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Hardware Specifications

CPU	Broadcom BCM4718
CPU Speed	480 MHz
Flash ROM	16 MB Macronix MX25L12845E
RAM	64 MB
Radios	2.4 GHz, 5 GHz
WLAN Support	a/b/g/n

WLAN Max Speed	300mbps (2.4 GHz) & 450mbps (5 GHz)
Antenna Location	Internal (x6)
Bands	3 x 3
Radio wl0	Broadcom 4718 (SoC)
Radio wl1	Broadcom 4331 Intensi-fi Single-Chip 802.11n Transceiver
Switch	4x GigE + 1 WAN Broadcom 53115 IEEE 802.3/3u/3ab
USB	1x USB 2.0

Flashing

Warnings

These instructions are for E4200 version 1 ONLY! Version 2 has a marvel chipset and is NOT supported

- The E4200 uses **nv60k** builds, **do NOT flash nv64k nor generic builds.**
- To upgrade stock firmware to DD-WRT, use the Flashing procedure below. Only use trailed builds (with *E4200* in the file name) to avoid bricking.
- **AFTER** initial flash, only use trailed OR **nv60k** builds - NOT nv64k nor generic builds.
- K3X is recommended once you are running dd-wrt - **only use a trailed build to flash from K26 to K3X**
  - ♦ Newer K3X builds may not have a nv60k.bin build, in this case use the trailed build for upgrades
  - ♦ Recovery from firmware with the wrong nvram size requires use of a JTAG cable to erase the nvram.[1]
- The E4200 works very well with most newer builds >32XXX, see <u>Where do I download firmware?</u> for links.
  - ♦ Read model-specific and New Build threads before flashing different firmware
- The E4200 dissipates a good deal of heat at the stock 100 mW transmit power
  - ♦ *Ensure adequate cooling* or reduce transmit power to 40-50 mW.

Initial Flash

To install DD-WRT, perform these steps from the stock Linksys GUI:

1. Read all of the required <u>Peacock announcement</u>.
2. Disconnect any Ethernet cables from router and PC, and disable PC wireless.
3. <u>Reset</u> the router.
4. Connect Ethernet cable from a LAN port (not the Internet port) of the router to PC doing the flash.
5. Wait for router to boot up, and then for PC to get DHCP address from the router.
6. Open router GUI (192.168.1.1) in Web browser on PC.
7. Flash an E4200-specific mini build; e.g., **21676 trailed initial flash build for E4200**
   - ♦ **Do NOT use a "nv60k" build for the initial flash**; only use a trailed build, such as above.
   - ♦ **21676 is a stable, recommended build for the E4200**, but *only use the mini version*, since *larger versions have the <u>dangerous Heartbleed vulnerability</u>*. If you need more functionality

than mini, upgrade to a newer build, see Where do I download firmware? for links.
8. Wait for flashing process to complete, *then wait 3 more minutes*.
9. Reset the device after it has successfully updated.
10. Wait for router to boot up, then log into DD-WRT Web interface (192.168.1.1).
   ♦ If the browser GUI login does not display, clear the browser cache.

Upgrading

• To upgrade to other builds AFTER installing DD-WRT, ONLY flash nv60k (or trailed) builds

WARNING: Flashing anything else may result in a brick, as noted above

1. Select the build of your choosing from the the following link: Where do I download firmware?
2. After the initial flash of a K26 build, you can upgrade to K26 mega build or K3X mega (broadcom_K3X folder). K3X mega is the recommended build version for this router, and supports SFE accelerated NAT after build 33006.
3. Follow the same flashing procedure as you used for the initial flash

Reverting to stock firmware

You can always revert back to stock firmware.

• Download the latest E4200 firmware from the Linksys website.

1. Disconnect all cables and wireless clients.
2. Perform a 30/30/30 reset on the device.
3. Login and select the stock firmware file and flash, make sure to select "reset to defaults" on the drop down menu when flashing.
4. Wait approximately 5 minutes for the flashing process to complete.
5. Perform a 30/30/30 after the device has successfully updated.

Wireless-N Configuration

• As is explained in **Wireless-N Configuration** make sure that you use **AES** with **WPA2** security for your wireless N network. Do not use TKIP or the wireless speed will revert to the g standard and that would be a pity. (AES+TKIP is also allowed but not recommended.)

• It is recommended to set:
   ♦ 2.4 GHz radio to "NG-Mixed".
   ♦ 5 GHz radio to "NA-Mixed".

• Both 2.4 and 5 GHz Radios run at a stock transmitting power of 100mW. Decreasing the transmitting power to a value between 40 & 50mW may help stability, especially if the router has poor cooling.

References

1. e4200 build thread at dd-wrt forum
2. FCC disclosures