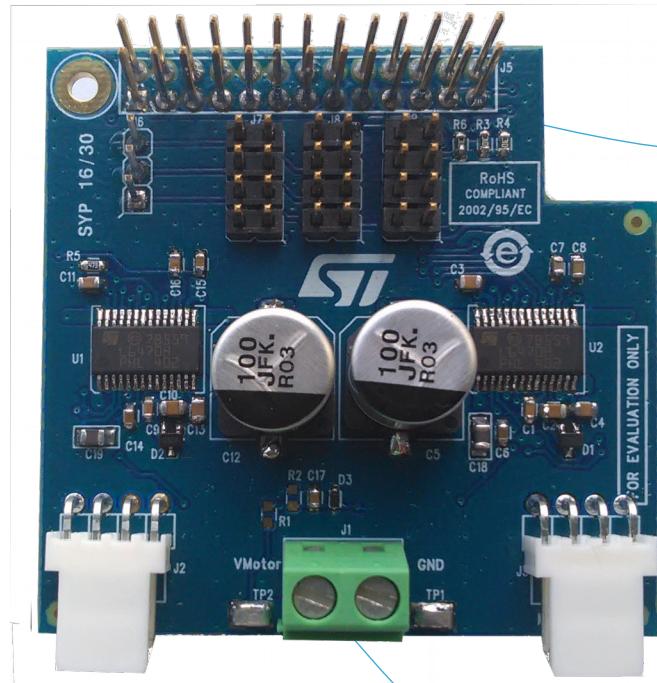
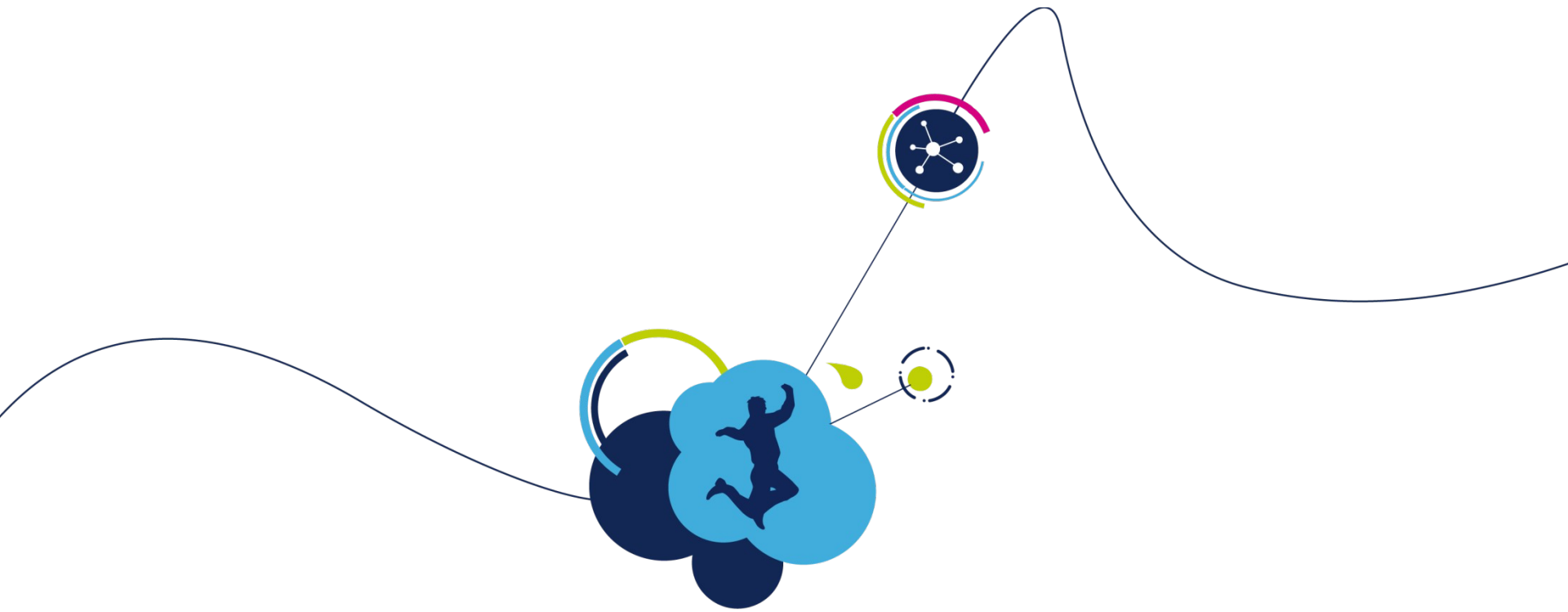


EVAL6470H-RPi Quick Start Guide



Contents

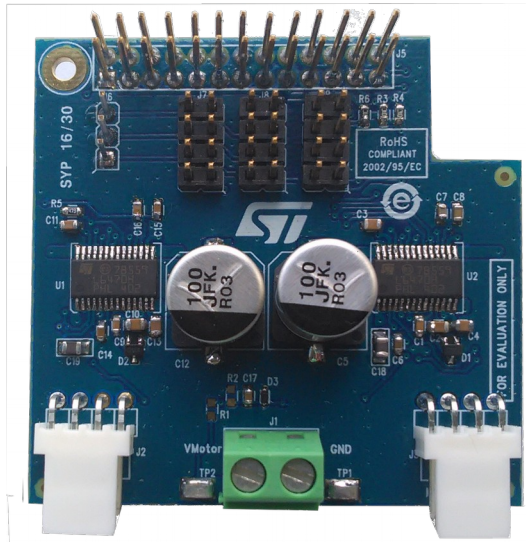
- What do you need
- How to prepare the SD Card
- How to connect to the Rpi
- How to install WinSCP and modify configuration file :
motor_config.txt
- How to control motors



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 stepper motors per EVAL6470H-RPi board
- The distribution image file : [EVAL6470H-RPi.img](#)

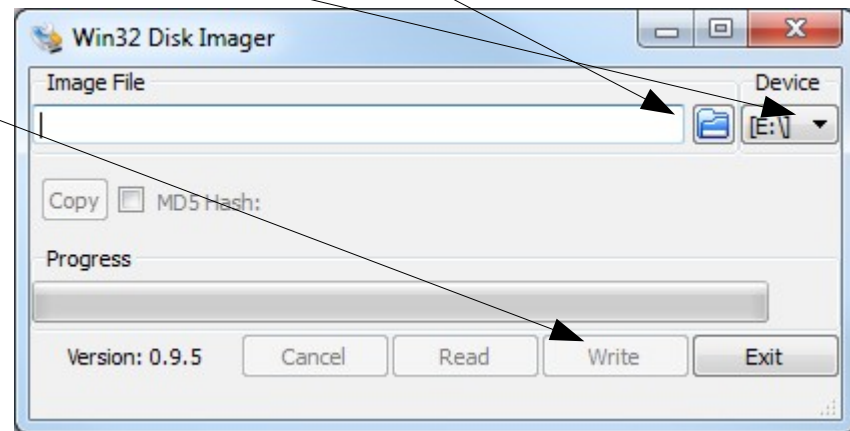
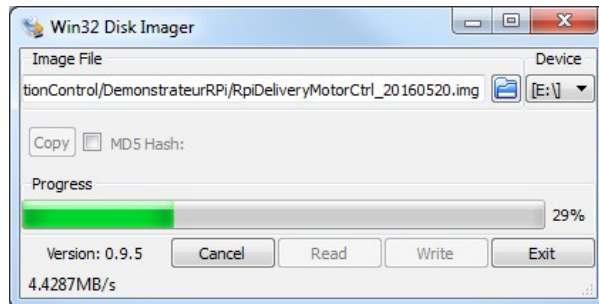




How to prepare the SD Card

On Windows computer

- Download Win32 Disk Imager from SourceForge
 - <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
```

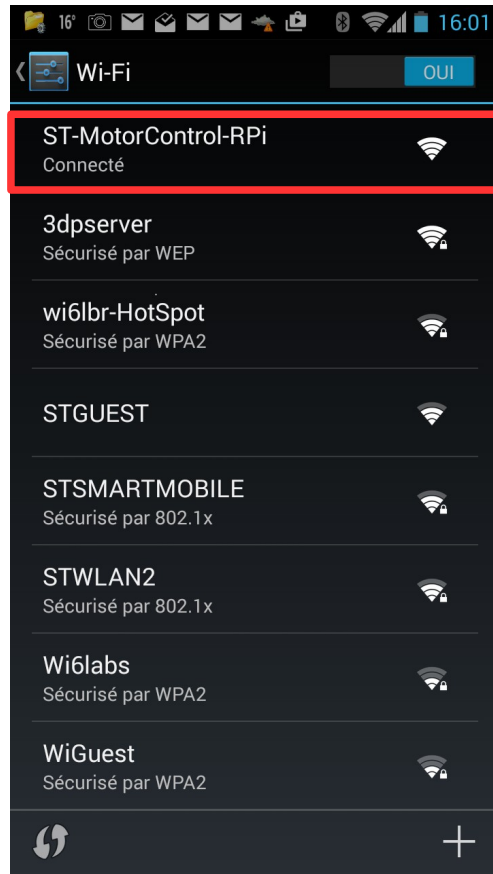
- If dd don't work, access right may be needed, so use « sudo dd » instead of « dd »
- Once done, your SD card is ready to be used in a Raspberry Pi



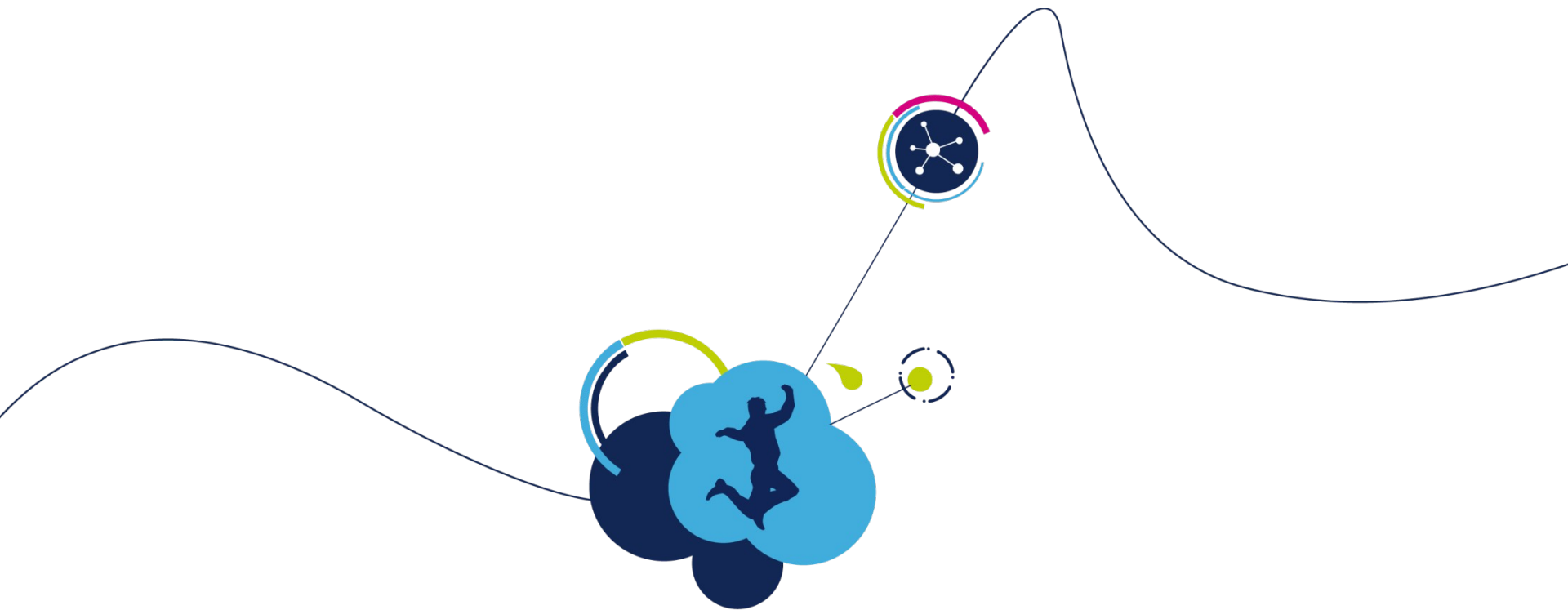
How to connect to the RPi

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 personal computer or from a SmartPhone.



- When connected from a personal 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.*



The screenshot shows the WinSCP website's download page. The browser address bar displays <https://winscp.net/eng/download.php>. The page header includes the WinSCP logo and the tagline "Free SFTP, SCP and FTP client for Windows". A navigation menu contains links for News, Introduction, SSH Client, SFTP Client, FTP Client, Download, Install, Donate, and Documentation. Below the menu, the "WinSCP Downloads" section features links for "[Download WinSCP]", "[WinSCP Release Notification]", and "[Download PuTTY]". An advertisement banner for 123RF is visible. The "Download WinSCP" section lists various download options: "Installation package (5.6 MiB; 452,375 downloads to date)", "Portable executables (4.7 MiB; 73,761 downloads to date)", ".NET assembly / COM library (4.6 MiB; 3,371 downloads to date)", and "Source code (8.8 MiB; 1,719 downloads to date)". At the bottom, there are links for "[Release Notes, Checksums]", "[What's New]", and "[Release Notifications]".

WinSCP
Free SFTP, SCP and FTP client for Windows

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WinSCP 5.7.6

Installation package (5.6 MiB; 452,375 downloads to date)

Portable executables (4.7 MiB; 73,761 downloads to date)

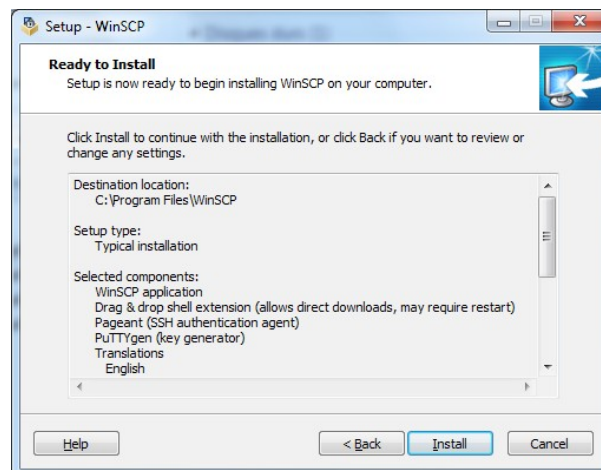
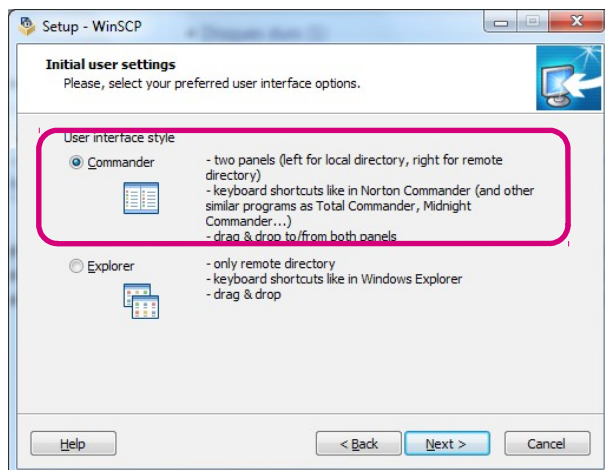
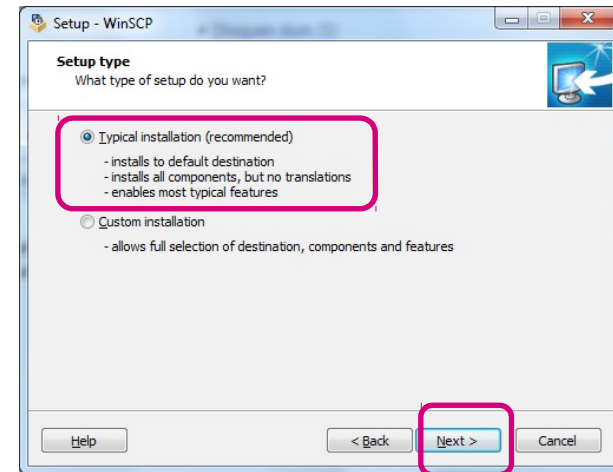
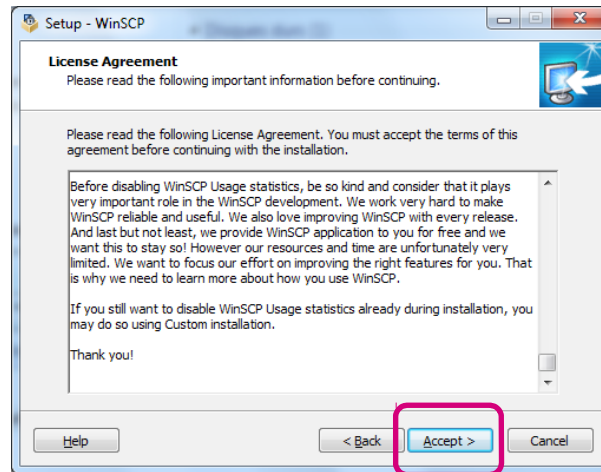
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[Release Notes, Checksums] [What's New] [Release Notifications]

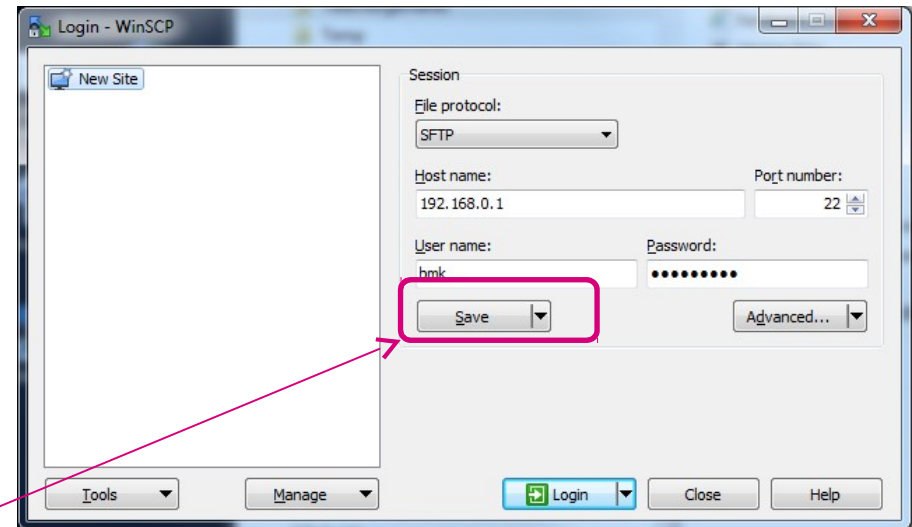
Install WinSCP on Windows computer

- Launch the installation package : winscp576setup.exe

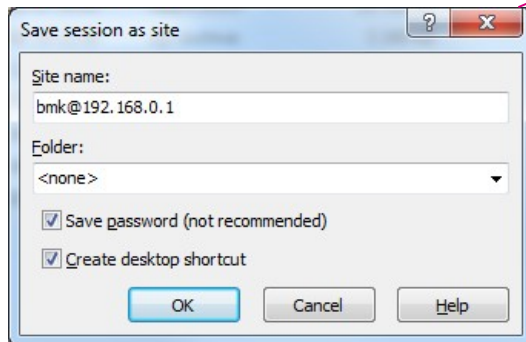


Connect to Raspberry Pi on Windows

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



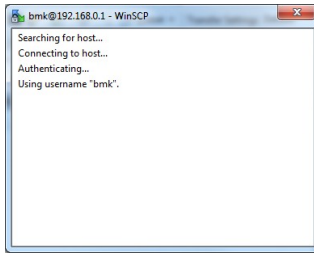
- And save it



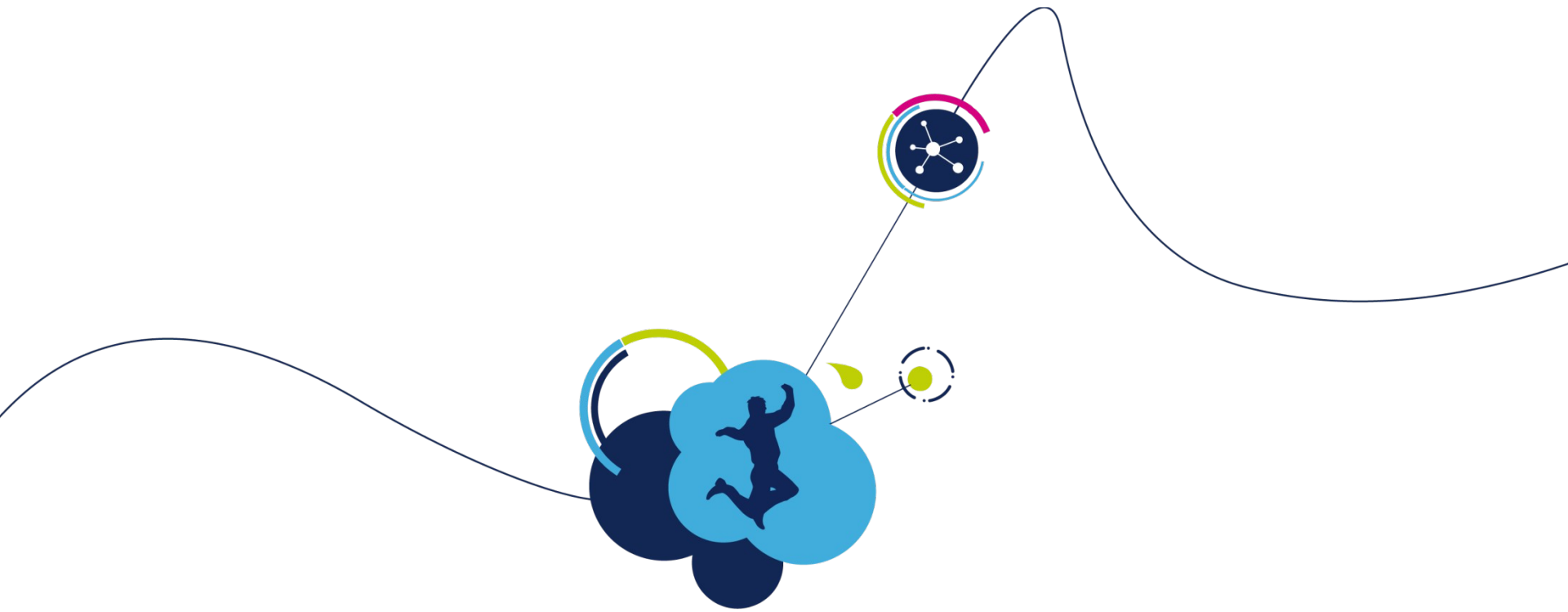
- A new site : pi@192.168.22.1 is created

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.



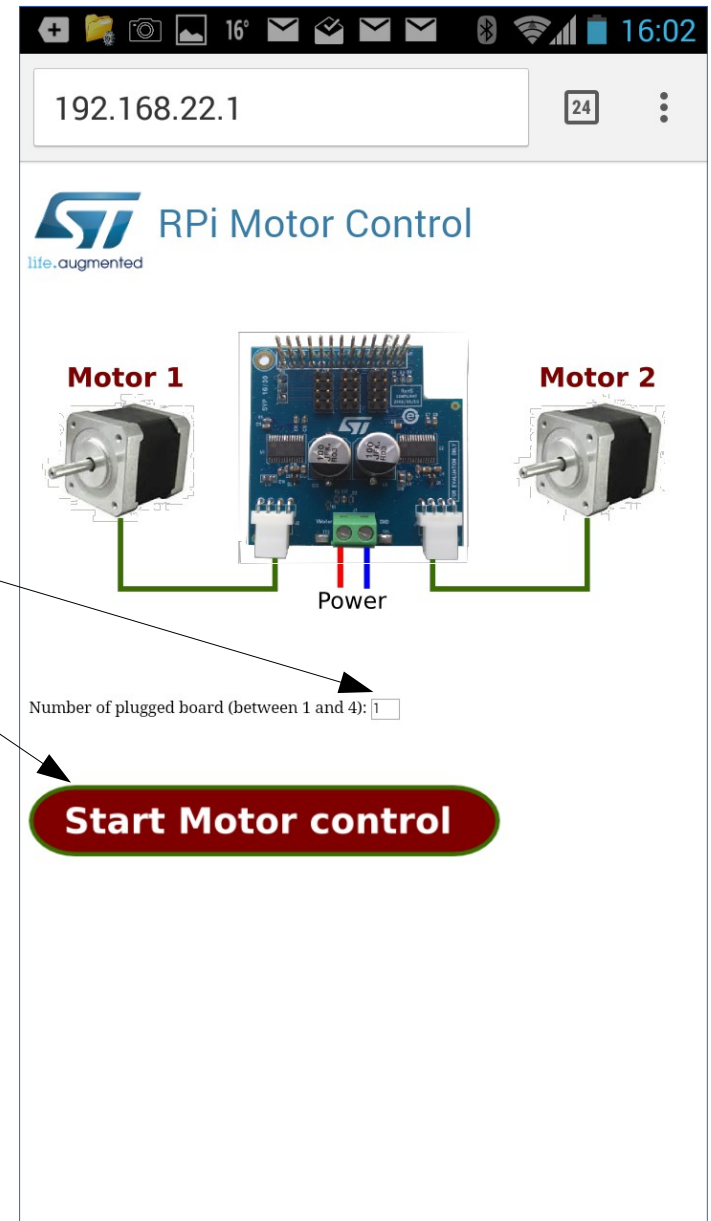
- A WinSCP window, with 2 panels, opens :
 - In the left panel, you have access to your home directory of your computer.
 - In the right panel, you have access to the directory of the pi user on Raspberry Pi
- You can now open the configuration file : **motor_config.txt**
 - This file contains the configuration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

