ochin_CM4v2 Hardware test number 9

UARTs test

Devices used for tests

1. ochin CM4v2 carrier board
2. Raspberry Pi CM4 module with eMMC
3. Power Supply 0-30Vdc
4. UART to USB adapter

Test description

The purpose of this test is to verify the proper functioning of the UART0, UART4 and UART5 interfaces, available on the ochin board. To test the UART interfaces we will use a serial terminal called “minicom”.

Preliminary configuration

To test the functionality of the UARTs, it is necessary to enable them by entering the following lines within the file "boot/config.txt"

```
#enable serial interface

enable_uart=1

dtoverlay=disable-bt

dtoverlay=uart0

dtoverlay=uart4

dtoverlay=uart5
```

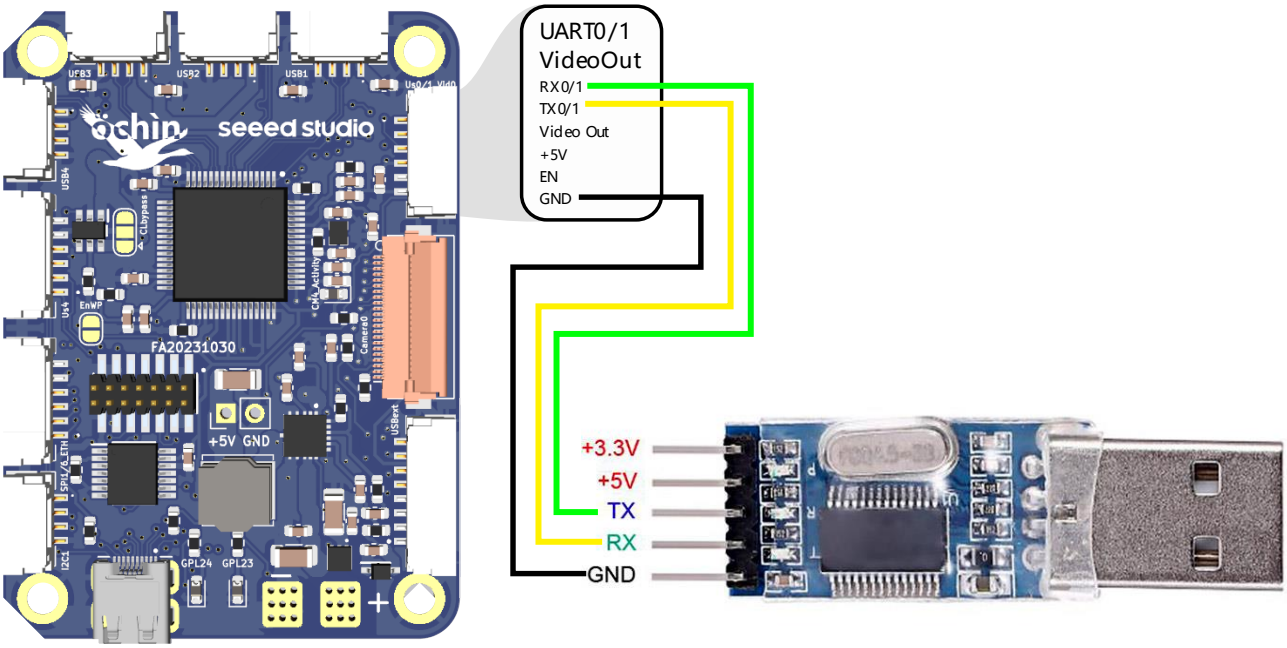
sudo reboot now

Install the Minicom serial terminal:

sudo apt-get install minicom

Test execution

To test UARTs you need to connect the port you want to test to a PC via a UART<->USB adapter.



To establish communication between the PC and CM4, a serial terminal must be started on the PC, connected to the virtual serial port generated by the adapter. CM4 side you need to start minicom on the port you want to test.

list the available UART ports:

ls -al /dev/ttyAMA*ls -al /dev/ttyAMA*

```
pi@raspberrypi:~ $ ls -al /dev/ttyAMA*ls -al /dev/ttyAMA*
ls: cannot access '/dev/ttyAMA*ls': No such file or directory
crw-rw---- 1 root dialout 204, 64 Feb 29 21:52  /dev/ttyAMA0
crw-rw---- 1 root dialout 204, 68 Feb 29 21:50  /dev/ttyAMA4
crw-rw---- 1 root dialout 204, 69 Feb 29 21:50  /dev/ttyAMA5
pi@raspberrypi:~ $
```

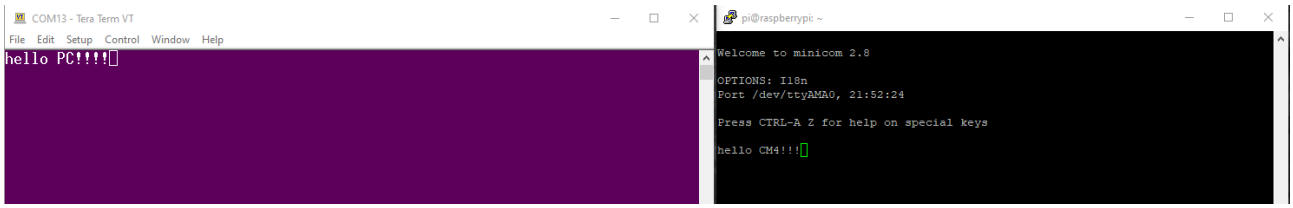
Launch minicon on the selected port:

sudo minicom -D /dev/ttyAMA0

sudo minicom -D /dev/ttyAMA4

sudo minicom -D /dev/ttyAMA4

At this point the serial connection is established and you can send and receive texts between the PC and CM4.



Test result

Test passed for both cameras