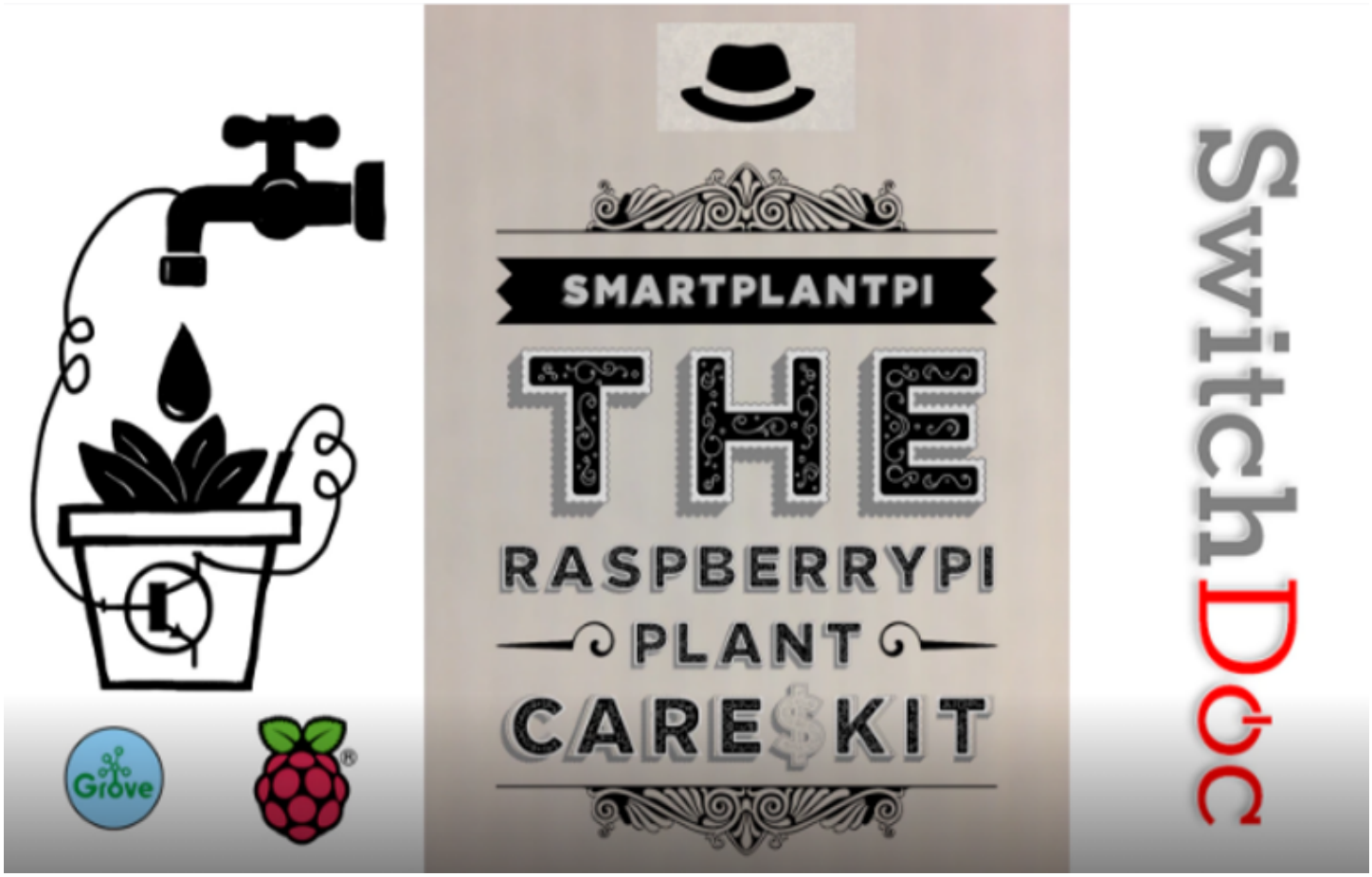


SmartPlantPi HR Grove Moisture Sensor

Assembly Addendum Manual

May 2017

Version 1.0

Table of Contents

Cautions when building and using SmartPlantPi

1) Keep all water away from the electronics and power supply at all times!
2) SmartPlantPi is designed for indoor use only and should be placed in a dry environment where no water or rain can reach to avoid short circuiting the electronics
3) Insert the moisture sensor into the CENTER of the flower pot, and keep it near the center of the plant and away from the water coming out of the holes cut in the watering pipe.
4) This is not a toy! Keep it out of reach of young children and pets.
5) SwitchDoc Labs assumes no liabilities in the use of this kit, beyond the refund of the purchase price.

What is SmartPlantPi?

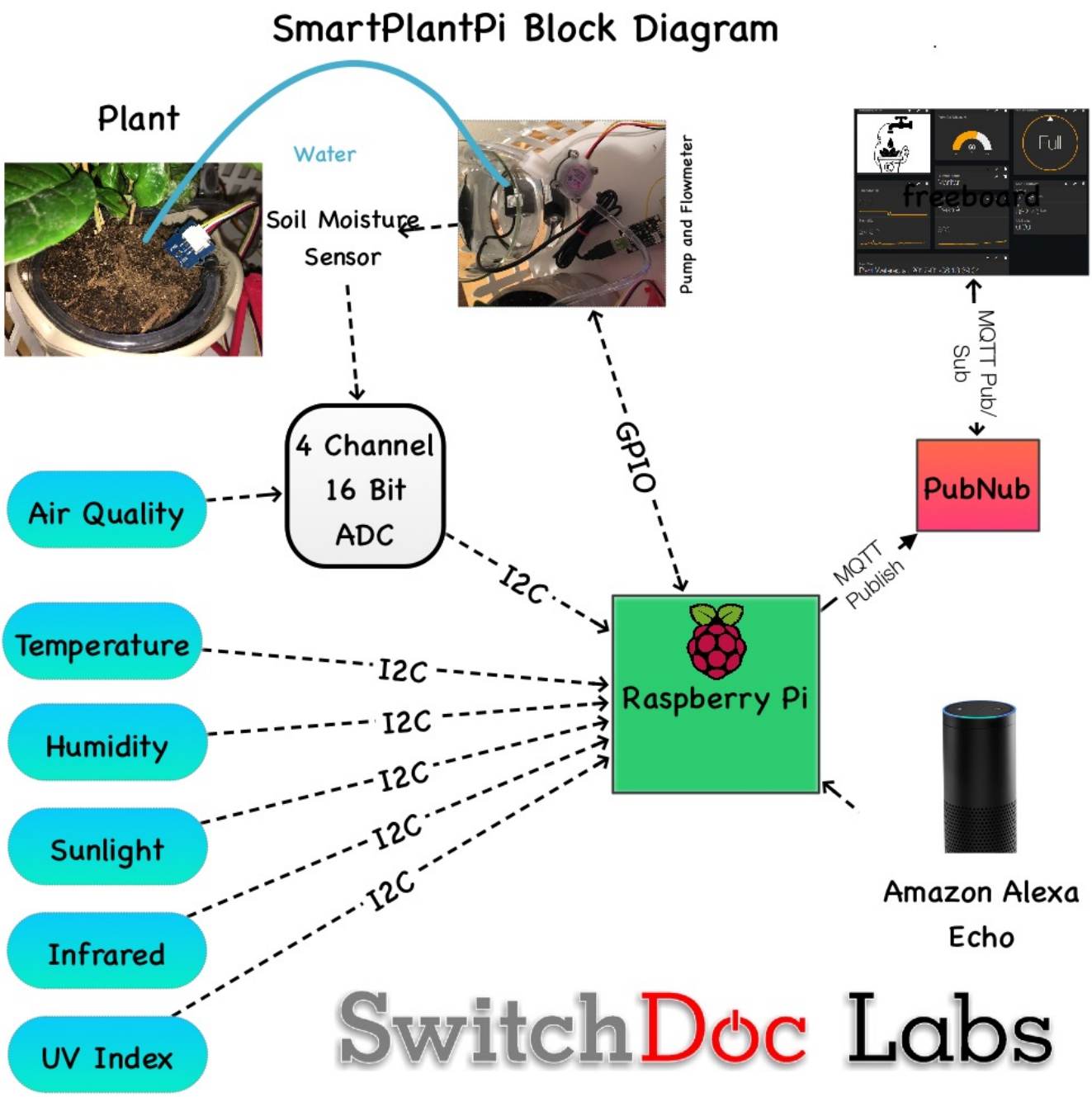
This is a perfect project kit for kids with some help from the adults and for adults trying to learn some new things. We have done this before with our successful OurWeather KickStarter so we know what we are talking about. People all over the world have built the OurWeather weather station with great success. This project has **no soldering** involved and uses Grove connectors to wire everything up! You can't reverse them and blow things up. Here is our tutorial on the Grove system.

SmartPlantPi Features

- Measure your Temperature
- Measure your Soil Moisture
- Measure your Sunlight
- Show your results on the Internet
- Even connect your plant to the Amazon Echo/Alexa

Easy to build. Easy to learn about the IOT (Internet Of Things) and the Raspberry Pi.

SwitchDoc Labs is building on the strength and reception of our last successful No Soldering Kickstarter Project - OurWeather.

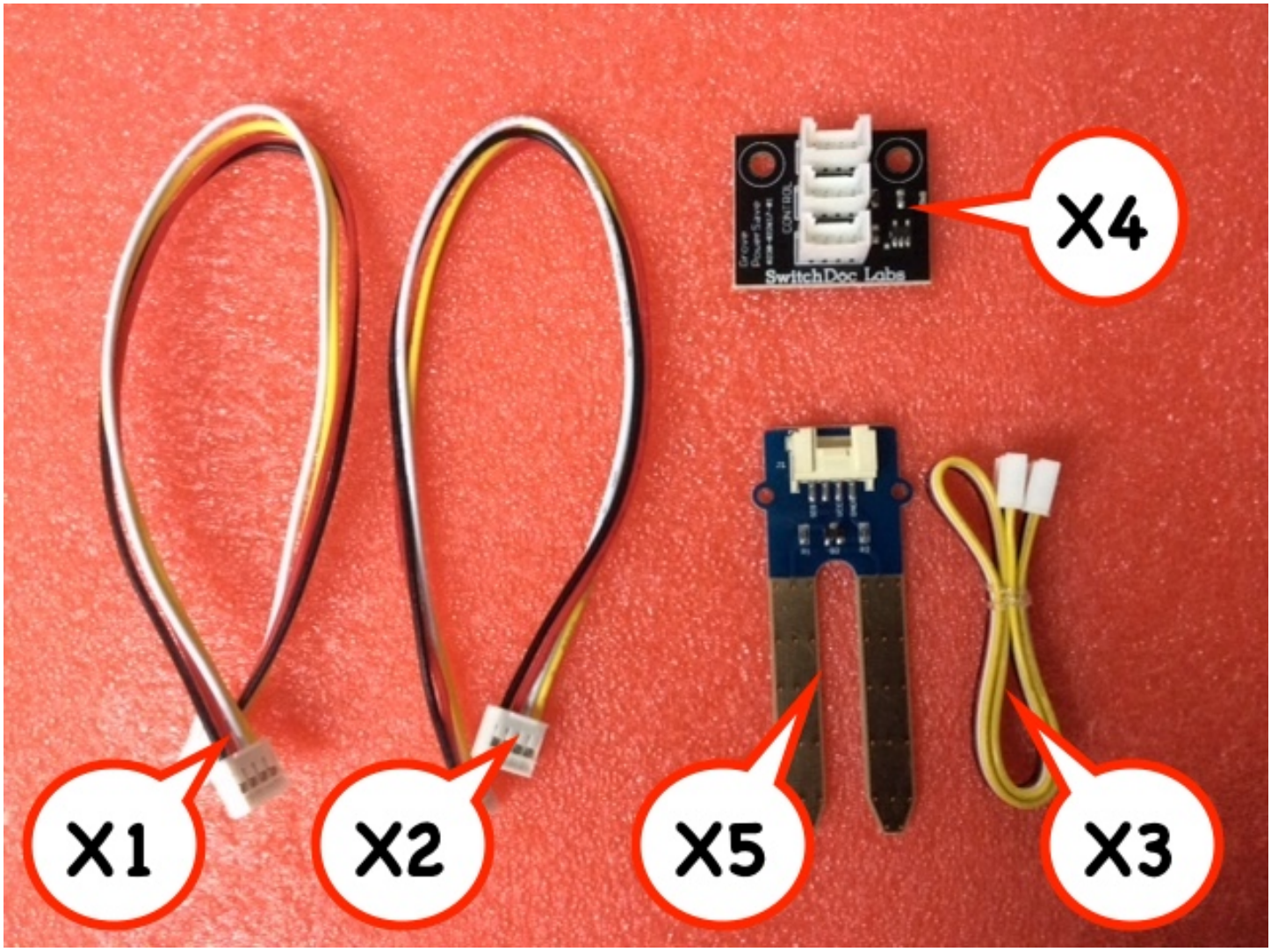

SmartPlantPi Block Diagram
Plant
Water
Soil Moisture Sensor
Pump and Flowmeter
freeboard
MQTT Pub/ Sub
PubNub
GPIO
4 Channel 16 Bit ADC
Air Quality
I2C
Temperature
Humidity
Sunlight
Infrared
UV Index
Raspberry Pi
MQTT Publish
Amazon Alexa Echo
SwitchDoc Labs

What is in the SmartPlantPi HR Grove Moisture Sensor Assembly Addendum Manual?

This Addendum Manual shows how to use the High Reliability Grove Moisture Sensor with SmartPlantPi.

The High Reliability Grove Moisture is a new product from SwitchDoc Labs and is included with all new SmartPlantPi kits. This new product dramatically reduces electroplating on the Grove Moisture Sensor and increases the length of time these inexpensive moisture sensors will work in most environments.

The Parts List for the High Reliability Grove Plant Moisture Sensor



X1 – Grove Cable

X2 – Grove Cable

X3 – Grove Cable (You may want to use the 50cm Grove Cable included in SmartPlantPi)

X4 - Grove PowerSave – New board from SwitchDoc Labs. Turns off the power to the moisture sensor reducing electroplating action.

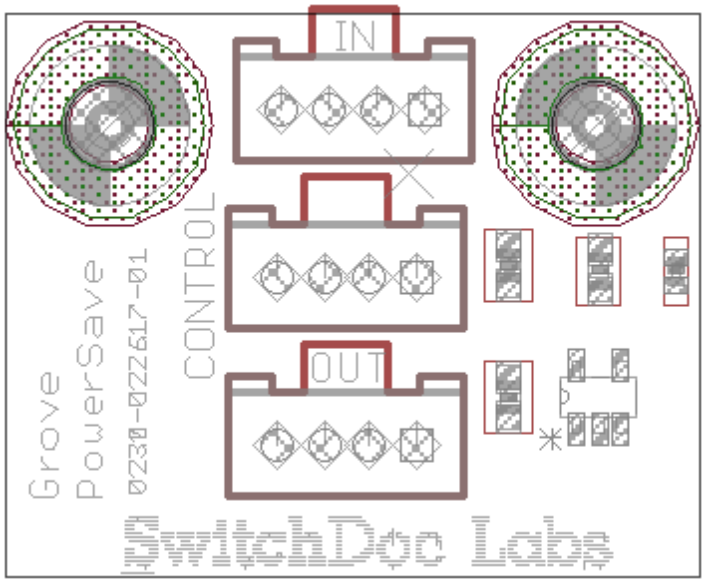
X5 – Grove Moisture Sensor – Identical to the two Moisture Sensors included in SmartPlantPI.

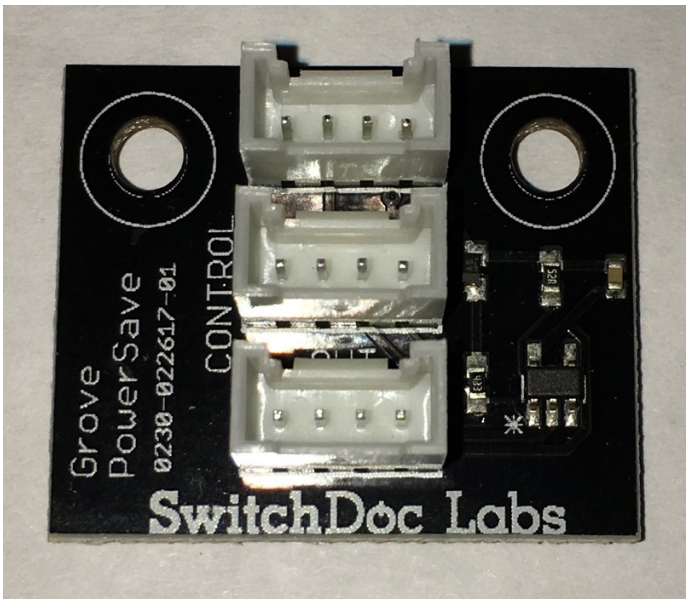
Assembly

Step 1) Power off your SmartPlantPi system

Step 2) Connect a 50cm Grove cable (or shorter if desired) to a Grove Moisture Sensor (Part X5). Note: This is identical to the Grove Moisture Sensors shipped with SmartPlantPi.

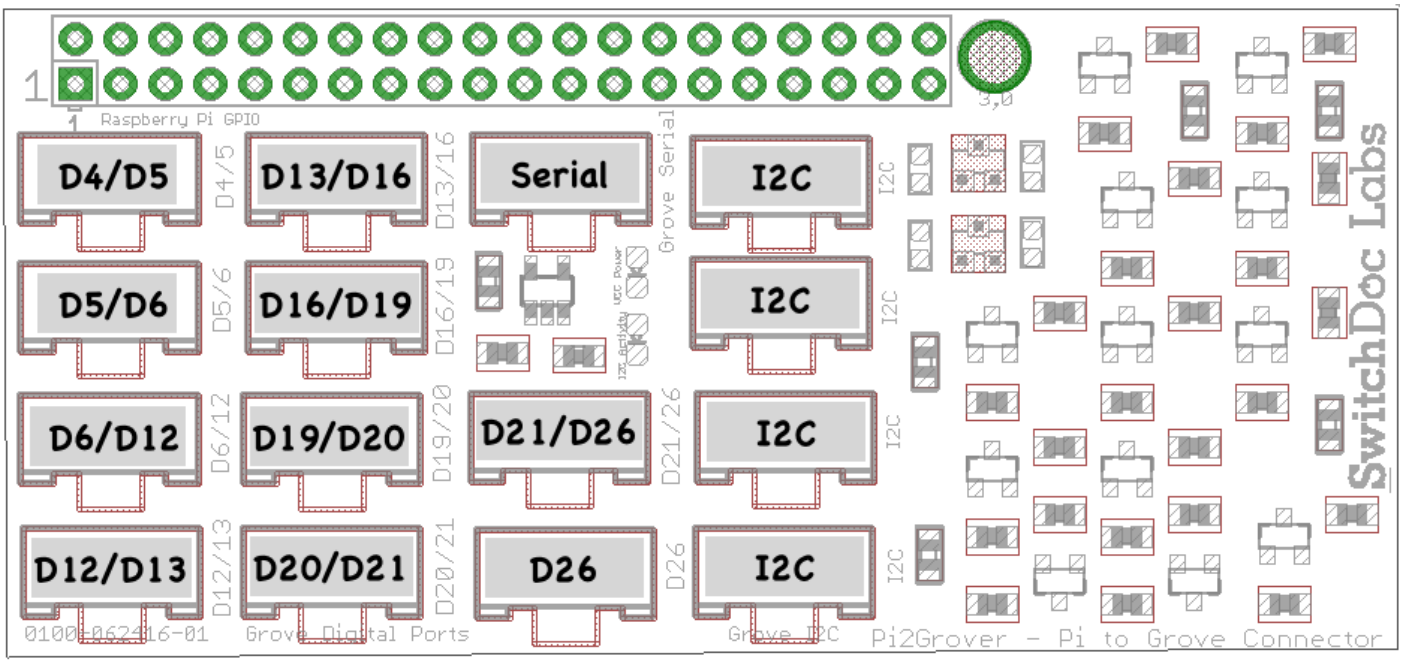
Step 3) Plug the other end of the 50cm Grove cable into the OUT Grove Connector on the Grove PowerSave (Part X4)



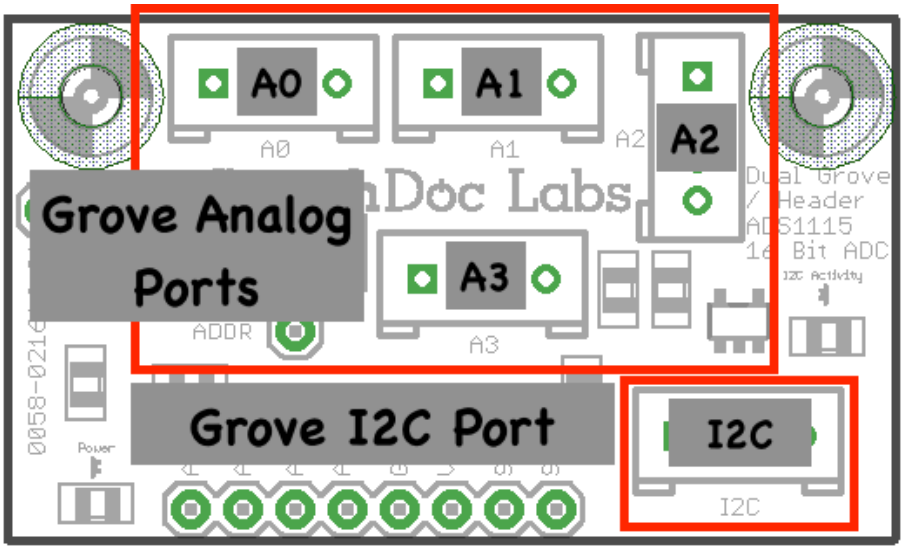


Step 4) Plug a Grove cable into the CONTROL Grove Connector on the Grove PowerSave (Part X4)

Step 5) Plug the other end of the Grove Cable in Step 4) into the D6/D12 Connector on the Pi2Grover board



Step 6) Plug a Grove Cable into the IN Grove connector on Grove PowerSave (Part X4) and connect this to the A1 port on the A1 Port of the Grove 4 channel ADC included with SmartPlantPi (the same place that the Grove Moisture Sensor was connected previously – see the main assembly manual)



The latest version of SmartPlantPi (Version 012 and above) software supports this HR Grove Moisture sensor.

https://github.com/switchdoclabs/SDL_Pi_SmartPlantPi

Now you are complete! You know you have connected it correctly if SmartPlantPi is measuring the Soil Moisture on power up. If it isn't, check your connectors very carefully.

Support

As with all SwitchDoc Labs products, technical support is given through the forums on www.switchdoc.com (support->forums).

If you have issues that can be solved by our fabulous customer service department, please go to www.switchdoc.com and send your issues through our Contact page on the top menu.

Disclaimer

SwitchDoc Labs, LLC takes no responsibility for any physical injuries and possession loss caused by those reasons which are not related to product quality, such as operating without following the operating manual and cautions, natural disasters or force majeure.

SwitchDoc Labs, LLC has compiled and published this manual which covers the latest product description and specification. The contents of this manual are subject to change without notice.