

Hacking the Linksys WRT54G

Custom Firmware, Tips & Tricks,
And Other Online Resources

What is the WRT54G?

- ◆ Linksys Wireless AP/Router
- ◆ 802.11b/g, dual RP-TNC
- ◆ (1) 10/100 WAN, (4) 10/100 LAN Ports
- ◆ Extensible, Hackable
- ◆ Several versions
 - ◆ 1.0, 1.1
 - ◆ 2.0, 2.2
 - ◁ WRT54GS

General Specs

- ◆ 16 MB RAM, 4 MB Flash (32/8 - S)
- ◆ Broadcom 125/200MHz MIPS CPU
- ◆ ADMtek 10/100 5 port switch
- ◆ Broadcom radio

Why Hack It?

- ◆ Increase radio strength
- ◆ Bridging, routing, firewalling, WDS
- ◆ Add support for channels 12 - 14
- ◆ Advanced QoS (VoIP, Gaming, ...)
- ◆ Headless Wardriving
- ◆ Instant HotSpot

Available Firmware

- ◆ Linksys (blah)
- ◆ HyperWRT (very similar to Linksys)
- ◆ Sveasoft (greatly enhanced functionality)
- ◆ eWRT (Sveasoft fork, captive portal)
- ◆ OpenWRT (fully open, no Linksys code)

HyperWRT

- ◆ Modified Linksys Firmware
- ◆ Adjustable transmit power
- ◆ 13 wireless channels
- ◆ Boot_wait enabled
- ◆ Enhanced Firewalling and QoS
- ◆ Telnet command shell

Sveasoft

- ◆ Client/Bridge, WDS/Repeater mode
- ◆ Supports WPA over WDS
- ◆ Web-based stats, SNMP, ntop
- ◆ Captive Portal, Kismet drone
- ◆ PPTP and/or IPsec VPN
- ◆ OSPF Routing/Load Balancing
- ◆ QoS and Bandwidth Management
- ◆ 802.1Q VLAN Support
- ◆ SSH Management

eWRT

- ◆ Based on stable Sveasoft release
- ◆ Fixed/improved build process
- ◆ Backported newer Sveasoft features
- ◆ Backported newer Linksys fixes
- ◆ Added NoCatSplash Captive Portal

OpenWRT

- ◆ NOT Linksys-derived
 - ◆ Supports Linksys, Belkin, Asus, Dell, Buffalo
- ◆ Minimal Linux
 - ◆ Network init and Firewalling
 - ◆ DHCP client/server, caching DNS server
 - ◆ Busybox, Telnet shell
- ◆ All else installable as IPKGs
 - ◆ HTTP Admin Interface
 - ◆ SSH daemon, etc.

Additional Resources

- ◆ Linksys
 - ◆ <http://www.linksys.com>
- ◆ LinksysInfo.org
 - ◆ <http://www.linksysinfo.org>
- ◆ HyperWRT
 - ◆ <http://www.hyperdrive.be/hyperwrt/>
- ◆ Sveasoft
 - ◆ <http://www.sveasoft.com/modules/phpBB2/index.php>
- ◆ eWRT
 - ◆ <http://www.portless.net/menu/ewrt/>
- ◆ OpenWRT
 - ◆ <http://openwrt.org/>
- ◆ SeattleWireless
 - ◆ <http://www.seattlewireless.net/index.cgi/LinksysWrt54g>