

Installation of NITOS USRP Chassis Manager (CM) Card

Components included / required:

Within the parcel you can find the:

1. NITOS USRP Chassis Manager (CM) Card
2. 4 Pin dupont wire female connector
3. USB 3.0 extension
4. Power supply extension



1. NITOS USRP Chassis Manager (CM) Card



2. 4-pin dupont wire female connector



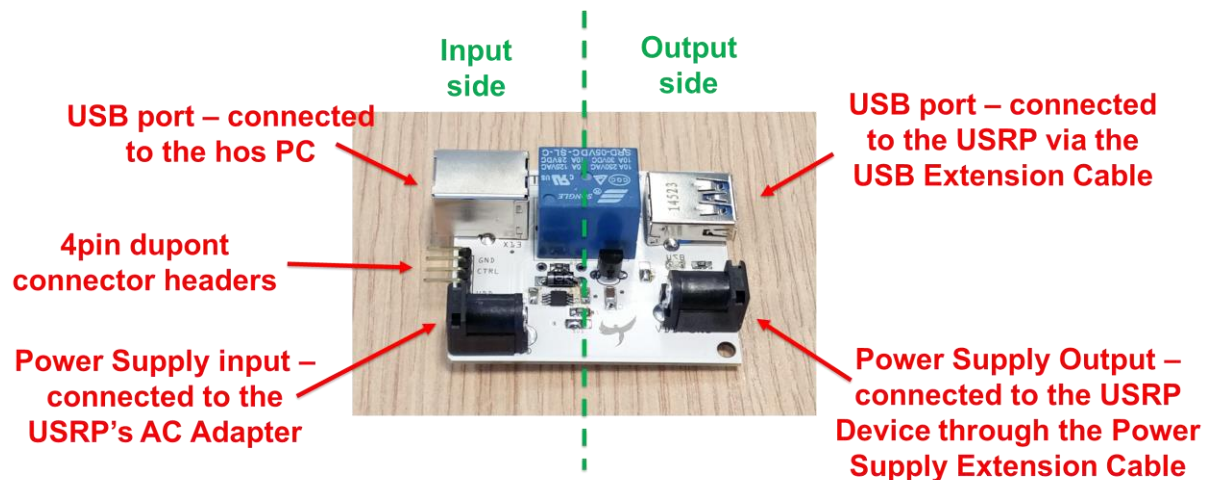
3. USB 3.0 extension



4. Power supply extension

USRP Chassis Manager Card Connections

In the following picture, the USRP Chassis Manager Card connections are depicted. Great care should be taken in order to avoid confusing the input with the output side of the aforementioned card.

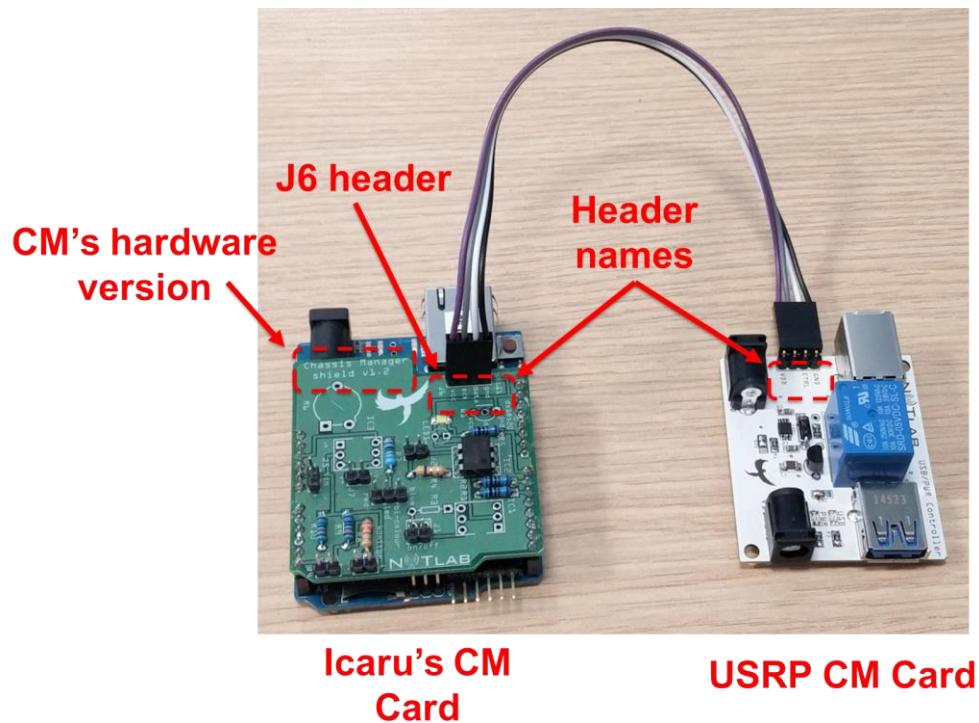


Connecting the USRP Chassis Manager (CM) Card with Icarus' CM Card

Use the provided 4-pin dupont wire connector in order to bridge the four header pins of the Icarus' CM Card (J6 connector) with the *appropriate* header pins of the USRP CM card as presented in the following table.

| Icarus' CM card header name | USRP CM Card header name |
|-----------------------------|--------------------------|
| gnd | GND |
| data | CTRL |
| sck | |
| vcc | VDD |

The side and notation for the dupont wire connector in both cards is presented in the following picture. Please do not connect the 4pin dupont connector reversely, it will damage the USRP CM.



*Icarus CM card's firmware need to be updated to support also the functionality of the USRP CM Card.

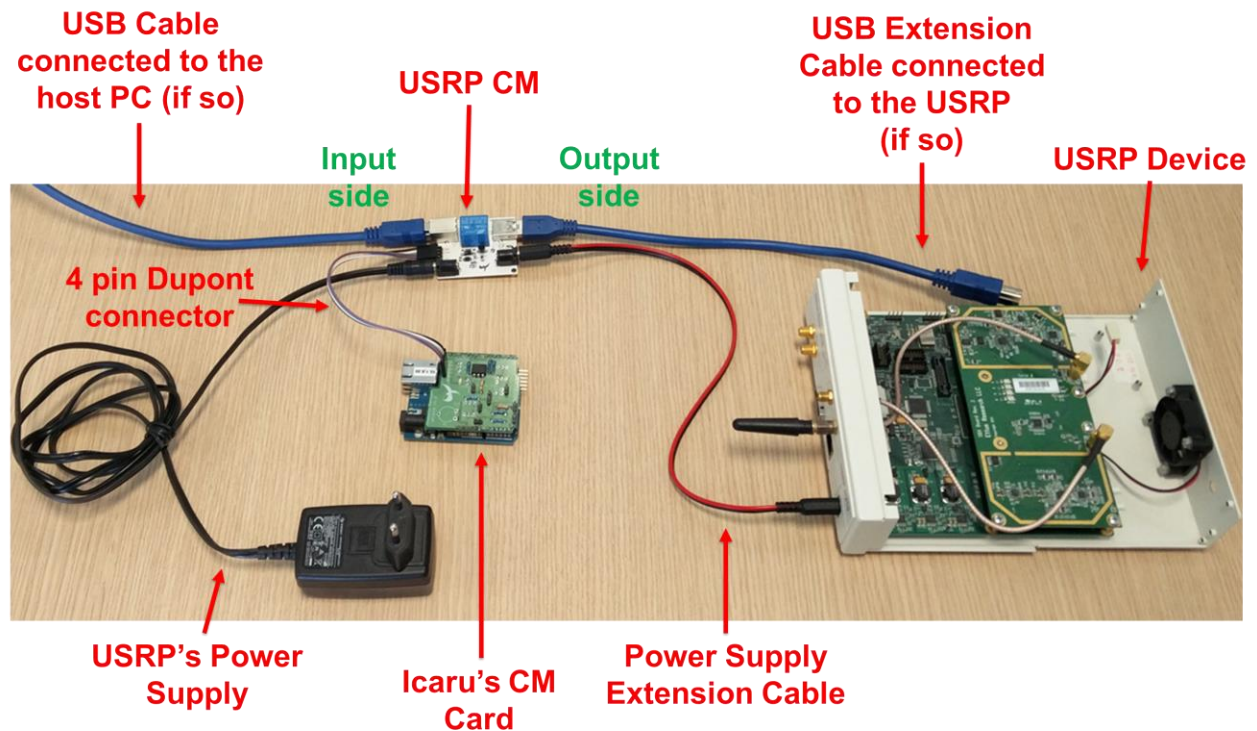
Manually Controlling USRP Chassis Manager Card (just for testing – not required step)

- Driving the CTRL pin LOW (to the ground), the USRP Chassis Manager Card is switched **OFF** and no power (and/or) USB data is passed to the following USRP device.
- Driving the CTRL pin HIGH (to 3.3V/5V), the USRP Chassis Manager Card is switched **ON** and power (and/or) USB data is passed to the following USRP device.

| CTRL pin | Power | USB |
|----------|------------|------------|
| LOW | OFF | OFF |
| HIGH | ON | ON |

USRP connection architecture

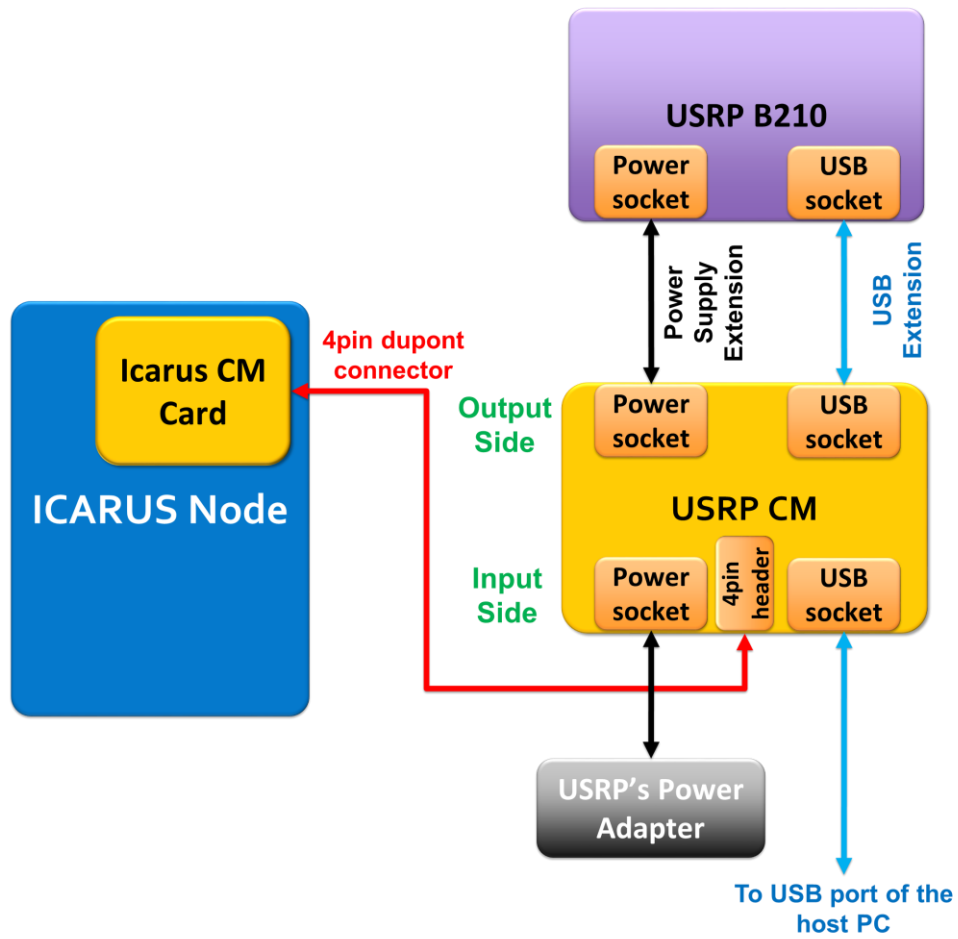
The overall system architecture with all the required connections is presented in the following picture.



Notably, the USRP CM is connected with the Icaru's CM only through the 4pin dupont connector. No other wire/cable is required to be connected to Icarus node.

Architecture diagram

USRP B210 case:



Rest USRP devices case:

