

# Router Firmware for SOHO Equipment

Router custom firmware information for common models of Small Office/Home Office router equipment, such as Netgear, Asus, and Linksys routers.

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# Fresh Tomato



## ..FRESH TOMATO..

**FreshTomato** is a firmware project based on Linux, targeting home and SOHO routers.

FreshTomato is distributed on the [GPL license](#).

FreshTomato supports Broadcom based systems.

“ I currently run Fresh Tomato firmware on several Netgear Nighthawks. The R7000 and R8000 are my current preferred routers for Fresh Tomato firmware.

It is far superior in both security and features than the original Netgear firmware that came with these routers. Unlike Netgear, updates for the router firmware to address security vulnerabilities or correct bugs are available on a regular basis. Netgear would usually take well over a year to address security issues, if at all.

Status

- Overview
- Device List
- Web Usage
- Logs
- Bandwidth
- IP Traffic
- Tools
- Basic
- Advanced
- Port Forwarding
- Access Restriction
- DoS
- Bandwidth Limiter
- Captive Portal
- Web Server
- USB and NAS
- VPN Tunneling
- Administration

System

Name	N66U
Model	Asus RT-N66U
Bootloader (CFE)	1.0.1.9
Chipset	Broadcom BCM5300 chip rev 1 pkg 0
CPU Frequency	600MHz
Flash Size	32MB
Time	Mon, 20 Apr 2020 18:07:54 +0200
Uptime	0 days, 00:04:31
CPU Load (1 / 5 / 15 mins)	1.23 / 0.71 / 0.29
Total / Free Memory	249.39 MB / 221.96 MB (89.00%)
Total / Free NVRAM	64.00 KB / 24.04 KB (37.55%)

Ethernet Ports State



WWAN Modem Status

Modem type	hlink
Current Mode	LTE
RSSI	-71 dbm
RSRP	-103 dbm
RSRQ	-9 dbm
SINR	-1 dB
Location	MCC: 211 MNC: 06 LAC: 0x0 (0) Cell ID: 0x0 (211) PC: 0x155 (341)

WAN

MAC Address	50:46:...
Connection Type	4G/LTE
IP Address	192.168.8.100
Subnet Mask	255.255.255.0
Gateway	192.168.8.1
DNS	192.168.8.153
MTU	1500
Status	Connected
Connection Uptime	0 days, 00:02:51
Remaining Lease Time	0 days, 23:57:09

Renew Release

LAN

Router MAC Address	50:46:...
Router IP Addresses	br0 (LAN) - 192.168.1.1/24 br1 (LAN1) - 192.168.2.1/24 br2 (LAN2) - 192.168.3.1/24
DHCP	br0 (LAN) - 192.168.1.2 - 192.168.1.51 br1 (LAN1) - 192.168.2.2 - 192.168.2.51 br2 (LAN2) - 192.168.3.2 - 192.168.3.51

Wireless (2.4 GHz / eth1)

MAC Address	50:46:...
Wireless Mode	Access Point
Wireless Network Mode	Auto
Interface Status	Up (LAN)
Radio	Enabled
SSID	pedro-test2
Broadcast	Enabled
Security	WPA2 Personal (PSK) + AES
Channel	6 - 2.437 GHz
Channel Width	40 MHz
Interference Level	Acceptable
Rate	54 Mbps

Enable Disable

Wireless (5 GHz / eth2)

MAC Address	50:46:...
Wireless Mode	Access Point
Wireless Network Mode	Auto
Interface Status	Up (LAN)
Radio	Enabled
SSID	pedro-test5-2
Broadcast	Enabled
Security	WPA2 Personal (PSK) + AES
Channel	104 - 5.520 GHz
Channel Width	40 MHz
Interference Level	Acceptable
Rate	450 Mbps

Enable Disable

Wireless (2.4 GHz / wi0.1)

MAC Address	52:46:...
Wireless Mode	Access Point
Interface Status	Up (LAN1)
SSID	pedro-guest
Broadcast	Enabled
Security	WPA2 Personal (PSK) + AES

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## Installing on a R8000 Router

Since I use Netgear Nighthawk R8000 routers in my environment, I thought I would outline the process I use to flash fresh Tomato firmware to them. Fresh Tomato supports other broadcom based routers as well. If you have another make and model of router, you can check if yours is supported by going [here](#).

Be sure to read the installation information for your model of router. This installation guide is simply the way I install the firmware on my R8000 routers. I do not imply any guarantee this will work for yours. You are responsible for taking the risk.

“ I will get the instructions in here as soon as time permits. A bit busy with life at the moment.

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## Fixing a 'Bricked' R8000 Router

Recently, I decided I wanted a router as a "shelf spare" in the event one of my production routers failed. Since I have previously flashed many R8000s for myself without issue, I proceeded to purchase a used R8000 from eBay. This particular router, however, 'bricked' on me when I attempted to flash Tomato firmware to it.

“Bricking” essentially means a device has turned into a brick. It may be an electronic device worth hundreds of dollars, but it’s now as useful as a brick (or perhaps a paperweight). A bricked device won’t power on and function normally. A bricked device cannot be fixed through normal means.

Anyway, I thought I would detail the steps and requirements I used to 'unbrick' my router and get it working with Tomato firmware.

“ I will get the instructions in here as soon as time permits. A bit busy with life at the moment.



# DD-WRT



**DD-WRT** is a Linux based alternative OpenSource firmware suitable for a great variety of WLAN routers and embedded systems. The main emphasis lies on providing the easiest possible handling while at the same time supporting a great number of functionalities within the framework of the respective hardware platform used.

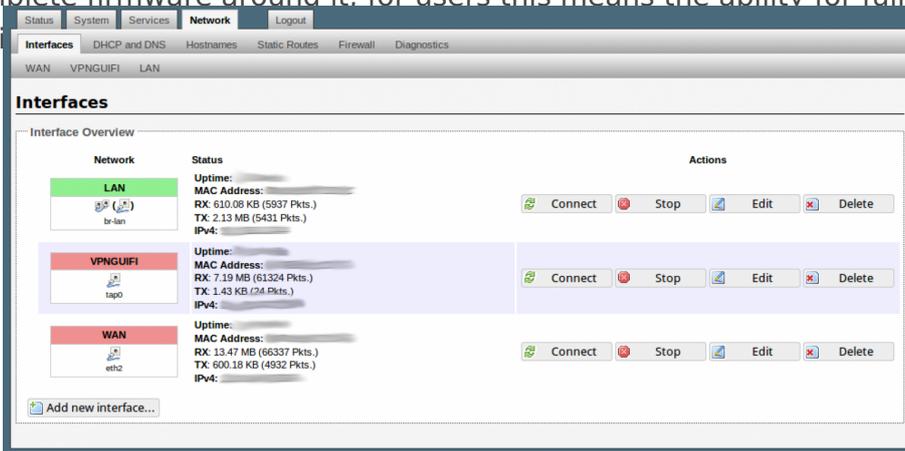
The screenshot shows the DD-WRT control panel interface. At the top, there's a status bar with the text 'dd-wrt.com ... control panel' and system information: 'Firmware: DD-WRT v24-sp2 (07/09/13) kingkong', 'Time: 19:15:28 up 2 days, 19:31, load average: 0.03, 0.05, 0.03', and 'WAN IP: 192.168.1.2'. Below this is a navigation menu with tabs for 'Setup', 'Wireless', 'Services', 'Security', 'Access Restrictions', 'NAT / QoS', 'Administration', and 'Status'. The 'Setup' tab is active, and within it, the 'WAN Setup' sub-tab is selected. The main content area is titled 'WAN Setup' and contains several configuration fields: 'Connection Type' (PPTP), 'Gateway (PPTP Server)' (11.vpn.ac), 'Username' (myusername@vpn.ac), 'Password' (masked with asterisks), 'Use DHCP' (No), 'WAN IP Address' (192.168.1.2), 'Subnet Mask' (255.255.255.0), 'Gateway' (192.168.1.1), 'MPPE Encryption' (Enable), 'Packet Reordering' (Enable), 'Connection Strategy' (Keep Alive: Redial Period 30 Sec), and 'Additional PPTP Options' (mppe required,no40,no56,stateless). On the right side, there's a 'Help' section with a 'more...' link, containing information about 'Automatic Configuration - DHCP', 'Hostname', 'Domain Name', 'Local IP Address', 'Subnet Mask', 'DHCP Server', and 'Start IP Address'.

DD-WRT Control Panel

# OpenWrt



The **OpenWrt** Project is a Linux operating system targeting embedded devices. Instead of trying to create a single, static firmware, OpenWrt provides a fully writable filesystem with package management. This frees you from the application selection and configuration provided by the vendor and allows you to customize the device through the use of packages to suit any application. For developers, OpenWrt is the framework to build an application without having to build a complete firmware around it; for users this means the ability for full customization, to use the dev



LuCi Interface for OpenWrt