

Rviz Visualization

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This tutorial uses Ubuntu 22.04 and ROS2 version Humble as an example.

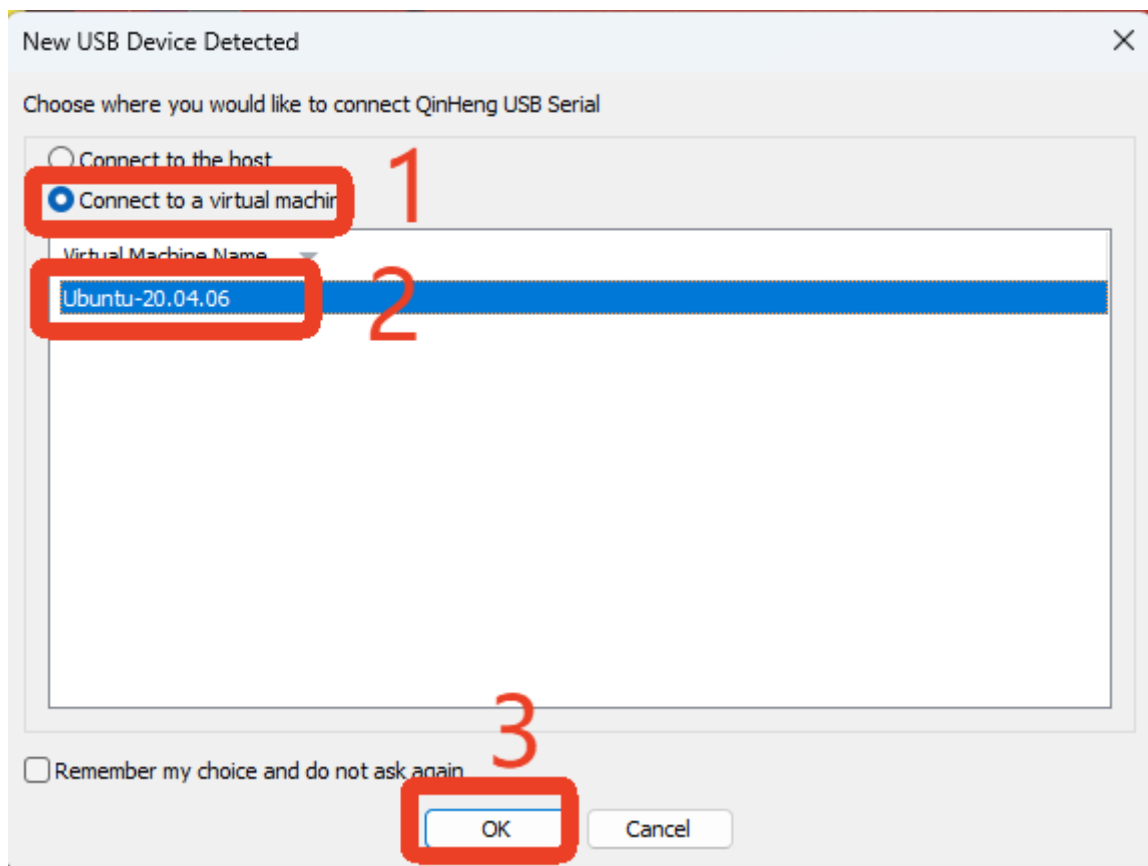
Note: Before running, please ensure that you have completed the "[IMU Data Printing](#)" section of the previous chapter and that it is running correctly.

1. Connecting the Device

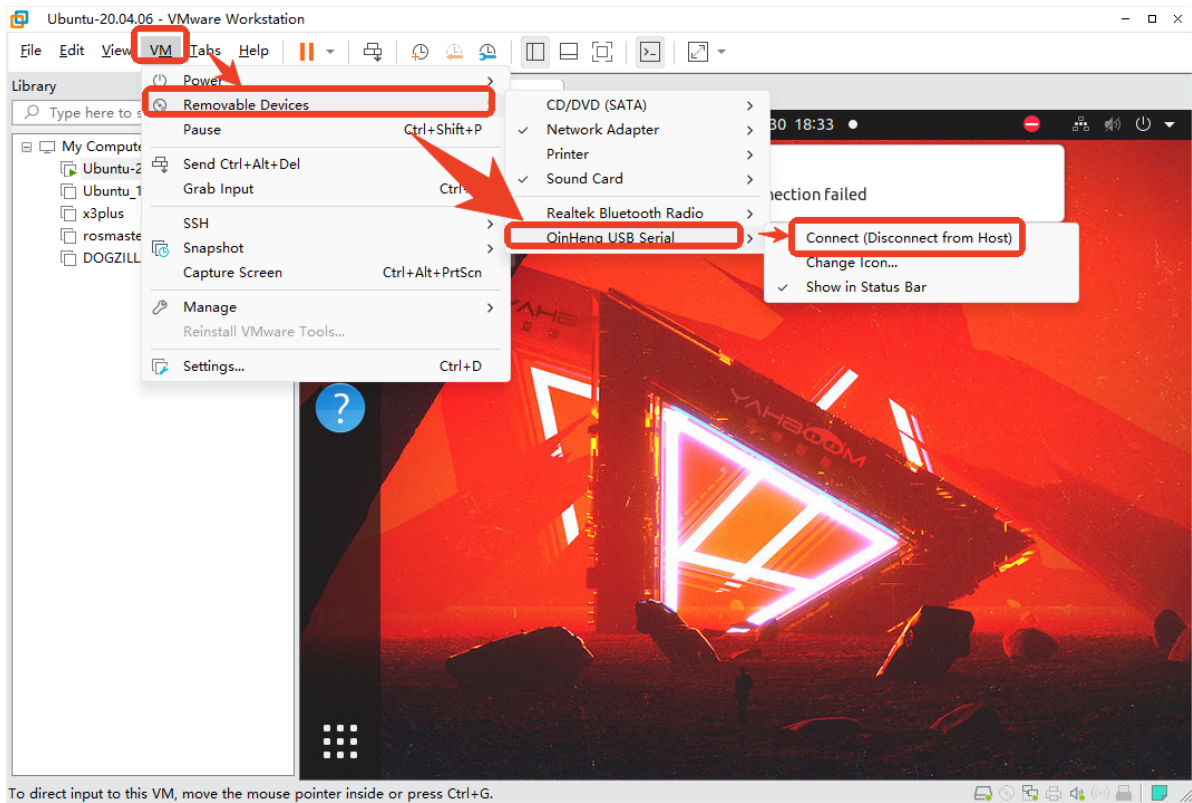
Connect the IMU attitude sensor to the host controller's USB port using a Type-C cable.

If using a virtual machine, refer to the following steps:

Virtual machine displays a pop-up window



Virtual machine does not display a pop-up window



2. Check device connection status

View device ID

```
lsusb
```

```
yahboom@VM: ~  
yahboom@VM: ~ 80x24  
[System Information]  
IP_Address_1: 192.168.11.181  
-----  
ROS_DOMAIN_ID: 28 | ROS: humble  
-----  
yahboom@VM:~$ lsusb  
Bus 004 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub  
Bus 003 Device 004: ID 0e0f:0002 VMware, Inc. Virtual USB Hub  
Bus 003 Device 003: ID 0e0f:0002 VMware, Inc. Virtual USB Hub  
Bus 003 Device 005: ID 1a86:7523 QinHeng Electronics CH340 serial converter  
Bus 003 Device 002: ID 0e0f:0003 VMware, Inc. Virtual Mouse  
Bus 002 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub  
Bus 001 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub  
yahboom@VM:~$
```

View device number

```
11 /dev/ttyU*
```

```
yahboom@VM:~$ ll /dev/ttyU*  
crw-rw---- 1 root dialout 188, 0 10月 22 19:00 /dev/ttyUSB0  
yahboom@VM:~$
```

View IMU mapping

```
ll /dev/my*
```

```
yahboom@VM:/etc/udev/rules.d$ ll /dev/my*  
lrwxrwxrwx 1 root root 7 10月 22 19:02 /dev/myimu -> ttyUSB0  
yahboom@VM:/etc/udev/rules.d$
```

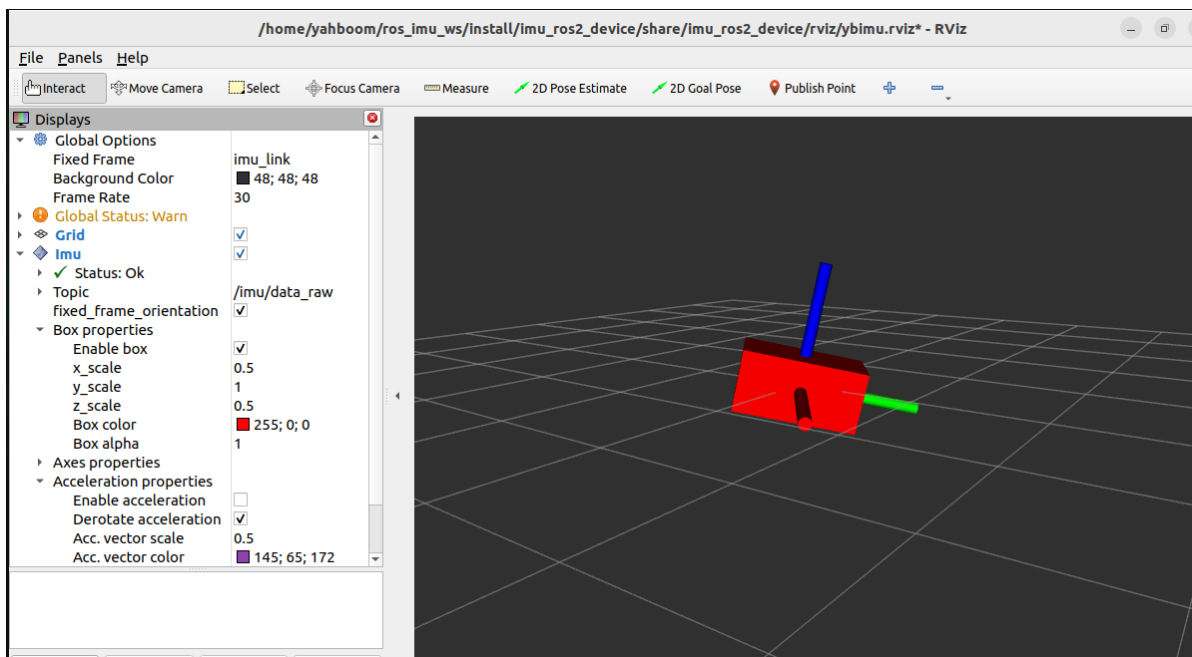
3. Rviz Visualization

Run the command to view

```
ros2 launch imu_ros2_device ybimu_display.launch.py
```

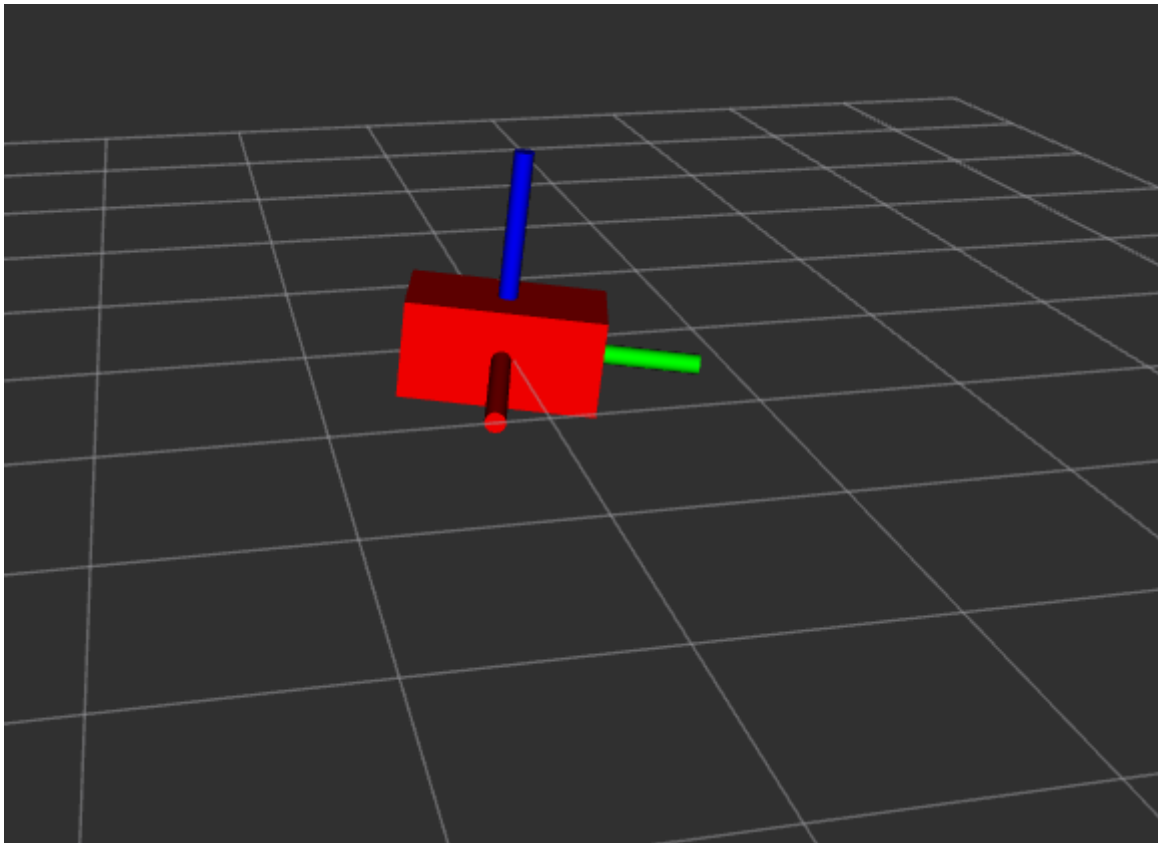
```
yahboom@VM:~$ ros2 launch imu_ros2_device ybimu_display.launch.py
```

After entering, you can rotate the IMU module, and you can see the IMU on the screen rotate accordingly.



Notes:

If, after starting the command, the IMU module is placed horizontally and the blocks displayed by rviz are tilted horizontally, as shown in the image, calibration is required.



Refer to the calibration tutorial in the attachment folder for details.

4. Raspberry Pi 5, RDK X5 series, Jetson series

Note: Before running, please ensure that you have completed the "[IMU data printing](#)" section of the previous chapter and that it runs normally.

4.1 Starting the Docker Image

```
sh ros2_humble.sh
```

4.2 Rviz Visualization

```
ros2 launch imu_ros2_device ybimu_display.launch.py
```

