



Globalcode

USING WIFI MODULE



FILES FOR THIS CLASS

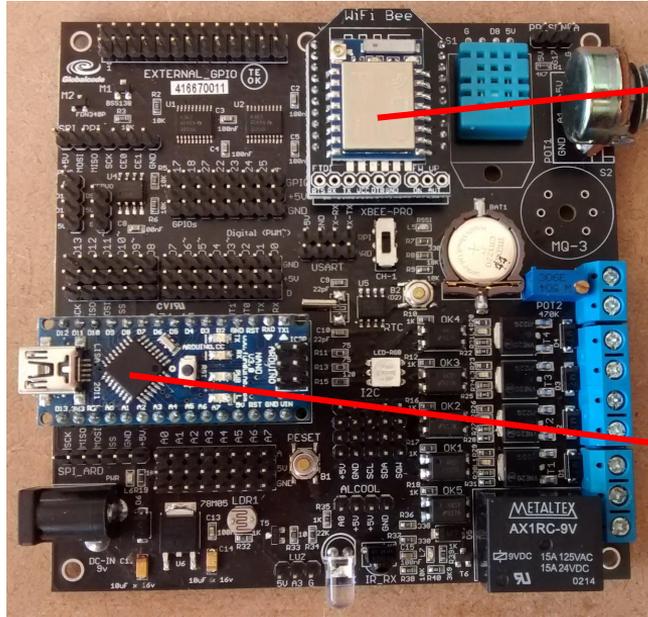
[HTTPS://PORTALALUNO.TOOLSCLOUD.NET/REDMINE/PROJECTS/IOTSURFBOARD/FILES](https://portalaluno.toolscloud.net/redmine/projects/iotsurfboard/files)

□ PRESENTATION: IOT_SURFING_CLASS_10_EN.PDF

WIFI BEE MODULE

- ❑ ESP8266 PACKED WITH ZIGBEE FORM FACTOR
- ❑ COMPLETE TCP/IP SOC WITH LUA SUPPORT
- ❑ CAN BE PROGRAMMED WITH ARDUINO IDE!
- ❑ CAN HOST A HTTP SERVER AND MQTT BROKER

DUAL MCU: ATMEGA328 + ESP8266



Wifi Bee w/ ESP8266

WIFI Communication ready for ThingSpeak.com Sparkfun Data, IFTTT, firmware can be replaced by MQTT + REST gateway.

+

Arduino w/ Atmega328

Dedicated controller to manage actuators and sensors provides communication abstraction for USB Cable, Bluetooth, WIFI, Zigbee and 2g / 3g Modems.

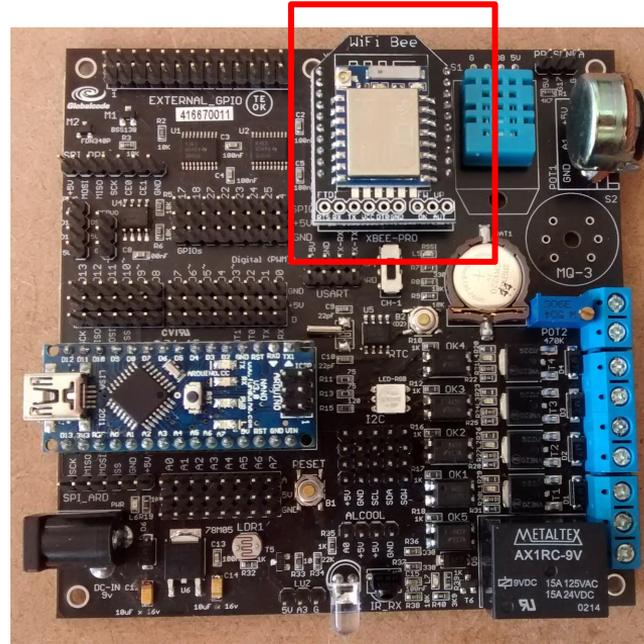
Internet

REST
MQTT
ThingSpeak
Sparkfun Data
ifttt.org
NodeRed
IBM Bluemix
Amazon IoT

HOW TO USE...

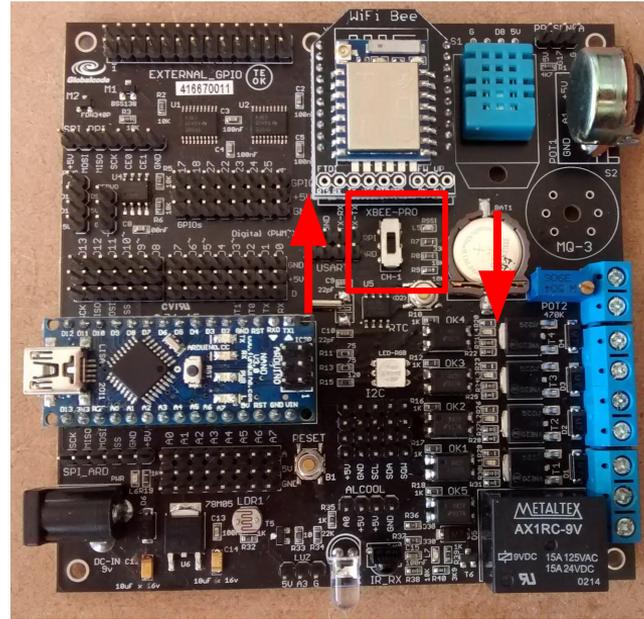
1. PLUG THE WIFI MODULE
2. CHANGE WIFI THE SWITCH ARDUINO - RASPBERRY PI
3. OPEN AT COMMAND WIFI FIRMWARE
4. CHANGE SSID, PWD AND KEY
5. UPLOAD TO YOUR BOARD
6. TEST WITH DATA.SPARKFUN.COM AND THINGSPEAK.COM

1. PLUG THE WIFI MODULE



2. CHANGE WIFI SWITCH

IF YOU MOVE UP,
WIFI MODULE WILL
BE DISABLED AND
YOU CAN UPLOAD
SKETCHES TO YOUR
ARDUINO.



IF YOU MOVE DOWN,
WIFI MODULE WILL BE
ENABLED AND YOU
CAN'T UPLOAD
SKETCHES TO YOUR
ARDUINO.

3. OPEN AT COMMAND BASIC FIRMWARE



The image shows a screenshot of an IDE interface. On the left, a menu is open with the following items: File, Edit, Sketch, Tools, and Help. The 'Sketch' menu item is highlighted. The main editor area displays the following code:

```
//dados para acesso a rede WiFi
#define SSID "iot-mobile"
#define PASS "iotiotiot"

#define DST_IP "54.86.132.254" //data.sparkfun.com
char myChar;

//dados para acesso ao banco de dados Sparkfun
const String publicKey = "G2q1b21w54FoDl5Q5GjY";
const String privateKey = "NW460W6J9RsMjqRkRWN1";

system_mode(1, myBlink);
```

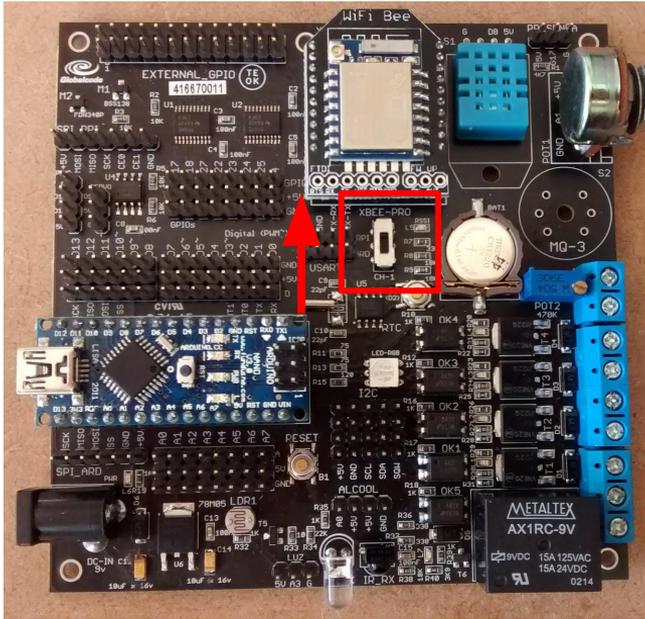
4. CHANGE THE SSID, PWD AND KEYS

```
//dados para acesso a rede WiFi
#define SSID "iot-mobile"
#define PASS "iotiotiot"

#define DST_IP "54.86.132.254" //data.sparkfun.com
char myChar;

//dados para acesso ao banco de dados Sparkfun
const String publicKey = "G2q1b21w54FoDl5Q5GjY";
const String privateKey = "NW460W6J9RsMjqRkRWNl";
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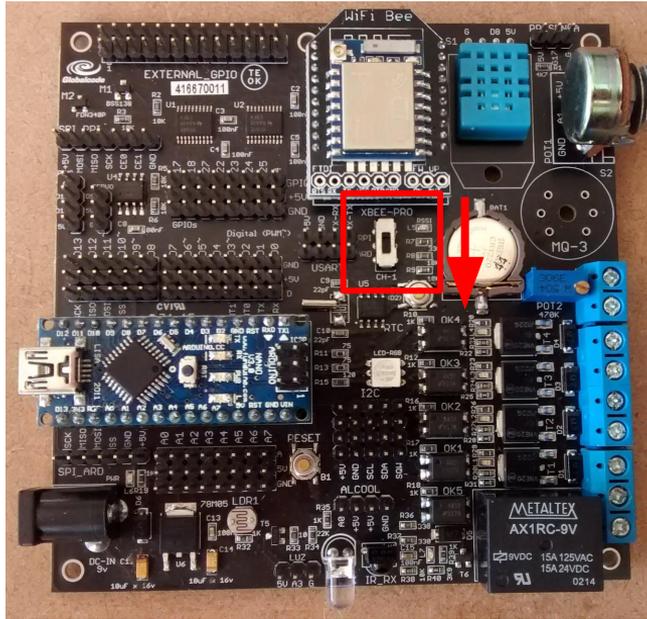
5. UPLOAD TO YOUR BOARD



```
DHT dht (DHTPIN, DHTTYPE);
```

```
//dados para acesso a rede WiFi  
#define SSTD "iot-mobile"
```

6. TEST WITH SPARKFUN AND THINGSPEAK!



IoT Surfboard

Channel ID: 62673

IoT Surfboard Channel

Author: vsenger

Access: Private

Private View

Public View

Channel Settings

API Keys

Data Import / Export

+ Add Visualizations

Data Export

Channel Stats

Created 3 months ago

Updated about 12 hours ago

1 Entries

LIVE DEMO



SUMMARY

- DUAL-CORE ROCKS: ARDUINO AS DEDICATED CONTROLLER, ESP AS TCP/IP PROVIDER
- CHEAPEST WIFI SOLUTION EVER!
- ESP8266 IS A BIG COMMUNITY!

IOT SURFBOARD + ARDUINO + ESP8266 =
BEST CHOICES!

