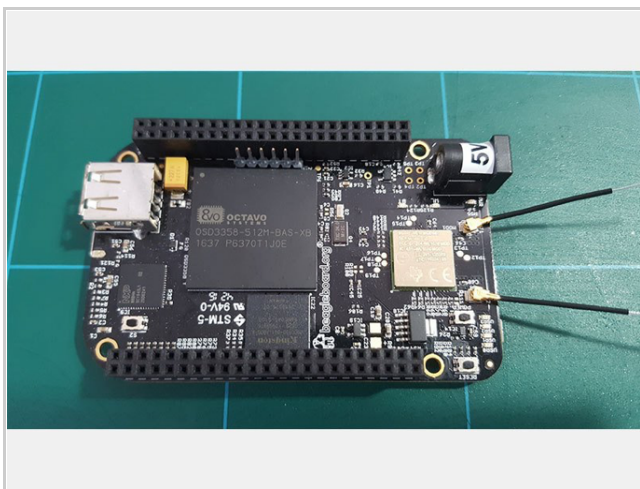


Login (<https://www.digikey.com/MyDigiKey/Login?ReturnUrl=https%3A%2F%2Fwww.digikey.com%2Fen%2F>)

[MENU](#)

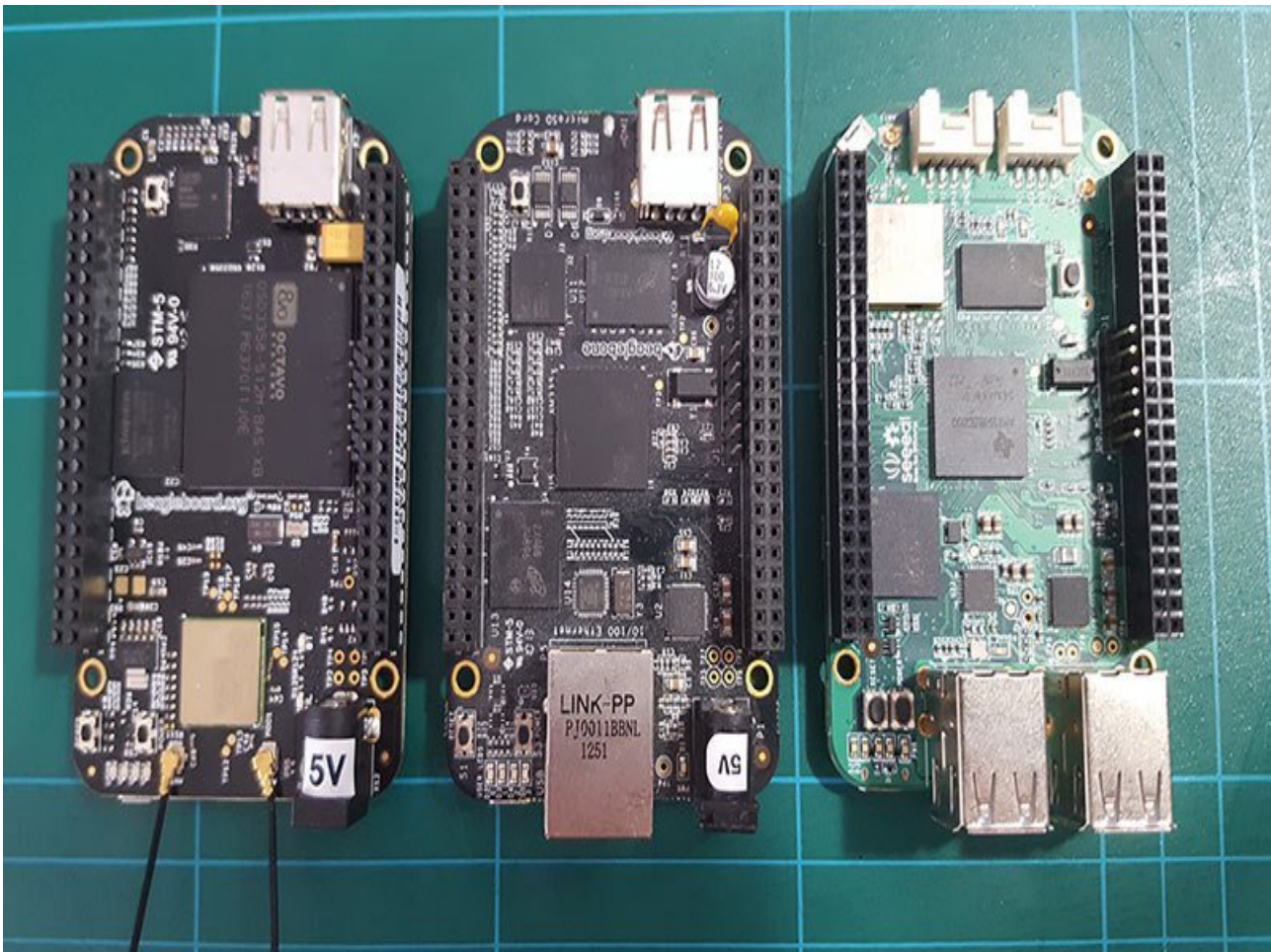
3/8/2017 | BY MAKER.IO STAFF

How to Setup WiFi on the BeagleBone Black Wireless



The [BeagleBone Black Wireless \(/product-detail/en/ghi-electronics-llc/BBBWL-SC-562/BBBWL-SC-562-ND/6211000\)](https://product-detail/en/ghi-electronics-llc/BBBWL-SC-562/BBBWL-SC-562-ND/6211000) is the latest revision of the BeagleBone family adding WiFi and Bluetooth capabilities. Not only does it have wireless capabilities but there are also a few minor changes to the board compared to the previous revision such as the SoC is now

an Octavo OSD3358 which allows quicker manufacturing and offers a single chip solution. They have also changed the USB programming port from a mini to a micro, which should allow better compatibility with common cables and power supplies .



BeagleBone Comparison

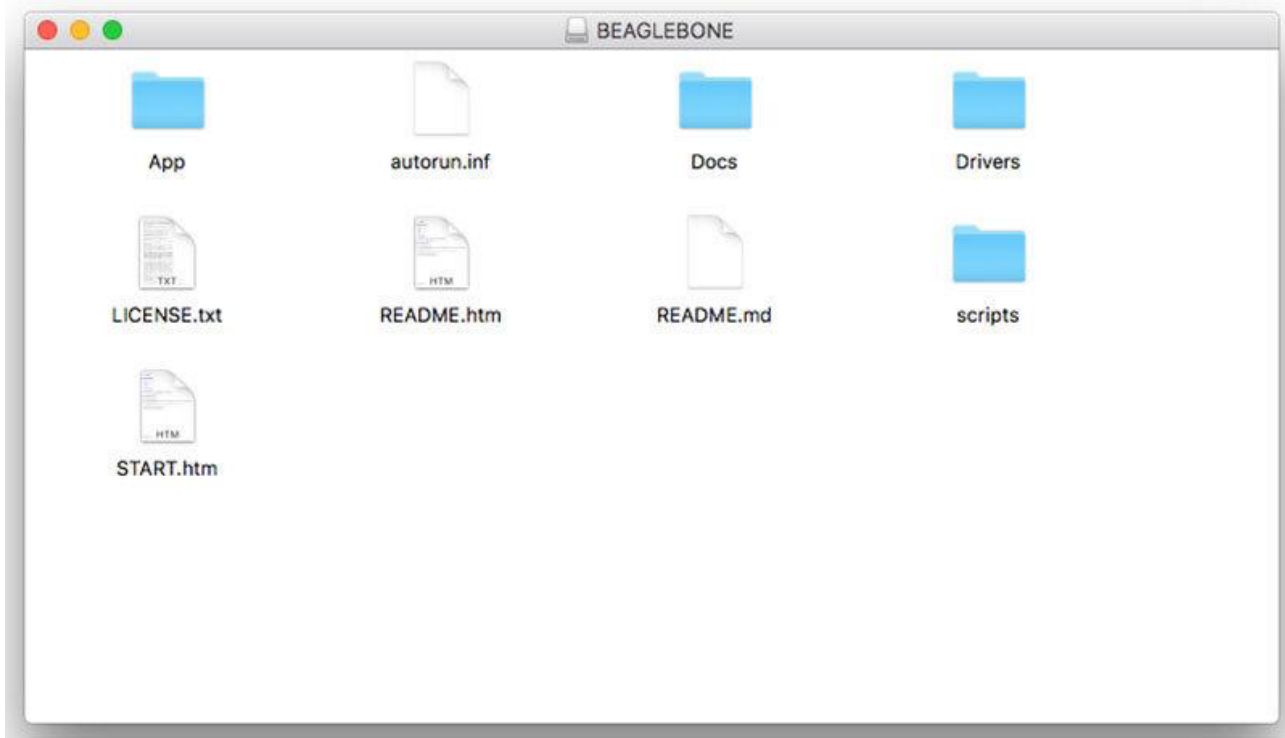
The BeagleBone Black Wireless (BBBW) uses the same wireless chip as the [BeagleBone Green Wireless \(/product-detail/en/seeed-technology-co-ltd/102010048/1597-1367-ND/5965297\)](https://www.seeedstudio.com/product-detail/en/seeed-technology-co-ltd/102010048/1597-1367-ND/5965297) (BBGW), which is the WL18MODGB TI module. Unlike the BBGW the BBBW does not have a built-in antenna therefore solely relies on the provided external antennas. This revision has also removed the Ethernet port and as such users will have to rely on the WiFi for Internet connectivity.

Unlike the BBGW, which boots up an Access Point Mode (AP) and allows you to connect to it wirelessly to configure the WiFi connection to your local router, on the BBBW you will have to connect it to your computer and configure it using the terminal window.

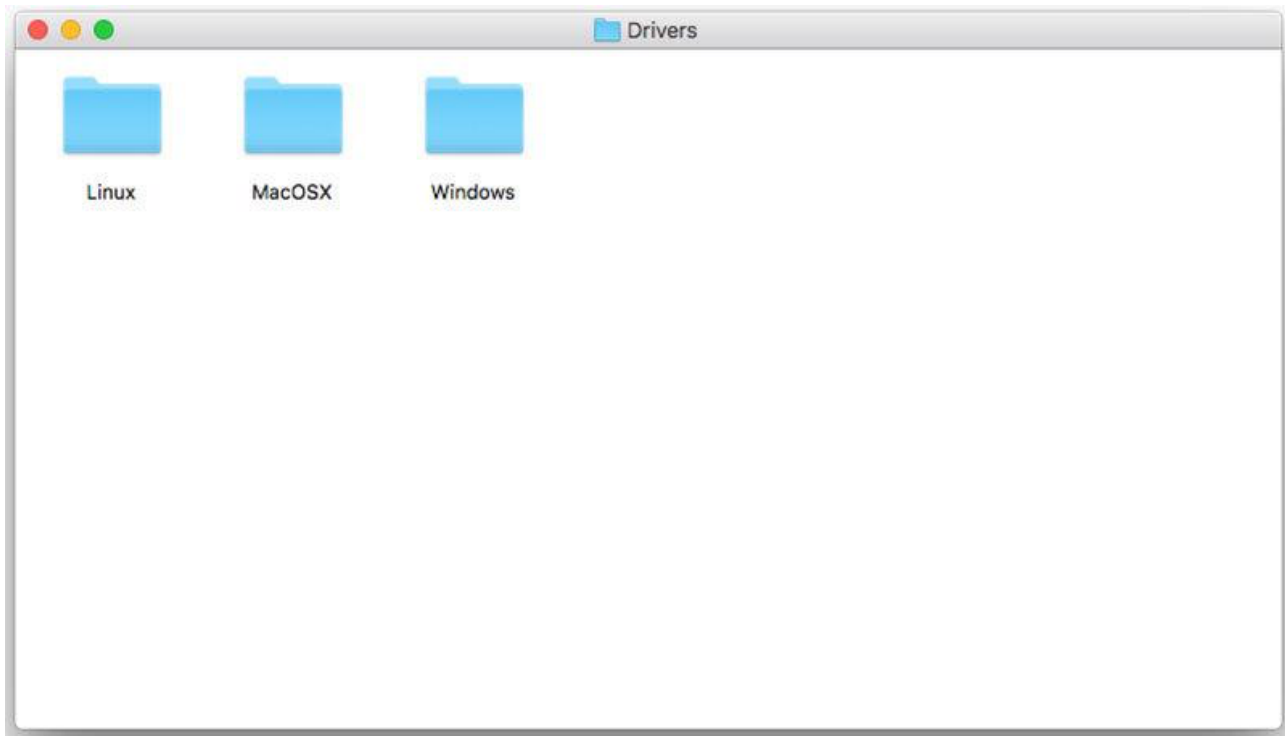
Getting Connected

Out of the box the board comes supplied with a micro USB cable to connect to your computer and also to provide power to the board. Connect the cable to your BeagleBone and then connect to your computer, it will take a few moments to boot up.

Once booted you should see that the BeagleBone has connected as a media drive. This is where you can install the drivers for your operating system.



BeagleBone Media Drive



Install Drivers for your Operating System

Once you have installed the drivers you may be required to restart your machine. Once done so re-connect your BeagleBone Black Wireless, you should be able to open the following url in your internet browser:

<http://192.168.7.2> (<http://192.168.7.2>).

Now we are going to connect to the board using SSH in a terminal program. If you are using windows then you can download PuTTY or on Linux or Mac OS X you can just open the terminal window. To connect to the board type the following in the terminal window:

ssh root@192.168.7.2

Once connected you should see the BeagleBone command prompt.



BeagleBone Command Line

Unlike other Linux boards, normally you would have to edit the `/etc/network/interfaces` file and add your wireless credentials in their and then reboot the network interface. The BeagleBone Black wireless has a built-in network manager program that can do all this for us called “connmanctl”. To connect to your Wireless network type the following command in the terminal window:

sudo connmanctl

connmanctl> **enable wifi**

Enabled wifi

connmanctl> **scan wifi**

Scan completed for wifi

connmanctl> **services**

*AO TNCAPA97AB9

wifi_506583d4fc5e_544e434150413937414239_managed_psk

wifi_506583d4fc5e_hidden_managed_psk

DIRECT-roku-876

wifi_506583d4fc5e_4449524543542d726f6b752d383736_managed_psk

BTHub6-H5H7

wifi_506583d4fc5e_4254487562362d48354837_managed_psk

virginmedia2029431

wifi_506583d4fc5e_76697267696e6d6564696132303239343331_managed_psk

VM046693-2G

wifi_506583d4fc5e_564d3034363639332d3247_managed_psk

BTWifi-with-FON

wifi_506583d4fc5e_4254576966692d776974682d464f4e_managed_none

connmanctl> **agent on**

Agent registered

connmanctl> **connect**

wifi_506583d4fc5e_544e434150413937414239_managed_psk

Passphrase? **xxxxxxxxxxxx**

connected wifi_506583d4fc5e_544e434150413937414239_managed_psk

connmanctl> **quit**

You should now be connected to your local wifi. You can check that you have an IP address by typing the following in the terminal window:

ifconfig -a

You should now see an IP address under Wlan0 and you can now connect to this IP address in the future to program your BeagleBone Black Wireless.

```

christopherrush — ssh • sudo — 93x25
UP LOOPBACK RUNNING MTU:65536 Metric:1
RX packets:488 errors:0 dropped:0 overruns:0 frame:0
TX packets:488 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1
RX bytes:38310 (37.4 KiB) TX bytes:38310 (37.4 KiB)

usb0    Link encap:Ethernet HWaddr 50:65:83:d4:fc:60
        inet addr:192.168.7.2 Bcast:192.168.7.3 Mask:255.255.255.252
        inet6 addr: fe80::5265:83ff:fed4:fc60/64 Scope:Link
        UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
        RX packets:0 errors:0 dropped:0 overruns:0 frame:0
        TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
        collisions:0 txqueuelen:1000
        RX bytes:0 (0.0 B) TX bytes:0 (0.0 B)

wlan0    Link encap:Ethernet HWaddr 50:65:83:d4:fc:5e
        inet addr:192.168.1.76 Bcast:192.168.1.255 Mask:255.255.255.0
        inet6 addr: fe80::5265:83ff:fed4:fc5e/64 Scope:Link
        UP BROADCAST RUNNING MULTICAST DYNAMIC MTU:1500 Metric:1
        RX packets:2328 errors:0 dropped:0 overruns:0 frame:0
        TX packets:325 errors:0 dropped:0 overruns:0 carrier:0
        collisions:0 txqueuelen:1000
        RX bytes:574157 (560.7 KiB) TX bytes:47316 (46.2 KiB)

root@beaglebone:~#

```

BBBW Connected to the WiFi

RECENT COMMENTS(5)



(/en/maker/profiles/4bd805874d5a43b2a7b79b7735902a90)

Doug Reese (/en/maker/profiles/4bd805874d5a43b2a7b79b7735902a90)

1 year ago

1 0

I had to issue:

tether wifi disable

before the scan command found any services. Other than that detail, worked great.



[\(/en/maker/profiles/4c1f93e6b6094128addb04051779d449\)](/en/maker/profiles/4c1f93e6b6094128addb04051779d449)

Georges Guinchard

(/en/maker/profiles/4c1f93e6b6094128addb04051779d449)

1 year ago

0 0

Thanks Doug,

Right, without this no work.

But please webmaster, correct the line sudo conmanctl in sudo connmanctl with 2 n. For those (I am !) who are not big specialist, and who use copy paste to be sure not to type an error, this lead to loose a lot of time "why is conmanctl unknown !!"



[\(/en/maker/profiles/e463e7ae83c14f98bc667178fd20e977\)](/en/maker/profiles/e463e7ae83c14f98bc667178fd20e977)

Maker.io Team

(/en/maker/profiles/e463e7ae83c14f98bc667178fd20e977)

1 year ago

0 0

Thank you for pointing this out, it has been updated..... happy making



[\(/en/maker/profiles/4c1f93e6b6094128addb04051779d449\)](/en/maker/profiles/4c1f93e6b6094128addb04051779d449)

Georges Guinchard

(/en/maker/profiles/4c1f93e6b6094128addb04051779d449)

1 year ago

0 0

Now, every things goes fine. I just make a short-circuit on my main electric distribution, and then I have lost the original IP adress. Finally I found it, but I do'nt find any method to setup a fixed IP adress with connmanctl, have you some example or a link pls ?



(/en/maker/profiles/8990f43bccc44a76ab00e0bbfcfafcb1).

Neil Hancock (/en/maker/profiles/8990f43bccc44a76ab00e0bbfcfafcb1)

1 year ago

0 0

For me the recently received BBW has an out-of-date boot - and trying to figure out how to upgrade it.

Please [sign up](https://www.digikey.com/MyDigiKey/Register?) (https://www.digikey.com/MyDigiKey/Register?

ReturnUrl=https%3A%2F%2Fwww.digikey.com%2Fen%2Fmaker%2Fblogs%2F2017%2Fhow-to-setup-wifi-on-the-beaglebone-black-wireless) or [log in](https://www.digikey.com/MyDigiKey/Login?) (https://www.digikey.com/MyDigiKey/Login?

ReturnUrl=https%3A%2F%2Fwww.digikey.com%2Fen%2Fmaker%2Fblogs%2F2017%2Fhow-to-setup-wifi-on-the-beaglebone-black-wireless) to comment.

Details

Tags

[BeagleBone \(/en/maker/search-results?](/en/maker/search-results?t=51386b17348d4b74bf481d7f14a45b82&y=cb5252a72f0549558ffaaa2a80d3a1ed)

[t=51386b17348d4b74bf481d7f14a45b82&y=cb5252a72f0549558ffaaa2a80d3a1ed\).](/en/maker/search-results?t=51386b17348d4b74bf481d7f14a45b82&y=cb5252a72f0549558ffaaa2a80d3a1ed)

[Networking \(/en/maker/search-results?](/en/maker/search-results?t=483d5b3cad214a55a5fd3adc85bb8147&y=cb5252a72f0549558ffaaa2a80d3a1ed)

[t=483d5b3cad214a55a5fd3adc85bb8147&y=cb5252a72f0549558ffaaa2a80d3a1ed\).](/en/maker/search-results?t=483d5b3cad214a55a5fd3adc85bb8147&y=cb5252a72f0549558ffaaa2a80d3a1ed)

[Wi-Fi \(/en/maker/search-results?](/en/maker/search-results?t=e41a6e7afc8441a29d22303bcf70420d&y=cb5252a72f0549558ffaaa2a80d3a1ed)

[t=e41a6e7afc8441a29d22303bcf70420d&y=cb5252a72f0549558ffaaa2a80d3a1ed\).](/en/maker/search-results?t=e41a6e7afc8441a29d22303bcf70420d&y=cb5252a72f0549558ffaaa2a80d3a1ed)

[Wireless \(/en/maker/search-results?](/en/maker/search-results?t=dfa3f8c85731454497a7754c65582b83&y=cb5252a72f0549558ffaaa2a80d3a1ed)

[t=dfa3f8c85731454497a7754c65582b83&y=cb5252a72f0549558ffaaa2a80d3a1ed\).](/en/maker/search-results?t=dfa3f8c85731454497a7754c65582b83&y=cb5252a72f0549558ffaaa2a80d3a1ed)

Get Involved

[Like \(https://www.digikey.com/en/maker/blogs/2017/how-to-setup-wifi-on-the-beaglebone-black-wireless\).](https://www.digikey.com/en/maker/blogs/2017/how-to-setup-wifi-on-the-beaglebone-black-wireless)

[Favorite \(https://www.digikey.com/en/maker/blogs/2017/how-to-setup-wifi-on-the-beaglebone-black-wireless\).](https://www.digikey.com/en/maker/blogs/2017/how-to-setup-wifi-on-the-beaglebone-black-wireless)

[Bookmark](#)

Related Products



GHI ELECTRONICS, LLC

[DEV BEAGLEBONE BLACK WIRELESS \(/product-detail/en/ghi-electronics-llc/BBBWL-SC-562/BBBWL-SC-562-ND/6211000\)](/product-detail/en/ghi-electronics-llc/BBBWL-SC-562/BBBWL-SC-562-ND/6211000)

[View Details](#)

[\\$76.13 \(/product-detail/en/ghi-electronics-llc/BBBWL-SC-562/BBBWL-SC-562-ND/6211000\)](/product-detail/en/ghi-electronics-llc/BBBWL-SC-562/BBBWL-SC-562-ND/6211000)

Related Blogs



10/10/2016

[BeagleBone™ Black Wireless - BeagleBoard's Latest Development Board \(/en/maker/blogs/beaglebone-black-wireless-beagleboards-latest-development-board\)](/en/maker/blogs/beaglebone-black-wireless-beagleboards-latest-development-board)



Powered By



[_\(/https://twitter.com/MakerIO\)](https://twitter.com/MakerIO)



[_\(/https://www.facebook.com/pages/Makerio/1649309965291006?ref=hl\)](https://www.facebook.com/pages/Makerio/1649309965291006?ref=hl)



[_\(/https://www.youtube.com/channel/UCeaxaQKW9PjXWpPjLNRsaow\)](https://www.youtube.com/channel/UCeaxaQKW9PjXWpPjLNRsaow)

[Contact Us \(/en/maker/contact\)](#)

[About \(/en/maker/about\)](#)

[Privacy Statement \(/en/help/privacy\)](#)

[Terms \(/en/terms-and-conditions?WT.mc_id=frommaker.io\)](#)



Powered By



©2018 Maker.io All Rights Reserved. Maker.io and Digi-Key Electronics are not associated with any third party to which Maker.io links other than franchised suppliers.

[_\(/https://ad.doubleclick.net/ddm/jump/N4481.2326506MAKER.IO/B4652602.131846039;sz=1x1;ord=\[timestamp\]?\)](https://ad.doubleclick.net/ddm/jump/N4481.2326506MAKER.IO/B4652602.131846039;sz=1x1;ord=[timestamp]?)
undefined