

Broadband Hamnet™ Router Shopping Guide

WRT54G information courtesy Wikipedia.org 11/2012, Versions in shaded area **are not usable**.
Consider printing this and keeping a copy handy to evaluate used equipment

Warning: There are a number of router models made by linksys with confusingly similar names. Check the model name carefully. If it has a suffix or added letters in the middle, check the broadband-hamnet.org web site to see if it's compatible.

Simplified shopping list:

WRT54G Series

Model	Version	Comments
WRT54GS	1.0 – 3.0	Most memory (32/8) MB
WRT54GS WRT54G WRT54GL	4.0 1.1 – 4.0 1.0 – 1.1	16/4 MB
WRT54G	1.0	16/4 MB 5V DC power Warning - uses different supply voltage from all other models.

Higher numbered versions of each model are **not compatible** with Broadband-Hamnet™ firmware.

Detailed model information:

WRT54G

Version	<u>CPU</u>	<u>RAM</u>	<u>Flash memory</u>	<u>S/N Prefix</u>	Power	Notes
1.0	Broadcom BCM4702 @ 125 MHz	16 MB	4 MB	CDF0 CDF1	5 V 2 A positive tip	20 front panel <u>LEDs</u> (including link/activity, collision detection and speed rating indicators for each <u>Ethernet</u> port). Wireless capability was provided by a <u>Mini PCI</u> card attached to the router <u>motherboard</u>
1.1	Broadcom BCM4710 @ 125 MHz	16 MB	4 MB	CDF2 CDF3	12 V 1 A	Front panel LEDs reduced to eight (one link/activity LED per port, plus one each for power, wireless, <u>DMZ</u> and <u>WAN</u> /Internet connectivity). Wireless

Version	<u>CPU</u>	<u>RAM</u>	<u>Flash memory</u>	<u>S/N Prefix</u>	Power	Notes
						chipset is integrated onto motherboard. Note: some of the routers have BCM4702 CPU (http://www.dslreports.com/forum/remark_8985696)
2.0	Broadcom BCM4712 @ 200 MHz	16 MB	4 MB	CDF5	12 V 1 A	Same as 1.1 with a CPU upgrade and greater wireless transmitter integration (fewer transmitter parts). Some of these have 32 MB of RAM but are locked to 16 MB in the firmware (can be unlocked to use all RAM — see [1] (general info) and [2] (for an XB card) and [3] (for an XH card)).
2.1	Broadcom BCM4712 @ 216 MHz	16 MB	4 MB	CDF6	12 V 1 A	Same physical appearance as 1.1 and 2.0 models. Some of these models have 32 MB of RAM installed but have been locked to 16 MB by the manufacturer. Some models have two 16 MB MIRA P2V28S40BTP memory chips.
2.2	Broadcom BCM4712 @ 216 MHz	16 MB	4 MB	CDF7	12 V 1 A	Same physical appearance as 1.1 and 2.0 models. Switching chipsets from ADMtek 6996L to Broadcom BCM5325EKQM. Some of these models have 32 MB of RAM installed but have been locked to 16 MB by the manufacturer. Some models have 16 MB Hynix HY5DU281622ET-J memory chips.
3.0	Broadcom BCM4712 @ 216 MHz	16 MB	4 MB	CDF8	12 V 1 A	Identical to 1.1 and later models, except for the CPU speed and an undocumented switch behind left front panel intended for use with a feature called "SecureEasySetup".
3.1	Broadcom BCM4712 @ 216 MHz	16 MB	4 MB	CDF9	12 V 1 A	The Version 3.1 hardware is essentially the same as the Version 3.0 hardware. Adds "SecureEasySetup" button.
4.0	Broadcom BCM5352 @ 200 MHz	16 MB	4 MB	CDFA	12 V 1 A	Switched to new SoC
5.0 or Higher						Not Compatible with Broadband-Hamnet™

WRT54GS

Version	CPU	RAM	Flash memory	S/N Prefix	Notes
1.0	Broadcom BCM4712 @ 200 MHz	32 MB	8 MB	CGN0 CGN1	ADMtek 6996L switch. Added SpeedBooster technology (Broadcom Afterburner technology), claims to boost the throughput of 802.11g by 30% (for maximum boost needs SpeedBooster technology on the other side, but will boost standard 802.11g as well). Has LEDs for Power, DMZ, WLAN, Internet, and 1–4 Ports.
1.1	Broadcom BCM4712 @ 200 MHz	32 MB	8 MB	CGN2	Switched to Broadcom BCM4712 SoC and BCM5325E switch.
2.0	Broadcom BCM4712 @ 216 MHz	32 MB	8 MB	CGN3	10 LED Front Panel (two new ones behind Cisco logo button). Also capable of SecureEasySetup, but use of the logo button and lighting of the new LEDs behind it requires firmware upgrade. SoC chip REV1 or REV 2. The flash chip on this unit is Intel TE28F640.
2.1	Broadcom BCM4712 @ 216 MHz	32 MB	8 MB	CGN4	Radio chip is changed from BCM2050 to BCM2050KML.
3.0	Broadcom BCM5352 @ 200 MHz	32 MB	8 MB	CGN5	Switched to newer Broadcom SoC
4.0	Broadcom BCM5352 @ 200 MHz	16 MB	4 MB	CGN6	Reduced RAM & Flash (a very rare few have 32 MB/8 MB)
5.0 or Higher					Not Compatible with Broadband-Hamnet™

WRT54GL

Version	<u>CPU</u>	<u>RAM</u>	<u>Flash memory</u>	<u>S/N Prefix</u>	Notes
1.0	Broadcom BCM5352 @ 200 MHz	16 MB	4 MB	CL7A	New model line, released after the version 5 WRT54G, which returns to a Linux-based OS as opposed to the VxWorks firmware. SpeedBooster is not enabled in stock firmware, however third-party firmware will enable the feature. The hardware is essentially the same as the WRT54G version 4.0. One alteration is that the internal numbering scheme of the 4-port switch changed in this model, from 1 2 3 4, to 3 2 1 0.
1.1	Broadcom BCM5352 @ 200 MHz	16 MB	4 MB	CL7B CL7C CF7C	Detachable antennas. As of August, 2009, this version was shipping with firmware revision 4.30.11. This pre-loaded firmware allows the user to upload a 4 MB firmware image, whereas the pre-loaded firmware on version 1.0 limited the image to 3 MB. Firmware version 4.30.15 is now available for both hardware versions. Fully supported by Tomato , OpenWrt , and DD-WRT .

Ubiquiti Radios

There is now a full release of BBHN for Ubiquiti radios.

Many of the details and fine points of the Ubiquiti based mesh nodes are different from the WRT-54G based mesh nodes. **Please read and understand the relevant BBHN web site pages before starting a project with the Ubiquiti radios.**

<http://www.broadband-hamnet.org/documentation/186-ubnt-fw-release-101>

The Ubiquiti radios are excellent radios with some significant advantages in terms of RF characteristics, mounting, and enclosures. They lack some of the features of the WRT-54G such as an attached 4 port switch and dual antennas.

Supported as of 02/01/2014. The authors of the Ubiquiti BBHN firmware are working on expanding this list, so check the forum.

- Rocket M2
- Bullet M2 HP
- AirGrid M2 HP
- NanoStation Loco M2 (NSL-M2)
- NanoStation M2 (NS-M2)

Other Router Types

Members of the Broadband Hamnet™ (BBHN) community have installed the firmware on hundreds or thousands of WRT54G series routers.

We have produced versions of the firmware for a number of other routers, but don't have much experience with using these routers. You may find some things work differently from the way WRT54G series routers work. The current software may not work on some of these routers.

Please report success/failure/problems to <http://broadband-hamnet.org/hsmm-mesh-forums/view-postlist/forum-2-hardware/topic-674-successfailure-for-different-router-models.html>

There is software on the BBHN web site for the following routers.

WRT54G3G – Confirmed to work

WR850G – confirmed by one user with some problems

WA840G v1 only - unconfirmed

WE800G v1 only - unconfirmed

WRT300N_v1 (ONLY version 1. The v1.1 and higher versions don't work) - unconfirmed

WRT150N – several people have reported that they have failed to load software successfully on this model

Customized WRT54G Versions

There are some customized versions of the WRT54G router that Linksys produced for certain customers. Some of these have compatible hardware but require a different process to load software. There are probably some custom versions of the hardware that don't work with BBHN. There is some discussion on the BBHN web site.

Other Hardware

Some of the more advanced members of the BBHN community have installed some of the software components used to make other hardware devices work in a BBHN network.

Please understand and respect the difference between the complete, supported, BBHN package and other hardware software combinations. The process of installing, configuring, and using this other hardware is very different and may be much more difficult than the process for the official BBHN firmware on supported hardware.

We encourage everyone to experiment with such enhancements and share your results on the BBHN website. <http://broadband-hamnet.org/hsmm-mesh-forums/view-postlist/forum-2-hardware/topic-823-bbhn-mesh-ports-to-other-hardware.html>