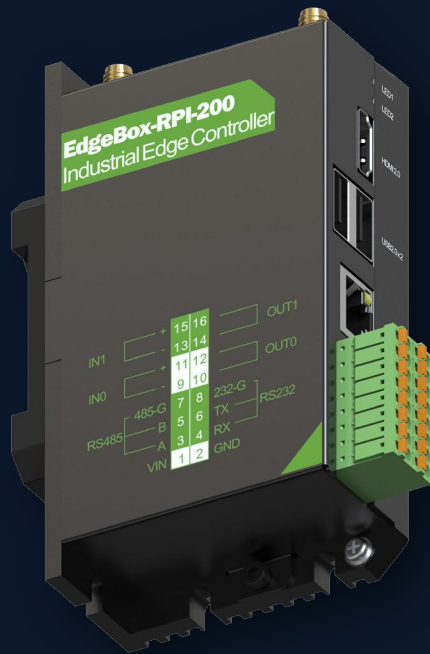
- Build-in 2.4G/5G WiFi, BLE5.0
- Gigabit Ethernet RJ45 Port
- Mini PCIe Slot support 4G LTE/LoRaWAN® Gateway/Zigbee Module*
- Support AWS and Azure Cloud services

* LoRaWAN® is a mark used under license from the LoRa Alliance®.

* The adaptation of CodeSYS, AWS, and Azure Cloud Services will be available early 2023.

* LoRaWAN® is a mark used under license from the LoRa Alliance®.





 Powered by
Raspberry Pi

Specifications

Product Name	EdgeBox-RPI-200
CPU	Quad-core Cortex-A72 CM4 Core @ 1.5GHz
Memory	1G/2G/4G RAM optional
Storage	8GB/16GB/32GB eMMC M.2 slot for SSD
Certification	   
Wireless	2.4 GHz, 5.0 GHz IEEE 802.11 b/g/n/ac Bluetooth 5.0, BLE
Video Interface	HDMI 2.0 (up to 4K@60fps)
Interfaces	1 x RJ45 Ethernet port support 10/100M/1000M 2 x USB 2.0 Port 1 x HDMI2.0 2 x Isolated DI 2 x Isolated DO 1 x Isolated RS485 1 x RS232 1 x mini PCIe slot support 4G LTE module, LoRaWAN® gateway module and Zigbee module 1 x M.2 socket with 2242 NVME SSD card support Dual-Band 802.11ac Wi-Fi (optional)
Dimensions	124mm x 76mm x 35mm
Operating Temperature	-20°C to +60°C
Storage Temperature	-25°C to +75 °C
EMI	IEC 61000-6-2
ESD Protection	4 kV/8 kV with IEC 61000-6-2 IEC61000-4-4
Additional features	Built in UPS with Supercap (optional) RTC Standalone Watchdog timer Cryptographic Encryption with ATECC608a Chip (optional)
Power Supply	DC 12-36 V

1GB RAM and 8GB eMMC SKU 102991558	model 1	2GB RAM, 8GB eMMC and 2.4G/5G WiFi SKU 102110772	model 2
4GB RAM, 16GB eMMC and 2.4G/5G WiFi SKU 102110771	model 3	4GB RAM, 32GB eMMC and 2.4G/5G WiFi SKU 102991559	model 4

* LoRaWAN® is a mark used under license from the LoRa Alliance®.

*In Progress

Product	EdgeLogix-RPI-1000	EdgeBox-RPI-200
		
CPU Core	Raspberry Pi CM4 4★	Raspberry Pi CM4 4★
Memory	2G/4GB/8GB	1G/2G/4GB
Storage	32GB	8G/16G/32GB
Screen	4.3 inches 480 x 800 pixels	-
WiFi	2.4 GHz, 5.0 GHz IEEE 802.11 b/g/n/ac	2.4 GHz, 5.0 GHz IEEE 802.11 b/g/n/ac
Bluetooth	Bluetooth 5.0, BLE	Bluetooth 5.0, BLE
Cellular	Mini-PCIe support 4G LTE(Quectel EC20/EC25 tested)	Mini-PCIe support 4G LTE(Quectel EC20/EC25 tested)
LoRa	Mini-PCIe support LoRaWAN(Seeed WM1302 tested)	Mini-PCIe support LoRaWAN(Seeed WM1302 tested)
Cellular & LoRa both working	Supported	-
Ethernet	1000M RJ45 *3	1000M RJ45 *1
HDMI	HDMI 2.0 up to 4k@60fps	HDMI 2.0 up to 4k@60fps
USB	USB2.0 A*2; USB2.0 Type C*1	USB2.0 A*2
RS Serial	RS485 *5 (Optoisolated); RS232 *2 (Optoisolated); RS232 *1	RS485 *1 (Optoisolated); RS232 *1
CAN BUS	CAN BUS with CAN-FD *2 (Optoisolated)	-
M.2 socket	-	2242 NVME SSD card
DI	12 (Optoisolated)	2 (Optoisolated)
DO	12 (Optoisolated)	2 (Optoisolated)
Extra features	RTC;Atecc608a(optional); Stand alone watch dog timer	RTC; Atecc608a(optional); Stand alone watch dog timer
Certification	RoHS; CE; FCC; UKCA; TELEC	RoHS; CE; FCC; UKCA; TELEC

reTerminal E10-1 - Expansion Board

An expansion board for the reTerminal

Empowers rechargeable and portable functions, enhanced wireless communication and industrial data transmission along with audio capability

Gigabit Ethernet

LTE/4G/5G/LoRaWAN
(Modules not included)

•RS-485 •RS-232
•CAN

3 Power Supply:

DC Jack

PoE

**UPS - 18650
Battery**
(Battery not included)

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reTerminal E10-1



**Plug-and-play to
Expand More Possibilities**

Massive Storage



M.2 for SATA SSD

Expandable AI-power Capabilities

2 Micorphones

Speaker 1



reTerminal E10-1 - Expansion Board
supports DC Jack/PoE/UPS, Gigabit
Ethernet, LTE/4G/5G/LoRaWAN,
RS485/232, CAN, SATA 2.0

SKU 103060001

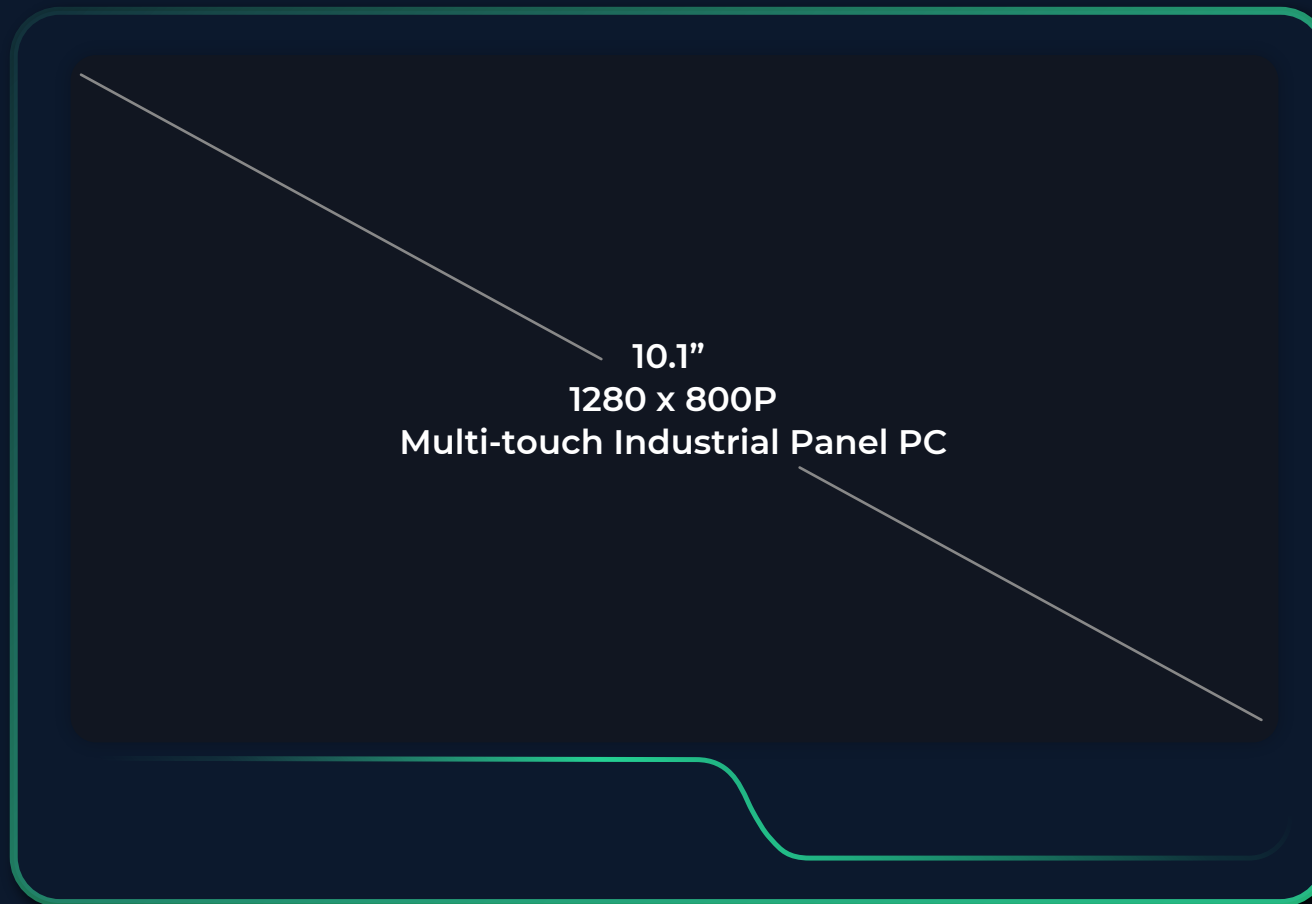
Specifications

reTerminal E10-1

Product Name		reTerminal E10-1 - Expansion Board
Power	DC Jack	Supply power to the reTerminal, the expansion board and the battery in DC 12V@4A
	PoE	The PoE power input is RJ45 and supports a maximum of 25W power input
	UPS - 18650 battery	2x battery holder with fixed pin. During the charging process, the battery will automatically stop charging if it overheats, and LED2 will flash the alarm.
External I/O	RS-485 Interface RS-232 Interface	Supports a maximum communication rate of 256000 baud
	CAN	CAN at common-mode supports a 500KBps communication rate, CAN at FD mode supports the communication rate up to 8Mbps
	Antenna Interface	Equip four antennas
	RJ45 Interface for Gigabit Ethernet	Equip LAN7800 IC with the RJ45 interface and support PoE module
	DC Jack Power Interface	DC 12V@4A
	100 Pins Industrial High-Speed Interface	Connect with reTerminal through 100pins high-speed interface
Internal I/O	M.2 Interface	Support SSD, M.2B KEY driver, USB3.0 GEN1 and SATA2, suitable for 2242/2280
	Mini-PCle	Support UART, USB2.0, I2C, and SPI communication modes
	SIM card slot	Insert the LTE/4G/5G SIM card
	Microphone	Two Analog Microphones
	Speaker	8Ω/1W
	Fan	3PinFan (Support speed control and speed measurement)
Network	Wireless Connection	M.2 Interface Support 4G/5G wireless modules Mini-PCle Support LTE/4G/LoRaWAN modules SIM card slot Insert. Insert the LTE/4G/5G SIM card Antenna interface Equip four antennas
	Gigabit Ethernet	Equip LAN7800 IC with the RJ45 interface and support PoE module
Display	LED1	DC Jack Power status indicator
	LED2	LED2, as the battery status indicator
	LED3	User LED
Dimension		140mm x 95mm x 30mm
Certification		CE, FCC, EU DoC, RoHS, REACH, UK DoC

reTerminal Plus

Release Time 2023 Q2



Panel PC, HMI, PLC,
Gateway All-in-one



Powered by Raspberry
Pi CM4 Variants



High-speed Fieldbus
Communication Capability



Multiple
Industrial I/O



Rugged
Design

Applications



Software-defined
PLC

IoT Gateway

SCADA

Edge Computing
Controller

Industrial
Controller

Automation and
Control System

Software Solution

Raspberry Pi CM4 core and Debian OS-based industrial solutions are supported by rich open-source software ecosystem. We are dedicated to gradually make our Raspberry Pi-powered industrial solutions compatible with following software in 2023.



| CODESYS

CODESYS Control for Raspberry Pi MC SL is an adapted CODESYS Control runtime system for Raspberry Pi with more than one core on a single CPU.



| AWS

Amazon Web Services (AWS) is the world's most comprehensive and broadly adopted cloud platform, offering over 200 fully featured services from data centers globally.



| Ignition Edge

Edge Computing, Data Collection, and HMI Software for the Network's Edge.



| AZURE

On-premises, hybrid, multicloud, or at the edge—create secure, future-ready cloud solutions on Azure



| Node-RED

Node-RED is a programming tool for wiring together hardware devices, APIs and online services in new and interesting ways.

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Node-RED

Node-RED is a programming tool for wiring together hardware devices, APIs, and online services. It provides a browser-based editor that makes it easy to wire together flows that can be deployed to its runtime in a single click.

[Learn more >> nodered.org](https://nodered.org)

OpenWrt

OpenWrt is an open-source Linux operating system that runs on embedded devices/ routers. It has a filesystem that's fully writable and includes a package management system.

[Learn more >> openwrt.org](https://openwrt.org)

Supported Hardware

reTerminal
reRouter

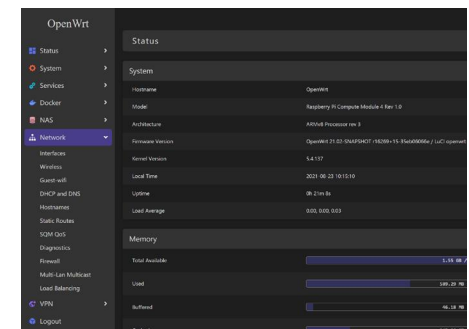
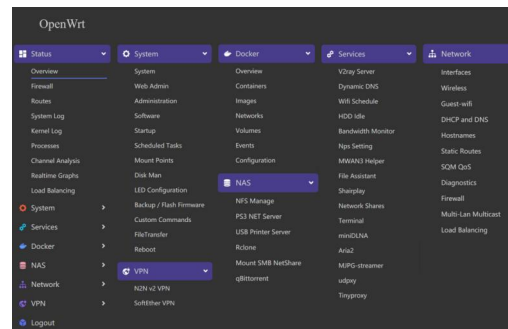
Smart Home with Node-RED on OpenWrt

Do you know how to control your smart home appliances using Node-RED running on the OpenWrt System by Seeed Studio? This blog will explain how you can set up everything step-by-step. Also, the reTerminal LCD will be used to view the Node-RED dashboard to visualize the connected devices.



Getting Started with OpenWrt on reRouter

Our reRouter comes with the OpenWrt software pre-installed, so you don't have to go through the trouble of flashing the image on a microSD card and installing it on the device yourself. There's DDNS, Bandwidth Monitor, File Assistant and Network Shares, but, Open-WRT will also offer you the V2Ray VPN, the option to schedule when to slow down external HDDs, to run the Nps, the MWAN3 Helper, the ShairPlay and more. It's worth mentioning the Docker and it allows you to run various available containers.



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Home Assistant

Home Assistant

Home Assistant is a free and open-source software for home automation designed to be a central control system for smart home devices with a focus on local control and privacy

[Learn more >> home-assistant.io](https://home-assistant.io)

Application:

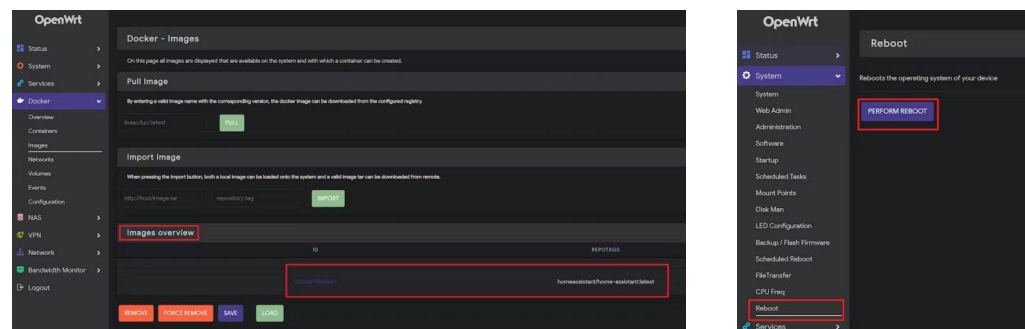
Home Automation

Supported Hardware:

reTerminal
reRouter

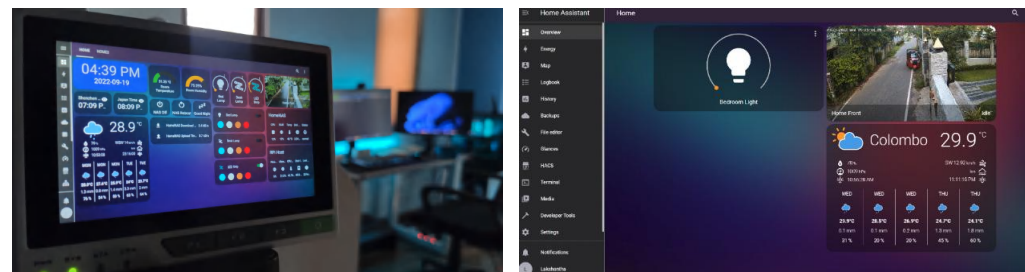
Deploying Home Assistant on reRouter with OpenWrt

Home Assistant is the popular home automation control platform. Since HA needs to be online 7x24 hours, running on devices that are always on will be a good choice. The reRouter and H68K soft router from Seeed Studio support OpenWrt and Docker, so you can easily deploy Home Assistant and keep it stable online for a long time.



Home Automation with Raspberry Pi: Home Assistant, Router, NVR and more!

Using Raspberry Pi as a smart home device is not strange. You can set up it for a secure soft router, firewall, smart home hub, or local NVR, or you can use Home Assistant to integrate everything together! Let's take a look at how to use Seeed Studio's Raspberry Pi CM4-based devices reRouter and reTerminal to work with a local home automation system and customize it in a controller hub!



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Grafana

Grafana is a multi-platform open source analytics and interactive visualization web application. It provides charts, graphs, and alerts for the web when connected to supported data sources.

[Learn more >> grafana.com](https://grafana.com)

InfluxDB

InfluxDB is an open source time series database.

[Learn more >> influxdata.com](https://influxdata.com)

Application:

Data Analytics and Visualization

Supported Hardware

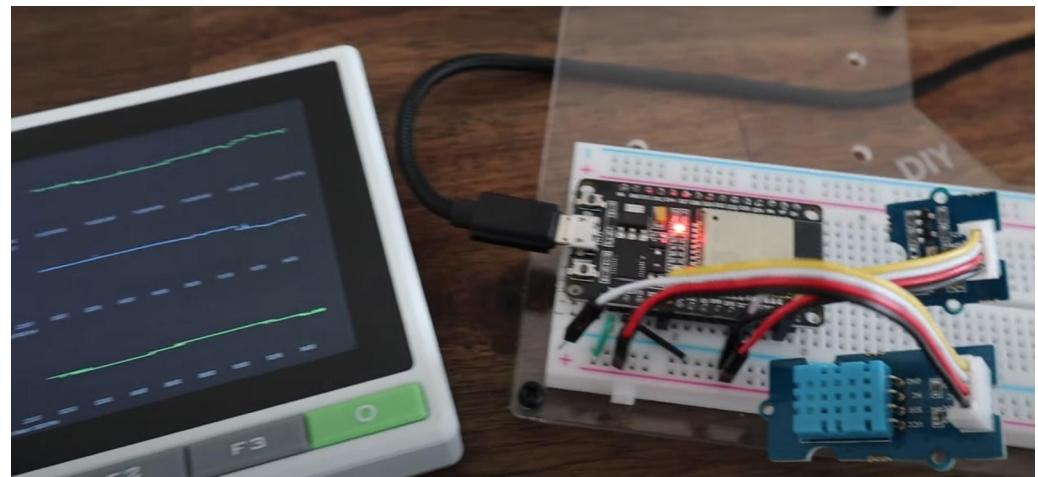
[reTerminal](#)

Grafana Weather Dashboard on the reTerminal by Seeed Studio

In this project, an ESP32 is used to collect temperature, humidity and pressure readings. These will then be posted to a time-series database in InfluxDB.

InfluxDB can be run locally on a Raspberry Pi or on their cloud server, we're going to be using their cloud server. We're then going to be using an analytics and visualisation application called Grafana to display the information that has been stored in the database.

Grafana can also be run locally on our Raspberry Pi (or reTerminal in this case) or on their cloud server. We're going to be installing and running it locally on our reTerminal.



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CODESYS

CODESYS is a leading manufacturer-independent IEC 61131-3 automation software for engineering control systems. It is the ideal programming tool for machine and process applications in machine building and system integration.

[Learn more >> codesys.com](https://www.codesys.com)

Application:

Industrial Automation

Supported Hardware

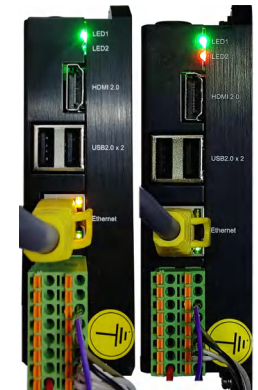
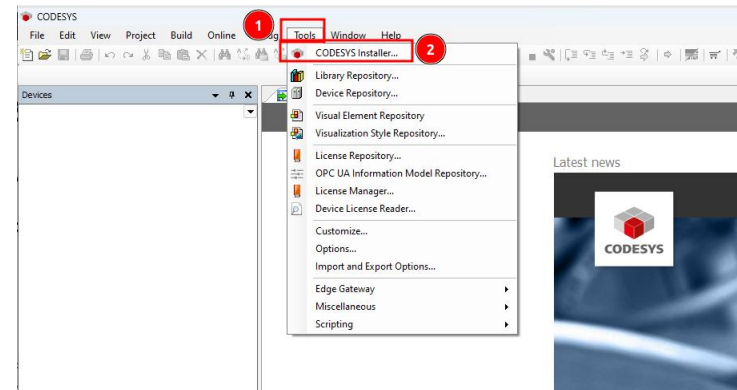
[EdgeLogix-RPi-1000](#)

[EdgeBox-RPi-200](#)

EdgeBox-RPi-200 Getting Started with CODESYS

In this wiki, we have used the CODESYS Development System V3 software as IDE to config and program software to run on the EdgeBox-RPi-200. The first episode will be a Toggle user LED project.

As CODESYS is popular in IIoT area, and as one of the Raspberry Pi Design Partners, we are focusing on developing more Pi-powered industrial products to be compatible with it.



The Trustworthy Provider of ODM Service

With decades of ODM & OEM experience and in-depth understanding of popular open-source hardware, we are committed to assisting you at any moment and shortening your path from idea to products for emerging AIoT scenarios.

We also promise you the professional and flexible customization for the existing devices and your creative idea about new product based on Raspberry Pi CM4 by our engineers and product experts.

Customization Service



Raspberry Pi CM4 Custom Design



Replace
CM4



Remove
Screen



I/O
Modification



Custom
Case



Others

MOQ: ¥1M or 10Kpcs/Y

NRE Fee Reference: \$20k~\$50k

Customize reTerminal/reRouter

reRouter

Built with Raspberry Pi CM4,
equipped with dual Gigabit Ethernet
ports and dual USB 3.0 ports



reTerminal

Embedded Linux with Raspberry
Pi CM4 and 5-inch Capacitive
Multi-Touch Screen HMI



CUSTOMIZATION PROCESS & TIMELINE



1.Inquiry

Introduction of The Project
Technical Requirement List
Technical Evaluation



2.Quotation

Quotation SoW(Statement
of Works)
Product Requirements Document
Contract Agreement



3.Kickoff

Initial Project
Schedule Project
Development Plan



4.EVT

Engineering Verification Test

Product Design
Hardware Software
Mechanical Packaging
Design for Manufacturing
Design for Testing



5.DVT

Design Verification Test

Building Samples
Test Plan
Debug & Test
Functionality Test
Regulatory Test
Reliability Test



6.PVT

Pilot Verification Test

Pilot Manufacturing
Quality Control
Certification



7.Mass Production

Procurement
Production
Management Control
Manufacturing
Shipping
Global Logistics



8.After Sales

Failure Analysis
RMA(Returned Material
Authorization)
Customer Certification
Survey

Smart Packing

Scenario:

End-to-end packhouse systems at large fruit packhouse in South Africa

Product:

reTerminal

ODM solutions we provide:

- Robust industrial design for dusty, hot and rough
- An interface for a mechanical labeler with a programmable logic controller
- Integrating a capacitive touchscreen and a highly responsive RFID reader.

Applications:

Labeling, bin tipping, carton verification, pallet weighing, and data collection.

Learn More:

seeedstudio.com/blog/2022/10/08/odm-services-for-smart-packing-the-reterminal-for-semi-automated-packhouse



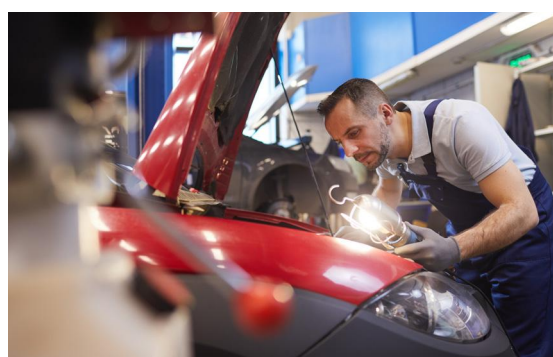
Seed Studio ODM Service Showcase

We have been receiving ODM inquiries related with Raspberry Pi from companies in various industries, which shows the wide adaptability of Raspberry Pi CM4 in different IoT scenarios and our ability to undertake Raspberry Pi CM4-related ODM services.



Robotics

Raspberry Pi CM4-based companion robot that can perform object/human recognition, voice interaction and many other functions.



Car Calibration and Diagnostics

A machine customized from our Raspberry Pi CM4-powered reTerminal to be deployed in car calibration and diagnostics site.



Industrial Coatings Business

A reTerminal-based customized device with larger screen for the industrial coatings business operating in various production workshop.



Drone

A Raspberry Pi-CM4 compatible carrier board that is small enough to be embedded in the drone and support 4G for communication.



Security Alert

Our Raspberry Pi CM4-based reRouter is customized to perform visual alarm monitoring, in which local camera production is triggered by motion and environmental sensors.



Medical Alert PERS System

A Raspberry Pi CM4-based customized IoT gateway/edge compute device to monitor and process sensor data and take appropriate action in the homes of seniors.

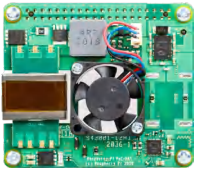
Raspberry Pi Hardware Provider

Modules, Official Dev Boards and Kits

Module – Pi Hat

Various functional expansion boards for Raspberry Pi, designed by Seeed Studio, for developing various projects with Pi.

Raspberry Pi PoE + HAT for Raspberry Pi 4B/3B+

SKU: 106990388

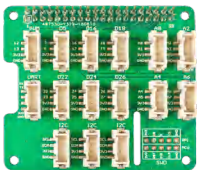
The Raspberry Pi PoE+ HAT is an add-on board for Raspberry Pi computers with PoE pins, including Raspberry Pi 3B+ and Raspberry Pi 4. It is used to power Raspberry Pi via an Ethernet cable, provided that power-sourcing equipment is installed on the Ethernet network. It supports 802.3at PoE standard with high output power of 5V DC/4A and the built-in controllable brushless fan can deliver 2.2 CFM to cool the Raspberry Pi processor. It also features a fully isolated switched-mode power supply for better power efficiency.

WM1302 Raspberry Pi Hat

SKU: 113100022

WM1302 Pi HAT is a Raspberry Pi add-on board for connecting the WM1302 LoRaWAN module, based on LoRa Concentrator Semtech SX1302. It supports mini-PCIe form-factor and simplifies the development process for users to integrate with all Raspberry Pi versions up to Raspberry Pi 4B.

Grove Base Hat

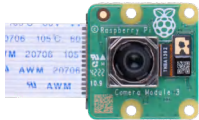
SKU: 103030275

Grove Shield for Raspberry Pi is an expansion board for Raspberry Pi, designed by Seeed Studio, for the orderliness of your connected sensors when you develop projects with Pi. It maintains 24-Pin GPIO and provides 15 additional Grove ports based on the MM32 chip, along with other interfaces, giving you a great and quick development experience.

Module – Camera

By using one of these cameras, combined with all the versions of Raspberry Pi, you can simply deploy any camera project. Also, you can experience better quality video capture from these cameras and build more demanding projects.

Raspberry Pi Camera Module 3



Sony IMX708, 4608 × 2592 pixels, IR cut filter, autofocus

Raspberry Pi Camera Module 3 is a compact camera from Raspberry Pi. It offers an IMX708 12-megapixel sensor with HDR, and features phase detection autofocus and IR cut filter.

SKU: 114993028

Raspberry Pi Camera Module 3 NoIR



Sony IMX708, 4608 × 2592 pixels, autofocus

Raspberry Pi Camera Module 3 NoIR is a compact camera from Raspberry Pi. It offers an IMX708 12-megapixel sensor with HDR, and features phase detection autofocus.

SKU: 114993029

Raspberry Pi Camera Module 3 Wide



Sony IMX708, 4608 × 2592 pixels, 120 degrees Diagonal FOV, IR cut filter, autofocus

Raspberry Pi Camera Module 3 Wide is a compact camera from Raspberry Pi with FOV, presenting 120 degrees Diagonal FOV. It offers an IMX708 12-megapixel sensor with HDR, and features phase detection autofocus and IR cut filter.

SKU: 114993030

Raspberry Pi Camera Module 3 Wide NoIR



Sony IMX708, 4608 × 2592 pixels, 120 degrees Diagonal FOV, autofocus

Raspberry Pi Camera Module 3 Wide NoIR is a compact camera from Raspberry Pi, presenting 120 degrees Diagonal FOV. It offers an IMX708 12-megapixel sensor with HDR, and features phase detection autofocus.

SKU: 114993031

Module – Display

The display module for Raspberry Pi gives users the ability to create all-in-one, integrated projects such as tablets, infotainment systems and embedded projects. Touchscreen drivers with support for 10-finger touch and an on-screen keyboard will be integrated into the latest Raspbian OS for full functionality without a physical keyboard or mouse.

Raspberry Pi 7 inch Touchscreen Display

SKU: 104110009

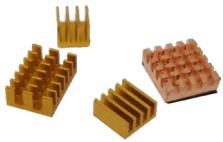


Screen Resolution 800 x 480 pixels 10 finger capacitive touch
Adapter board handles power and signal conversion On screen keyboard
in latest Raspbian OS.

Heat Sink

We provide aluminum heat-sink kits used for cooling the chips on Raspberry Pi. Some of them are packaged with a copper heat sink. The golden aluminum version has better heat dissipation, and anodizing, the main chip heat sink is copper. You can also choose our silver aluminum kit or black aluminum kit, they are the cheaper versions.

Heat Sink Kit for Raspberry Pi 4B



This is a three-piece aluminum heat sink kit and a copper heat sink for the main chip to cool the chip on the Raspberry Pi 4B. You can also choose our silver aluminum kit or black aluminum kit.

SKU: 110991329

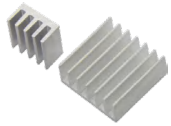
Heat Sink Kit for Raspberry Pi 4B



This is a four-piece aluminum heat sink kit to cool the chip on the Raspberry Pi 4B.

SKU: 110991328

Heat Sink Kit for Raspberry Pi B+



This is an aluminum heatsink kit used for cooling the chips on Raspberry Pi.

SKU: 114990125

Heat Sink Kit for Raspberry Pi 4B



This is a four-piece aluminum heat sink kit to cool the chip on the Raspberry Pi 4B. You can also choose the black version kit or the Gold Aluminum version kit.

SKU: 110991327

Other Accessories

Seeed has prepared lots of add-on for Raspberry Pi. All those power supplier, cooling fan, and adapter will give the Raspberry Pi more features and possibilities. Find all you need to boost up your Raspberry Pi projects!

Raspberry Pi Official Power Supply



15.3W USB-C with 1.5M Cable - EU Plug 5.1V 3A White

This Official Raspberry Pi power supply is the perfect choice for powering your new Raspberry Pi 4 Model B board. This PSU works with all variants of the Raspberry Pi 4 board, the 1GB, 2GB and 4GB. It is a 5.1V, 3A power supply featuring a USB-C connector at one end, and a plug socket at the other. Simply plug the USB-C into your Pi 4 and plug the socket into the mains and you're ready to go!

SKU: 106990292

USB Power Adapter for Raspberry Pi 4



US Standard - 5V 3A

This is a 15W(5V, 3A) USB wall charger (US standard), which is specially designed for the Raspberry Pi 4.

SKU: 106990249

Blink Blink ICE Tower CPU Cooling Fan



Tower structure, RGB LED, 5mm copper tube, multi-layer heat sinks, 7 blades powerful fan, all those combinations make this super radiator for Raspberry Pi 4 / 3. In the case of overclocking, it can reduce the temperature of the Raspberry Pi from 80 C to 40 C.

SKU: 114992048

SBC

Raspberry Pi Compute Module 4

SKU: 102991441



8GB RAM, 32GB eMMC, 2.4/5.0GHz Wi-Fi & Bluetooth 5.0 (CM4108032)

This version of the Raspberry Pi Compute Module 4 includes a high-performance 64-bit quad-core processor, 8GB LPDDR4 RAM, 32GB eMMC, dual-display support at resolutions up to 4K, hardware video decode at up to 4Kp60, Gigabit Ethernet, USB 2.0, dual camera interfaces, PCIe Gen 2 x1 interface, and dual-band 2.4/5.0GHz wireless LAN and Bluetooth 5.0.

Raspberry Pi 4 Computer Model B 2GB V1.2

SKU: 102991317



Raspberry Pi 4 Model B is the latest product in the popular Raspberry Pi range of computers. It offers ground-breaking increases in processor speed, multimedia performance, memory, and connectivity compared to the prior-generation Raspberry Pi 3 Model B+.

Raspberry Pi Compute Module 4 IO Board

SKU: 114992365



The Compute Module 4 IO Board is a companion board for Raspberry Pi Compute Module 4. It is designed for use both as a development system for Compute Module 4 and as an embedded board integrated into end products. The IO board is designed to allow you to create systems quickly using off-the-shelf parts such as HATs and PCIe cards, which might include NVMe, SATA, networking, or USB. The major user connectors are located along one side to make enclosures simple.

Raspberry Pi Zero 2 W

SKU: 102110617



Raspberry Pi Zero 2 W is the latest product (2021) in our most affordable range of single-board computers. The upgraded processor provides Raspberry Pi Zero 2 W with 40% more single-threaded performance, and five times more multi-threaded performance, than the original single-core Raspberry Pi Zero.



Raspberry Pi Officials

Seeed as Raspberry Pi's official design partner, offers Raspberry Pi computers and microcontrollers including the latest launched Raspberry Pi 4. You could start and develop your own Raspberry Pi project by clicking links below right now!

MCU

Raspberry Pi Pico



Raspberry Pi Pico is equipped with the powerful RP2040 chip, features high performance and rich on-board interfaces/resources, yet offered a relatively low price. It is perfectly designed for the beginners to electronics, pretty suitable for IoT controlling applications.

SKU: [102110537](#)

Seeed Studio XIAO RP2040



Seeed Studio XIAO RP2040 is compatible with the Raspberry Pi RP2040 ecosystem as they share the same RP2040 chip. It supports multiple languages including C / MicroPython / CircuitPython. This will be a great tool for you to get started with MicroPython.

SKU: [102110537](#)

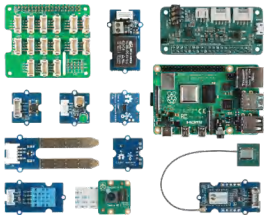


Kits – Starter Kit

Seeed Studio provides Raspberry Pi based starter kits for beginners interested in IoT or Raspberry Pi. Seeed also launches Grove kit with modular design, which is easier to learn than regular kits.

IoT for beginners with Seeed and Microsoft

SKU: **E21000020**



Learn the basics of the Internet of Things with this free 12-week, 24-lesson curriculum from the Microsoft Cloud Advocates. Build prototypes of real-world IoT projects with Raspberry Pi 4 and compatible modules as you learn all about IoT whilst following the journey of food from farm to table.

Grove Beginner Kit - Raspberry Pi 4B - 4G

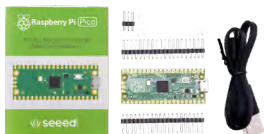
SKU: **110061127**



The Raspberry Pi's Grove Base Kit is one of the best kits for beginners to get started with the Raspberry Pi. Can you use it for basic function learning, illuminate LEDs, make traffic lights, design IOT projects and so on modules.

Raspberry Pi Pico Basic Kit

SKU: **110061282**



The Raspberry Pi Pico is a new flexible microcontroller board based on the Raspberry Pi RP2040 microcontroller chip. It featured with Dual-core ARM Cortex M0+ processor, flexible clock running up to 133 MHz.

Kits – Prototyping Kit

Prototyping Kits includes accessories and custom-designed PCB as Raspberry Pi projects, containing everything you need to get started.

Raspberry Pi 400 Personal Computer Kit

SKU: 114992366



UK Version

Featuring a quad-core 64-bit processor, wireless networking, dual-display output, and 4K video playback, Raspberry Pi 400 is a complete personal computer, built into a compact keyboard.

Raspberry Pi 400 Personal Computer Kit

SKU: 114992367



US Version

Featuring a quad-core 64-bit processor, wireless networking, dual-display output, and 4K video playback, Raspberry Pi 400 is a complete personal computer, built into a compact keyboard.

GrovePi+ Starter Kit for Raspberry Pi A+,B,B+&2,3,4

SKU: 110060161



GrovePi+ Starter Kit is the gateway to exploring Grove sensors and actuators with Raspberry Pi. Containing a GrovePi+ add-on board and 12 of the most popular Grove modules, the kit is a great way to get started with the plug-and-play world of Grove with Raspberry Pi.

GrovePi+ is CE certified and is compatible with Raspberry Pi 2, 3 and 4 and works with Linux and Win 10 IoT. Raspberry Pi board not included.

seeed studio



Seeed Studio & Raspberry Pi
Series Catalog V1.1
Jan 2023

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