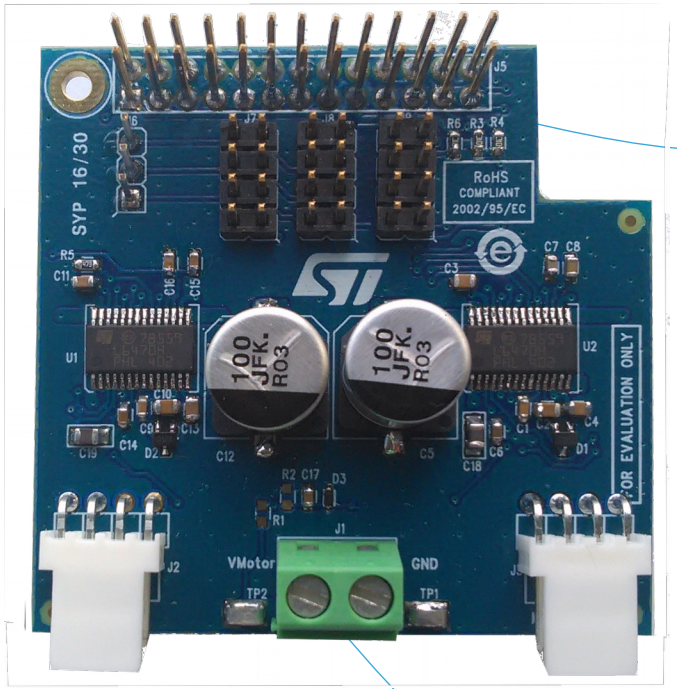
EVAL6470H-RPi Quick Start Guide



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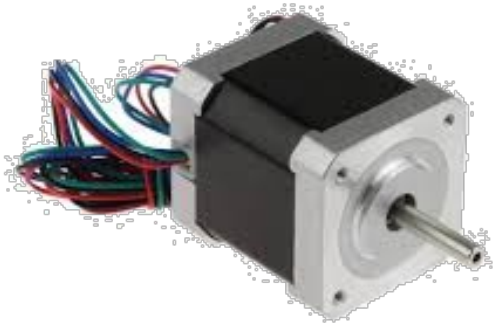
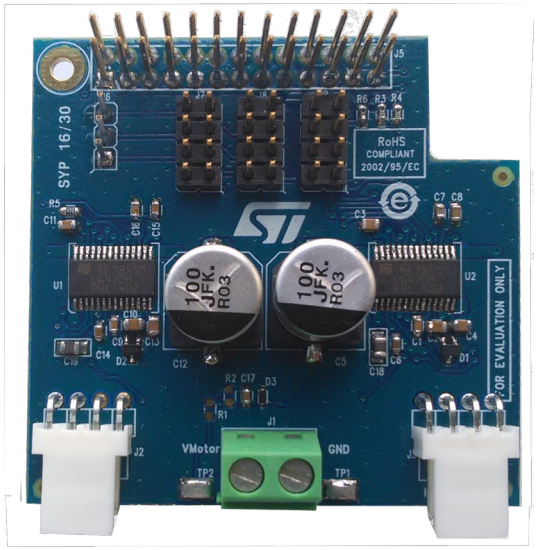
What do you need

Needed material

- One Raspberry Pi platform. The distribution has been tested with Raspberry Pi 3.
- Up to 4 EVAL6470H-RPi expansion boards
- 2 steeper motors per EVAL6470H-RPi board
- The distribution image file : EVAL6470H-RPi.img

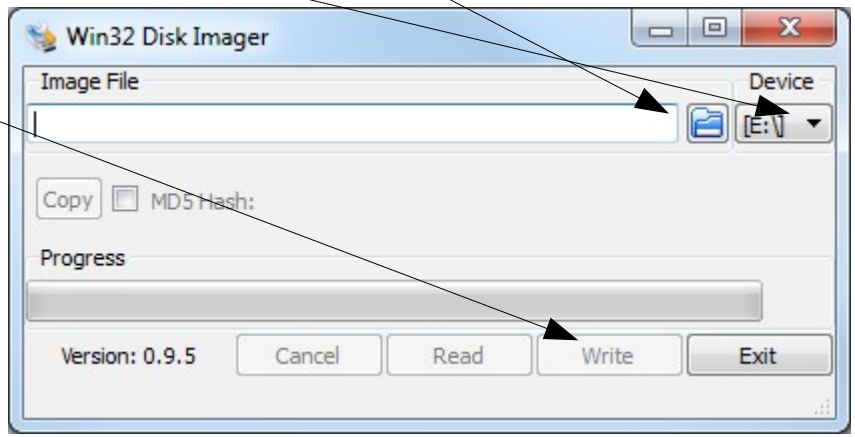


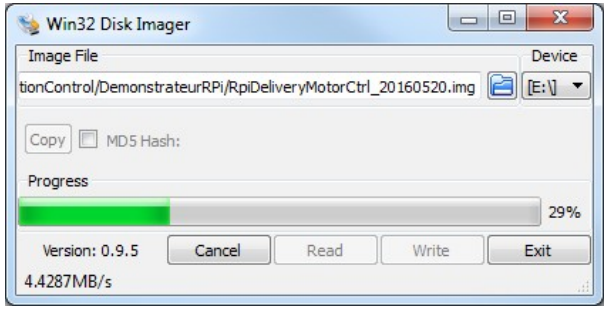


How to prepare the SD Card

On Windows computer

- Download Win32 Disk Imager from SourceForg
  - https://sourceforge.net/projects/win32diskimager/
- After installation, select the image to write (EVAL6470H-RPi.img) on the SD card, and the SD card location :
- One done, click on Write
- Writing is ongoing





- Once done, your SD card is ready to be used in a Raspberry Pi

On Linux computer

- Determine the path to the SD card where you want to write the image, with the df command :

```
$ df
….
/dev/mmcblk0p1          64456     20944     43512  33% /media/….
/dev/mmcblk0p2        1795504    867348    825604  52% /media/…
...
```

- Go in the directory where is saved the image you want to write, and enter the command :

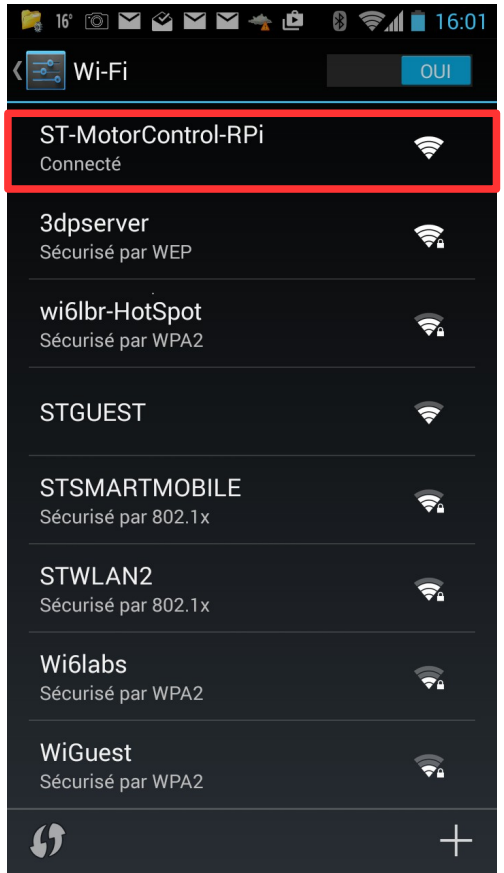
```
$ dd  if=EVAL6470H-RPi.img  of=/dev/mmcblk0
```

- If dd don't work, access right may be needed, so use « sudo dd » instead of « dd »
- Once done, your SD card is ready to be used in a Raspberry Pi

How to connect to the RPi

Wifi connection

- The GNU Linux system in the SD card integrate a Wifi access point. Name of the access point is **ST-MotorControl-RPi**
- You can connect to the access point from a personnal computer or from a SmartPhone.



- When connected from a personnal computer, you can log on RPi using a ssh explorer like WinSCP
- Name and passwd of the user on RPi are :
  - Name = pi
  - Passwd = raspberry

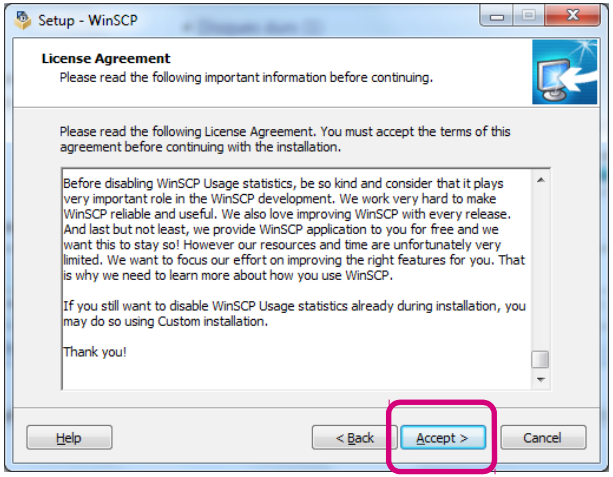
How to install WinSCP and modify configuration file : motor_config.txt

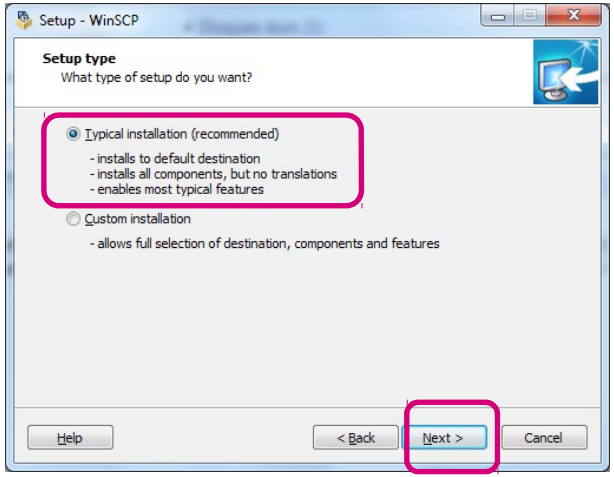
Install WinSCP on Windows computer

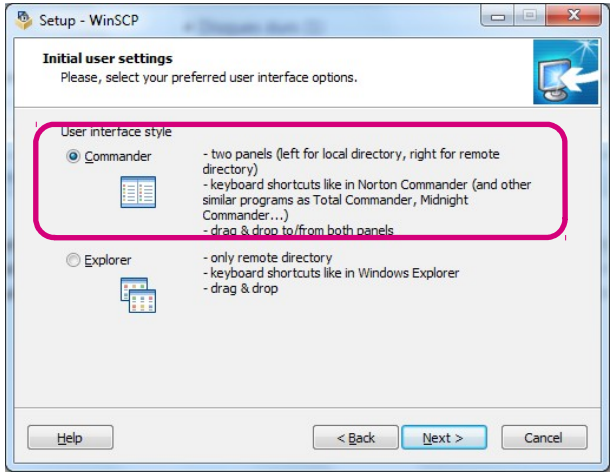
- WinSCP can be downloaded at : https://winscp.net/eng/download.php
- Chose the installation package.
- *You can also download and install PuTTY that will allow you to connect to Raspberry Pi and to open a shell windows.*

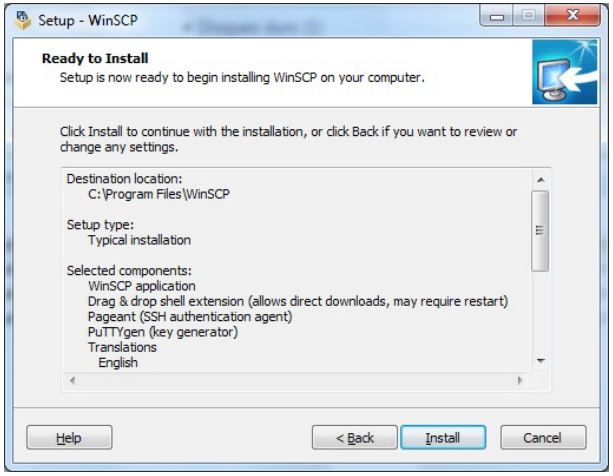
Install WinSCP on Windows computer

- Launch the installation package : winscp576setup.exe



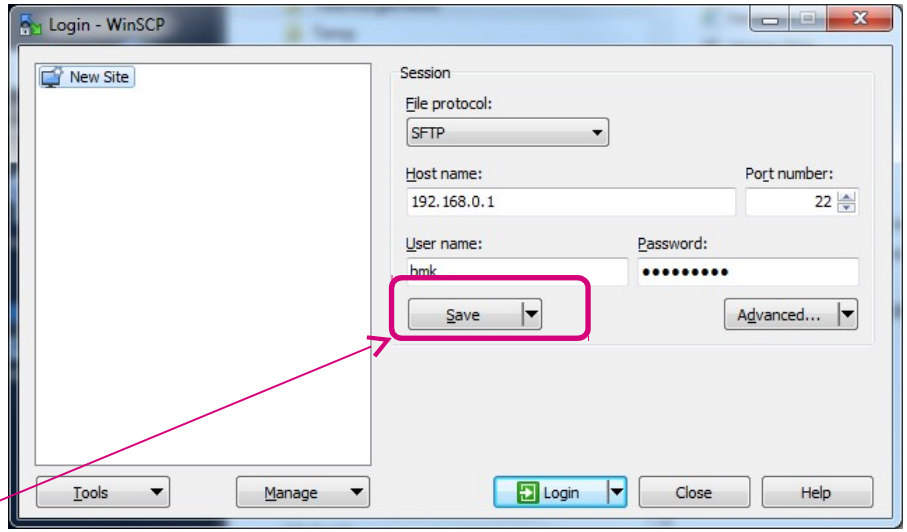




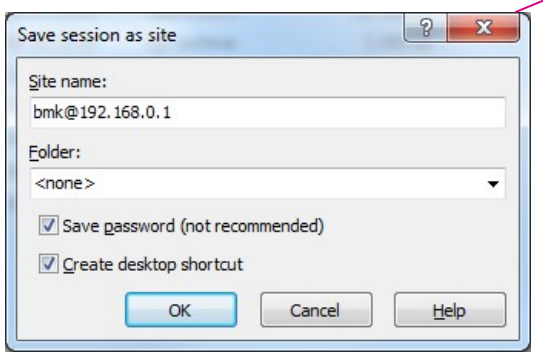


Connect to Raspberry Pi on Windows

- Launch the WinSCP application
- Enter session information:
  - Protocol : SFTP
  - Host name: 192.168.22.1
  - Port number : 22
  - User name : pi
  - Password : raspberry



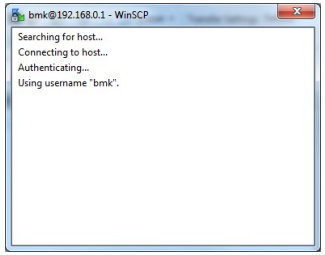
- And save it



- A new site : pi@192.168.22.1 is created

Connect to Raspberry Pi on Windows

- To connect to Raspberry Pi, click on Login button
- WinCSP will connect to the Raspberry Pi. The system may ask you if you accept to connect to an unknown address. Answer yes.

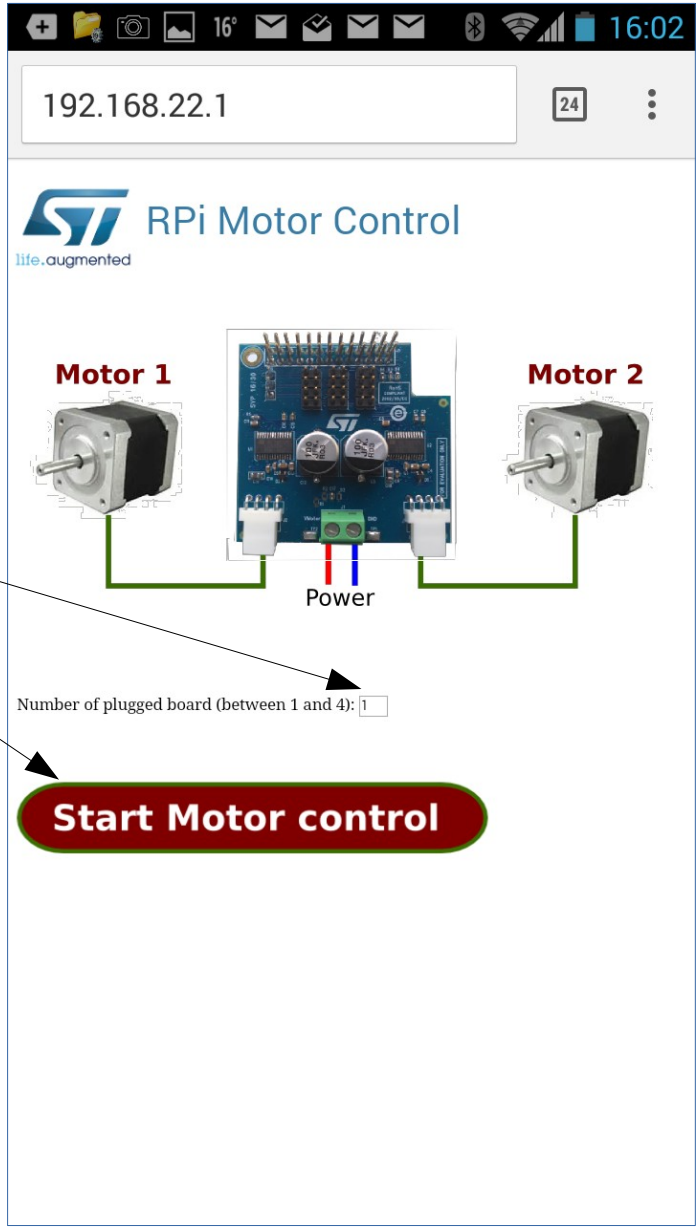


- A WinSCP window, with 2 panels, opens :
  - In the left panel, you have access to your home directory of your computer.
  - In the right panel, you have access to the directory of the pi user on Raspberry Pi
- You can now open the configuration file : **motor_config.txt**
  - This file contains the configuration parameters for each of the 8 motors.

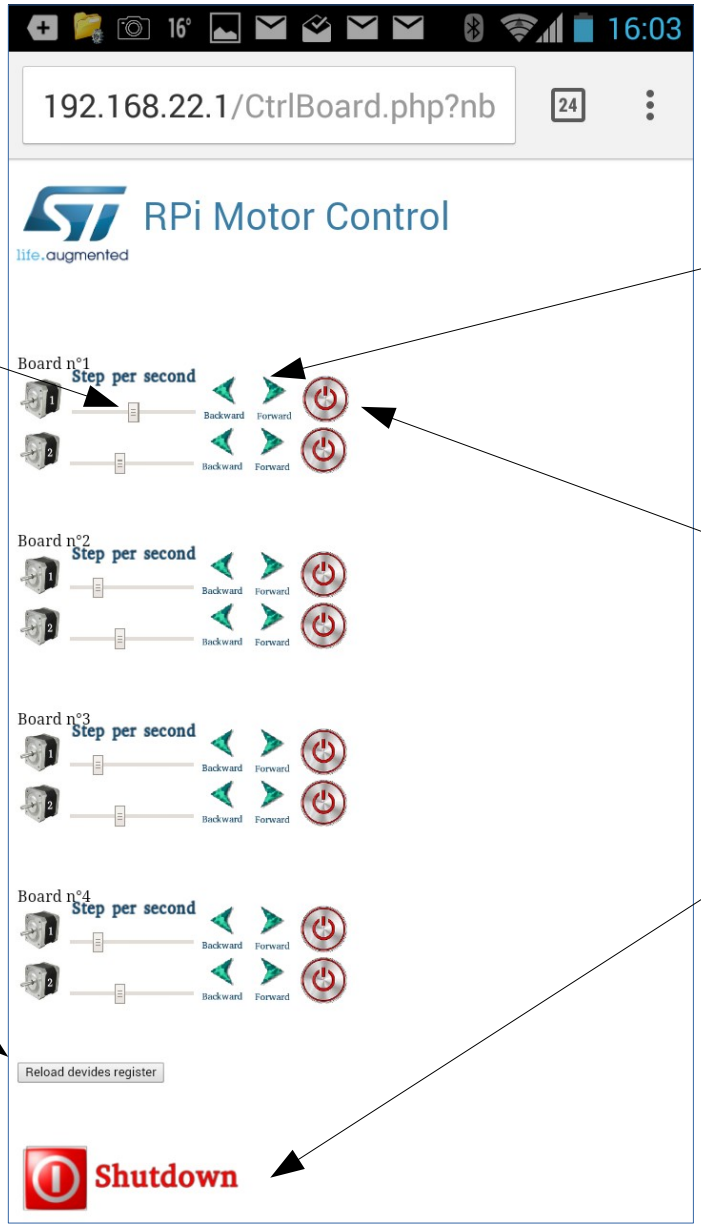
How to control motors

How to control motors

- In you web browser (on PC or smartphone), enter address 192.168.22.1
- Enter the number of board to control (1 to 4)
- Press « Start Motor control »
- Now you can control motors



How to control motors



Select motor speed in step/s

Press to start motor in forward or backward direction

Press to stop motor

Press to reload the motor_config.txt file once modified

!! Press to shutdown the Rpi !!

Never unplug RPi power without pressing Shutdown button