

# Giada RD01 Docking Station User manual



## Statement

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Specifications here are for reference only, please take the real product as standard.

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## Safety Notice

- Read the user manual carefully before setting up the Giada product.
- Disconnect the power cord before installing the internal components
- Most electronic components are sensitive to static electrical charge, please wear a wrist-grounding strap when installing the internal components.
- Don't disconnect the power cord when the system is running to avoid damage to the sensitive components by instantaneous surge voltage.

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## 1. Product Introduction

Giada RD01 is a sensor docking station powered by ESP32-S3 microcontroller unit for IoT solutions. With 2 sets of phoenix connector 6pin GPIO and 6 sets of 4-pin I2C grooves, RD01 can provide GPIO and I2C expansion for PCs, enriching the application scope of PCs. RD01 supports both DC and USB type-C power supply, with an input voltage of 5V. The phoenix connector of GPIO provides 3.3V/5V power output, and the I2C interface provides 3.3V power output.

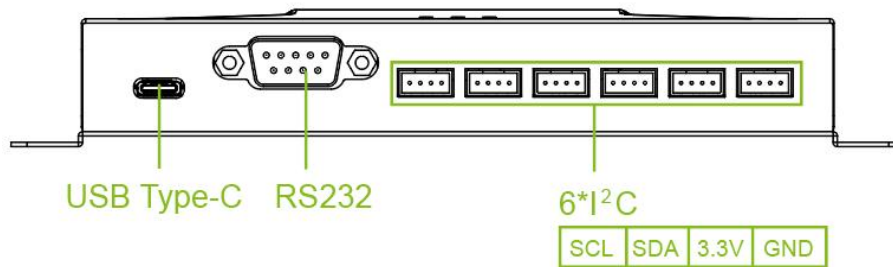
Giada provides embedded programs and configuration software for RD01 to connect sensors through GPIO and I2C.

**Notice:** This user manual guides you to connect the sensors to the host PC. For different sensor settings, please check your sensor configuration guide.

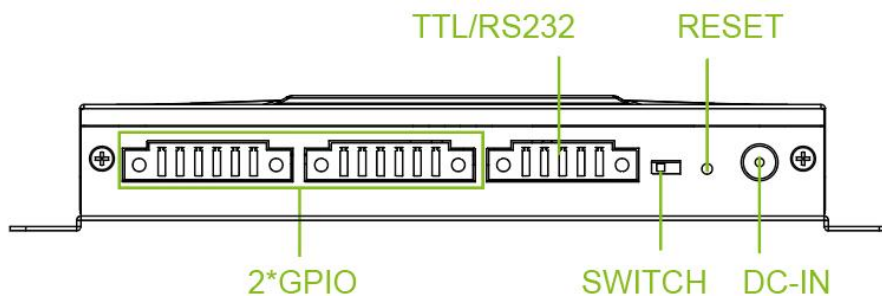
## 2. Interface Description and Hardware Specifications

### 2.1 Interface Description

#### Front I/O Port



#### Rear I/O port



## 2.2 Hardware Specifications

<b>RD01</b>	
<b>Microcontrol Unit</b>	ESP32-S3
<b>Input Voltage</b>	DC-IN, 12V/ 2.08A
<b>Rear IO</b>	1 x USB Type-C 1 x DB9 RS232 6 x 4pin I2 C grove 2 x 6pin GPIO 1 x 5pin serial port
<b>LED</b>	1 x Power supply, 1 x PC connect, 1 x IO signal
<b>Button</b>	1 x TTL/RS232 switch, 1 x RESET
<b>Construction</b>	Metal, White
<b>Dimensions</b>	168.5 mm x 55mm x 24mm (6.63" x 2.16" x 0.94")
<b>Product Weight</b>	232.6 g
<b>Operating Temperature</b>	0°C ~45°C (32°F~113°F) @0.7m/s Air Flow

## 2.3 RD01 Packing list

- 1x Giada RD01 docking station
- 1x DC power supply, 5V / 1A
- 2x 6pin Phoenix connector
- 1x 5pin Phoenix connector

## 3. Sensor connectivity through RD01

### Before start, you need:

- Giada player as terminal with RD01 sensor docking station.
- Giada player as Host PC with screen and installed the Windows10 64bit OS.
- A DB9 RS232 serial cable or a USB type-C to type-A cable.
- Dock Configuration software.

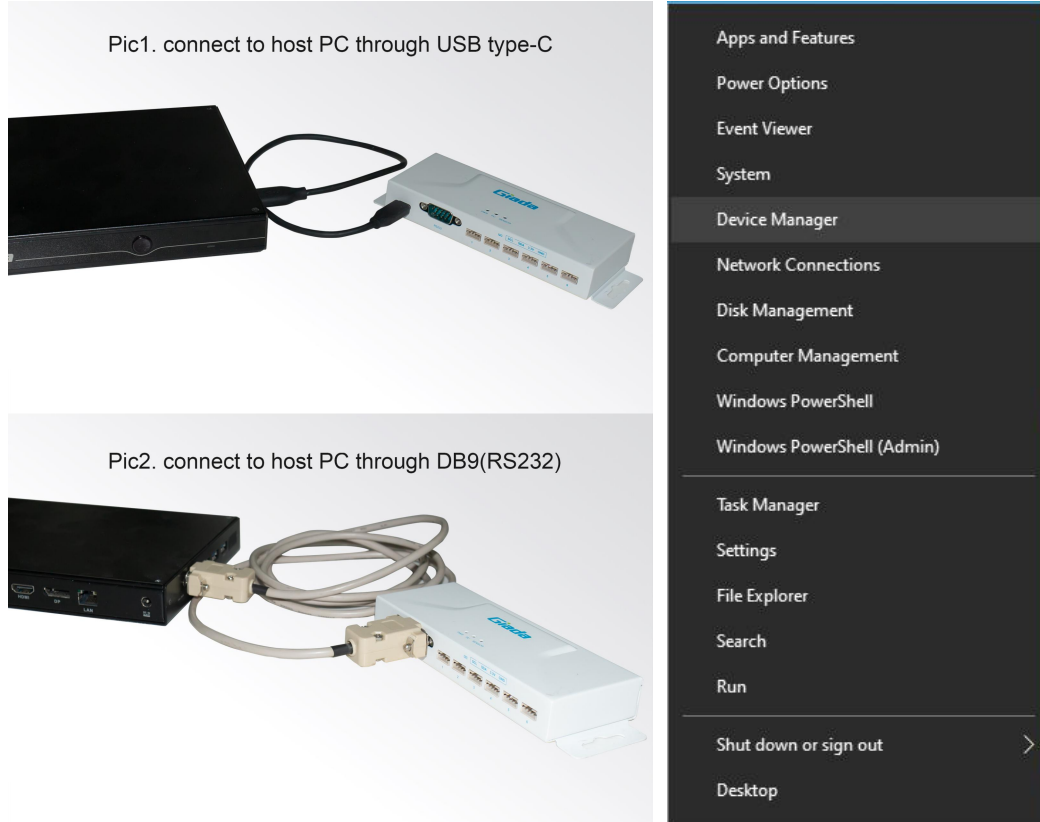
The configuration software files include:

DockConfig.exe	2023/9/6 17:44	应用程序	13,366 KB
libDock.dll	2023/9/6 17:26	应用程序扩展	2,037 KB
libDock.lib	2023/8/29 8:57	Object File Library	3 KB
libDockDemo.exe	2023/8/28 15:07	应用程序	2,064 KB
port.conf	2023/5/22 20:25	CONF 文件	1 KB

## 3.1 Connect the RD01 Docking Station

A. Connect the RD01 docking station to the Windows Host PC via Type-C or COM port. The “PC” LED will light up.

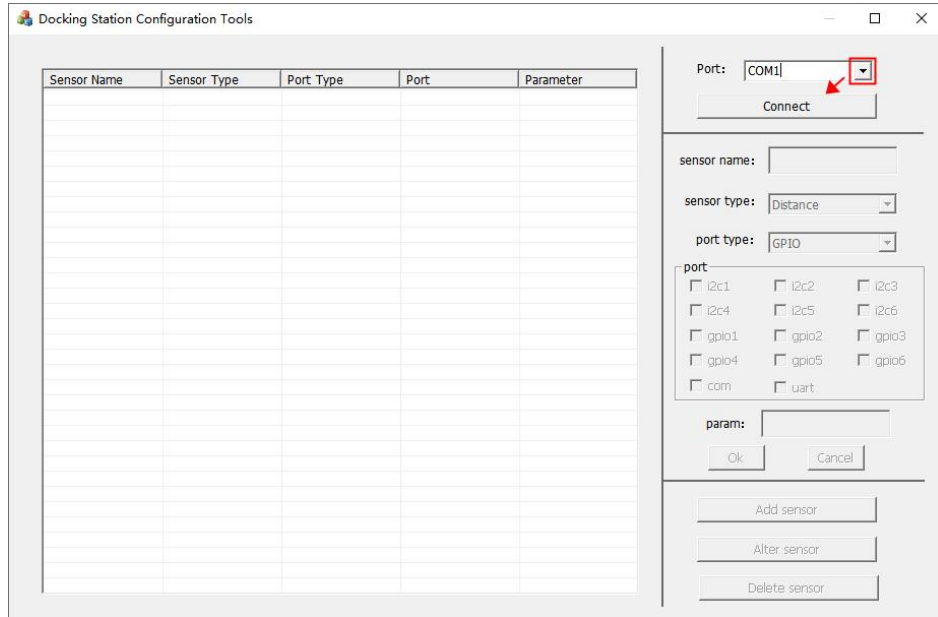
Notice: This configuration tool only supports for window 10 operating system



B. Enter the device manager, Then find the Prolific USB-to-Serial Comm Port under the Ports(COM & LPT) option and note the current COM number.

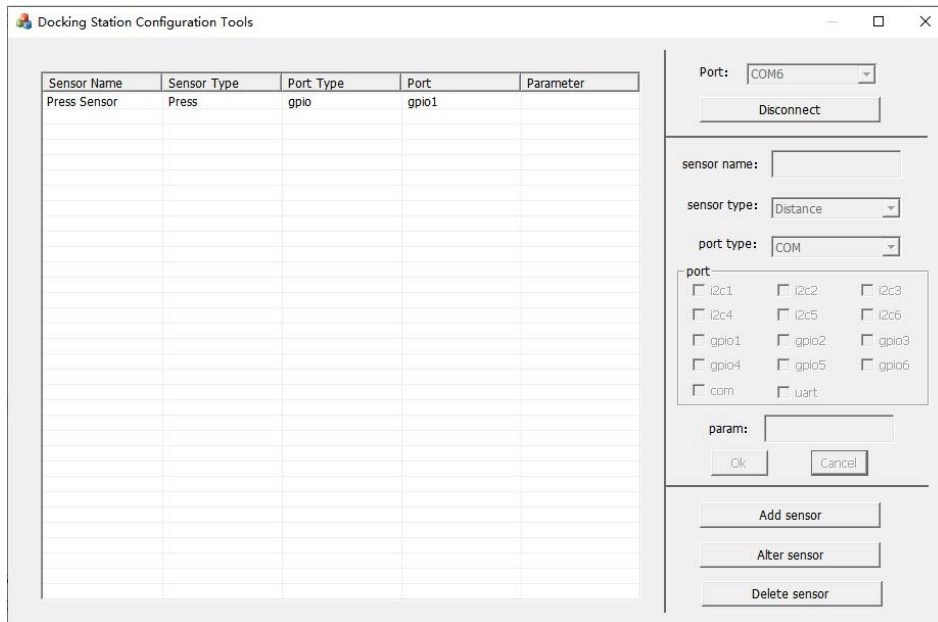


C. Run “DockConfig” software and then select the correct COM port and click the button of Connect.



Connect RD01 to the sensor docking station

D. The “Press Sensor” can be shown in Docking configuration software after successfully connection.



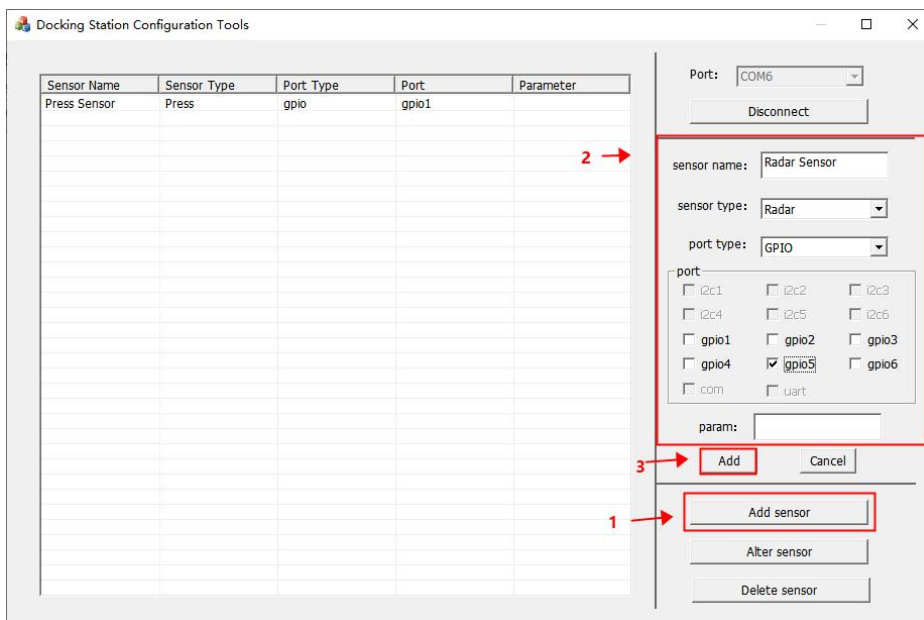
## 3.2 Add the Sensor

Click the button of "Add" and you can add the sensor. At present it can support the following several sensors.

- Pressure sensor( FSR402/4);The port type is GPIO;The parameter is null;
- Laser Ranging Sensor (VL53L0X);The port type is I2C;The parameter is {addr=0x52};
- Radar Sensor(HLK-LD2410C);The port type is GPIO;The parameter is null;
- Electronic Scale Pressure (HX711) ;The port type is GPIO ;The parameter is {5KG}.

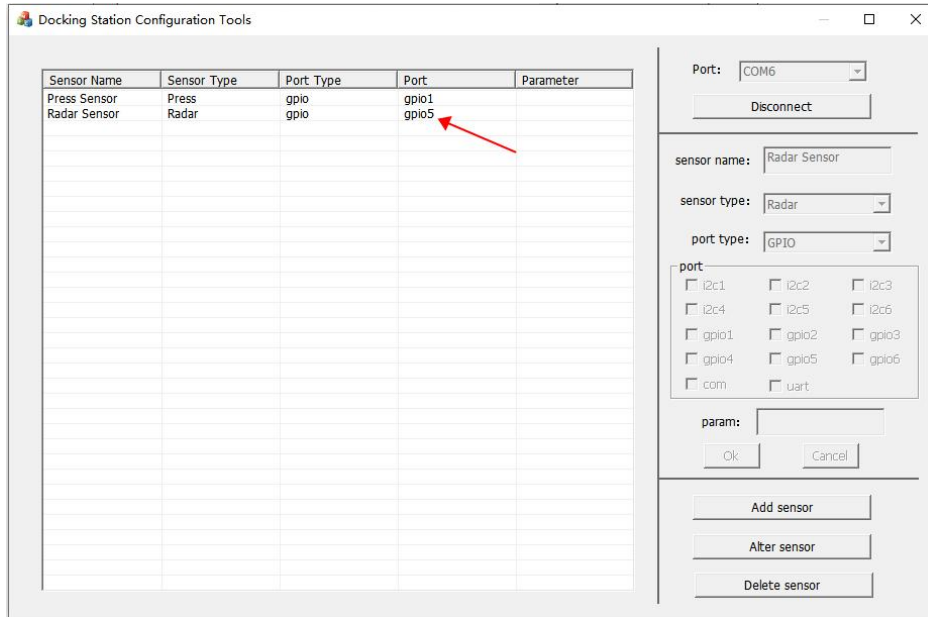
**Note:** The parameter of Electronic Scale Pressure must fill out max threshold. The SCK and DT interface of Electronic Scale Pressure must be set as adjacent GPIO port number. Such as SCK connect to GPIO2, then DT should connect to GPIO3.

The sensors can be shown on the left after successfully added (Display a pop-up tip indicates success).



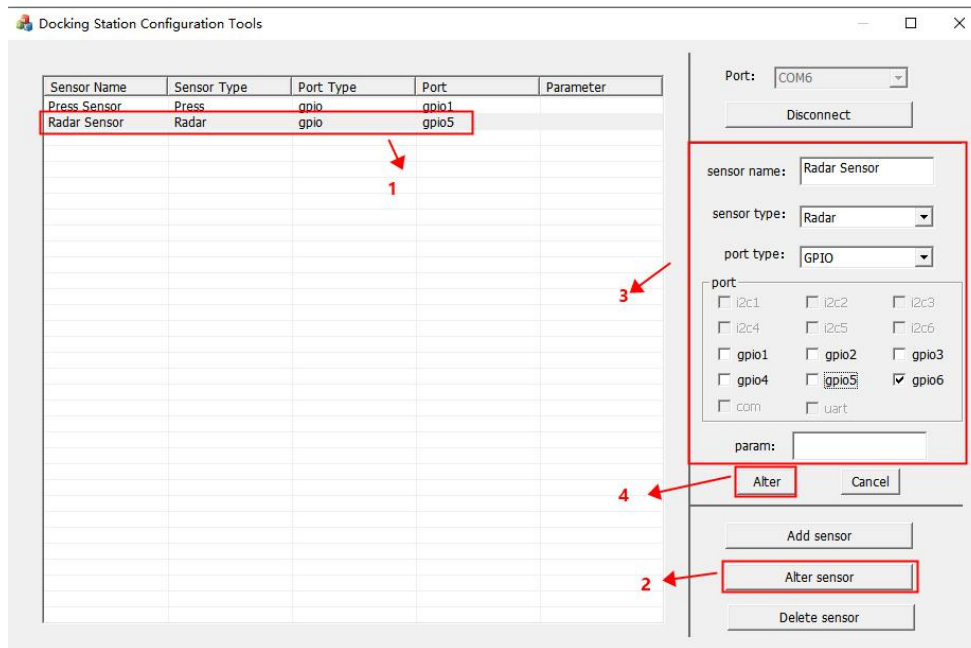
Add Sensor

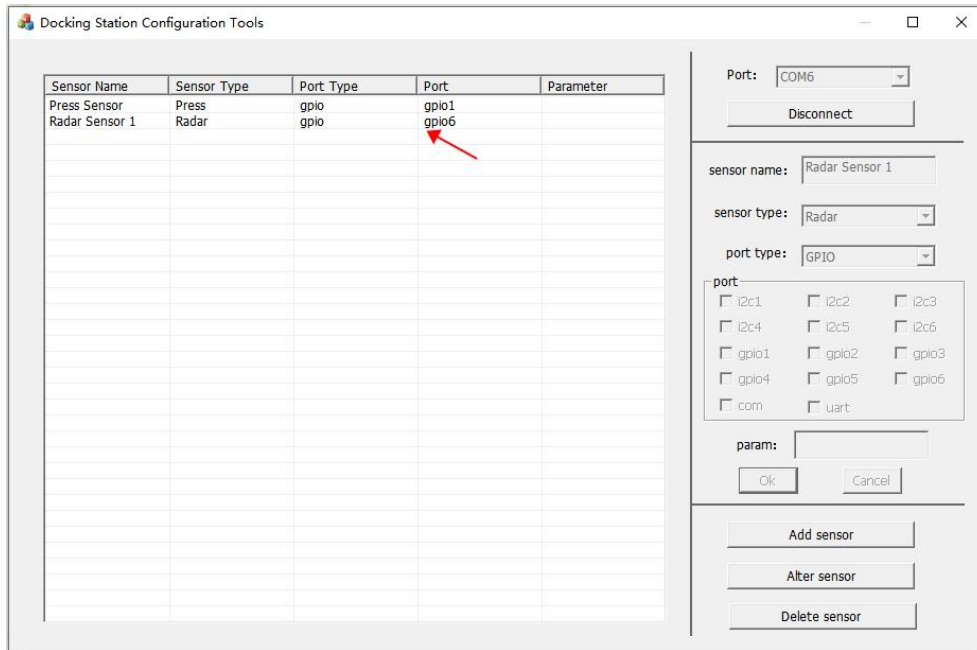




### 3.3 Modify the Sensors

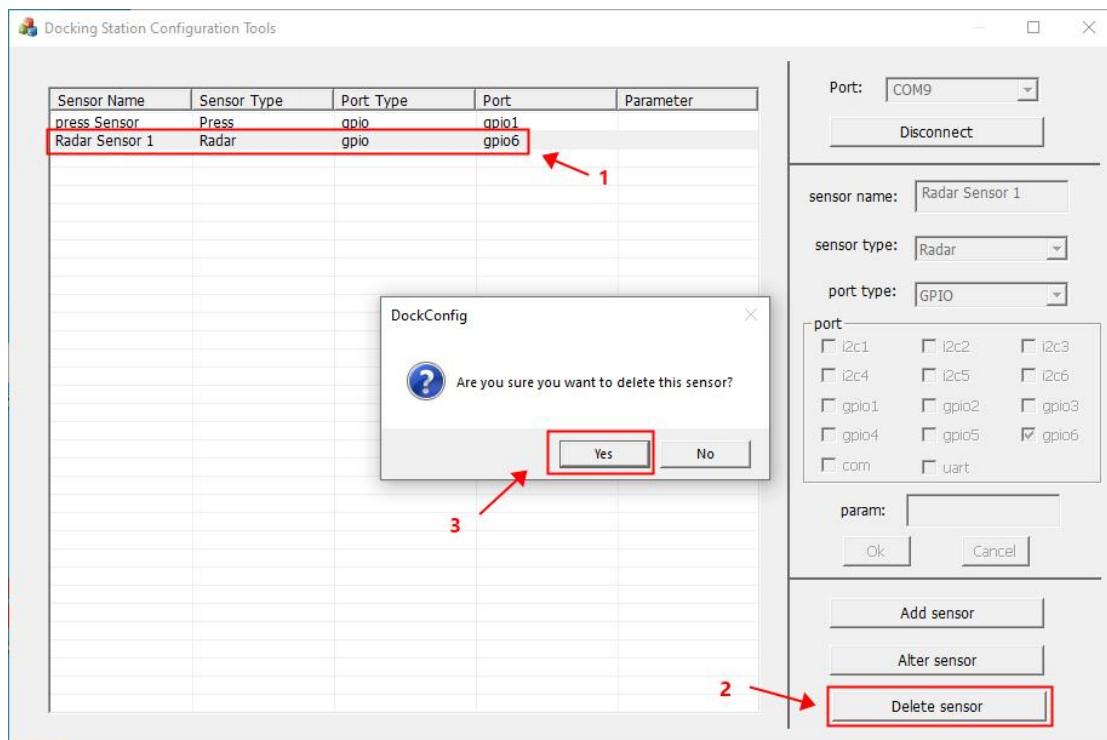
Make sure that you select the sensor that you want. Then click the button of “Alter sensor” to modify the parameter (Display a pop-up tip indicates success).





### 3.4 Remove the Sensors

Make sure that you select the sensor that you want. Then click the button of “Delete Sensor” to modify the parameter (Display a pop-up tip indicates success).





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