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E2000 Hardware Specs



CPU	Broadcom BCM4717A
CPU Speed	354 MHz
Flash ROM	8 MB
RAM	32 MB
Radio	Selectable: 2.4 GHz <i>or</i> 5 GHz
WLAN Support	a/b/g/n
WLAN Max Speed	300 mbps
Antenna Location	3x Internal
Switch	4x GigE + 1 Gbit WAN

E2000 Flashing Instructions

DON'T BRICK YOUR ROUTER! Only use the traileed builds (with 'e2000' in the file name) for initial flashing or it may result in a bricked unit! Also reference [this post](#) regarding the **newer nv60k.bin files which replace the e2k-e3k.bin files.**

Initial Flash from Linksys firmware:

Linksys_E2000

1. READ the [Peacock Announcement](#) carefully!
2. Disconnect all cables and wireless clients.
3. Do a hard reset.
4. Connect a LAN cable to the PC doing the flash, then access Linksys GUI at 192.168.1.1 via web browser.
5. Go to the Firmware Upgrade page to flash the **14929 E2000 trailed build**
6. Wait 10 minutes until WLAN (wireless) light turns on.
7. Power cycle by unplugging E2000 for 30 secs.
8. Plug back in and wait about 5 minutes until it finishes booting.
9. Do a hard reset.
10. Wait 3 minutes and log into web interface.
11. You are done. There is no requirement to flash any other build.

Upgrade when already running DD-WRT firmware:

- With dd-wrt installed, you can use the following for upgrading to newer builds:
 - ◆ e2k-e3k.bin for builds **prior to 16785**
 - ◆ **For newer builds**, you must flash a trailed mini build first, then use nv60k.bin files thereafter[1]
- DO NOT use any other files or you WILL BRICK YOUR ROUTER!
- See [Where do I download firmware?](#) for more info.
- **Newer is not always better! Research new build and E2000 threads before flashing!**
- [1] K3X builds (kernel 3.x) are available for the E2000 as well. If the nv60k file is missing, use the trailed E2000 build.
 - ◆ K3X builds newer than 33006 have SFE accelerated NAT

DD-WRT Build Info

Brainslayer added E2000 support in 14929, and builds are found in the broadcom_K26 folder for each build.

- Build [25974 works well](#) but later k2.6 builds have VAP issues. Initial flash: 21061 K2.6 mini-e2000
- Build [33492](#) loads on the E2000 and wireless works. [Tmittelstaedt]
 - ◆ Erase nvram from CLI highly recommended. Working: 2.4GHz WiFi, virtual SSID, multiple VLAN support, VLAN tagging, port trunking, multiple DHCP, bridging, bridge assignment, DDNS, NTP client. [[jjwatmyself](#)]

CFE Boot Log

```
Boot partition size = 262144(0x40000)
Found a 8MB ST compatible serial flash
Partition information:
boot   #00   00000000 -> 0003FFFF (262144)
trx    #01   00040000 -> 0004001B (28)
os     #02   0004001C -> 007F0FFF (8064996)
nvram  #03   007F1000 -> 007FFFFFFF (61440)
Partition information:
boot   #00   00000000 -> 0003FFFF (262144)
trx    #01   00040000 -> 007F0FFF (8065024)
nvram  #02   007F1000 -> 007FFFFFFF (61440)
BCM47XX_GMAC_ID
et0: Broadcom BCM47XX 10/100/1000 Mbps Ethernet Controller 5.10.56.51
```

Linksys_E2000

CPU type 0x19740: 354MHz
Tot mem: 32768 KBytes

Only flash builds under 7936 KB (7.75MB) [0x7FFFFFF-3FFFF] or you will brick your router.

Experimental Build Specific Information

List of builds tested by Bturnbough:

Contributor	Build Date	Kernel	Build Number	Build Type	Notes
Brainslayer	8/12/10	2.6	<u>14929</u>	std-usb-ftp	1) Router database recommended build. 2) No known issues 3) Can be used as initial flash from stock.
Brainslayer	12/24/10	2.6	<u>15962</u>	std-usb-nas	1) No known issues -- Highly recommended by Mods 2) Can be used as initial flash from stock.
Brainslayer	3/25/13	2.6	<u>21061</u>	mini	1) Can be used as initial flash from stock.
Brainslayer	3/25/13	2.6	<u>21061</u>	mega	1) Can NOT be used as initial flash from stock. 2) SSH broken
Brainslayer	5/27/13	2.6	<u>21676</u>	mega	1) Can NOT be used as initial flash from stock. 2) SSH broken
Brainslayer	4/18/14	2.6	<u>23919</u>	mini	1) Can be used as initial flash from stock.
Brainslayer	4/18/14	2.6	<u>23919</u>	mega	1) Can NOT be used as initial flash from stock. 2) Wireless broken .
Brainslayer	5/23/14	2.6	<u>24118</u>	mega	1) Can NOT be used as initial flash from stock. 2) Wireless broken .

Brainslayer5/27/142.624160mega1) Can **NOT** be used as initial flash from stock.
2) Wireless **broken**.
3) SSH **broken**. Brainslayer6/23/143.024461mega

Brainslayer10/23/142.625143-testingmega1) Can **NOT** be used as initial flash from stock.
2) Wont flash -- Too big? Brainslayer10/29/142.625203mini1) Can be used as initial flash from stock.
2) Wireless **broken**. Brainslayer10/29/143.025203mega1) Can be used as initial flash from stock.
2) SSH **broken**.
3) HTTPS **broken**.
4) Wireless works, AFAICT.
5) Telnet works.
6) HTTP works.

Reverting back to stock firmware

It has been asked about how to revert back to stock firmware, why would you ever want to do that?!? You can always flash back to dd-wrt anyhow, to revert back to stock firmware simply download the latest E2000 firmware from linksys site, reset you router to defaults from within dd-wrt's webgui, wait, then login and select the stock firmware file and flash, make sure to select "reset to defaults" on the drop down menu when flashing.

Debricking

<https://forum.dd-wrt.com/phpBB2/viewtopic.php?t=316814>

Notes

- The E-series Linksys units have poor ventilation, so cooling can be very important to its performance. 'buddee' has a nice and easy mod that will improve air flow for under the unit.
- After further study, the E2000 was found to have an EIRP rating of 17dBm, so it is best to run these units at a TxPower of 50mW (50mW = 17dBm) instead of the dd-wrt default 71mW. This can be adjusted in the webgui (Wireless > Advanced Settings), which should help the unit run cooler and have less Tx/Rx errors.
- If you experience wireless disconnects, try the following settings:

```
Wireless > Channel > Ch 161 (5GHz)
Wireless > Channel > Ch 9 (2.4GHz)
Wireless > Security > WPA2 Personal - AES
Wireless > Advanced Wireless Settings > Beacon Interval: 75
Wireless > Advanced Wireless Settings > Fragmentation Threshold: 2306
Wireless > Advanced Wireless Settings > RTS Threshold: 2307
Security > Firewall > Block Anonymous WAN Access <--- Uncheck
```

- If you are having trouble doing a hard reset using the 30/30/30 method, you can try using the wrt320n hard reset method instead. It has been confirmed to work on the E2000 as well. [buddee]

1. *Unplug power cable*
2. *Hold down WPS button and plug power back in*
3. *Continue holding WPS button for 12 seconds, then release*

- The Broadcom 4717 SoC uses a default clock of 300MHz, but the Linksys E2000 runs at 354MHz. The increased heat can reduce routing performance, and may be responsible for many of the wireless errors reported in the forum. It is suggested to add a heat sink and/or improve ventilation. Alternatively, set the CPU clock to 300MHz, but this will reduce max throughput and slightly increase latency. From telnet/SSH or GUI *Commands*:

```
nvramp set clkfreq=300,150,75
nvramp commit && reboot
```

VLAN Support

Minimum build 15508 is required to adjust E2000 VLANs from the GUI. For more regarding configs:

http://www.dd-wrt.comhttp://wiki.dd-wrt.com/wiki/index.php/Switched_Ports

http://www.dd-wrt.comhttp://wiki.dd-wrt.com/wiki/index.php/VLAN_Support