Introduction

The öchìn_CM4v2 it's a tiny carrier board for the Raspberry Pi Compute Module 4. It is designed for applications where a powerful machine with low consumption and small dimensions is required. The small form factor makes it interesting for all those applications where the space available is not much and containing the weight is important, such as in robotics, home automation and IOT.

The board is compatible with all Raspberry Pi CM4 modules equipped with eMMC. Depending on your needs, you can select a CM4 module with an SDRAM starting from 1GB up to 8GB and the eMMC from 8GB up to 32GB, with or without the WiFi / BT4 connection.

Hardware Test Plan

The test plan is meant to verify the correctness of the ochin board design and assembly, considering a variety of aspects. The following test plan does not replace any type of certification, nor does it guarantee that the board works well in any condition. The goal is to look for any issue in the design and test the limits of the board with the instruments available. The checklist is not locked, any interesting new tests that will be made will be also added to the list. The list can also be expanded by the community which will have the pleasure of integrating it.

The Test Plan:

1. **Power Supply circuits. Forward voltage circuit test**
2. **Power Supply circuits. Inversion polarity protection**
3. **USB switch. Type-C Device mode and USB 2.0 hub**
4. **USB current limiter**
5. **Power Supply circuits. Stress test and overheat**
6. **USBs r/w speed test**
7. **USBs stress test**
8. **CSI cameras test**
9. **UARTs test**
10. **SPI test**
11. **I2C test (will be done on test13 and test15)**
12. **microHDMI test**
13. **INA219 test**
14. **Btn & LEDs test**
15. **KTD2026 RGB LED test**
16. **Ethernet test**

Each test is explained specifically in a separate file. Each file relates to a specific test, conducted on the date present in the file name:

ex:

Test1_öchìn CM4-Power Supply circuits_Forward Voltage circuit Test_DDMMAAAA.pdf

is the test number 1 (Power Supply circuits_Forward Voltage circuit Test), executed on DD/MM/AAAA.