

For initial flash see [All Asus WL-500xx series routers](#)

["Old" wiki about Initial flash of WL500gP v2](#)

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Introduction

Thought this would be a good place for **ASUS WL-500G Premium v2** specific information similar to what has been added for other router makes and models. It would probably be relevant to merge any existing and future v1 content here if anyone wishes, as the differences are relatively minor.

Details on version 1

<http://oleg.wl500g.info/devices.html>

Clock Timing Bug

See [this thread](#) about a clock timing bug that affects this model.

Radio Activity LED Bug

See [this thread](#) about a bug regarding the "wifi activity" LED.

Observations

At its heart, the ASUS WL500PV2 is your basic Broadcom-based, Wireless 802.11g router. It sports a modern veneer of white and silver colored plastic. The length and width dimensions are slightly larger than your typical Linksys router. The status lights on the front are lit with orange LEDs. It is silent, passively cooled with plenty of ventilation holes along the top and bottom surface. The orange LEDs shine through the holes, but are only noticeable in dark lighting conditions. The AC adapter is fairly slim and does not hog up multiple spots on a standard power strip.

It offers several advantages over more popular G routers like the venerable Linksys WRT54GL. The most predominant advantage is the 8MB flash and 32MB of SDRAM, allowing DD-WRT Mega builds and plenty of resources for increased IP connections, ipkg installs, JFFS2 partitions, etc. The dual USB 2.0 ports allow USB printers and storage devices to be connected, and the 240MHz BCM5354 is faster than the 200MHz BCM5352 found in the WRT54GL.

One drawback of this router is the single antenna pole. It may be the case that dual antennas is just an illusion of signal range, I cannot say for sure. Also, no overclocking support in DD-WRT as of v24 SP1 and no integrated GigE switch.

Device Photos



Hardware

- **Platform:** Broadcom MIPS
- **CPU:** Broadcom BCM5454 at 240 MHz (130nm construction) [Technical Overview](#)
 - ◆ NOT overclockable in DD-WRT as of v24 SP2 Build 12874
 - ◆ /proc/cpuinfo output

```
root@DD-WRT:/mnt# cat /proc/cpuinfo
system type      : Broadcom BCM5354 chip rev 2
processor        : 0
```

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```
cpu model           : BCM3302 V2.9
BogoMIPS           : 239.20
wait instruction    : no
microsecond timers : yes
tlb_entries        : 32
extra interrupt vector : no
hardware watchpoint : no
VCED exceptions    : not available
VCEI exceptions    : not available
```

- **Flash:** 8 MB NAND, single chip
- **System Memory:** 32MB 16-bit DDR SDRAM
- **USB:** dual USB 2.0 ports
 - ◆ VIA 4-port USB controller model ???
- **Wireless Radio:** Broadcom BCM43xx 802.11b/g
 - ◆ 2.412 - 2.484 GHz, 14 channel increments + auto setting
 - ◆ PCI Device 14e4:4318

```
root@DD-WRT:/# cat /proc/pci
PCI devices found:
Bus 0, device 0, function 0:
  Class 0501: PCI device 14e4:0800 (rev 2).
  IRQ 3.
  Non-prefetchable 32 bit memory at 0x18000000 [0x18000fff].
  Non-prefetchable 32 bit memory at 0x1fc00000 [0x1fffffff].
  Non-prefetchable 32 bit memory at 0x1c000000 [0x1dfffffff].
  Non-prefetchable 32 bit memory at 0x1a000000 [0x1bfffffff].
Bus 0, device 1, function 0:
  Class 0200: PCI device 14e4:4713 (rev 2).
  IRQ 4.
  Master Capable. Latency=64.
  Non-prefetchable 32 bit memory at 0x18001000 [0x18001fff].
Bus 0, device 2, function 0:
  Class 0b30: PCI device 14e4:0816 (rev 2).
  IRQ 5.
  Non-prefetchable 32 bit memory at 0x18002000 [0x18002fff].
Bus 0, device 3, function 0:
  Class 0c03: PCI device 14e4:471a (rev 2).
  IRQ 6.
  Master Capable. Latency=64.
  Non-prefetchable 32 bit memory at 0x18003000 [0x180037ff].
Bus 0, device 3, function 1:
  Class 0c03: PCI device 14e4:471a (rev 2).
  IRQ 6.
  Master Capable. Latency=64.
  Non-prefetchable 32 bit memory at 0x18003800 [0x18003fff].
Bus 0, device 4, function 0:
  Class 0500: PCI device 14e4:080f (rev 2).
  IRQ 3.
  Non-prefetchable 32 bit memory at 0x18004000 [0x18004fff].
  Non-prefetchable 32 bit memory at 0x0 [0x7fffffff].
  Non-prefetchable 32 bit memory at 0x10000000 [0x17fffffff].
  Non-prefetchable 32 bit memory at 0x80000000 [0x9fffffff].
Bus 0, device 5, function 0:
  Class 0280: PCI device 14e4:4318 (rev 2).
  IRQ 2.
  Master Capable. Latency=64.
  Non-prefetchable 32 bit memory at 0x18005000 [0x18005fff].
Bus 0, device 6, function 0:
  Class 0280: PCI device 14e4:4719 (rev 2).
```

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IRQ 3.

Non-prefetchable 32 bit memory at 0x18006000 [0x18006fff].

- **Antenna:** Single, detachable/replaceable antenna
- **Network Switch:** (4) 10/100 LAN + (1) 10/100 WAN, Auto MDX
- **Internal Pic:** [External Link](#)

Firmware

Newest build - tested to work

- [2016-04-11_R29440-dd-wrt.v24_mega_generic](#) --[Alvin](#) 16:09, 7 June 2016 (CEST)

Flashing

The easiest, most reliable method to flash to 3rd party firmware is to use ASUS Firmware Restoration tool that comes on the CD bundled with the product. There is no firmware size limit requiring you to flash dd-wrt mini first; you can go ahead and flash dd-wrt mega right from the start.

When flashing from 3rd party firmware to other 3rd party firmware, just use the firmware upgrade utility in the web GUI. This applies to 3rd party firmwares that include a web GUI, as not all of them do so.

The ASUS Firmware Restoration Utility comes with the CD-ROM included with the device and by default installs to

- WinXP / Vista 32-bit C:\Program Files\ASUS\WL-500gP V2 Wireless Router Utilities\Rescue.exe
- Vista 64-bit C:\Program Files (x86)\ASUS\WL-500gP V2 Wireless Router Utilities\Rescue.exe

Flash using recovery method

To flash using the "recovery" method, do the following...

- 1) Unplug the router
- 2) Press and hold the black restore button and plug in power.
- 3) Keep holding the restore switch until the power light starts to blink on and off.
- 3a) **The router is now in recovery mode**
- 4) Change the ip settings on your computer to:
 - 4a) IP: 192.168.1.xxx(use anything above 1, I like 100)

- 4b) Subnet: 255.255.255.0
- 4c) Gateway: 192.168.1.1
- 5) Run the recovery program and point it to your .bin file of choice
- 6) Hit the "upload" button and wait about 2 minutes.
- 7) Change your IP settings back to DHCP and let it get an address
- 8) Open a web browser and go to <http://192.168.1.1> and have fun!

mspacone

Updated 'out of the box' TFTP method

Very easy process to flash a WL-500gP v2 out of the box straight to dd-wrt.

You will need 2 files for this procedure (with an optional third for Windows users).

This first file will be used for the initial flash:-

[1] Asus initial dd-wrt NEWD flash mini

The second will be used to upgrade from the initial mini build, adding USB support:-

[2] 14853 NEWD Eko BIG

This last file is an optional program for Windows. Those that do not know command line TFTP well enough should use this:-

[3] Easy utility for Windows TFTP

- 1) Power up router for at least 2 minutes.
- 2) Once router is fully powered up, unplug the power.
- 3) Set the computer to a static IP 192.168.1.6 then plug in lan cable into port 1
- 4) Press and hold the restore button (the black button, not the red EzSetup button)
- 5) Plug power back in with restore button held for 30 seconds, then release.
- 6) This will put the router in TFTP mode with the power led blinking. Set the tftp.exe Server to 192.168.1.1 and leave password blank then select the dd-wrt.v24-13491_NEWD_mini_asus.trx
- 7) Use tftp.exe to then flash the 13491 NEWD mini, after success wait 5 minutes, then unplug power
- 8) Plug power in and go to <http://192.168.1.1> set a user/password

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- 9) Once in go to Administration > Firmware Upgrade and select the dd-wrt.v24-14853_NEWD_big.bin
- 10) When file has been selected, set "After flashing, reset to" Default settings then Upgrade.
- 11) Wait till upgrade is complete and webgui is once again shown. Then set a user/password.
- 12) Once you have set a user/password make no other settings and close the web browser.
- 13) Telnet should be enabled by default, so telnet in at 192.168.1.1 with User:root
Password:Whatever_You_set_it_to_in_the_webgui
- 14) When you get to the command prompt issue 2 commands

erase nvram

reboot
- 15) This will hard reset your router, wait 2-3 minutes then re-access webgui at 192.168.1.1
- 16) Set whatever settings you like and enjoy dd-wrt.

- Also to remember to unset you static ip after flashing, if you intend on using DHCP

buddee

ASUS stock firmware

Of course this ASUS device works with the [latest ASUS firmware](#). Patching to the latest ASUS firmware provides a notable improvement over earlier versions, even those shipping as of Oct 2008. The interface has undergone a cosmetic makeover and provides a straightforward GUI to easily set up shared printers, shared storage, Samba file serving with user credentials and of course typical router functionality. However, the firmware is unstable and requires a reboot every day or two as functionality seems to randomly break.

DD-WRT

Here is a [useful chart](#) from the DD-WRT Wiki comparing the different builds. Ever wanted to know what you get in mega that you don't in std? This chart has the answers.

Micro

[Micro](#) (1.7 MB)

DD-WRT micro is not a good fit for the ASUS WL-500G Premium V1/V2 router. While it has an amazing amount of functionality for such a small firmware footprint, you lose out on the SSH server, JFFS2 file system support, ipkg, WDS and more. The embedded Linux does not even have the /proc filesystem enabled, nor is their even /bin/lis available. This makes it just about impossible to add any USB devices.

Mini

Mini (2.8 MB)

Standard, Vpn, Volp

Standard (3.6 MB)

VPN (3.5 MB)

VOIP (3.6 MB)

Mega

Mega (6.6 MB)

Mega is the only build that includes USB support "baked in", although there are non-Mega builds that also include USB support, such as the Eko v24 NEWD mini USB firmware. Which, as you can probably guess by the name, is a mini firmware image with the USB functionality built in. It is also possible to configure USB support on any non-micro v24 (and later) DD-WRT firmware release as long as the proper USB drivers are loaded.

How To's

- Using Optware, the Right Way is highly suggested to run with this unit. Which adds printer support, auto USB mounting, and more.
- Here is the DD-WRT Wiki page for USB on ASUS WL500GPV2 Updated 11/5/2009

Old Tutorials:

- Here is a short guide on configuring a basic USB printer and USB flash drive to make use of the dual USB 2.0 ports on this router.
- Here is the generic DD-WRT Wiki page on Printer Sharing
- Here is the generic DD-WRT Wiki page on USB storage

VLANs Support

This unit also has VLAN Support which the Switched Ports page provides some examples.

Links

ASUS Product Page

Third-party firmware flash testing by eibgrad