

# Internet of Things Discovery Kit

Thank you for purchasing this kit. These are the wiring instructions for this individual kit (kits may vary) so please keep them safe.

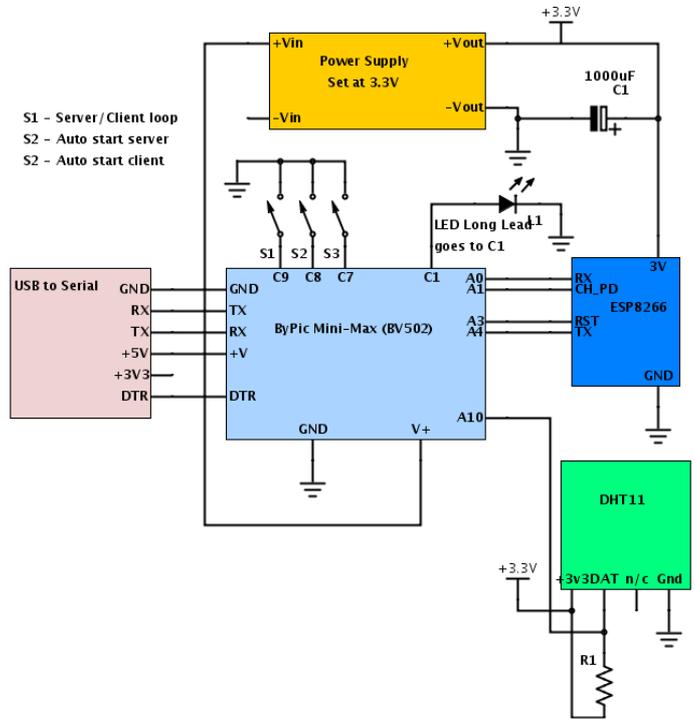
The software and how it works instructions are all on line at [http://www.bypic.co.uk/index.php/IoT\\_Wi-Fi\\_Kit](http://www.bypic.co.uk/index.php/IoT_Wi-Fi_Kit)

The kit comes complete with a Mini-Max Microcontroller (BV502) that is pre loaded with the Wi-Fi firmware so no additional downloads are needed initially.

## Wiring Instructions

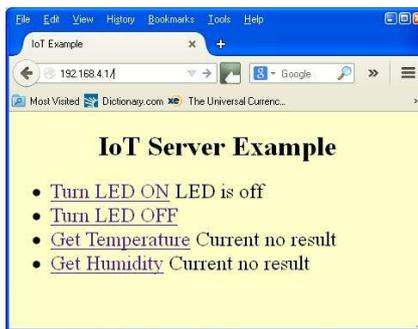
Following the circuit diagram and construct using the breadboard provided.

1. Start with inserting the mini-max at one end
2. Wire the power supply from the mini-max V+ and use the long row of pins down either side. Some breadboards do not have a continuous strip and require linking—check.
3. Next wire the DHT11 and resistor that goes from +3.3V to the DHT11 DAT pin.
4. Insert the capacitor between the ground and +3v3, make sure the polarity is correct, the long lead goes to the +3v3 supply
5. Wire the LED, again the long lead is +V so this goes to the port C1 (marked) on the Mini-Max.
6. Wire the Wi-Fi module. Use 4 x F-F type connectors to wire to the Mini-Max and 2 x F-M type connectors for the power supply.



## First Pass

On power up, if switches (jumper wires) S1 and S2 are closed then it should be possible to connect using a tablet, phone or laptop to the Wi-Fi module, the default SSID is LINK???? And is open. Once connected wait for the module go give your device an IP address and then brows to 192.168.4.1 whereby you should be presented with a yellow web page similar to

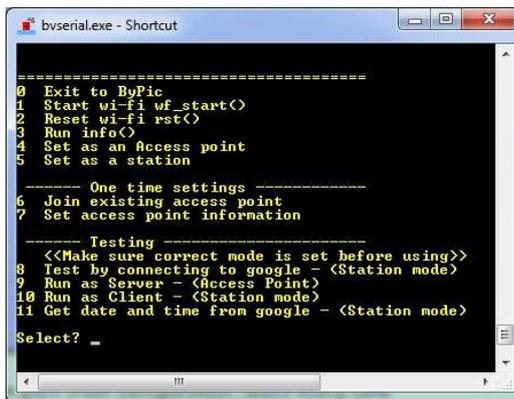


this. If not don't worry, there are lots of things to get right for this to happen.

## Second Pass

The next thing to do is to go on line and obtain BvSerial, this is a terminal emulator program that will allow you to directly manipulate the Mini-Max and

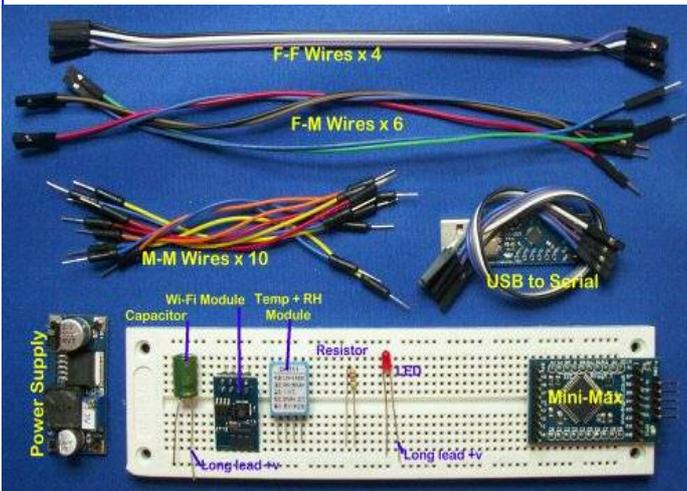
thus the Wi-Fi Module.



This is the main menu when S1 to S3 (jumpers) are open (not connected to ground). From here the Wi-Fi module can be manipulated. There is insufficient space to explain this here and so full instructions are on line, see the resources below.

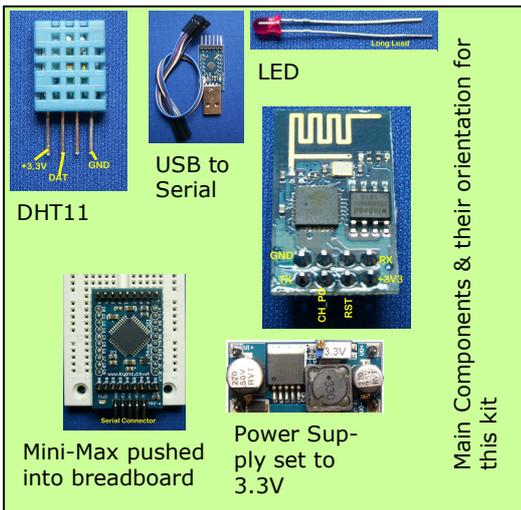
## Resources

[http://www.bypic.co.uk/index.php/IoT\\_Wi-Fi\\_Kit](http://www.bypic.co.uk/index.php/IoT_Wi-Fi_Kit)



## Parts List

- |                           |                          |
|---------------------------|--------------------------|
| 1 x Breadboard            | 1 x LED                  |
| 1 x Power Supply, 3.3V    | 1 x Resistor 4k7 or near |
| 1 x Wi-Fi Module, ESP8266 | 1 x Capacitor 1000uF     |
| 1 x Mini-Max, BV502       | 4 x F-F hook up wires    |
| 1 x USB to Serial         | 6 x F-M hook up wires    |
| 1 x DHT11, Temp + RH      | 10 x M-M hook up wires   |



Kit type ref mm1

[www.bypic.co.uk](http://www.bypic.co.uk)