DOCUMENT RELEASE 1.2

PC LINUX REQUIREMENT

Linux Ubuntu 16.04 / 64 bits. You can use the two commands "`lsb_release -a`" and "`uname -m`" to check.

```
lsb_release -a

Distributor ID: Ubuntu
Description:    Ubuntu 16.04.6 LTS
Release:        16.04
Codename:       xenial

uname -m

x86_64
```

HARDWARE INSTALLATION

For all following command, it's preferable to be connected as `root` on Linux laptop

01 - Connect the Olimex interface to the Pyboard (hypos-pict06.jpg)

02 - Connect the Olimex interface to the PC (hypos-pict07.jpg)

03 - Connect the PyBoard to the PC (hypos-pict08.jpg)

There are two types of cables (black,white,green) or (black,yellow,orange):

black <---> black
white <---> yellow
green <---> orange

SOFTWARE INSTALLATION

01 - On the laptop, go to : www.hyperpanel.com

02 - In "Tutorials Center / Download", (purple button) download the release "Hyperpanel OS Release 9.wr.64 for Pyboard". The file is "`hypv9wr64.zip`"

03 - If not already exist on the laptop, create `/home/hyperpanel directory`:

```
cd /home
```

```
mkdir hyperpanel
```

04 - Copy the zip file in the directory:

```
cp hypv9wr64.zip /home/hyperpanel
```

05 - Unzip the file

```
cd /home/hyperpanel
unzip hypv9wr64.zip
```

06 - You have now a directory `/home/hyperpanel/hypv9wr64`. For more informations and picture, please refers to the tutorial #011 directly available at :

https://tutorial.hyperpanel.com/tutorials/tuto011/

SOFTWARE / HARDWARE TEST

01 - Open a shell and enter the following commands:

```
cd /home/hyperpanel/hypv9wr64/os/linux
source stm32py
exe
hgdb
```

GDB should start and display information lines like:

```
GNU gdb (7.10-1ubuntu3+9) 7.10

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<http://gnu.org/licenses/gpl.html>

This is free software: you are free to change and redistribute it.

There is NO WARRANTY, to the extent permitted by law.  Type "show copying"

and "show warranty" for details.

This GDB was configured as "--host=x86_64-linux-gnu --target=arm-none-
eabi".

Type "show configuration" for configuration details.

For bug reporting instructions, please see:

<http://www.gnu.org/software/gdb/bugs/>.

Find the GDB manual and other documentation resources online at:
```

```
<http://www.gnu.org/software/gdb/documentation/>.

For help, type "help".

Type "apropos word" to search for commands related to "word".

(gdb)
```

02 - Enter the flashing command:

```
(gdb) romload stm32py myapp
```

Wait (almost 30 seconds). The debugger should display information lines similar to:

```
Open On-Chip Debugger 0.10.0+dev-00001-g0ecee83-dirty (2017-02-10-
06:53)

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For bug reports, read

http://openocd.org/doc/doxygen/bugs.html

0x20000046 in ?? ()

target halted due to debug-request, current mode: Thread

xPSR: 0x01000000 pc: 0x00001008 msp: 0x20002000

auto erase enabled

wrote 393216 bytes from file hypos.bin in 12.594071s (30.491 KiB/s)

(gdb)
```

03 - Enter “continue” command. Depends on hardware release, it can be necessary after the “continue” command to enter following command:

```
(gdb) rom stm32py myapp

(gdb) continue
```

04 - On the Pyboard, press the “Reset” button. The application start. If you press buttons, the corresponding lights starts blinking. For example, if you press the button in front of the RED LED, the RED LED starts blinking.

05 - On another shell, access to the trace with minicom. The release includes minicom configuration file. Enter following commands:

```
cd /home/hyperpanel/hypv9wr64/os/linux
source stm32py
minicom stm32py -D /dev/ttyUSB1
```

Notes : Depends on linux installation, in order to find the correct device corresponding to serial trace, it can necessary to enter following commands:

```
dmesg
```

search for similar output message :

```
[ 7118.319786] usb 2-2: pl2303 converter now attached to ttyUSB1
```

On the daughter board, press the reset button (RST1), the menu is launched. For more informations and picture, please refers to the tutorial #012 directly available at :

https://tutorial.hyperpanel.com/tutorials/tuto012/

ON-LINE TOOLKIT

01 - On the laptop, go to : www.hyperpanel.com

02 - Select "Toolkit" (Yellow button on the main menu)

03 - Connect to your account

Email or Username (cf. mail from Carolino)
Password (cf. mail from Carolino)

04 - Press "Compil" (default application compilation), "Build" (building the binary file). A popup appears on the screen, select "Save file" and "OK". You get a file : `App_9wr64.zip`

```
cp App_9wr64.zip /home/hyperpanel/hypv9wr64/stm32py/exe
cd /home/hyperpanel/hypv9wr64/stm32py/exe
unzip App_9wr64.zip
```

To files are extracted : `hypos.elf` and `hypos.bin`

05 - Flashing the Pyboard :

```
hgdb
(gdb) romload stm32py hypos
```

If you need more information and pictures about the online toolkit, please refers to the Tutorial #113 directly available at :

https://tutorial.hyperpanel.com/tutorials/tutorial-113-toolkit-step-by-step-demo/