ochin_CM4v2 Hardware test number 10

SPI test

Devices used for tests

1. ochin CM4v2 carrier board
2. Raspberry Pi CM4 module with eMMC
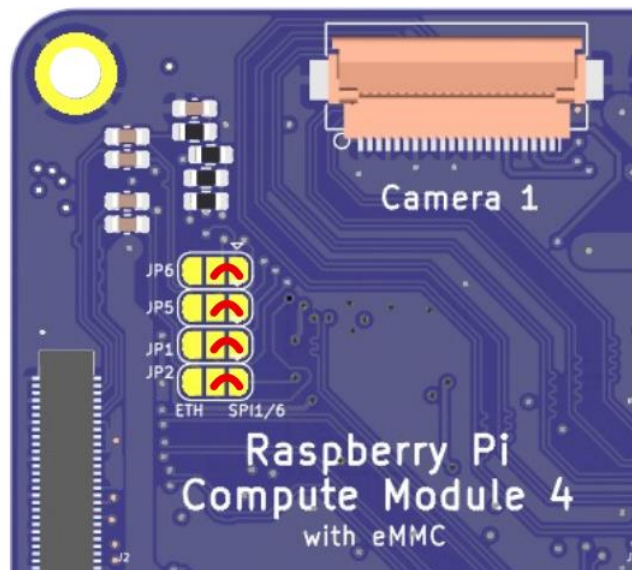3. Power Supply 0-30Vdc
4. An SPI device

Test description

The purpose of this test is to verify the proper functioning of the SPI interface of the CM4 module.
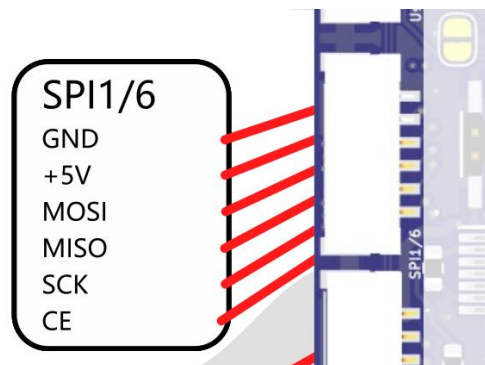
Preliminary configuration

The connector, named SPI1/6, can be used to connect to either the SPI1/6 or the Ethernet port. In order to allow either connection, there are four smd switches (normally open) on the back of the ochin_CM4v2 board, which must be soldered appropriately.

In order to use the connector as SPI1/6, it is necessary to solder the jumpers between the central pad and the pad on the right (indicated by the word SPI1/6) of JP6,5,1,2 as shown in the following figure:

The order of the signals on the SPI1/6 connector is as follows

To test the functionality of the SPI, it is necessary to enable it by using the "raspi-config" software or entering the following line within the file "boot/config.txt"

        dtparam=spi=on

Test execution

To test the functionality of the SPI interface, it is necessary to connect the ochin an SPI device (any device) and establish communication.

Test result

Test passed