

Orange Pi PC Quick Start Guide

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Step 1: Get what you need.

To enjoy the use of your Orange Pi PC, you will need at least the accessories in the table below.

No.	Item	Minimum recommended specification & notes
1	TF card	<ul style="list-style-type: none">• Minimum size 8Gb; class 10 (the class indicates how fast the card is).• We recommend using branded TF cards as they are more reliable.
2a	HDMI(Full sized) to HDMI / DVI lead	<ul style="list-style-type: none">• HDMI to HDMI lead (for HD TVs and monitors with HDMI input). OR HDMI to DVI lead (for monitors with DVI input).
2b	AV video lead	<ul style="list-style-type: none">• A standard AV video lead to connect to your analogue display if you are not using the HDMI output.
3	Keyboard and mouse	<ul style="list-style-type: none">• Any standard USB keyboard and mouse should work.• Keyboards or mice that take a lot of power from the USB ports, however, may need a powered USB hub. This may include some wireless devices.
4	Ethernet cable/USB WiFi(Optional)	<ul style="list-style-type: none">• Networking is optional, although it makes updating and getting new software for your Orange Pi PC much easier.
5	DC power adapter	<ul style="list-style-type: none">• A good quality, DC power supply that can provide at least 2A at 5V is essential.
6	Audio lead (Optional)	<ul style="list-style-type: none">• You can choose a 3.5mm jack audio led to connect to audio port to get stereo audio.



HDMI to HDMI lead

HDMI to DVI lead

AV video lead



TF card



Micro USB power adapter

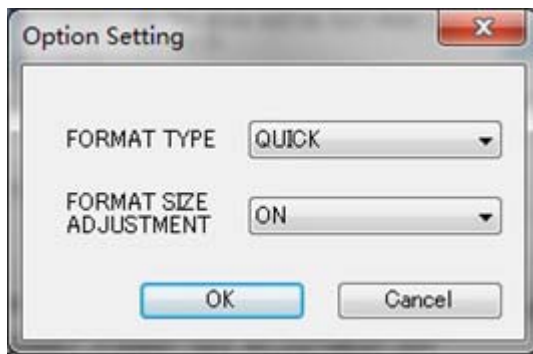
Step 2: Prepare your TF card for the Orange Pi PC

In order to enjoy your Orange Pi PC, you will need to install an Operating System (OS) onto an TF card. Instructions below will teach you how to write an OS image to your TF card under Windows and Linux.

Windows:

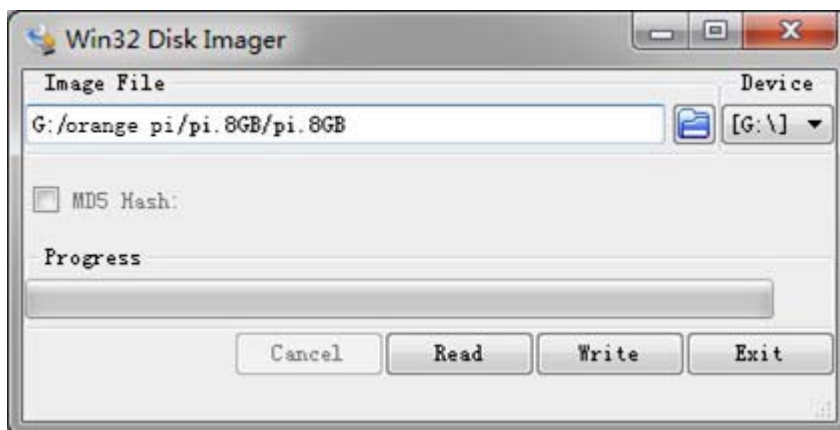
1. Insert your TF card into your computer. The size of TF should be larger than the OS image size, generally 8GB or greater.
2. Format the TF card.
 - i. Download a TF card format tool such as **TF Formatter** from https://www.sdcard.org/downloads/formatter_4/eula_windows/ (https://www.sdcard.org/downloads/formatter_4/eula_windows/)
 - ii. Unzip the download file and run the setup.exe to install the tool on your machine.
 - iii. In the "Options" menu, set "FORMAT TYPE" option to QUICK, "FORMAT SIZE ADJUSTMENT" option to "ON".





- iv. Check that the TF card you inserted matches the one selected by the Tool.
 - v. Click the "Format" button.
3. Download the OS image from the Downloads webpage (<http://www.orangepi.org/downloadresources/>).
 4. Unzip the download file to get the OS image (**exclude android os image, android os image need other burn mode.**)
 - i. Right click on the file and choose "Extract all".
 5. Write the image file to the TF card.

- i. Download a tool that can write images to an TF card, such as **Win32 Diskimager** from: <http://sourceforge.net/projects/win32diskimager/files/Archive/> (<http://sourceforge.net/projects/win32diskimager/files/Archive/>)
- ii. Open the unzipped image file.



- iii. Click "Write" button. Wait patiently to successfully complete writing.

Linux:

1. Insert your TF card into your computer. The size of TF should be larger than the OS image size, generally 8GB or greater.
2. Format the TF card.
 - i. Run **fdisk -l /dev/sdx** command to check the TF card node.
 - ii. Run **umount /dev/sdxx** to unmount all the partitions of the TF card.
 - iii. Run **sudo fdisk /dev/sdx** command to configure TF card. Use **o** command to delete all partition

of TF card and use **n** command to add one new partition. Use **w** command to save change.

- iv. Run **sudo mkfs.vfat /dev/sdx1** command to format the new created partition of TF card as FAT32.

(**x** should be replaced according to your TF card node)

You can also jump this step under Linux, because write image command **dd** under Linux will format the TF card automatically.

3. Download the OS image from the Downloads webpage (<http://www.orangepi.org/downloadresources/>).
4. Unzip the download file to get the OS image (**exclude android os image, android os image need other burn mode.**).

- i. Run **unzip [path]/[downloaded filename]** command.

If the filename extension is .tgz, run **tar zvxf [path]/[downloaded filename]** command.

Ensure that neither the file name of the image you're using or the path contain any spaces (or other odd characters, for that matter).

5. Write the image file to the TF card.

- i. Run **sudo fdisk -l /dev/sdx** command to check the TF card node.
- ii. Verify if the hash key of the zip file is the same as shown on the downloads page (optional).

sha1sum [path]/[imagename]

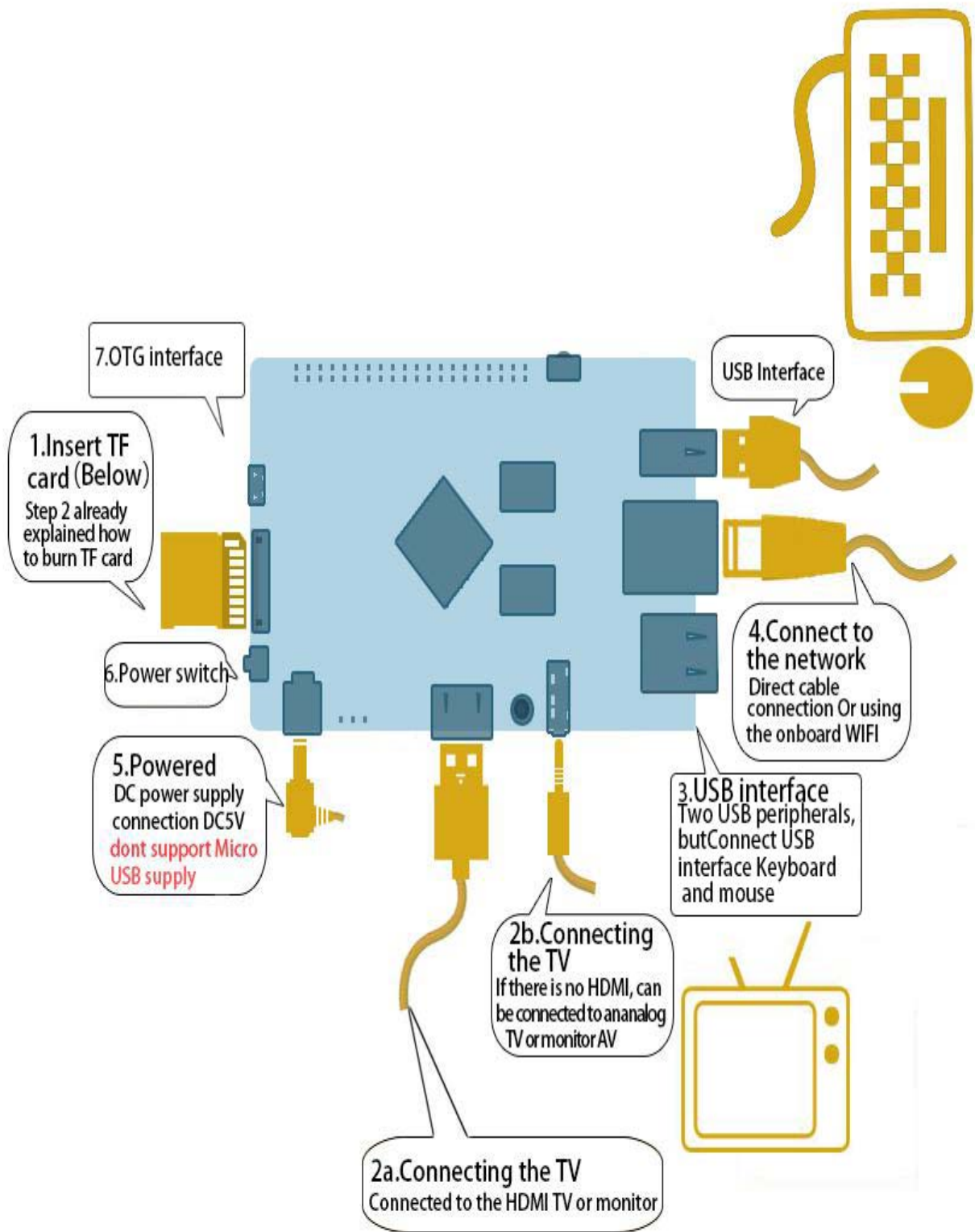
This will print out a long hex number which should match the "SHA-1" line for the TF image you have downloaded.

- iii. Run **umount /dev/sdxx** to unmount all the partition of the the TF card
- iv. Run **sudo dd bs=4M if=[path]/[imagename] of=/dev/sdx** command to write image file to TF card. Wait patiently to successfully complete writing. Please note that block size set to 4M will work most of the time, if not, please try 1M, although 1M will take considerably longer. You can use **sudo pkill -USR1 -n -x dd** command to check progress

(**x** should be replaced according to your TF card node)

Step 3: Set up your Orange Pi PC

According to the set up diagram below, you can easily set up your Orange Pi PC.



1. Insert the written-image TF card into the TF card slot on the left side edge of the upside of the board.
2. On the bottom edge in the middle of the board is the HDMI Type A (Full sized) port, just on the right of the SATA port. Just connect any HDMI Type A cable from the board to your TV or HDMI Monitor.
If you don't have an TV/Monitor with a HDMI or DVI-D port you can use the AV jack located on the right edge above USB HOSTs.
3. Plug a USB keyboard and mouse into the USB slots located on the right edge.
4. Just under the USB ports on the right edge is the ethernet connector for anyone who wants to plug the Orange Pi PC into a wired network. You can also use wifi to connect network.
5. Finally, at the middle of the left edge is the DC power connector. Plug in a regulated power supply that is rated at 5V \pm 5% and at least 1500mA (or 2.0A). Any number bigger than 1500 mA will also work.
Note : Avoid using the micro-usb power connector, because micro-usb power does not supply power.

If all goes well, the Orange Pi PC will boot in a few minutes. The screen will display the OS GUI(Graphical User Interface). The first boot of a new OS can sometimes take a long time. Be patient! Subsequent boots are usually much quicker.

Step 4: Shut down your Orange Pi PC

You can use the GUI to shut down the Orange Pi PC safely.

Also you can run the command in the terminal:

```
sudo halt
```

or

```
sudo shutdown -h now
```

This will shut down the PI safely, (just use the power key to turn off might damage the TF-cards file system). After that you can press the power key for 5 seconds to turn it off.



Orange pi is an open-source
hardware product.

Technology is supported by Shenzhen
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