



# RFduino Quickstart Guide

## RFD22102 RFduino DIP

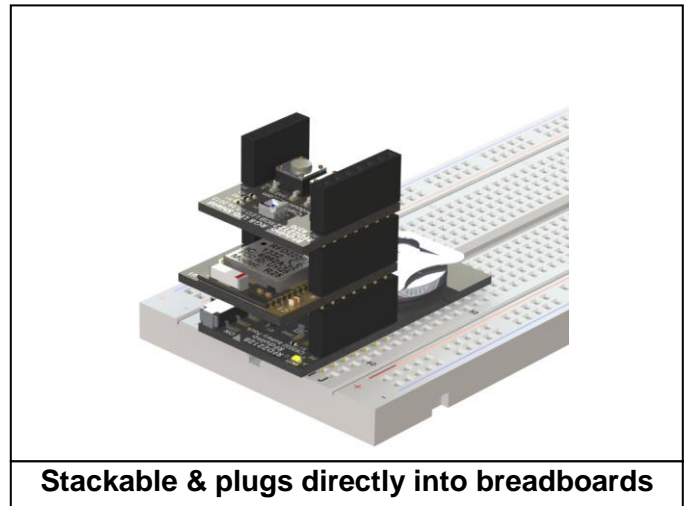
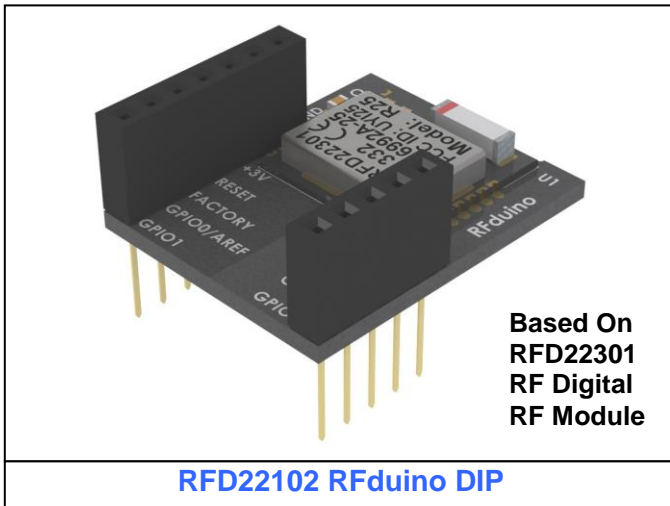
RFD22121 USB Shield  
RFD22122 RGB LED / Button Shield  
RFD22123 Servo Shield  
RFD22124 PCB USB Shield  
RFD22125 Proto Shield

RFD22126 Dual AAA Battery Shield  
RFD22127 Single AAA Battery Shield  
RFD22128 CR2032 Battery Shield  
RFD22130 MicroSD Shield  
RFD22131 Dual Relay Shield

RFD90101, RFD90102, RFD90103, RFD90104, RFD90105 Eval / Dev Kits

An RFduino "Shield" is a modular accessory that directly plugs into the RFduino.

**Shrunk an Arduino to the size of a finger-tip  
and made it Wireless!**



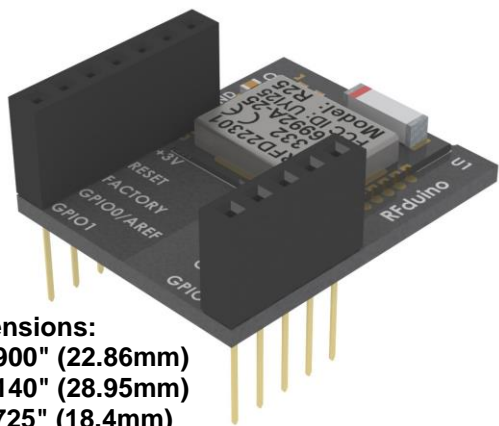
**RFduino is a Bluetooth 4.0 Low Energy BLE RF Module  
with Built-In ARM Cortex M0 Microcontroller  
for Rapid Development and Prototyping Projects**

**Simple to use Arduino IDE and sketches  
running on professional grade hardware**

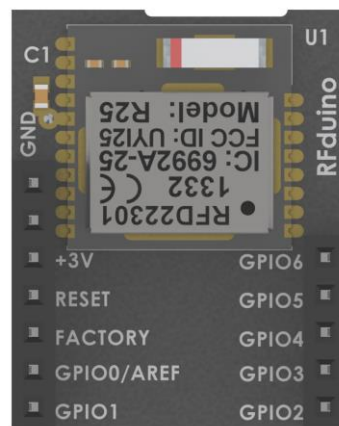


## RFD22102 RFduino DIP

The RFduino is a Bluetooth 4.0 Low Energy BLE RF Module with Built-In ARM Cortex M0 Microcontroller for Rapid Development and Prototyping Projects. It features the RFD22301 SMT Module.



**Dimensions:**  
X: 0.900" (22.86mm)  
Y: 1.140" (28.95mm)  
Z: 0.725" (18.4mm)

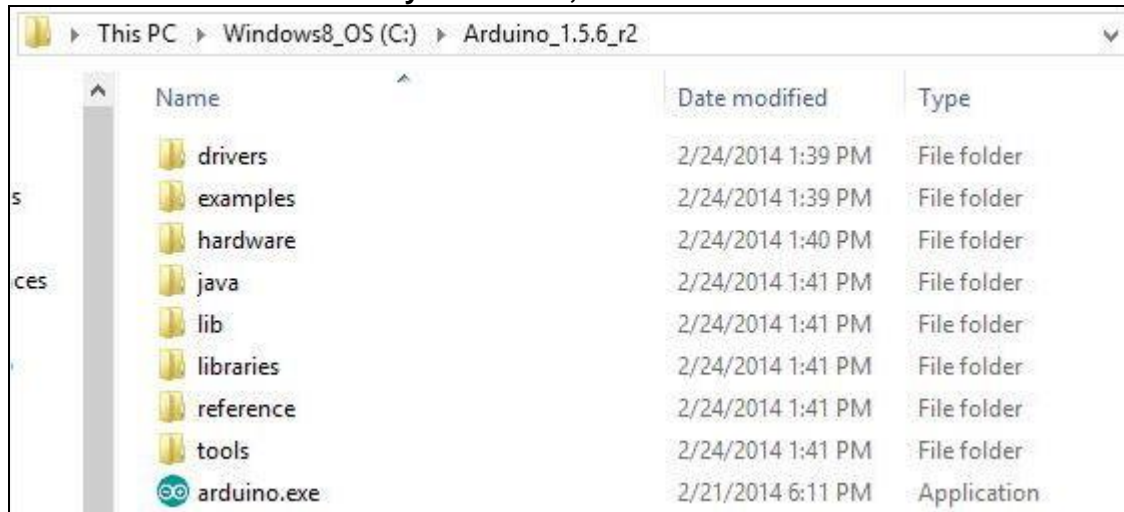


| Description                                   | Min       | Nom    | Max       | Notes      |
|---|-----------|--------|-----------|------------|
| VDD - Supply Voltage                          | 1.9 V     | 3.0 V  | 3.6 V     |            |
| General Purpose I/O (GPIO) input high voltage | 0.7 * VDD |        | VDD       |            |
| General Purpose I/O (GPIO) input low voltage  | VSS       |        | 0.3 * VDD |            |
| Output standard drive current                 |           | 0.5 mA |           |            |
| Output high drive current                     |           | 5 mA   |           | Max 3 pins |
| ULP Current with RC OSC Running               |           | 4uA    |           |            |
| Transmit Current                              |           | 18mA   |           |            |
| Receive Current                               |           | 18mA   |           |            |
| ARM CPU Running Current                       |           | 4mA    |           |            |

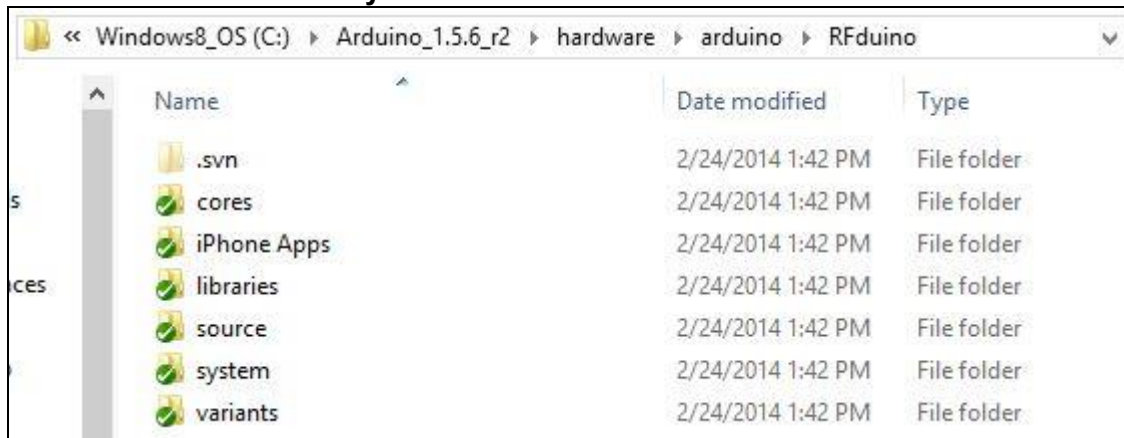


## RFduino IDE Installation on Windows

1. Visit the following link: <http://arduino.cc/en/Main/Software>
2. Scroll down the page and download the Arduino 1.5.x Windows ZIP file (You must use 1.5.x not the 1.0.x version)
3. Extract the ZIP to a folder of your choice, we recommend C:\



4. Download the RFduino library from: <http://www.rfduino.com> or Github <https://github.com/RFduino/RFduino>
5. Extract the RFduino library to the "hardware\arduino" folder

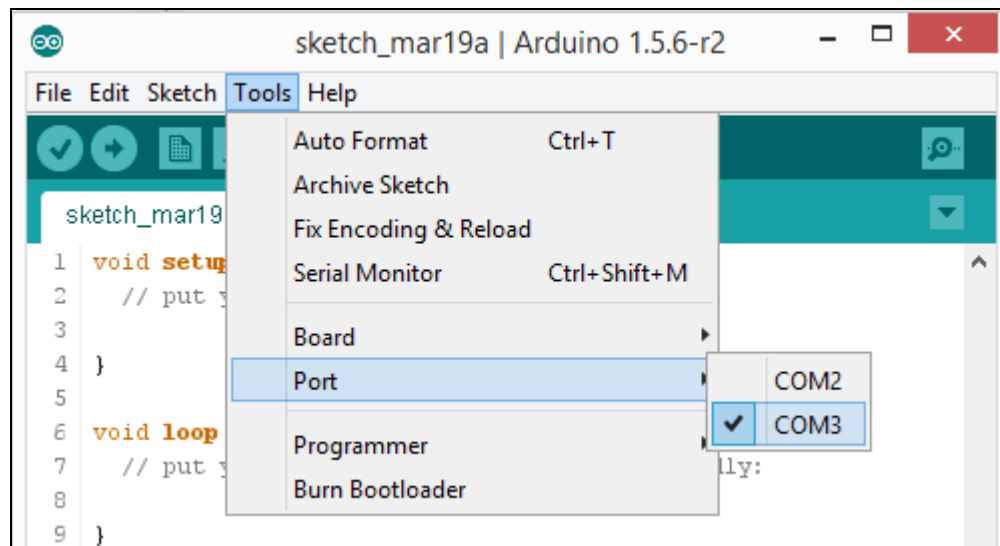
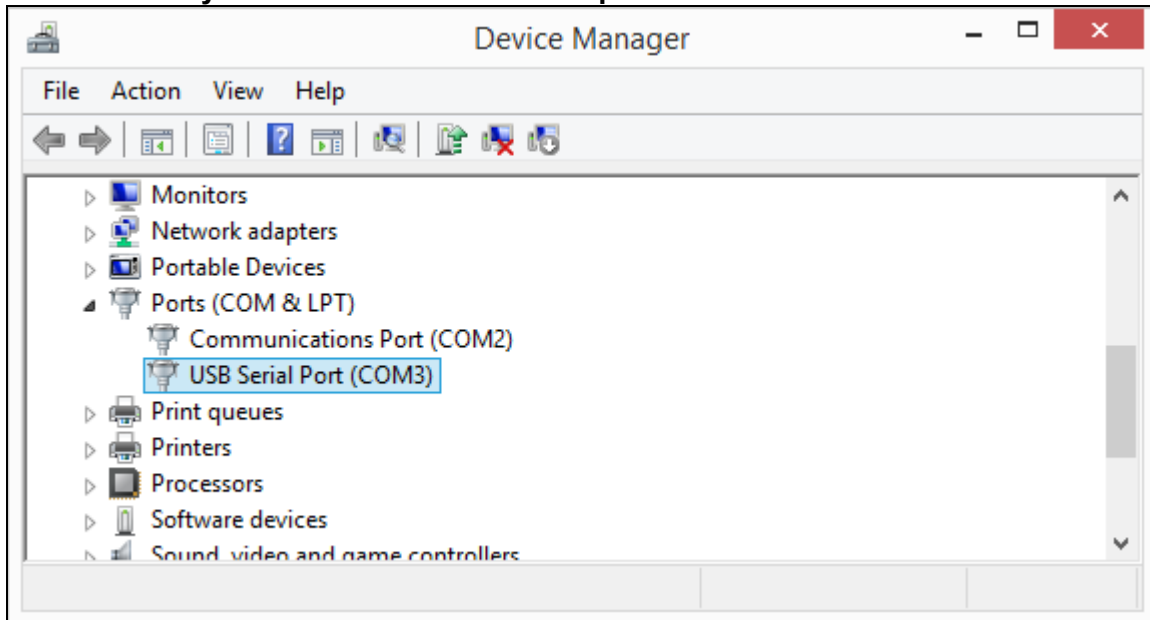


6. RFduino IDE Installation is complete



## RFduino USB Driver Installation on Windows

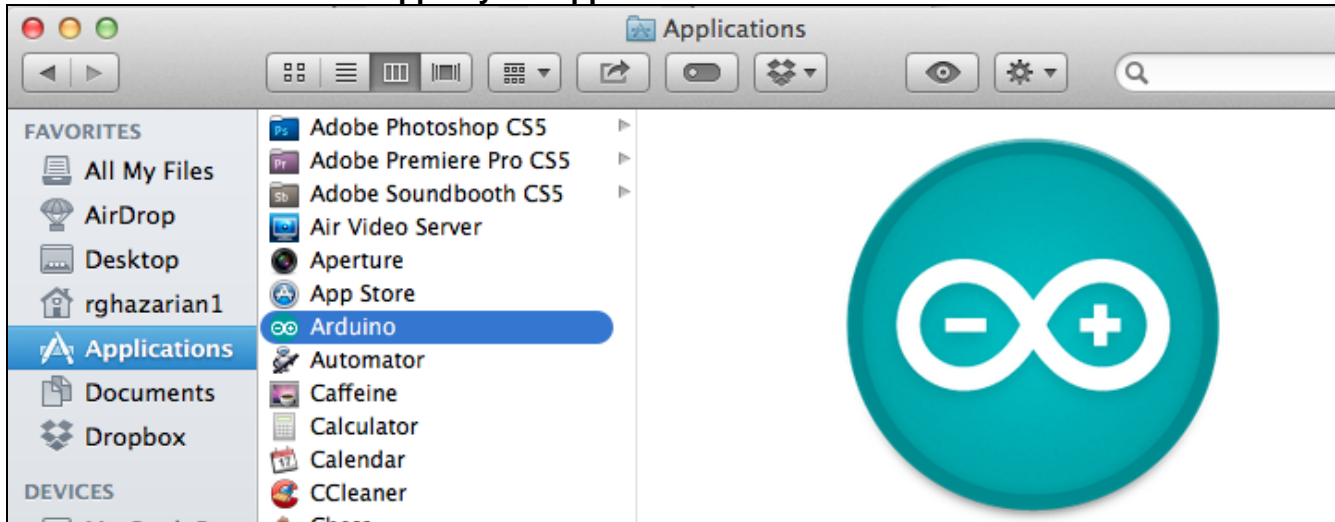
1. Visit the following link: <http://www.ftdichip.com/Drivers/VCP.htm>
2. Download and install the drivers for your system
3. On Windows you should have a new com port called "USB Serial Port"



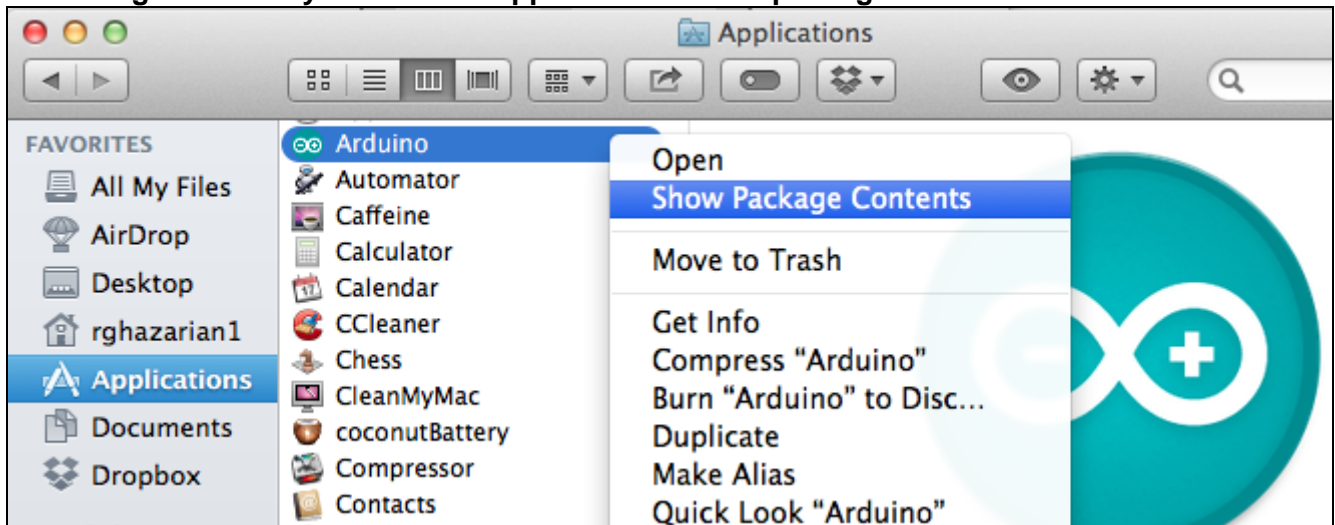


## RFduino IDE Installation on Mac OS X

1. Visit the following link: <http://arduino.cc/en/Main/Software>
2. Scroll down the page and download the Arduino 1.5.x Mac OS X ZIP file (You must use 1.5.x not the 1.0.x version)
3. Extract the Arduino app to your Application folder



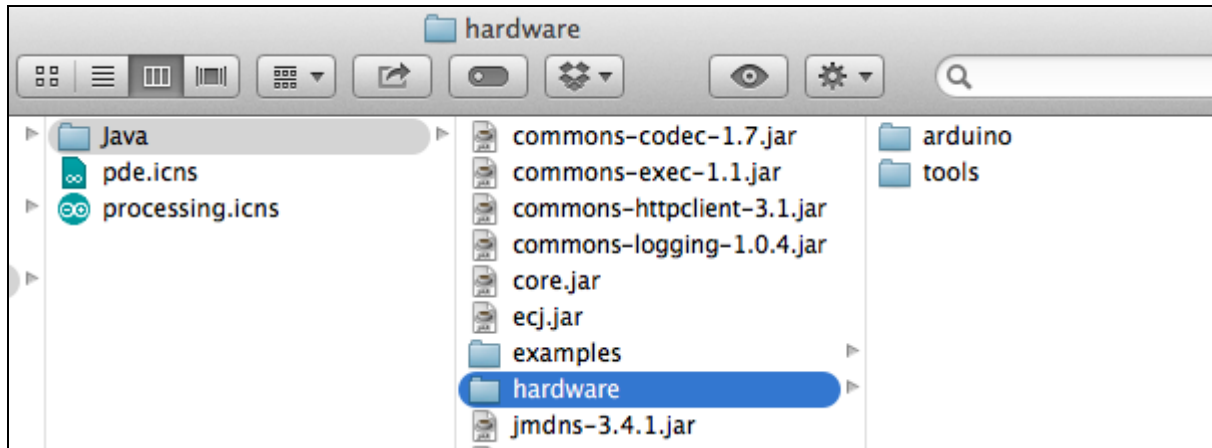
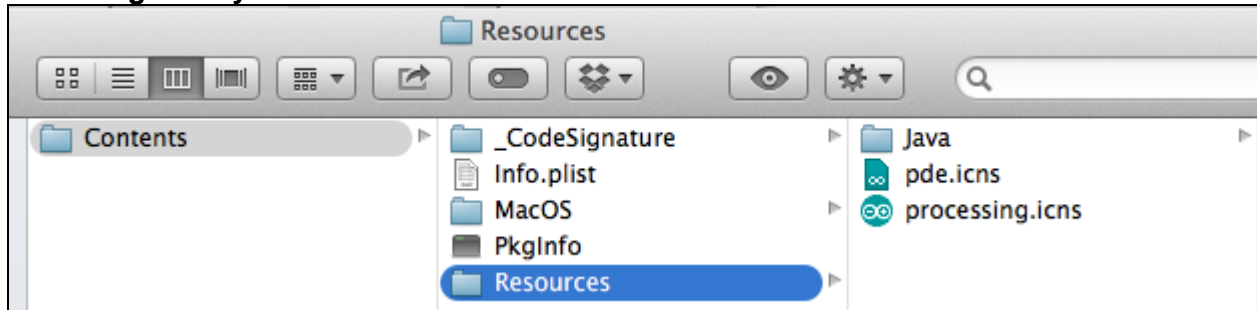
4. Download the RFduino library from: <http://www.rfduino.com> or Github <https://github.com/RFduino/RFduino>
5. Right click on your Arduino app and click show package contents



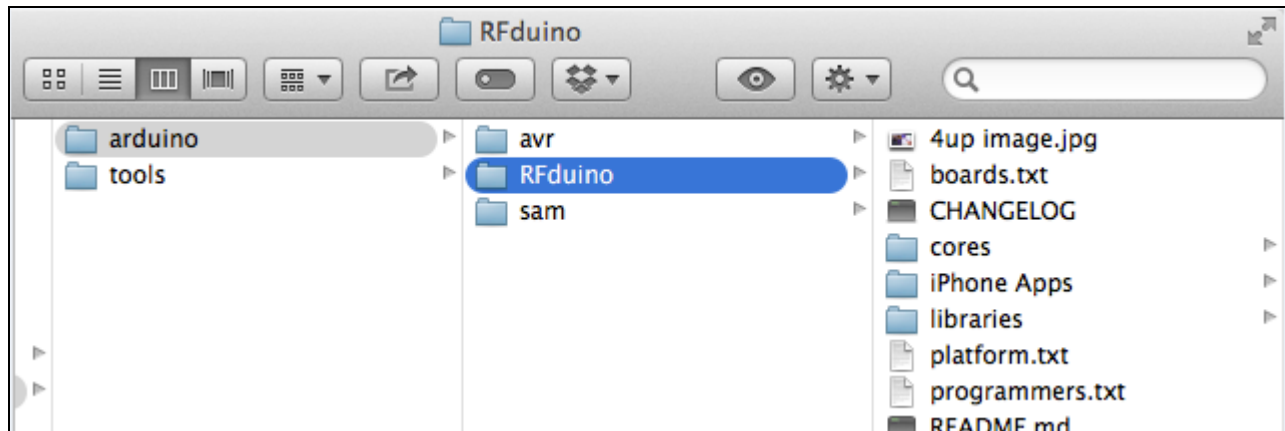




## 6. Navigate to your /Contents/Resources/Java/hardware/Arduino



## 7. Copy your "RFduino" folder from the RFduino library zip to your /Contents/Resources/Java/hardware/Arduino

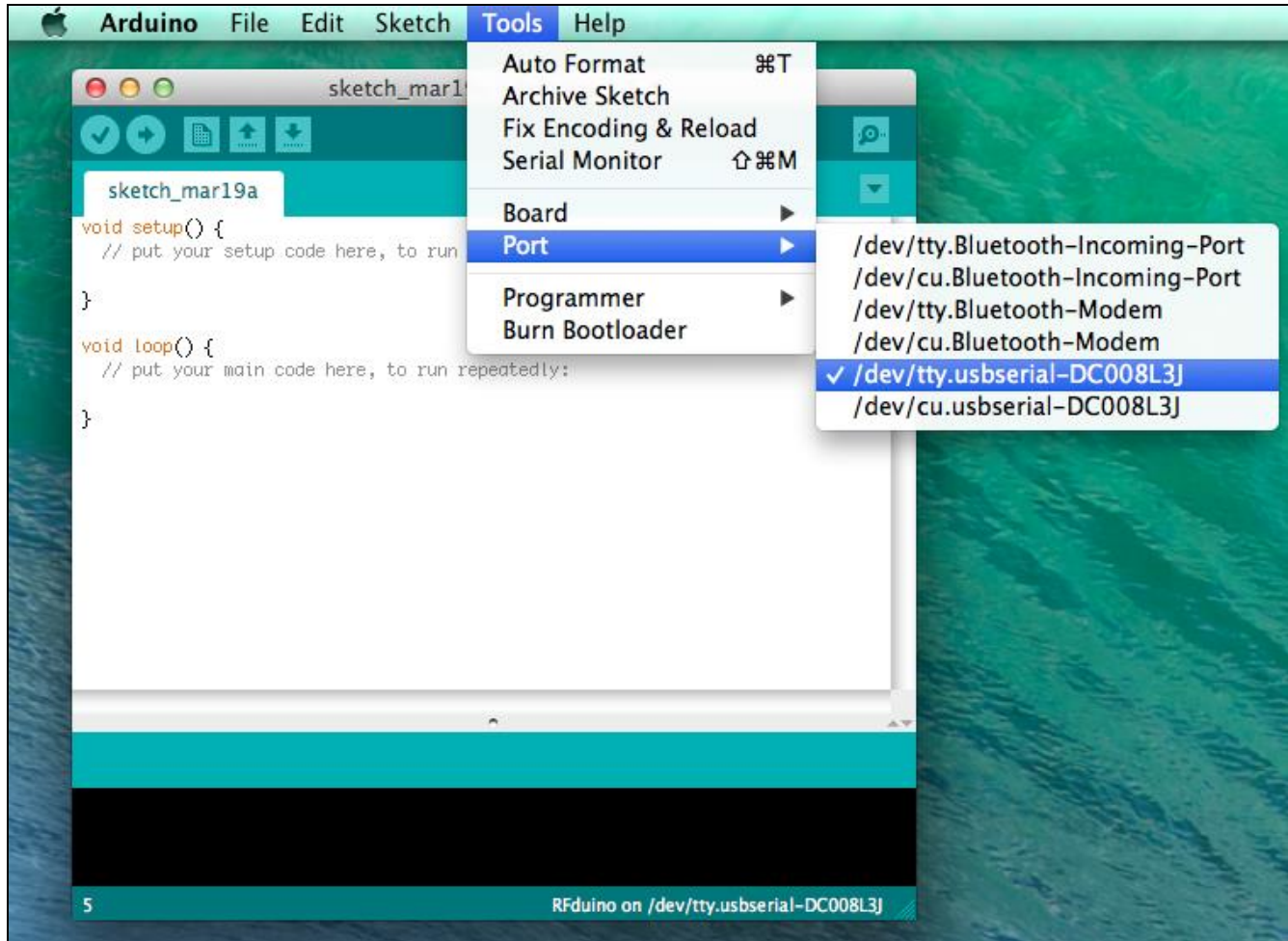


## 8. RFduino IDE Installation is complete



## RFduino USB Driver Installation on Mac OS X

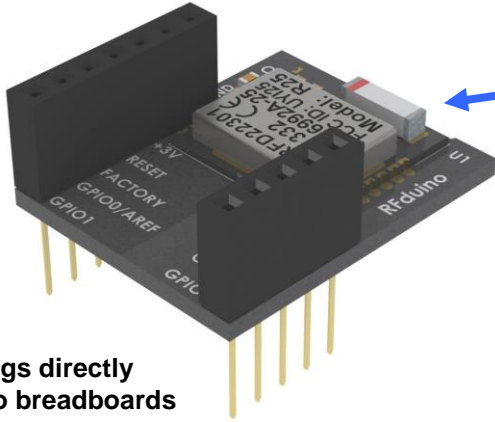
1. Visit the following link: <http://www.ftdichip.com/Drivers/VCP.htm>
2. Download and install the drivers for your system
3. On Mac OS X you should have a new com port called “/dev/tty.usbserial-xxxxxxx”





## RFD22102 RFduino DIP is based on RFD22301 SMT

RFD22102 RFduino DIP

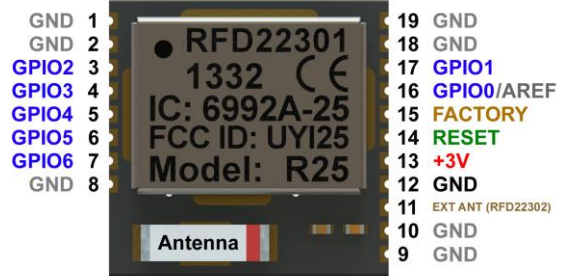
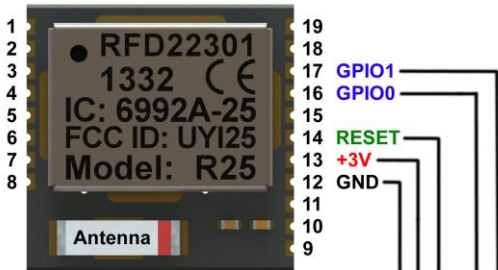


Plugs directly into breadboards

RFD22301 RFduino SMT Module



The RFD22301 compliance approved SMT module is placed onto a DIP board to create the RFD22102 RFduino DIP form factor.



**CE, ETSI, IC, FCC  
Approved & Certified**

See RFD22301 datasheet at:  
<http://www.RFDigital.com/>