

Approaches to access RPi from laptop

- Through a terminal interface called SSH
- Through a graphical user interface
- Transfer files between RPi and a remote computer

No matter how you communicate with the RPi system, you need to know its IP address.

The following guidelines assume you are accessing RPi from a remote Windows system.

1. Access through a terminal interface called SSH

[Detailed Procedure](#)

2. Access through a graphical user interface

Use a program called vncserver, which mirrors the graphical user interface on Raspberry Pi remotely.

VNC (Virtual Network Computing) is a graphical desktop sharing system that allows you to remotely control the desktop interface of one computer from another. It transmits the keyboard and mouse events from the controller, and receives updates to the screen over the network from the remote host.

Detailed Procedure: P23~25 <Raspberry.Pi.Robotic.Projects>

3. Transfer files between RPi and a remote computer

Use a program called WinSCP

Detailed Procedure: P28~30 <Raspberry.Pi.Robotic.Projects>

FAQ

• VNC Password set by myself

VNC Password: 12345678

• RPi Default Account & Password

Account: pi

Password: raspberry

• VNC Viewer connection refused

Error Message "Failed To Connect: The connection was refused by the host computer"

[Cause](#)

[Common resolution](#)

Explicitly state the port number when connecting from the client.

192.168.x.x: <displayName>

If you start it using display :1 (or something more than 0), you have to enter the IP like this:
192.168.x.x:590<displayName> (e.g. 192.168.1.23:5901)

or

192.168.x.x: <displayName> (e.g. 192.168.1.23:01, by default this address is automatically interpreted into 192.168.1.23:5901)

Port number is relevant to the desktop used to display.

Desktop 0 is port 5900

Desktop 1 is port 5901

Desktop 2 is port 5902

Each port will only be open if the relevant desktop is set to a VNC connection. In most cases it should be port 5901 that you need to connect to.

- **Why can't display Raspberry Pi on laptop via HDMI only?**

Laptop HDMI ports are generally output only, meaning it can only be used to display the laptop's screen on another device. To display RPi desktop on a monitor via HDMI, your HDMI port needs to be HDMI input enabled, which is unusual for these kinds of computers.

[How to connect RPi to laptop without a network](#)

<https://www.youtube.com/watch?v=srVoBC3yfcs>

- **How to access RPi easily when you switch RPi to a new network and a monitor is not available?**

Force RPi to connect to a specific network and assign it with a static IP.

A easy approach: set your laptop as hotspot (e.g. 用猎豹 WiFi)

Note:

Before you switch it to a new network, you have to connect RPi to the network generated by your laptop, so RPi can remember the password and automatically connects to the WiFi next time when it detects the same WiFi.

Every time RPi is connected to another network, it forgets the password of the old one and won't automatically connect to the old one next time.

Reference

[Guideline from raspberrypi.org](#)

Book <Raspberry.Pi.Robotic.Projects>

[Manual of PuTTY](#)

Meshlium web interface: <http://10.10.10.1>

Account: root

Password: libelium