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## Hardware Specifications

- FCC ID: [PY308100078](#), PY307300072
- Industry Canada ID: 4054A-07300072
- CPU1: Broadcom BCM4704 (264 MHz)
- Flash ROM / RAM Memory: 4 MiB / 16 MiB
- WI1 chip1: Broadcom BCM4321
- WI1 chip2: Broadcom BCM2055
- WI1 protocols / MIMO config: abgn / 2x2:2
- WI2 chip1: Broadcom BCM4318
- WI2 protocols: bg
- Wireless antenna connectors: none
- Ethernet: Broadcom BCM4704
- Switch: Broadcom BCM5325F
- LAN / WAN ports: 4 / 1 up to 100 Mb/s
- Serial / JTAG: yes / no

## OEM MTD Partitions

```
Flash device: 0x400000 at 0x1c000000
Boot partition size = 131072 (0x20000)
0x00000000-0x00020000 : "boot"
0x00020000-0x003b0000 : "linux"
0x000927f8-0x003b0000 : "rootfs"
0x003b0000-0x003c0000 : "T_Meter1"
0x003c0000-0x003d0000 : "T_Meter2"
0x003d0000-0x003e0000 : "POT"
0x003e0000-0x003f0000 : "board_data"
0x003f0000-0x00400000 : "nvram"
```

## Links

- Forum thread (locked): [New Netgear WNDR3300 support](#)
  - ◆ Please search before starting a new thread for any support requests
- [Peacock Announcement](#) READ THIS FIRST - IT IS OVEREMPHASIZED FOR A REASON
- [Build and download information](#)
- [OpenWRT wiki](#): detailed information
- [WLAN available channels](#) - list of channels for 2.4GHz and 5GHz bands plus country availability

## Common questions

- Can I use NEWD or NEWD2 builds?

Only use 14929 or later k2.4 builds (*broadcom/* folder). Build download links are found in the [Firmware FAQ](#).

- What build versions can be used?

See [DD-WRT File Versions](#)

- What are the difference between K24 and K26 builds?

**Only use K24**, as K26 support was dropped for this router's CPU AFTER build 15314. **DON'T USE NEWER K26!**

- [33679 mini\\_generic](#) works on this router and fixes the [KRACK vulnerability](#). [2017 Nov 8th]
- What are the options with the advertised dual radio support?

See [Basic Wireless Settings](#) for more info.

- What are all the posts about stability?

1. There are MANY users running this router in a variety of different environments and most have no or minimal issues. To be fair, some versions of DD-WRT have been better than others. However, the

most recent firmware revisions have been stable in most typical setups. Exotic setups, like using WDS and client bridging, require additional care that may be discussed in other sections of this wiki entry.

#### Linking Routers

2. Many posts with problems can be traced to not fully completing the flashing procedures - specifically the reset handling.
  3. If your WAN port is dropping connections - this is not normal and would require troubleshooting that may generally apply to any router running DD-WRT
  4. If the wireless connections are not stable (eg, regularly drops connections), there are any number of reasons for this that MAY NOT BE related to this router or DD-WRT itself.
  5. I've tried all sorts of things and it still is not "stable"! This does not mean the refurb unit you bought from a link on a deal site is bad. Please review potential sections like power supply information, spend time and read through the various forum posts as someone may have had your issue before asking for help.
- What kind of N wireless performance can I get on this router?
1. Some users have performed iperf testing. Results indicate N over 5GHz looks very reasonable depending on the configuration and surrounding environment. Watch for future separate section in this wiki entry for benchmark information.
  2. Remember that this router, by default, has internal antennas and that affects performance greatly for either band, but especially for N over 5GHz.

## Flash Preparation

1. **Research model and build threads before blindly flashing any dd-wrt build**
2. **Read "the Peacock Announcement"**
3. For first time installs over the Netgear firmware, a "trailed" \*.chk file (with the router name) is required.
4. **Initial flashing:** use [this trailed build](#) from [here](#). **Note that eko builds are gone.**
  - ◆ Note: avoid the 12-28-09 r13525 brainslayer .chk build, which has a known bug.
5. Do a hard reset on the router

### Initial flash from Netgear firmware

1. After performing the required preparation steps listed above...
2. All firmware updates should be performed from a wired ethernet (not wireless) connection. The router should be connected on one of the four available ethernet ports (**not** the WAN port) and end in your computer's network interface.
3. Set a static IP address on your computer e.g. 192.168.1.2, subnet 255.255.255.0, gateway 192.168.1.1
4. Log in to the Netgear Web UI:
  1. Click on "Router Upgrade" in the LEFT navigation side bar, then on "Browse..."
  2. Select the .chk file firmware you wish to load, then click "Upload"
  3. You will be prompted to "Continue? All existing Internet connections will be terminated" - click "OK".
  4. You will see the following prompt:

Router Upgrade

Warning! You are trying to upload a world wide firmware which is different

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from the NA firmware you had.  
Do you still want to continue?  
Current Version V1.0.**XX**\_1.0.**XX**NA  
Uploaded Version V1.0.14\_1.0.14

- ◇ Where **XX** is a version number (typically 29 for refurbs, 45 for fresh retail models)
- ◇ Ignore the Uploaded Version "V1.0.14\_1.0.14" string, this is just the version the original DD-WRT chk file uses so the Netgear firmware will accept the file.

5. Click on "Yes" to initiate the update.

5. You will see the following message:

Note:It will take about 1.5 minutes for firmware upgrade.

Please don't turn off the power or press reset button.

6. WAIT until the Power LED stops flashing and allow the router to reboot. BE SURE YOU ALLOW SUFFICIENT TIME FOR THE PROCESS TO COMPLETE. Follow appropriate recommendations in the Peacock thread.
7. Do a hard reset on the router

## Upgrading with DD-WRT

1. After researching build threads, use a good k2.4 (/broadcom folder) build **under ~3648 KB**

- See [Firmware FAQ](#). **Do not use files from broadcom\_K26 nor broadcom\_3X!**

1. Upgrade from the DD-WRT GUI *Administration->Firmware Upgrade*

2. Perform the update and allow sufficient time to complete

- ◆ Although the router has 4MB flash, the Netgear partitioning and CFE limits the available partition size to 3735552 bytes (3648 KB) for linux and rootfs combined. See the Peacock Announcement for details.
- ◆ Loading a larger \*.bin will fail leaving the router in TFTP recovery mode, to then load a smaller file.

3. Do a hard reset on the router

## Troubleshooting

- If bricked (green power light keeps blinking), just use [tftp](#) to upload .chk or factory firmware.
- For additional info, the WNDR3300 is discussed [here](#).
- Serial recovery: see [here](#) and [here](#).

## Revert to Netgear firmware

- DD-WRT GUI: use *Firmware Upgrade* to load the modified file [here](#)
- [tftp](#) mode (also see [TFTP flash](#)):

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1. SSH or telnet into the router CLI
2. Enter this at the shell prompt (deletes the OS causing the router to go in to recovery mode after reboot):
  - ◆ "erase linux" (`^ mtd erase linux`` is not recommended, as it leaves the device in TFTP mode [buddee])
3. This will show a message similar to:
  - ◆ Unlocking linux ...
  - Erasing linux ...
4. Wait to be returned back to the shell prompt, then power cycle the router
5. Ping 192.168.1.1: a TTL=100 indicates TFTP recovery mode
6. TFTP an appropriate .chk file to the router
  - ◆ Upload either an original Netgear firmware OR a known working DD-WRT .chk file for this router

## Netgear Firmware Recovery Utility

If flashing the router with tftp is unsuccessful, and you have a flashing power light with a ping response of TTL=100, the unit may still be recoverable using the Netgear Firmware Recovery Utility.

- This utility may be used in other circumstances, but I have only tested it under the above conditions.

1. Do a 30/30/30 reset.
2. Set a static IP for your computer's NIC, i.e. IP 192.168.1.2, gateway 192.168.1.1
3. Connect your computer to the router with a network cable.
4. Verify power light on the router is flashing slowly.
5. Open a command prompt and ping 192.168.1.1. You should receive a response of TTL=100.
6. Start the Autorun.exe application in this download from Netgear's site:  
[ftp://downloads.netgear.com/files/WNDR3300\\_230-10591-04v2.3.zip](ftp://downloads.netgear.com/files/WNDR3300_230-10591-04v2.3.zip)
7. Select the "Support Software" option, then "Firmware Recovery Utility" to launch the recovery application.
8. Follow the prompts while the utility is running. Be patient, the utility takes a long time to run. Your network adapter will appear to be disconnected during part of the process.
9. Your router should now be working again after the utility is finished running.
10. Follow the instructions under "[Flashing WNDR3300](#)" to flash 3rd party firmware again.

- *This is discussed in this thread: [WNDR3300 specific K26 k2.6](#)*

## JTAG / Serial information

1. Does this router support JTAG?
  - No: the mounted pin header on the PCB is for the dome LEDs. Do not use this for JTAG or serial TTL.
  - If there is another header mounted to the right of the dome LED header, it is for the serial TTL console.

1. Does this router support serial TTL console?

- Yes: first read this: [Serial Recovery](#)
- Do not hook up your serial cable/wiring to the header used for the dome LEDs
- The serial connectors (JP1) are next to the dome LED header. Most production/refurb units will not have a pin header mounted on the PCB for the serial connections (probably to save manufacturing costs)
- The FCC photos of the internals show a header for both the dome LED and serial port
- Reference: [OpenWRT WNDR3300 wiki](#)
- Reference thread for a photo with the pin outs: [WNDR3300 serial pinouts](#)
- The pin outs are as follows:
  1. Pin 1 = 3.3V (towards the front of the router and should have "1" silk screened near the pin)
  2. Pin 2 = RXD
  3. Pin 3 = n/c
  4. Pin 4 = n/c
  5. Pin 5 = TXD
  6. Pin 6 = GND (towards the rear of the PCB/back of router)
- JP1 = 3.3v TTL Serial, 115200/8/N, 1 row of six pins
- Further instructions: [InfoDepot Wiki - Netgear WNDR3300](#)
- More instructions: [\[1\]](#)
- *Note: This wiki entry does not discuss how to use or the equipment necessary for serial TTL. For more on this topic, try this thread: [Everything you Ever Wanted to know about Serial - TTL](#)*

## Configuration suggestions

For now here are some threads that discuss possible configuration settings for new users:

1. [Netgear WNDR3300 HELP](#)
2. [How to set up wireless WNDR3300?](#)
3. [Netgear Wndr3300 CPU loading problems slow wireless](#)

## Pin Short Recovery

(Not recommended) Short pins 16 & 17 while plugging in the power cable. Ping constantly with 'ping -t -w 1 192.168.1.1', and when you start to see TTL=100, remove the short and tftp a basic \*.chk file to the router. Give it a few mins to figure out what happened, and hopefully the WLAN lights should come back on. If you're still pinging, things are good if you see a TTL=64, DD-WRT's signature.

## Model and Revision Differences

- The [WNDR3300v2](#) is actually a WNDR3400v1. Reference the [FCC ID](#).

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- The model **WNDR3300-100NAR** is simply a refurbished WNDR3300 with the serial number removed from the bottom label on the unit.
- As of 2/1/2010, units bought in 2009 and 2010 opened up by one user had "Rev 1" etched on the PCB.
- If there are other revisions or you can confirm this information, please update this thread.

## Power supply information

Initial refurbis sold in 2008 and early 2009 had stability issues due to bad power supplies.

Most recent models (new and refurbis from mid 2009 on wards) come with a switching power supply:

- voltage: 12 vDC
- amp: 1500mA
- plug size:
  - ◆ 2.1mm ID (confirmed with digital caliper)
  - ◆ 5.5mm OD (confirmed with digital caliper)
  - ◆ Center=Positive (center pin)
  - ◆ Shield=Negative
- kill-a-watt reported power usage:
  - ◆ 3 watts on initial boot up or with all radios disabled (idle)
  - ◆ 5 watts with just one radio (with default TX power) - idle
  - ◆ 6 watts with both radios (with default TX power on each radio) - idle

Power supplies for this router are manufactured by two vendors (according to FCC information and based on purchases from 2009 and 2010):

- DVE - units from this manufacturer have been known to be bad or inconsistent from the early batches of routers sold in 2008 to mid 2009. Please read the main support thread for more information about this.
- ITE

It has been recommended to go with a non-switching transformer for those wanting to increase the power to the radios beyond the default mW per radio. However, some have found it difficult to find such power supplies (transformer based above 1500mA). A suggestion is to use a \*quality\* regulated 12vdc 2000mA (or higher amperage) switching power supply. If you believe to have stability issues that a 30/30/30 reset + full power cycle may not be not solving... try another power supply if you have one available.

Be sure to review the additional discussions links in the Peacock and main support thread regarding power supplies and bad capacitors. There have been no known reports regarding the router itself suffering from bad capacitors.

## Internal antennas

1. Netgear advertised 8 antennas, but while 8 *are etched on the PCB*, even the official FCC info lists 5 active.
2. Three of the five active antennas are for the w10 radio, supporting 2.4GHz or 5GHz bands.

3. The remaining two of the five active antennas are used for the wl1 radio, supporting only the 2.4GHz band.

## External antennas

- This requires modifications, see thread topic: [How to add external. ant](#)
- Some users ordered parts from digikey.com to follow twinmos on adding external antennas.
- The Hirose connectors on the PCB are MS-156 RF test switches. There are NO CHEAP solutions currently available to convert/adapt to SMA type cabling and antennas. The cheapest solution is a locking MS-156 to SMA adapter (\$29USD per switch), and at least 3 are needed for the WL0 radio plus 2 more for the WL1 radio.
- It is recommended to either do the pigtail mod or install Hirose u.fl pads, like twinmos did in the thread.

## Front LED Information

1. It does not appear that end user gpio LED access is allowed via the /sbin/gpio binary
2. See separate section on known GPIO information

*What do the front LEDs mean and how do they indicate status?*

1. Reference [WNDR3300 one activity LED flashes infrequently](#) (credit for partial paste for below)
  - ◆ Power (not directly labeled) - The power light blinks when it is starting up or the restore factory settings button is pressed.
  - ◆ 2.4GHz Mode - This light will blink if there are data transmitted wirelessly in this mode
  - ◆ 5 GHz Mode - This light will blink if there are data transmitted wirelessly in this mode
  - ◆ Internet (not directly labeled, looks like an lower case "i")- This light will blink if an IP address has been received and data is being transmitted and received
  - ◆ LAN 1-4 (labeled with actual numbers "1" "2" "3" and "4") - This will blink if there is traffic or data passing on this port.

## Dome LED Information

1. It does not appear that access to the dome lights are easily exposed to end users
2. Reference thread: [WNDR3300 Dome Lights](#)

*What if the dome LEDs come back on after I've flashed with a good known version of DD-WRT?*

1. Back up your settings using the hardware independent backup script (search the wiki and forums)
2. Try performing a full 30/30/30 reset, and do a full power cycle
3. If the dome does not turn off, either your unit is going bad or you can physically unplug the ribbon cable inside the unit to permanently disable it

*How are the dome LEDs handled?*



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1. Original Netgear firmware flashed the dome lights based on various activities on the wireless radios, etc.
2. DD-WRT automatically turns off the dome lights on boot up with code changes since builds around Nov 2008
  1. Reference [Changeset 10994](#)

## GPIO information

Known GPIO pin support from the [main support thread](#) (rafale12):

- gpio 0: using it crashes router
- gpio 1: 01, cannot change it with disable. Suspect WPS (top orb related)
- gpio 2: constantly changing: 00/01/00 so WAN or LAN
- gpio 3: 00 ??
- gpio 4: 00 ??
- gpio 5: powerled
- gpio 6: 01 disabling seems to be a reset to default.
- gpio 7: 01 ??
- gpio 8: 00 ??