

# Internet of Things Discovery Kit

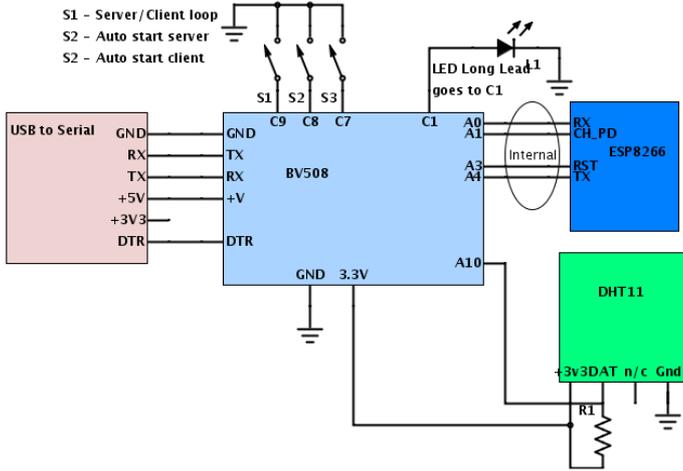
Thank you for purchasing this kit. These are the wiring instructions for this individual kit (kits may vary) so please keep them safe.

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)

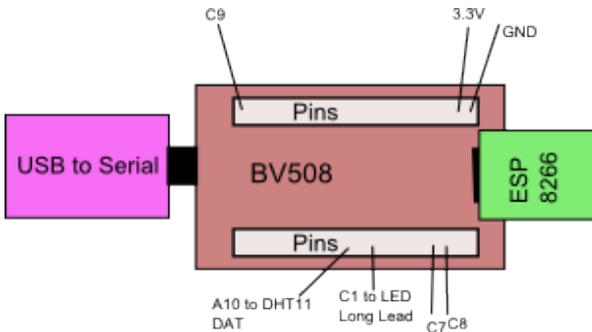
The kit comes complete with a BV508 Microcontroller that is pre loaded with the Wi-Fi firmware so no additional downloads are needed initially. In addition the pins have been soldered so no soldering is required for this kit.

## Wiring Instructions

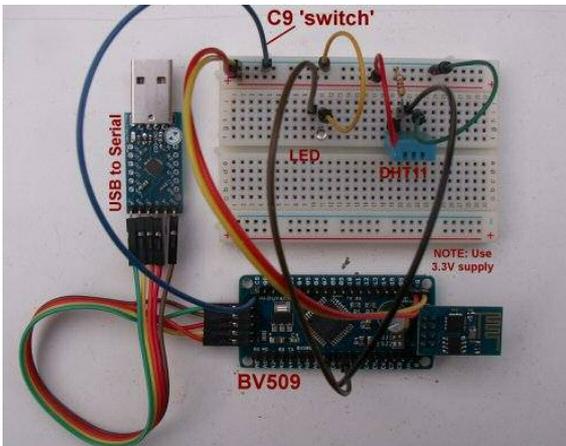
The BV508 incorporates the ESP8266 Wi-Fi module and so there is very little wiring to do.



This is the circuit diagram. The three switches are not really switches but juts wire links to the breadboard. Note also that the ESP8266 is part of the BV508 and so does not need wiring.



The block diagram shows the location of the pins. To maximise the room of the breadboard. The BV509 has the pins soldered upwards and connections are made with M-F connectors.



This is how the layout is conceived.

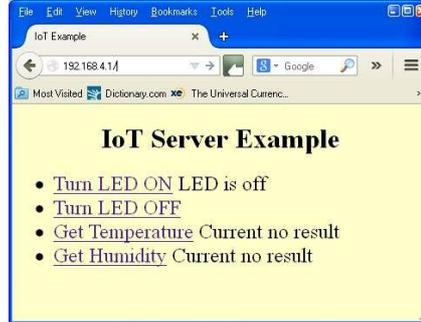
## Parts List

- 1 x Breadboard
- 1 x Wi-Fi Module, ESP8266
- 1 x BV509 \*\*
- 1 x USB to Serial
- 1 x DHT11, Temp + RH

- 1 x LED
- 1 x Resistor 4k7 or near
- 5 x F-F hook up wires (min)
- 7 x F-M hook up wires (min)
- \*\* Pins pre-soldered

## 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 browse to 192.168.4.1 whereby you should be presented with a yellow web page

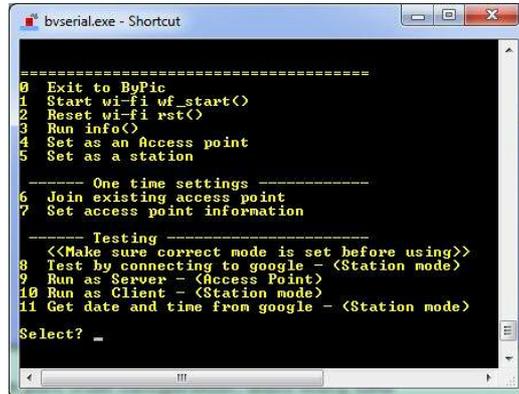


similar to this.

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

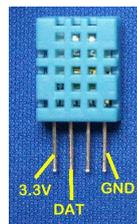
## Second Pass

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)