SwitchDoc Labs

SkyWeather2

Your Weather On The Cloud

SkyWeather2 Blynk Configuration

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Version 1.2

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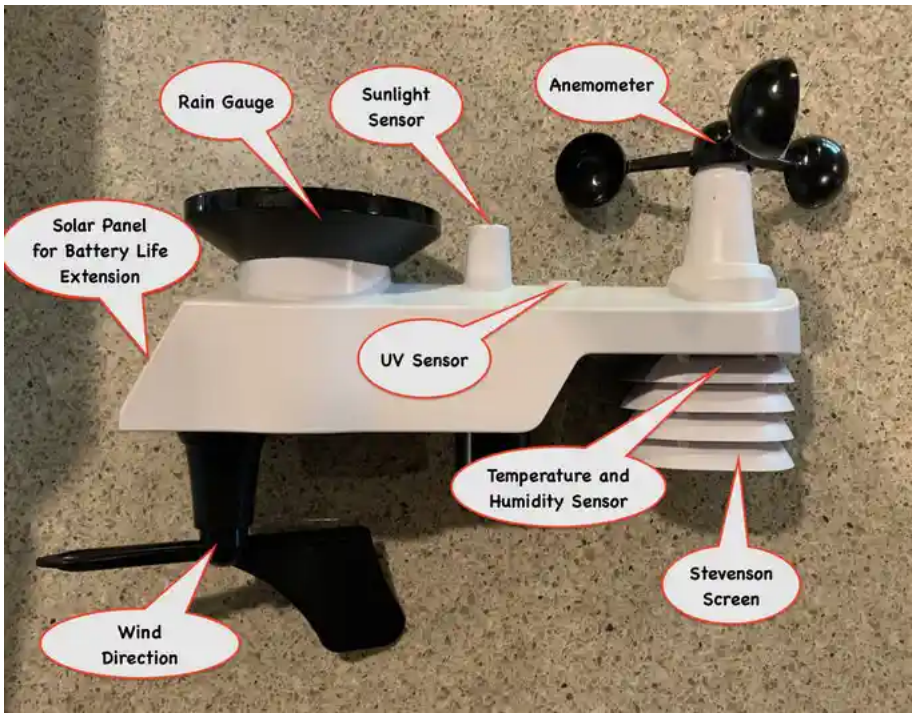
Errata

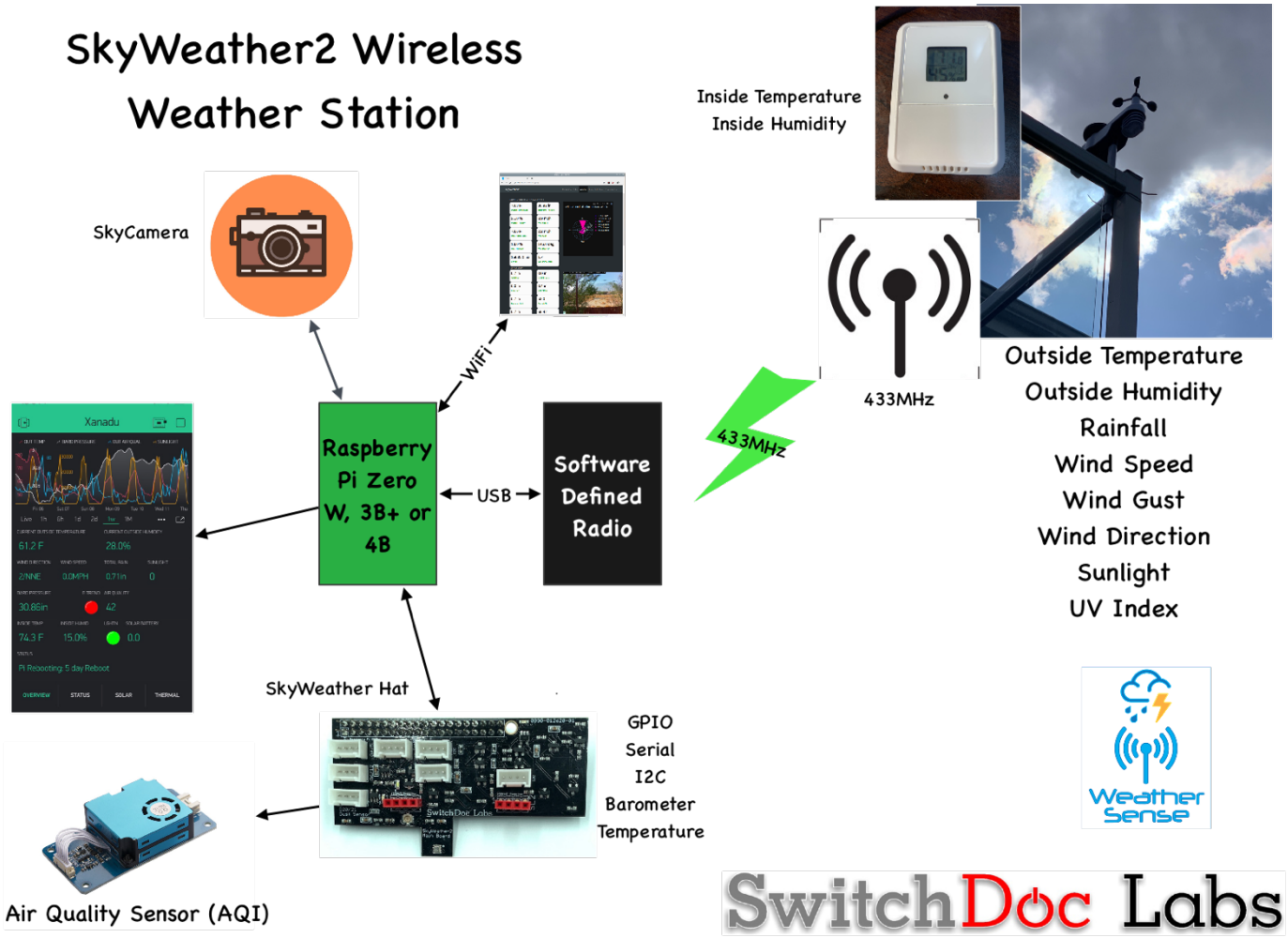
What is The SkyWeather2 System?

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

The **heart** of the new SkyWeather2 project is our new custom made wireless Weather Sensor package called the WeatherRack2.



The **SkyWeather2** kit is so simple that even middle school children can build it with just a little adult help for configuration and installation.

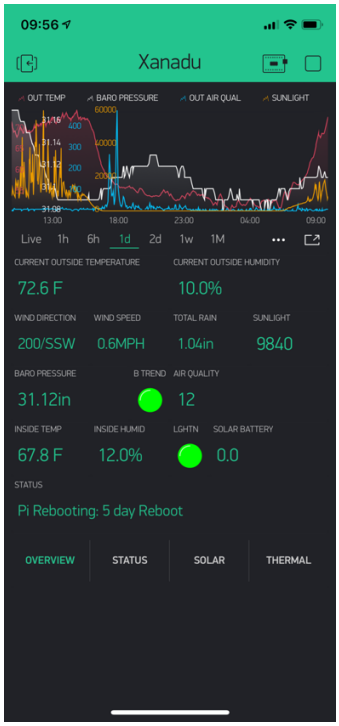


Full Open Source Python3 Software that you can Modify.

We provide the Python3 software all open source with the kit. The Pure Python software can be modified to add new sensors, support new cloud software and connect up to your own projects and software.

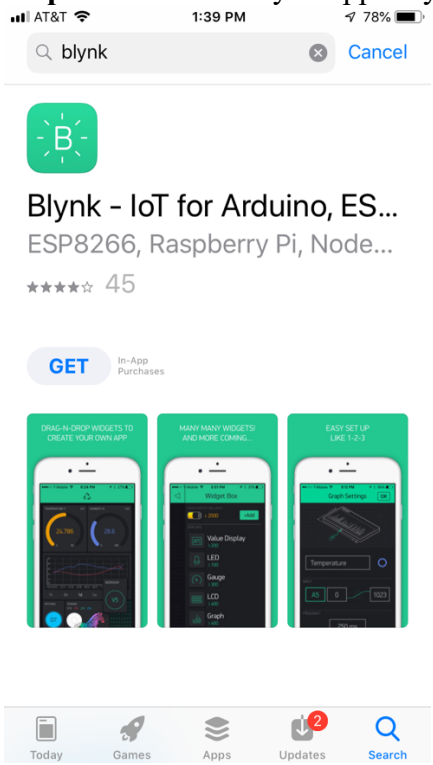
What is Blynk

Blynk is a digital dashboard for your iOS or Android device that allows you to easily build graphical interfaces by dragging and dropping widgets. Blynk runs on iOS and Android apps to control Arduino, Raspberry Pi and the likes over the Internet.
It's a digital dashboard where you can build a graphic interface for your project by simply dragging and dropping widgets.

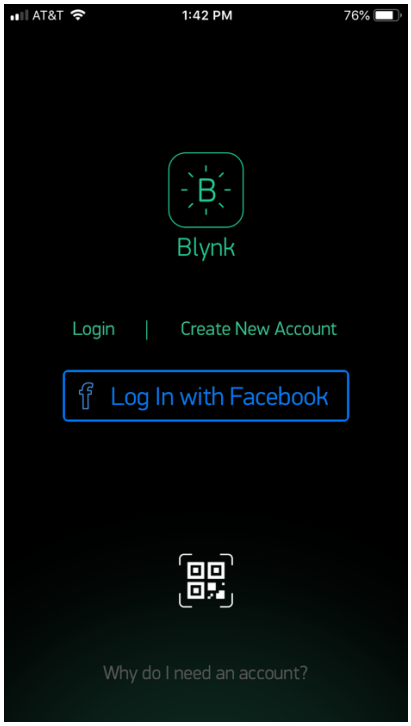


Step by Step Install (for iPhones – Android is very similar)

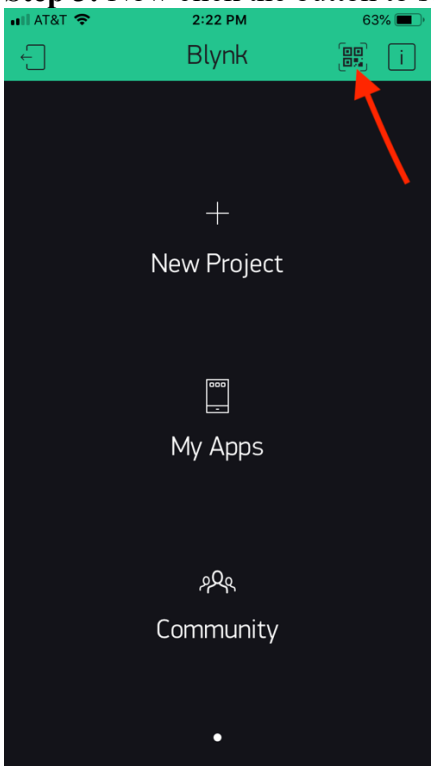
Step 1: Install the Blynk app on your mobile phone



Step 2: Open the Blynk app and create an account



Step 3: Now click the button to scan a QR (see arrow)

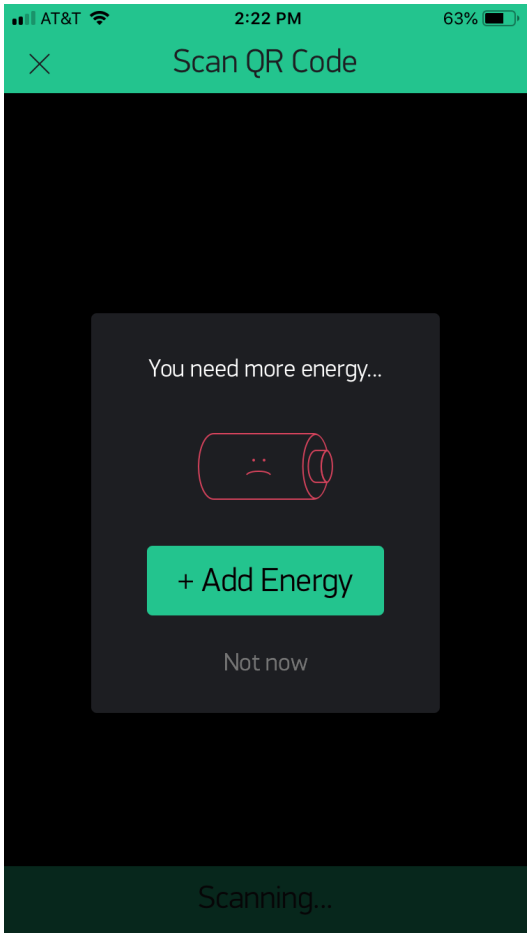


Step 4: The current QR code for your Blynk App is located on the SkyWeather2 product page.

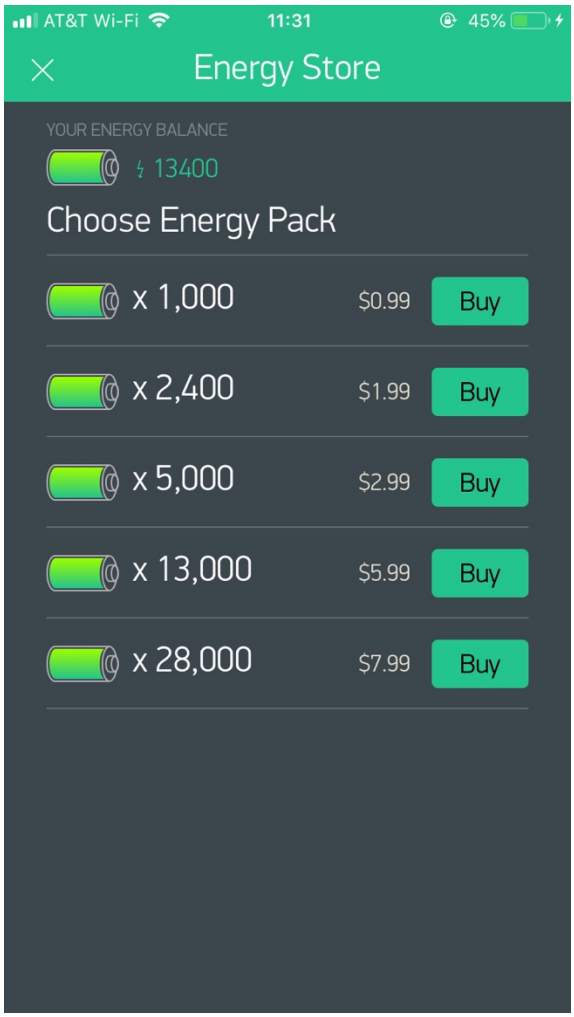
https://shop.switchdoc.com/products/skyweather2-raspberry-pi-based-weather-station-kit-for-the-cloud

Scan the QR code on this page you will then see the screen below the QR code

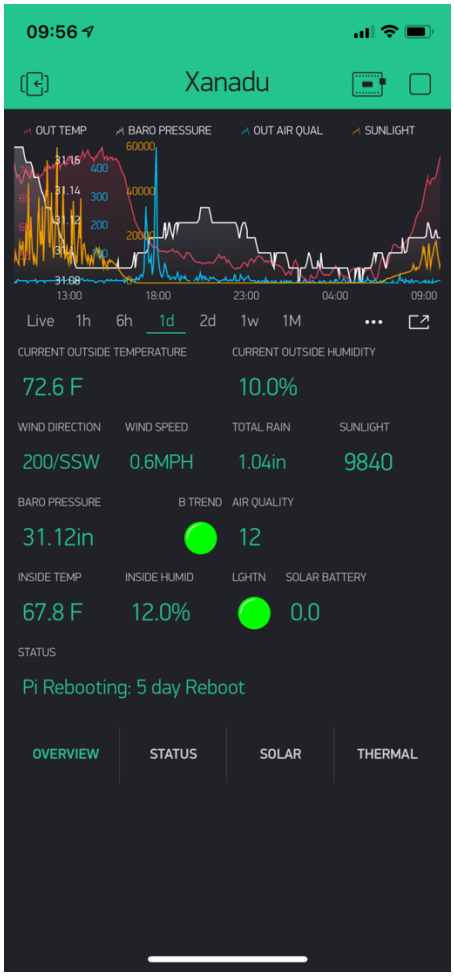
SkyWeather2



Step 5: Add Energy. SkyWeather2 requires a total of 8700 Blynk energy. You start your account with 2000, so you need to purchase 5700 Blynk Energy. As of this writing, it will cost $5.99. It varies.

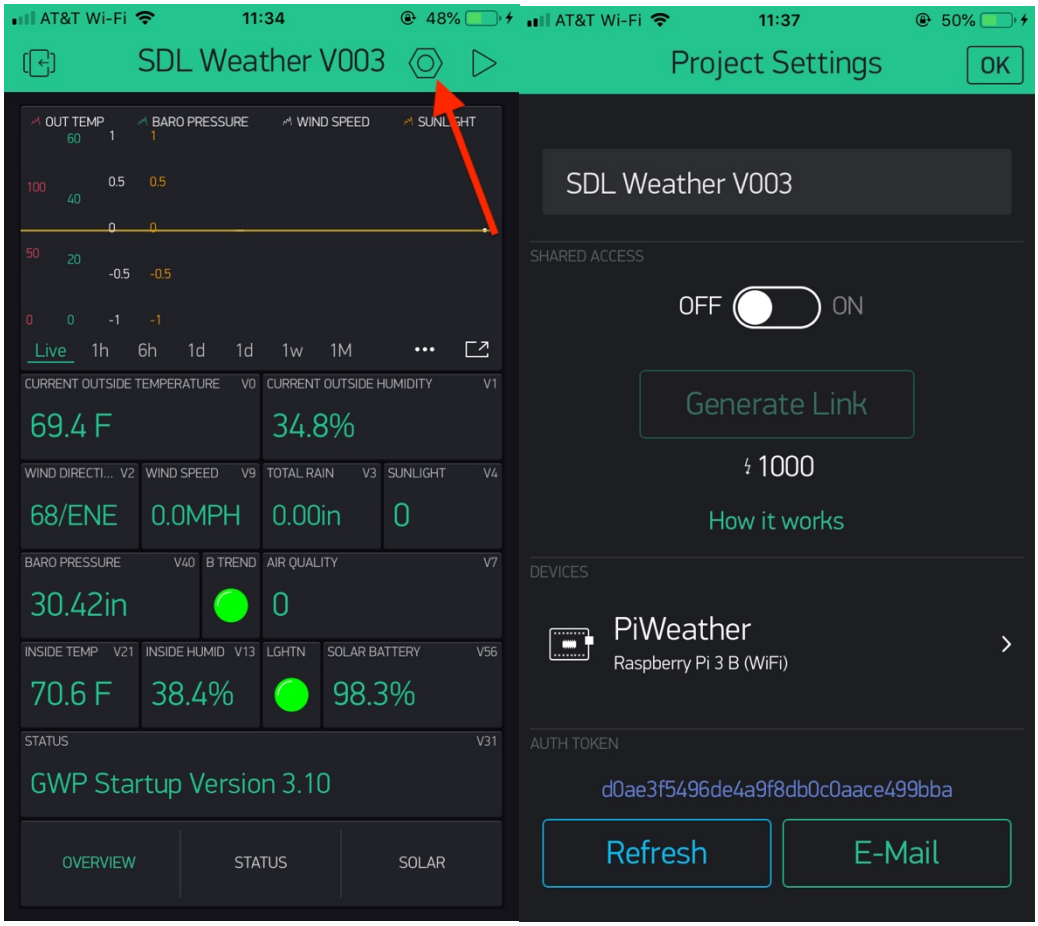


Step 6: Scan the QR code again. You will now see the SkyWeather2 App on your screen. Yours will say "SkyWeather2" instead of "Xanadu", but you can change that in edit mode.


09:56
Xanadu
OUT TEMP
BARO PRESSURE
OUT AIR QUAL
SUNLIGHT
13:00
18:00
23:00
04:00
09:00
Live 1h 6h 1d 2d 1w 1M
CURRENT OUTSIDE TEMPERATURE
72.6 F
CURRENT OUTSIDE HUMIDITY
10.0%
WIND DIRECTION
200/SSW
WIND SPEED
0.6MPH
TOTAL RAIN
1.04in
SUNLIGHT
9840
BARO PRESSURE
31.12in
B TREND
AIR QUALITY
12
INSIDE TEMP
67.8 F
INSIDE HUMID
12.0%
LGHTN
SOLAR BATTERY
0.0
STATUS
Pi Rebooting: 5 day Reboot
OVERVIEW
STATUS
SOLAR
THERMAL

Step 7: Click in middle of the project to select the project. Then click the indicated button to go to project settings. Now copy and paste or email yourself (using the E-Mail button below) the authentication token (AUTH TOKEN) as we will be putting this in the SkyWeather2 configuration file in the next section. The one below WILL NOT WORK. You need your own.

Your screens will look somewhat different than the ones below.



You have completed the Blynk SkyWeather2 App installation.

Installing the Blynk Authentication Codes into SkyWeather

Step 8: The final step to connecting SkyWeather2 to the SkyWeather2 App is to copy your Authentication Token (AUTH TOKEN above) to the SkyWeather2 configuration JSON file. Note: You enter this using the SkyWeatherConfig.py file as shown in the "SkyWeather2 Configuration and Operations Manual".

Step 9: You are now complete. Start up your SkyWeather2 software again. Look at the App on your phone and after about 30 seconds, things should start propagating and you will start seeing cool data.

What is in the SkyWeather2 Blynk App?

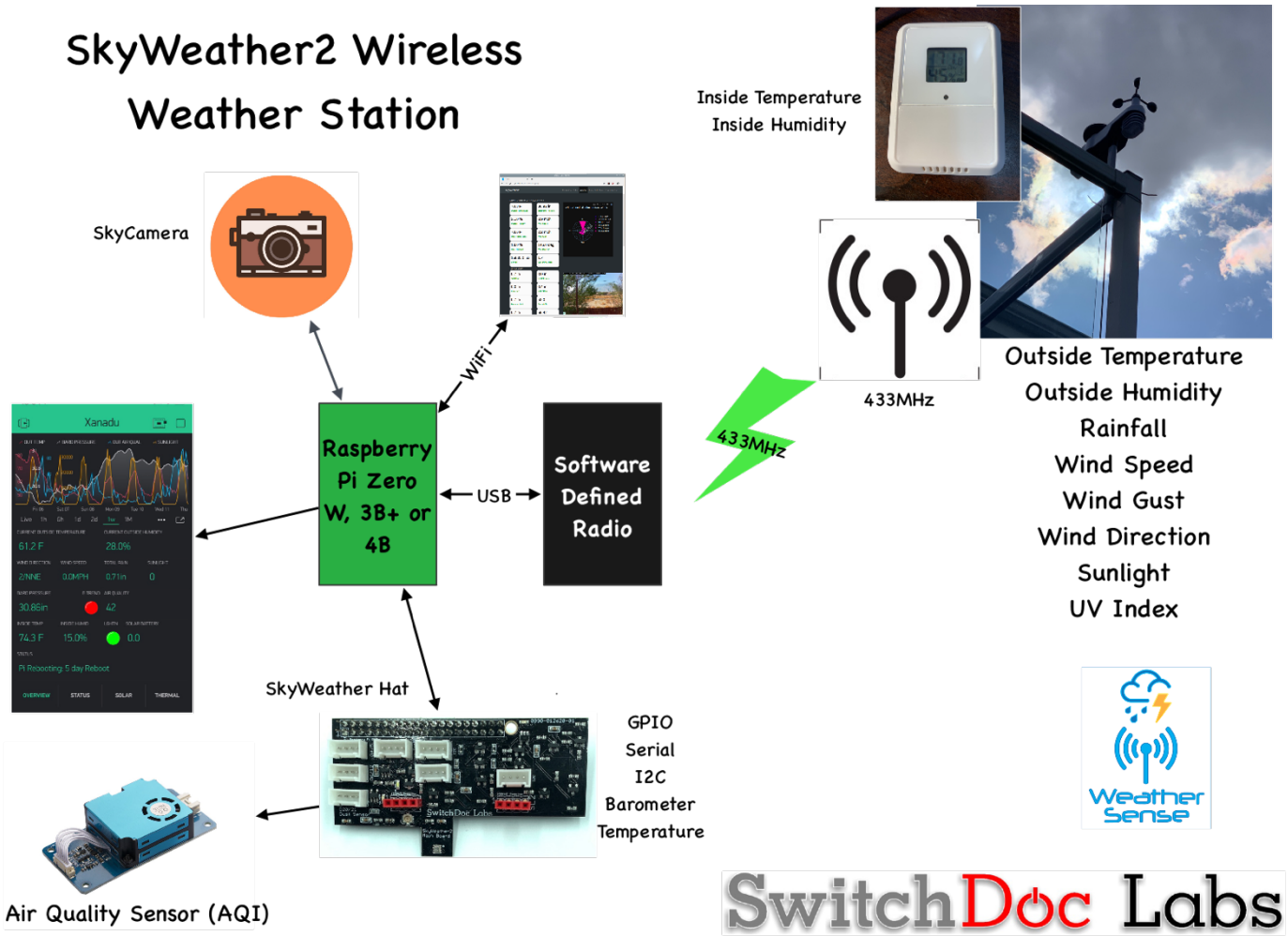
There are four screens in the Blynk App. They are:

- **Main Screen** – Shows current weather conditions and Air Quality

- **Control Screen** – Shows Status and controls. Only the OLED and Units buttons currently work in the current version of SkyWeather2 (and the OLED is an optional board for SkyWeather).

- **Solar** – Shows the status and performance of the solar power system if installed on SkyWeather

- **Thermal** – Shows the thermal state of the SkyWeather2 box and also if the optional fan is turned on or not.


SkyWeather2 Wireless Weather Station
Inside Temperature
Inside Humidity
SkyCamera
WiFi
433MHz
433MHz
Outside Temperature
Outside Humidity
Rainfall
Wind Speed
Wind Gust
Wind Direction
Sunlight
UV Index
Raspberry Pi Zero W, 3B+ or 4B
USB
Software Defined Radio
SkyWeather Hat
GPIO
Serial
I2C
Barometer
Temperature
Air Quality Sensor (AQI)
Weather Sense
SwitchDoc Labs

The Science and Education Goals Behind SkyWeather2

Everything we build for the Maker market is designed for education and learning. Making is education. Making is learning. Building your own projects allows you to innovate around a framework and do wonderful things that of which we have never even thought.

The educational goals for SkyWeather2 are:

- Learn about the Raspberry Pi and installing software on the Pi
- Connecting up sensors to the Raspberry Pi
- Learning about Feedback loops
- Understand your indoor environment and what affects it
- Learn about the new technology called the Internet of Things

SkyWeather2 designed to be the hub to which you connect everything to turn your Raspberry Pi into a complete Weather Station that talks to the Cloud. Just ready to be customized to your project and usage. It is designed to be a great way of learning to hook up hardware to the Raspberry Pi. And you have all the source code to modify to work the way you want it to do.

EDUCATORS: WeatherSTEM.com has a tremendous amount of curriculum material available about using WeatherSTEM (and SkyWeather) in your classroom.

Our partnership with WeatherSTEM brings this kickstarter into the realm of cloud based data mining, great graphics displays and even time lapse photography. SkyWeather2 and WeatherSTEM together rock. This is a great kit in which to learn about weather sensing, data sharing in the cloud and the Raspberry Pi.

Support

As with all SwitchDoc Labs products, technical support is given through the forums on Forum.switchdoc.com 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

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