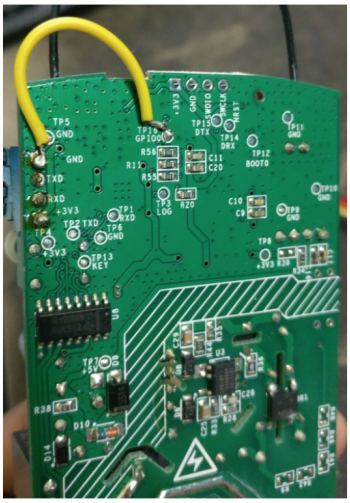
Sonoff iFan2

Flashing

Connect RX -> TX | 3.3 -> 3.3 | TX -> RX | GND -> GND and connect TP16 to GND.

Press and hold the button while connecting to power.



This is an ESP 8285 in the iFan2.

Download and compile the Tasmota firmware:

> *git clone https://github.com/arendst/Tasmota.git*
>
> *cd ./Tasmota/lib/*
>
> *vi deployLibs.sh*

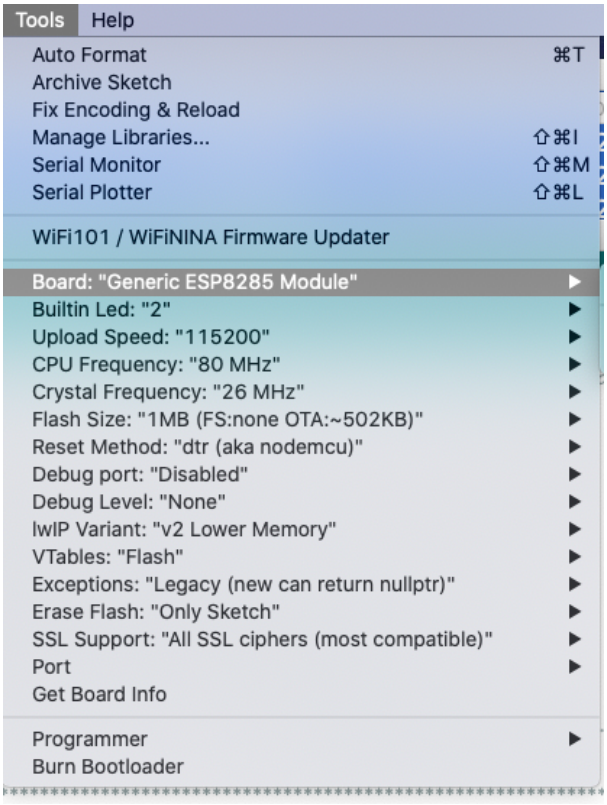
```
#!/bin/sh
rm -rf ~/Documents/Arduino/libraries/*

cp -R ./default/* ~/Documents/Arduino/libraries/.
cp -R ./lib_audio/* ~/Documents/Arduino/libraries/.
cp -R ./lib_basic/* ~/Documents/Arduino/libraries/.
cp -R ./lib_display/* ~/Documents/Arduino/libraries/.
cp -R ./lib_div/* ~/Documents/Arduino/libraries/.
cp -R ./lib_i2c/* ~/Documents/Arduino/libraries/.
cp -R ./lib_rf/* ~/Documents/Arduino/libraries/.
cp -R ./lib_ssl/* ~/Documents/Arduino/libraries/.
cp -R ./lib_ssl/* ~/Documents/Arduino/libraries/.
```

> *chmod +x deployLibs.sh*
>
> *./deployLibs.sh*

Open Arduino IDE

Open tasmota project

Set board to ESP8285 and other settings, see below:



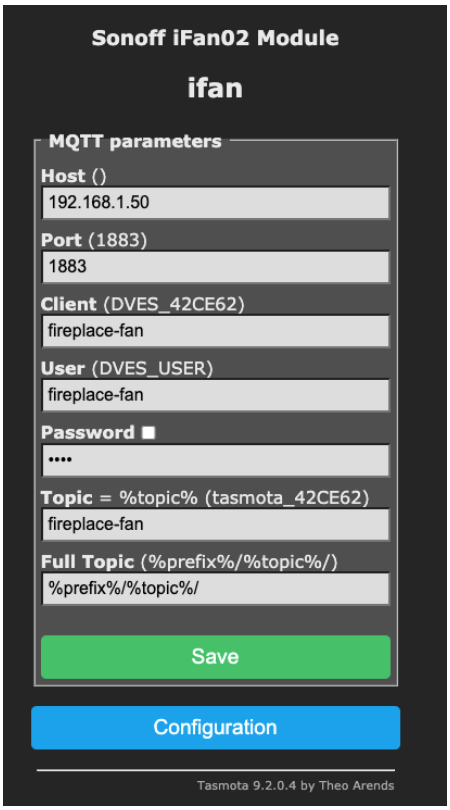
With the iFan in flash mode, click Upload.

Tasmota Commands

Cmd	Cmnd	Value	URL
Light Off	Power	0	http://xxx/cm?cmnd=Power 0
Light On	Power	1	http://xxx/cm?cmnd=Power 1
Fan Off	FanSpeed	0	http://xxx/cm?cmnd=FanSpeed 0
Low Speed	FanSpeed	1	http://xxx/cm?cmnd=FanSpeed 1
Med Speed	FanSpeed	2	http://xxx/cm?cmnd=FanSpeed 2
High Speed	FanSpeed	3	http://xxx/cm?cmnd=FanSpeed 3

Integration with Homebridge

Configure MQTT



Using the mqttthing homebridge plugin, we configure our fan using the following:

```
        {
            "accessory": "mqttthing",
            "type": "fan",
            "name": "fireplace-fan",
            "url": "http://192.168.1.50:1883",
            "username": "homebridge",
            "password": "pass",
            "topics": {
              "getOn": {
                "topic": "stat/fireplace-fan/RESULT",
                "apply": "return JSON.parse(message).FanSpeed > 0 ? true : false;"
              },
              "setOn": {
                "topic": "cmnd/fireplace-fan/FanSpeed",
                "apply": "return message ? '' : '0';"
              },
              "getRotationSpeed": {
                "topic": "stat/fireplace-fan/RESULT",
                "apply": "return Math.round(JSON.parse(message).FanSpeed * 33.3);"
              },
              "setRotationSpeed": {
                "topic": "cmnd/fireplace-fan/FanSpeed",
                "apply": "return Math.round(message / 33.3);"
              }
            },
            "confirmationPeriodms": 1000
        },
```

Order of Operations when Setting Rotation Speed

If we add some console.log statments in our apply function, we see that setting the rotation speed makes 2 calls. The first to setRotationSpeed and then to setOn.

```
setRotationSpeed - mesage=73
setOn - mesage=true
```

After installing the iFan for use with my fireplace, I concluded that the fan level 1 was too low and decided to bypass it. This new configuration changes the fan such that it operates at 0% (off), 50%(fan level2) and 100%(fan level 3).

```
{
            "accessory": "mqttthing",
            "type": "fan",
            "name": "fireplace-fan",
            "url": "http://192.168.1.50:1883",
            "username": "homebridge",
            "password": "pass",
            "topics": {
              "getOn": {
                "topic": "stat/fireplace-fan/RESULT",
                "apply": "return JSON.parse(message).FanSpeed > 0 ? true : false;"
              },
              "setOn": {
                "topic": "cmnd/fireplace-fan/FanSpeed",
                "apply": "return message ? '' : '0';"
              },
              "getRotationSpeed": {
                "topic": "stat/fireplace-fan/RESULT",
                "apply": "val=JSON.parse(message).FanSpeed; if(val==0)return '0'; if(val=='2') return '50'; if
(val==3) return '100';"
              },
              "setRotationSpeed": {
                "topic": "cmnd/fireplace-fan/FanSpeed",
                "apply": "if(message >50) return 3; if(messag=e=0) return 0; return 2;"
              }
            },
            "confirmationPeriodms": 1000
        },
```

References

Reference	URL
Flashing Tasmota	https://tasmota.github.io/docs/devices/Sonoff-iFan02/
Tasmota Commands	https://tasmota.github.io/docs/Commands/
Issue	https://github.com/arachnetech/homebridge-mqttthing/issues/78