20140901 - Beagle Bone Black WIFI setup

Setting up WIFI can be tricky for many reasons. Mostly the tutorial are out of date, or are written for the Angstrom distro. As we know BBB as of Rev C use Debian.

The is a WIFI manager call WICD (wicked) pre-installed on the Debian distro, this is suppose to be an easy to use WIFI manager, and for the most part it is.
The issues I have run into is my network is hidden, and the BBB is slow to connect to it, if it connects at all.

Most of the tutorials all agree that you need to power your USB WIFI adaptor from a powered hub. It seems the power starts to get a little flaky with most WIFI adaptors.

The other thing most agree on is the RALink Chipset is the way to go without struggling to much.

WIFI use to be a problem for Linux, but within the last 2 or 3 years all major distros support most WIFI adaptors out of the box probably 90 to 95%. WIFI use to be a problem because manufacturers didn't share the drivers or open source the drivers for linux. That has changed. That being said, with small distros or custom distros WIFI is normally the first thing they cut out to keep the distros small. RALink chipset has been supported from very early in the history of linux, and normally are the drivers that are left behind.

But this is why rPI, BBB, Nintendo, xBox, etc all have "custom" WIFI adaptors, the device might support others, but they guarantee the adaptors they sell will work.

A lot of the cheap Tenda adaptors have RAlink chipsets, The netgear WMA1000M adaptor (is the one in most of the update tutorials) the Rosewill NX-G1W

But not all adaptors are created equal - for example my Netgear WMA1000M refuses to auto connect, while my Tenda W311U has connected each time I reboot the device.
I like the Tenda card better anyways :-)

So here is some info on setting all up:
https://docs.google.com/document/d/1-CIGQYdk8ZhU3D3UCNn70jc7C9HdXvEZAsiNW71fGIE/edit (out of date, but has some info in it)
http://inspire.logicsupply.com/2014/07/beaglebone-wifi-installation.html (this is the updated document for the above) But it still has some misleading information.

It appears they are installing the "supported" BBB WIFI adaptor, and it talks about find the adaptor by looking for ra0 in the list of network adaptors. IF you are not using the "supported" adaptor you'll not find it and think it's not working.

Look for WLANx (where x is some number) - typically you'll see "eth0" which will be the wired network, if you are plugged into the USB port and using the "virtual" connection you'll also see "usb0" - and should see a "lo" which is a loopback adaptor.

If the USB WIFI is found, it will show up as a "wlan"x device - NOTE: You need to have the device plugged in before you power on the BBB.

The rest of the tutorial is pretty good. You'll need to know your devices name to finish setup. and I've found that you may also need to exit out of wicd-curses (maybe even reboot the BBB) and start it again for a new network device to be used.

The other thing when you setup "configure" your network, if you want it to start on reboot, be sure to put an x next to "automatically connect to this network"

That is pretty much it - not too hard, but a little tricky.

Unfortunately Microcenter doesn't carry the Tenda W311U anymore - they have a W311M which is a smaller USB device, and I haven't tested it out.

They also carry a W322U but again I've not tested it out

By The Way The W311U is a Wireless N device, my router is a G and together they work great!

Edit: I did find some Tenda W311U+ on eBay - the plus looks like it has an external antenna, I might get one of these to use in the Hero Jr - since it's frame and body are mostly metal - I can get the antenna out of the inside. I don't know if there were any other changes thou, so it's a risk.