

How can I set setup a Pi4 without MicroHDMI and Ethernet cable

Sat Aug 01, 2020 7:21 pm

The USB-C port does not support video (it's just a USB 2.0 port with a type-C connector).

Use the Raspberry Pi Imager to write Raspberry Pi OS (32-bit) to your card, then 1° add (using notepad on a Windows PC) an empty file named `ssh` to the root (FAT32 partition) to enable SSH logins. For wireless networking 2° add another file named `wpa_supplicant.conf` with the following inside :

```
ctrl_interface=DIR=/var/run/wpa_supplicant GROUP=netdev
update_config=1
country=GB

network={
    ssid="WiFi SSID"
    psk="WPA/WPA2 passphrase"
}
```

Edit country=, ssid= and psk= with your information and save the file.

Safely eject the card and use that to boot your Pi4B. It should boot and connect to your router. If you have a PC running an up-to-date version of Windows 10, or a recent version of Mac OS or Linux you should be able to SSH into `pi@raspberrypi.local` (or `pi@raspberrypi`). If that doesn't work login to your router and check the list of connected clients to find the Pi's IP address.

Once you have connected via SSH from a Windows PC (using "PuTTY" or a terminal program) you can use the command `sudo raspi-config` to set up your Pi4B. The main things you'll want to do is change the default password, enable the VNC server and set a resolution for the VNC remote desktop. Then you can use the free **RealVNC Viewer** to connect to the Raspberry Pi desktop and control your Pi from your main PC.

Linux Commands: To Find Out Wireless Network Speed, Signal Strength And Other Information

- `# iwconfig wlan0`
Sample outputs:

```
wlan0      IEEE 802.11abgn  ESSID:"nixcraft5g"
Mode:Managed  Frequency:5.18 GHz  Access Point: 74:44:44:44:57:FC
Bit Rate=6 Mb/s   Tx-Power=15 dBm
Retry long limit:7   RTS thr:off   Fragment thr:off
Encryption key:off
Power Management:off
Link Quality=41/70  Signal level=-69 dBm
Rx invalid nwid:0  Rx invalid crypt:0  Rx invalid frag:0
Tx excessive retries:0  Invalid misc:28  Missed beacon:0
```

- `# iwconfig wlan0 | grep -i --color signal`
Sample outputs:

```
Link Quality=41/70   Signal level=-69 dBm
```

Some parameters are only displayed in short/abbreviated form

- Install wavemon

Type the following [apt-get command/apt command](#) on a Debian/Ubuntu Linux:

```
$ sudo apt install wavemon
```

How do I use wavemon?

Just type the following command to see the details:

```
$ wavemon
```

```

-Interface
wlan0 (IEEE 802.11abgn), ESSID: " "
-Levels
link quality: 40/70
=====
signal level: -70 dBm (0.10 nW)
=====
-Statistics
RX: 101 (32.28 KiB), invalid: 0 nwid, 0 crypt, 0 frag, 28 misc
TX: 33 (7.98 KiB), mac retries: 1, missed beacons: 0
-Info
mode: Managed, access point: 
freq: 5.18 GHz, channel: 36, bitrate: 6 Mbit/s
power mgt: off, tx-power: 15 dBm (31.62 mW)
retry: long limit 7, rts/cts: off, frag: off
encryption: n/a
-Network
ip: 192.168.1.100/24, bcast: 192.168.1.255, mac: 00:21:6A:CA:9B:10
F1info F2hist F3aplst F4 F5 F6 F7prefs F8help F9about F10quit

```

Fig.03: wavemon - a wireless network monitor application for Linux

Remote access with VNC (server/viewer)

<https://www.youtube.com/watch?v=gsVhEEFM07I>

<https://www.youtube.com/watch?v=JZ1pdVVTMrw>

https://www.youtube.com/watch?v=kPeb5lvZW_k