F3932 Router User Manual

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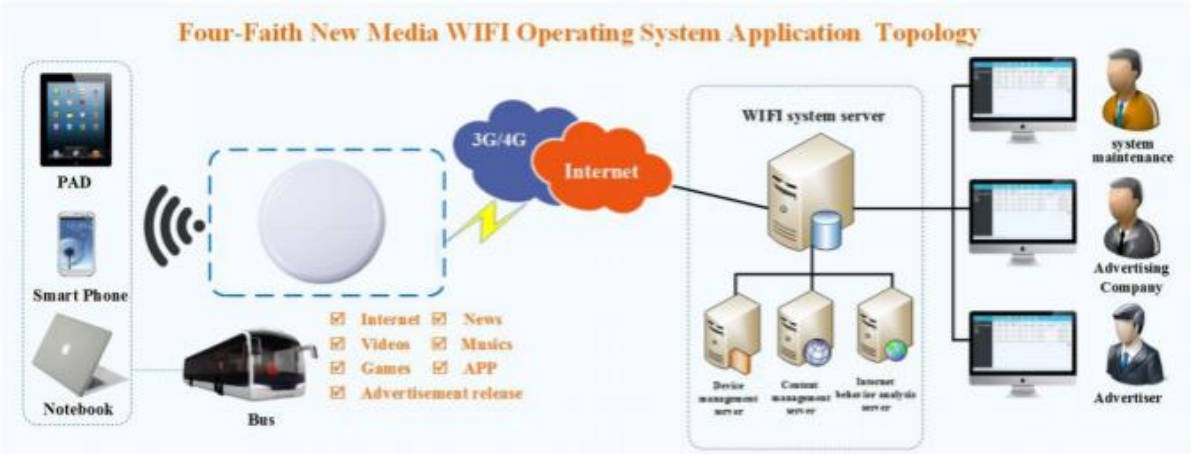
Chapter 1 Brief Introduction of Product

1.1 General

F3932 is our independent research and development of a wireless AP type , for indoor public areas, the integration of advanced WIFI communications, local large capacity storage, multimedia advertising push technology, users can through the smart phone, PAD, laptops access free local video, news, music, games, and fast Internet , and Businesses can carry out more value-added services.

Ceiling design, beautiful and generous and the overall environment of integration. Using PoE standard power supply, the installation is simple and convenient to use.

Application Topology



1.2 Features and Benefits

Design for Public Application

- High-powered 32bits CPU
- Wireless ceiling type AP design, beautiful and generous，can be directly installed on the ceiling
- Industrial design, support over-voltage, over-current, short circuit protection

- Support POE power supply
- Wide Power range(DC 5~36V)

Stability and Reliability

- Support hardware and software WDT to ensure the stability of the system
- Support auto recovery mechanism, including online detect, auto redial when offline to make router always online
- Data storage with TF, ensure the data security and stability on high speed read and write
- Ethernet port: 1.5KV magnetic isolation protection

Standard and Convenience

- Support all kinds of the Intelligent WIFI terminals
- Wireless ceiling type AP design, beautiful and generous, can be directly installed on the ceiling, also can be installed on the wall
- Provide powerful business platform for equipment management, content management and release, report management, user behavior statistics analysis, authority management, alarm management and other functions

High-performance

- Support website redirection, local captive portal, remote captive portal
- Support various authentication ways, including mobile phone number authentication, WeChat authentication, Twitter authentication, Google authentication ,Facebook authentication and without authentication.
- Support WIFI channel hopping for anti-interference
- Support English SSID
- Support suspended advertising function (optional)
- Support TF card for local storage(optional)
- WIFI TX power is configurable for optimized wireless coverage
- Support WEB server. Supports PHP, XML, and database storage(optional)
- Support WIFI inspector
- Support black/white list of URL, Accout, IP address, MAC address
- Support traffic statistics. Support monitoring of device traffic, user traffic and online duration monitoring

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- Support user's surfing behavior record, local PV/UV statistics and transmit these data to server at real time for data statistics analysis
- Support real time log auditing based on user's URL access
- Local information contains advertisement, news, APP, video, music, etc. Support various video formats and streaming media delivery
- Local information update support whole update and incremental update, support grouping update, support break-point resume and outage resume, support A/B backup, support update via internet, FTP
- Support remote firmware upgrade, including upgrade on single device, devices in patch and automatic upgrade, support break-point resume, outage resume
- Support remote terminal parameters configuration, can be a single, batch configuration, custom configuration, at the same time support online/offline equipment configuration
- Support monitoring device status at real time, including CPU, memory, signal strength, network status, storage and alarm
- Supports completed functionality of router
- Support SPI firewall, access restriction, URL filter, QoS, NAT, etc
- Support NTP, schedule reboot and schedule boot/shutdown with in built RTC
- Support various WAN connection types, including static IP, DHCP, PPPoE,etc
- Support VPN client and VPN server(PPTP, L2TP, OPENVPN, IPSEC and GRE(only VPN version supports)

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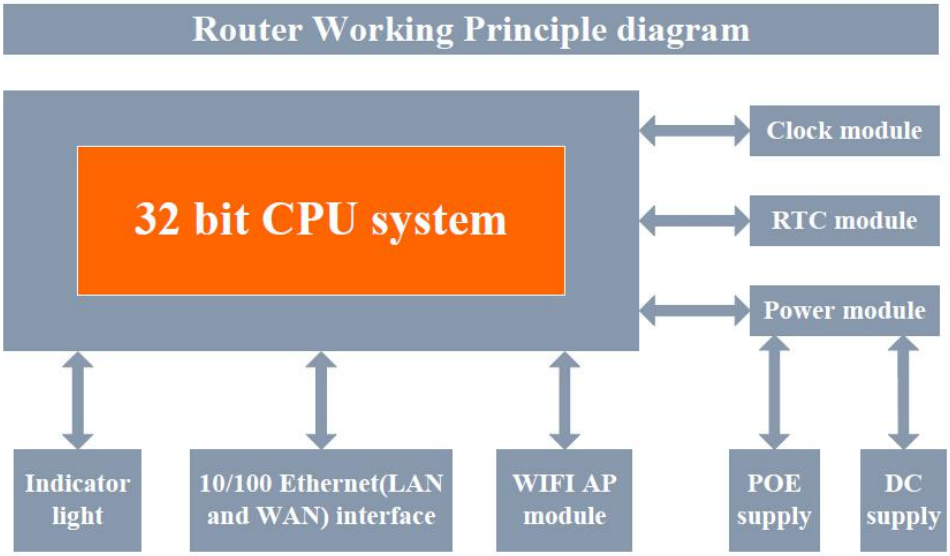
1.3 Working Principle

The principle chart of the router is as following:



1.4 Product Specifications

WIFI Specification

Item	Content
Standard	IEEE802.11b/g/n, 2.4G, 2*2 MIMO,AP model, Station model(optional)
Bandwidth	IEEE802.11b/g: 108Mbps (max) IEEE802.11n: 300Mbps (max)
Security	WEP, WPA, WPA2, etc. WPS (optional)
TX power	20dBm(11n), 21.5dBm(11g), 26dBm(11b)
RX sensitivity	<-75dBm@54Mpbs

Hardware System

Item	Content
CPU	High-performance 32bits CPU
FLASH	16MB(Extendable to 64MB)
DDR2	128MB
TF	8GB~32GB(optional)

Interface Type

Item	Content

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WAN	1 10/100 Mbps WAN port(RJ45), auto MDI/MDIX, 1.5KV magnetic isolation protection
LAN	1 10/100 Mbps Ethernet ports(RJ45), auto MDI/MDIX, 1.5KV magnetic isolation protection
Indicator	“Power”、“System”、“WIFI”、“WAN”、“LAN”
Antenna	Built-in 2.4 GHz antenna: 3 dbi
TF	Standard TF card interface
Power	Standard 3-PIN power interface, reverse-voltage and overvoltage protection
Reset	Restore the router to its original factory default settings

Power Supply

Item	Content
Standard Power	DC 12V/1.5A or POE supply
Power range	DC 5~36V or POE 44 ~ 57V
Working current	<270mA (12V)
Standby current	<220mA (12V)

Physical Characteristics

Item	Content
Housing	Ceiling installation and wall mounting
Dimensions	168x168x51 mm
Weight	450g

Other Specification

Item	Content
Operating Temperature	-35~+75ºC(-31~+167℉)
Storage Temperature	-40~+85ºC (-40~+185℉)
Operating Humidity	95% (unfreezing)

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Chapter 2 Installation Introduction

2.1 General

The router must be installed correctly to make it work properly.

Warning: Forbid to install the router when powered!

2.2 Encasement List

Name	Quantity	Remark
Router host	1	
Hanging wall base	1	
Network cable	1	
Power adapter	1	optional
Manual CD	1	
Certification card	1	
Maintenance card	1	

2.3 Installation and Cable Connection

Overall dimensions:

The following figure, appearance, size: 168 * 168 * 51 (unit: mm)

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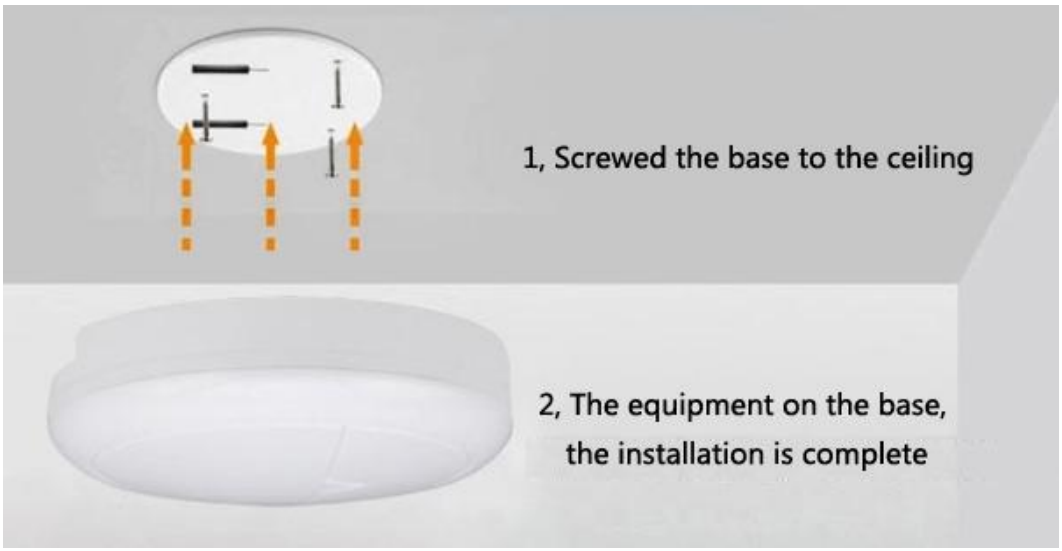
Equipment installation:

With M3 tapping screws equipment base, then aim the device for the base pit stuck, installation is complete.



Installation of cable:

Insert one end of the network cable into the LAN interface, and insert the other end into the Ethernet interface of user's device. The signal connection of network direct cable is as follows:

RJ45-1	RJ45-2
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8

2.4 Power

The power range of the router is DC 5~36V.

Warning: When we use other power, we should make sure that the power can supply power above 4W.

We recommend user to use the standard DC 12V/1.5A power.

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2.5 Indicator Lights Introduction

The router provides following indicator lights: “Power”, “System”, “WIFI”, “WAN”, “LAN”.

Indicator Light	State	Introduction
Power	ON	Router is powered on
	OFF	Router is powered off or in the shutdown period of schedule boot&shutdown
System	BLINK	System works properly
	OFF	System does not work
WIFI	OFF	WIFI is not active
	ON	WIFI is active
WAN	OFF	The interface of WAN is not connected
	BLINK	The interface of WAN is communicating
	ON	The interface of WAN is connected /communicating
LAN	OFF	The corresponding interface of switch is not connected
	BLINK	The corresponding interface of switch is communication
	ON / BLINK	The corresponding interface of switch is connected /communicating

2.6 Reset Button Introduction

The router has a “Reset” button to restore it to its original factory default settings. When user press the “Reset” button for up to 15s, the router will restore to its original factory default settings and restart automatically.

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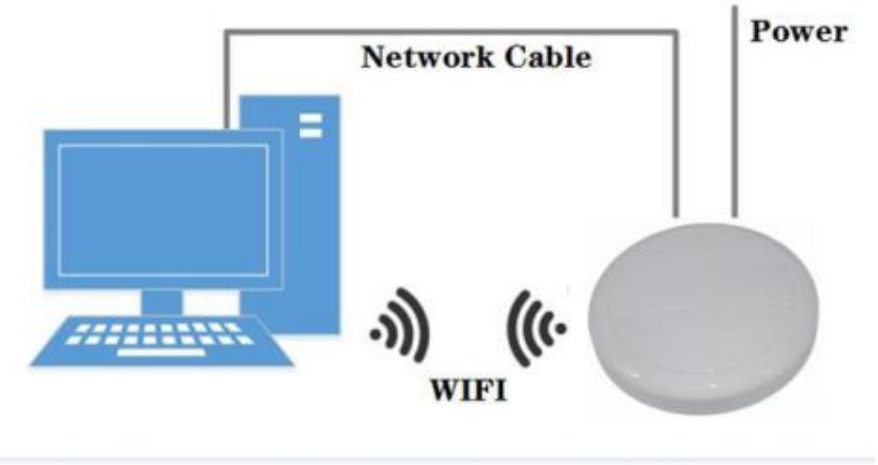
Chapter 3 Configuration and Management

This chapter describes how to configure and manage the router.

3.1 Configuration Connection

Before configuration, you should connect the router and your configuration PC with the supplied network cable. Plug the cable's one end into the Local Network port of the router, and another end into your configure PC's Ethernet port. The connection diagram is as following:



Please modify the IP address of PC as the same network segment address of the router, for instance, 192.168.4.9. Modify the mask code of PC as 255.255.255.0 and set the default gateway of PC as the router's IP address (192.168.4.1).

3.2 Access the Configuration Web Page

The chapter is to present main functions of each page. Users visit page tool via web browser after connect users' PC to the router. There are eleven main pages: Setting, Wireless, Service, VPN, Security, Access Restrictions, NAT, QoS Setting, Applications, Management and Status. Users enable to browse slave pages by click one main page..

Users can open IE or other explorers and enter the router's default IP address of 192.168.4.1:90 on address bar, then press the botton of Enter to visit page Web management tool of the router. The users login in the web page at the first name, there will display a page shows as blow to tip users to modify the default user name and password of the router. Users have to click "change password" to make it work if they modify user name and password.

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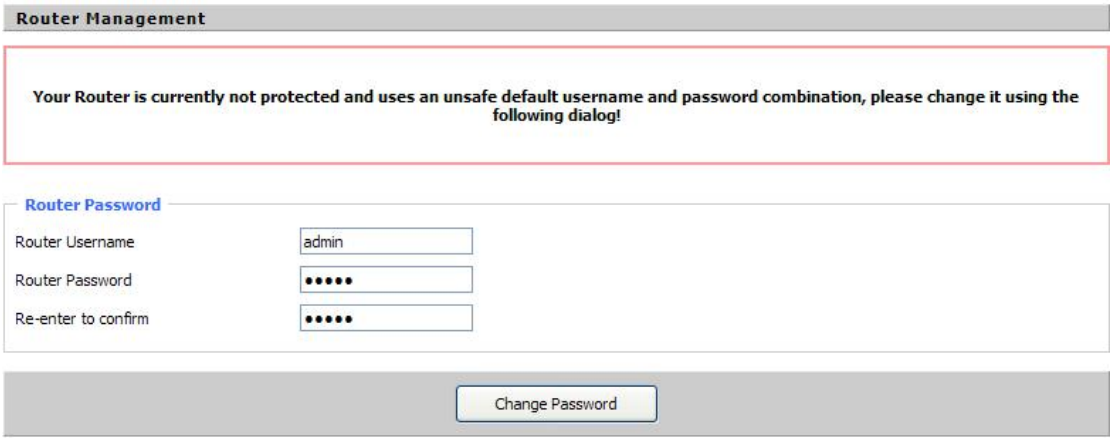
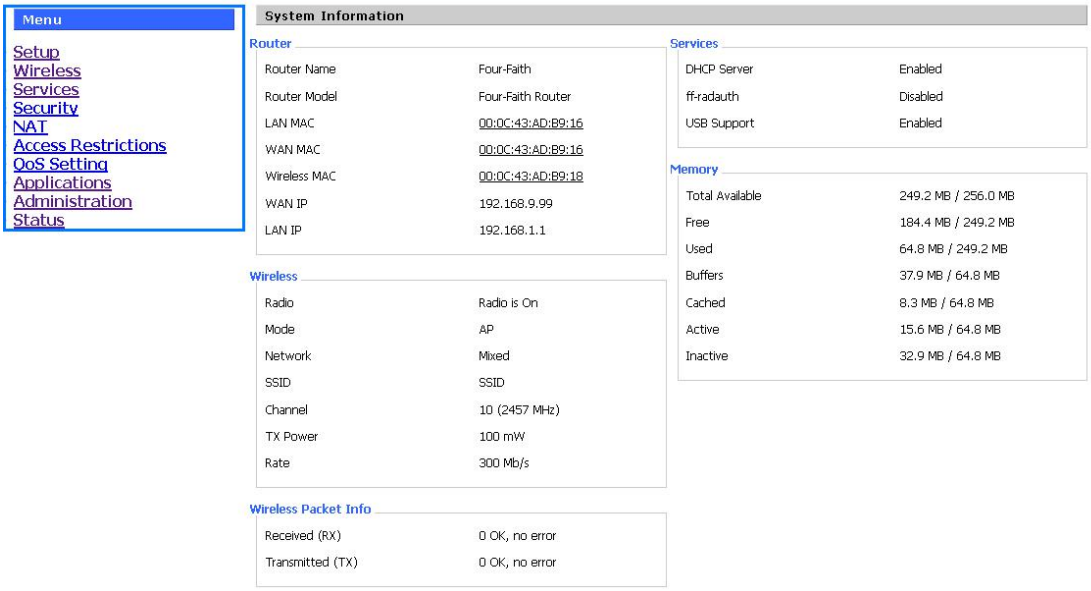


After access to the information main page



Users need to input user name and password if it is their first time to login.

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Input correct user name and password to visit relevant menu page. Default user name is admin, password is admin. (available to modify user name and password on management page, then click submit)

3.3 Management and configuration

3.3.1 Setting

The Setup screen is the first screen users will see when accessing the router. Most users will be able to configure the router and get it work properly using only the settings on this screen. Some Internet Service Providers (ISPs) will require users to enter specific information, such as User Name, Password, IP Address, Default Gateway Address, or DNS IP Address. These information can be obtained from your ISP, if required.

3.3.1.1 Basic Setting

WAN Connection Type
Six Ways: Disabled, Static IP, Automatic DHCP, PPPOE.

Disabled

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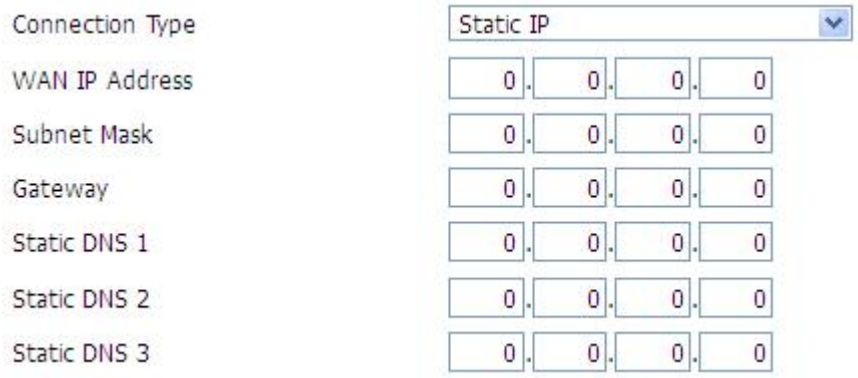
Forbid the setting of WAN port connection type

Static IP

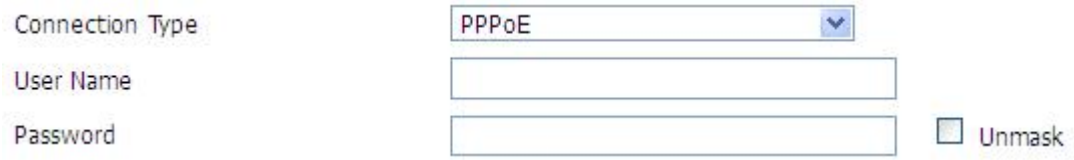


WAN IP Address: Users set IP address by their own or ISP assigns
Subnet Mask: Users set subnet mask by their own or ISP assigns
Gateway: Users set gateway by their own or ISP assigns
Static DNS1/DNS2/DNS3: Users set static DNS by their own or ISP assigns

Automatic Configuration-DHCP

IP address of WAN port gets automatic via DHCP

PPPOE



User Name: login the Internet
Password: login the Internet

Keep Online

This function is used to detect whether the Internet connection is active, if users set it and when the router detect the connection is inactive, it will redial to users' ISP immediately to make the connection active.

Detection Method:

None: do not set this function

Ping: Send ping packet to detect the connection, when choose this method, users should also configure "Detection Interval", "Primary Detection Server IP" and "Backup Detection Server IP" items.

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Route: Detect connection with route method, when choose this method, users should also configure "Detection Interval", "Primary Detection Server IP" and "Backup Detection Server IP" items.

Detection Interval: time interval between two detections, unit is second

Primary Detection Server IP: the server used to response the router's detection packet. This item is only valid for method "Ping" and "Route".

Backup Detection Server IP: the server used to response the router's detection packet. This item is valid for method "Ping" and "Route".

STP

STP (Spaning Tree Protocol) can be applied to loop network. Through certain algorithm achieves path redundancy, and loop network cuts to tree-based network without loop in the meantime, thus to avoid the hyperplasia and infinite circulation of a message in the loop network

Note: When users choose the "Route" or "Ping" method, it's quite important to make sure that the "Primary Detection Server IP" and "Backup Detection Server IP" are usable and stable, because they have to response the detection packet frequently.

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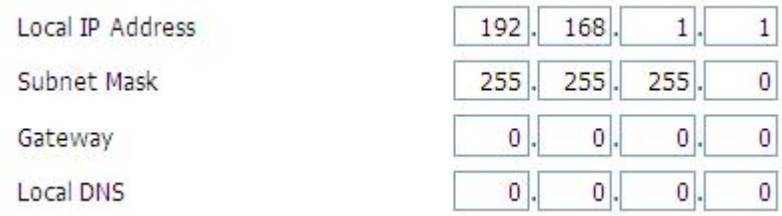
Optional Configuration

Router Name: set router name
Host Name: ISP provides
Domain Name: ISP provides
MTU: auto (1500) and manual (1200-1492 in PPPOE/PPTP/L2TP mode, 576-16320 in other modes)

Router Internal Network Settings
Router IP



Local IP Address: IP address of the router
Subnet Mask: the subnet mask of the router
Gateway: set internal gateway of the router. If default, internal gateway is the address of the router
Local DNS: DNS server is auto assigned by network operator server. Users enable to use their own DNS server or other stable DNS servers, if not, keep it default

Network Address Server Settings (DHCP)
These settings for the router's Dynamic Host Configuration Protocol (DHCP) server functionality configuration. The Router can serve as a network DHCP server. DHCP server automatically assigns an IP address for each computer in the network. If they choose to enable the router's DHCP server option, users can set all the computers on the LAN to automatically obtain an IP address and DNS, and make sure no other DHCP server in the network.

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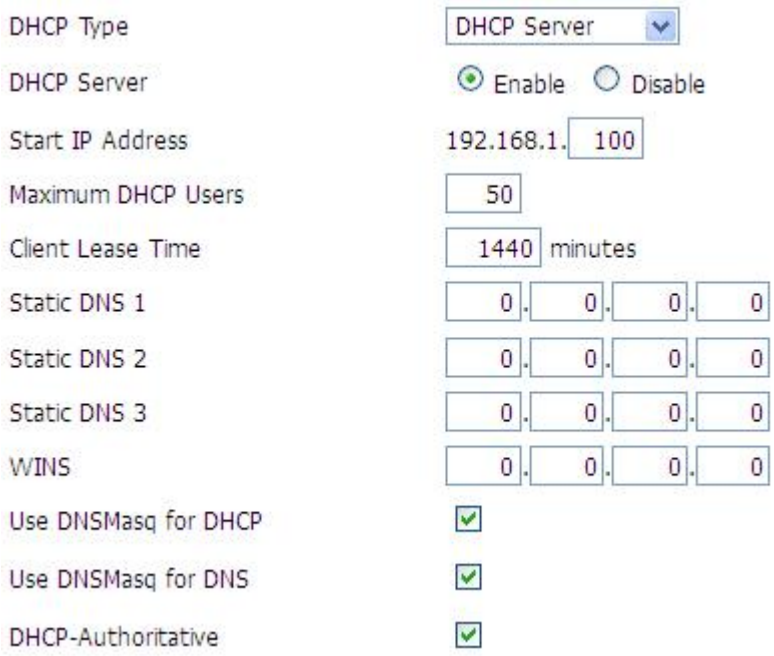

DHCP Type: DHCP Server and DHCP Forwarder

Enter DHCP Server if set DHCP Type to DHCP Forwarder as blow:

DHCP Server: keep the default Enable to enable the router's DHCP server option. If users have already have a DHCP server on their network or users do not want a DHCP server, then select Disable

Start IP Address: enter a numerical value for the DHCP server to start with when issuing IP addresses. Do not start with 192.168.4.1 (the router's own IP address).

Maximum DHCP Users: enter the maximum number of PCs that users want the DHCP server to assign IP addresses to. The absolute maximum is 253 if 192.168.4.2 is users' starting IP address.

Client Lease Time: the Client Lease Time is the amount of time a network user will be allowed connection to the router with their current dynamic IP address. Enter the amount of time, in minutes, that the user will be "leased" this dynamic IP address.

Static DNS (1-3): the Domain Name System (DNS) is how the Internet translates domain or website names into Internet addresses or URLs. Users' ISP will provide them with at least one DNS Server IP address. If users wish to utilize another, enter that IP address in one of these fields. Users can enter up to three DNS Server IP addresses here. The router will utilize them for quicker access to functioning DNS servers.

WINS: the Windows Internet Naming Service (WINS) manages each PC's interaction with the Internet. If users use a WINS server, enter that server's IP address here. Otherwise, leave it blank.

DNSMasq: users' domain name in the field of local search, increase the expansion of the host option, to adopt DNSMasq can assign IP addresses and DNS for the subnet, if select DNSMasq, dhcpd service is used for the subnet IP address and DNS.

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Time Settings

Select time zone of your location. To use local time, leave the checkmark in the box next to Use local time.

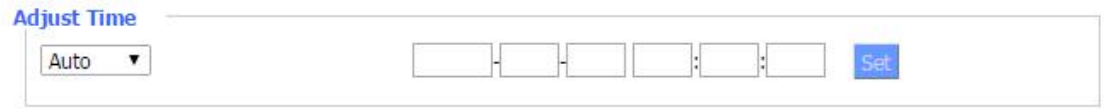
NTP Client: Get the system time from NTP server

Time Zone: Time zone options

Summer Time (DST): set it depends on users' location

Server IP/Name: IP address of NTP server, up to 32 characters. If blank, the system will find a server by default

Adjust Time



To adjust time by the system and refresh to get the time of the web, user can set to modify the time of the system. They can change to adjust time by manual to achieve adjust time by the system if the system fails to get NTP server

3.3.1.2 Dynamic DNS

If user's network has a permanently assigned IP address, users can register a domain name and have that name linked with their IP address by public Domain Name Servers (DNS). However, if their Internet account uses a dynamically assigned IP address, users will not know in advance what their IP address will be, and the address can change frequently. In this case, users can use a commercial dynamic DNS service, which allows them to register their domain to their IP address, and will forward traffic directed at their domain to their frequently-changing IP address.

DDNS Service: router currently support DynDNS, freedns, Zoneedit, NO-IP, 3322, easyDNS, TZO, DynSIP and Custom based on the user.

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User Name: users register in DDNS server, up to 64 characteristic
Password: password for the user name that users register in DDNS server, up to 32 characteristic
Host Name: users register in DDNS server, no limited for input characteristic for now
Type: depends on the server
Wildcard: support wildcard or not, the default is OFF. ON means *.host.3322.org is equal to host.3322.org
Do not use external ip check: enable or disable the function of 'do not use external ip check'

Force Update Interval: unit is day, try forcing the update dynamic DNS to the server by setted days

Status

DDNS Status shows connection log information

3.3.1.3 Clone MAC Address

Some ISP need the users to register their MAC address. The users can clone the router MAC address to their MAC address registered in ISP if they do not want to re-register their MAC address

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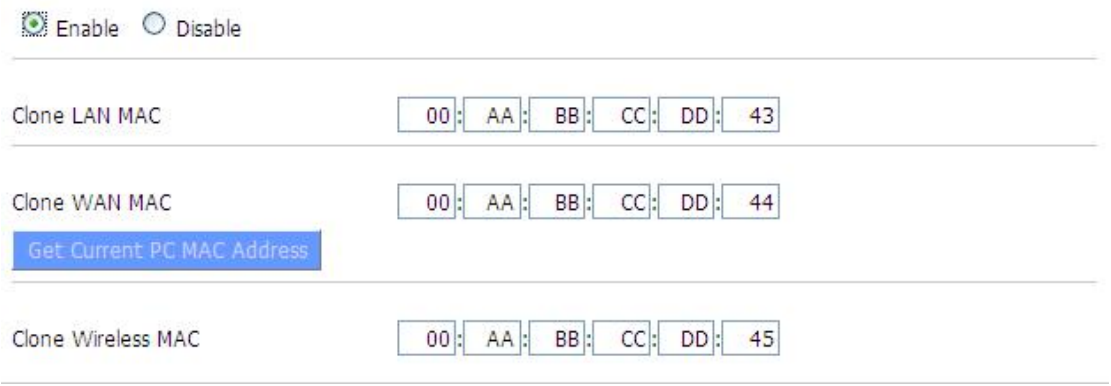

Clone MAC address can clone three parts: Clone LAN MAC, Clone WAN MAC, Clone Wireless MAC.

Noted that one MAC address is 48 characteristic, can not be set to the multicast address, the first byte must be even. And MAC address value of network bridge br0 is determined by the smaller value of wireless MAC address and LAN port MAC address.

3.3.1.4 Advanced Router

Operating Mode: Gateway and Router

If the router is hosting users' Internet connection, select Gateway mode. If another router exists on their network, select Router mode.

Static Routing

Select set number: 1-50

Route Name: defined routing name by users, up to 25 characters

Metric: 0-9999

Destination LAN NET: the Destination IP Address is the address of the network or host to which

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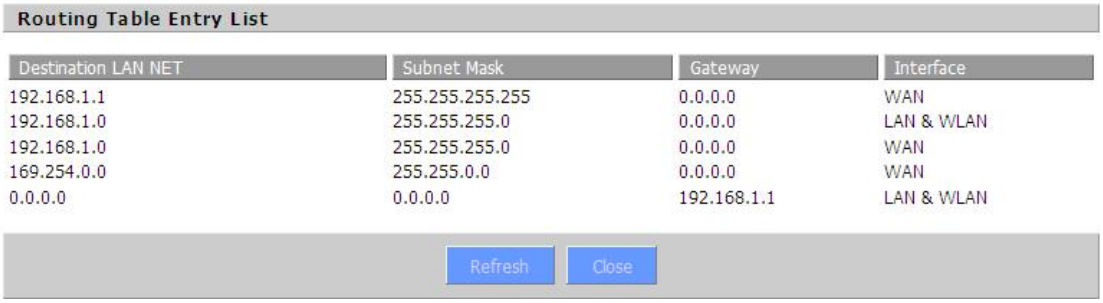
users want to assign a static route

Subnet Mask: the Subnet Mask determines which portion of an IP address is the network portion, and which portion is the host portion

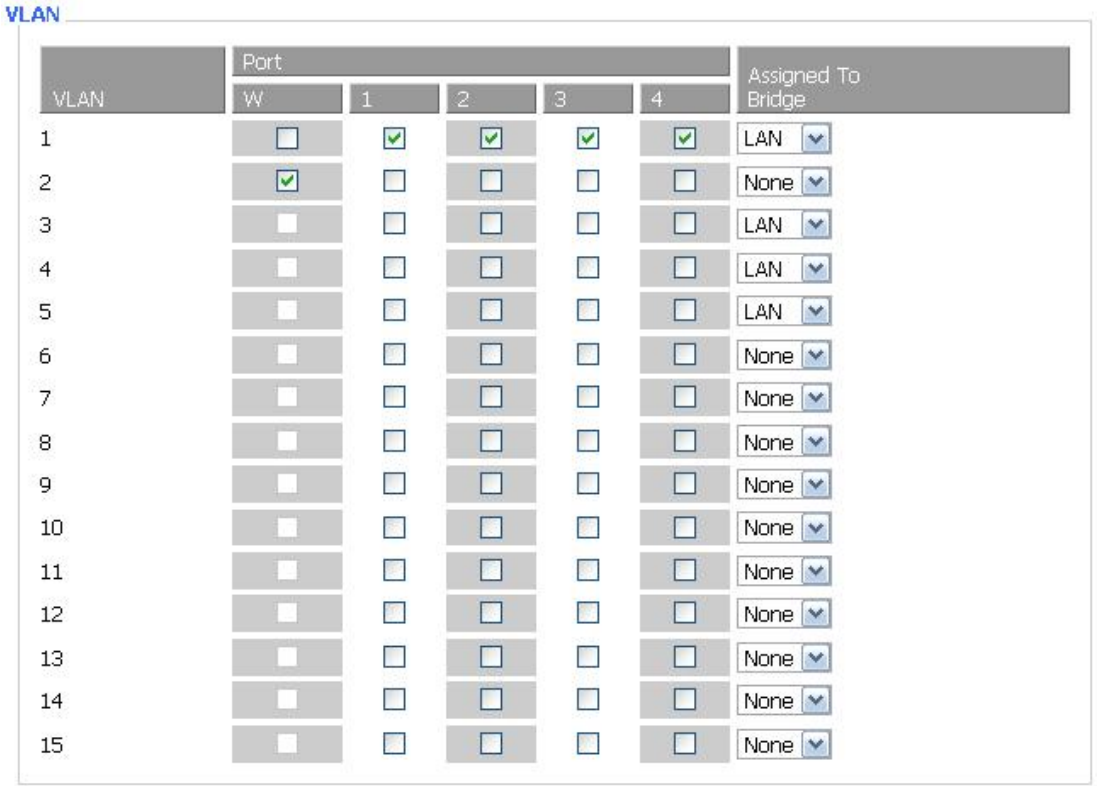
Gateway: IP address of the gateway device that allows for contact between the router and the network or host.

Interface: indicate users whether the Destination IP Address is on the LAN & WLAN (internal wired and wireless networks), the WAN (Internet), or Loopback (a dummy network in which one PC acts like a network, necessary for certain software programs)

Show Routing Table



3.3.1.5 VLANs



VLANs function is to divide different VLAN ports by users' will. The system supports 15 VLAN

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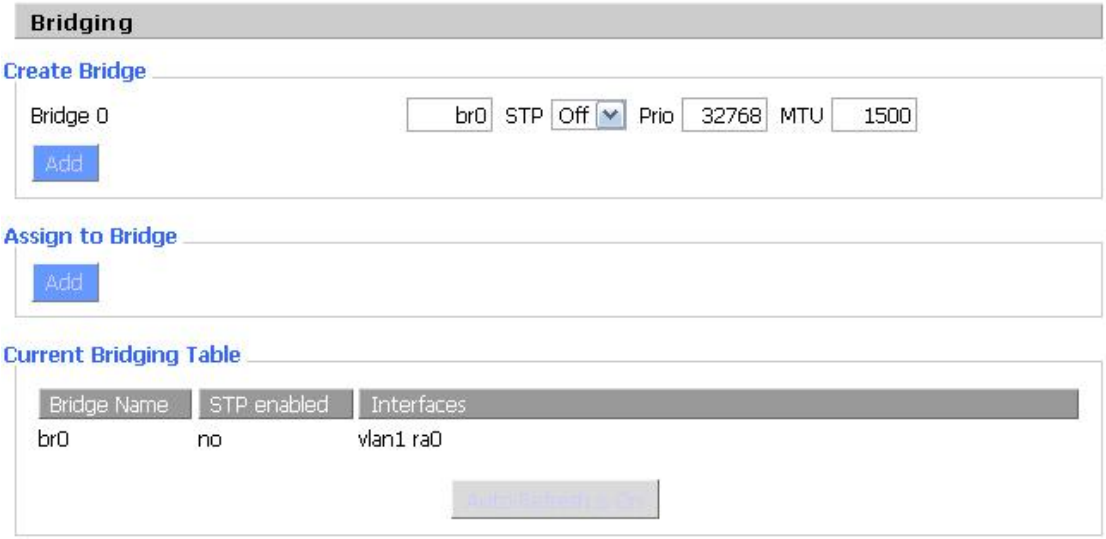
port from VLAN1-VLAN15. However there is only 5 time ports (1 WAN port and 4 LAN port) divided by users themselves,and LAN port and WAN port disable to divide into one VLAN port meanwhile.

3.3.1.6 Networking



Bridging-Create Bridge: creates a new empty network bridge for later use. STP means Spanning Tree Protocol and with PRIO users are able to set the bridge priority order. The lowest number has the highest priority.

Bridging - Assign to Bridge: allows users to assign any valid interface to a network bridge. Consider setting the Wireless Interface options to Bridged if they want to assign any Wireless Interface here. Any system specific bridge setting can be overridden here in this field.

Current Bridging Table: shows current bridging table

Create steps as below:

Click 'Add' to create a new bridge, configuration is as below:

Create bridge option: the first br0 means bridge name. STP means to on/off spanning tree protocol. Prio means priority level of STP, the smaller the number, the higher the level. MTU means maximum transfer unit, default is 1500, delete if it is not need. And then click 'Save' or 'Add'. Bride properties is as below:

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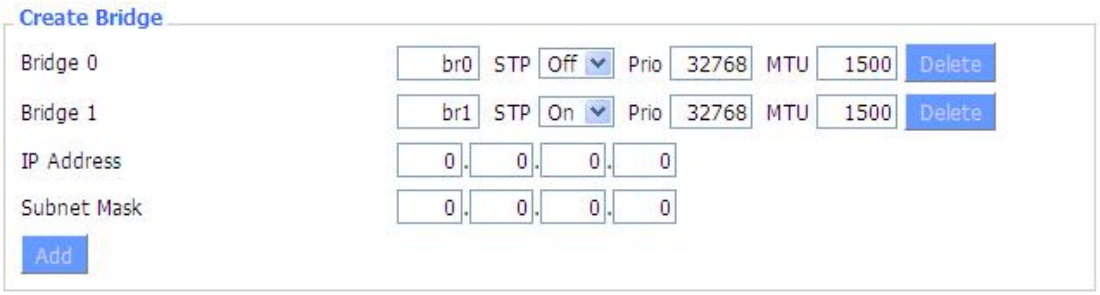
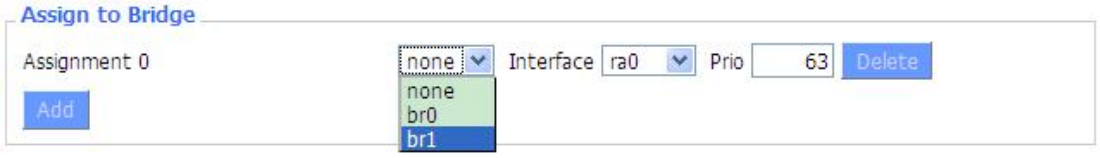


Enter relewant bridge IP address and subnet mask, click 'Add' to create a bridge.

Note: Only create a bride can apply it.



Assign to Bridge option: to assign different ports to created bridge. For example: assign port (wireless port) is ra0 in br1 bridge as below:

Prio means priority level: work if multiple ports are within the same bridge. The smaller the number, the higher the level. Click 'Add' to take it effect.

Note: corresponding interface of WAN ports interface should not be binding, this bridge function is basically used for LAN port, and should not be binding with WAN port

If bind success, bridge binding list in the list of current bridging table is as below:

To make br1 bridge has the same function with DHCP assigned address, users need to set multiple DHCP function, see the introduction of multi-channel DHCPD:

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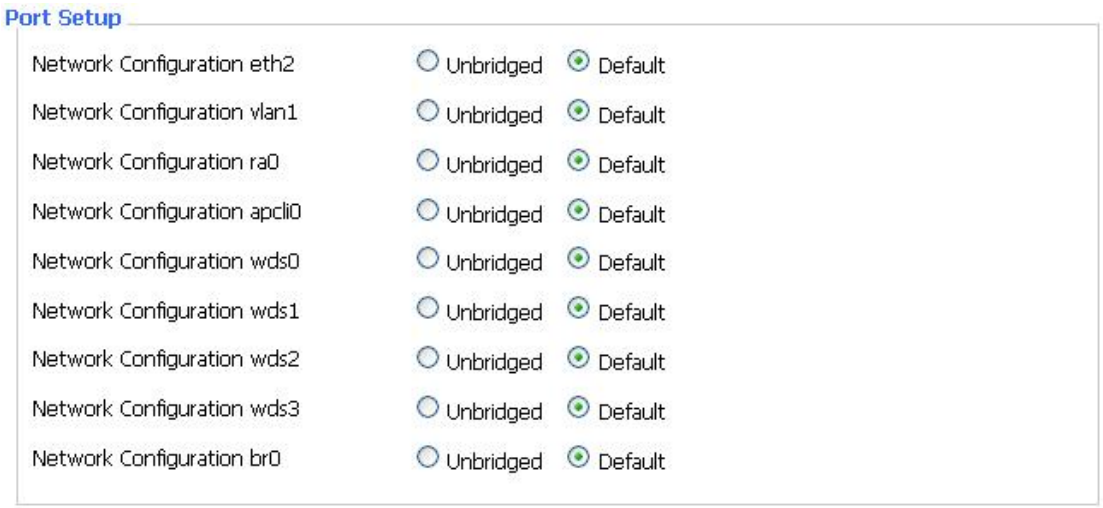
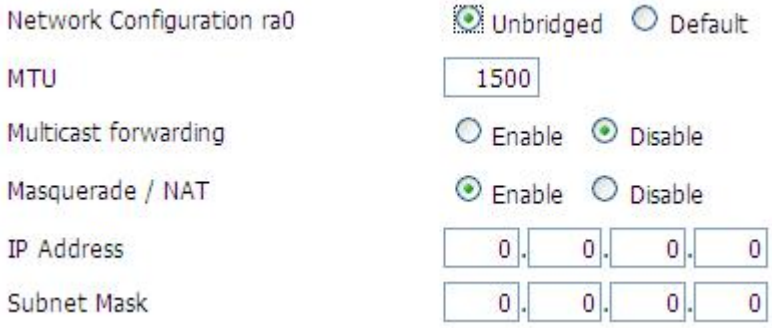


Port Setup: Set the port property, the default is not set



Choose not bridge to set the port's own properties, detailed properties are as below:
MTU: maximum transfer unit
Multicast forwarding: enable or disable multicast forwarding
Masquerade/NAT: enable or disable Masquerade/NAT
IP Address: set ra0's IP address, and do not conflict with other ports or bridge
Subnet Mask: set the port's subnet mask

Multiple DHCPD: using multiple DHCP service. Click 'Add' in multiple DHCP server to appear relevant configuration. The first means the name of port or bridge (do not be configured as eth0), the second means whether to on DHCP. Start means start address, Max means maximum assigned DHCP clients, Leasetime means the client lease time, the unit is second, click 'Save' or 'Apply' to put it into effect after setting.

Note: Only configure and click 'Save' can configure the next, can not configure multiple DHCP at the same time.

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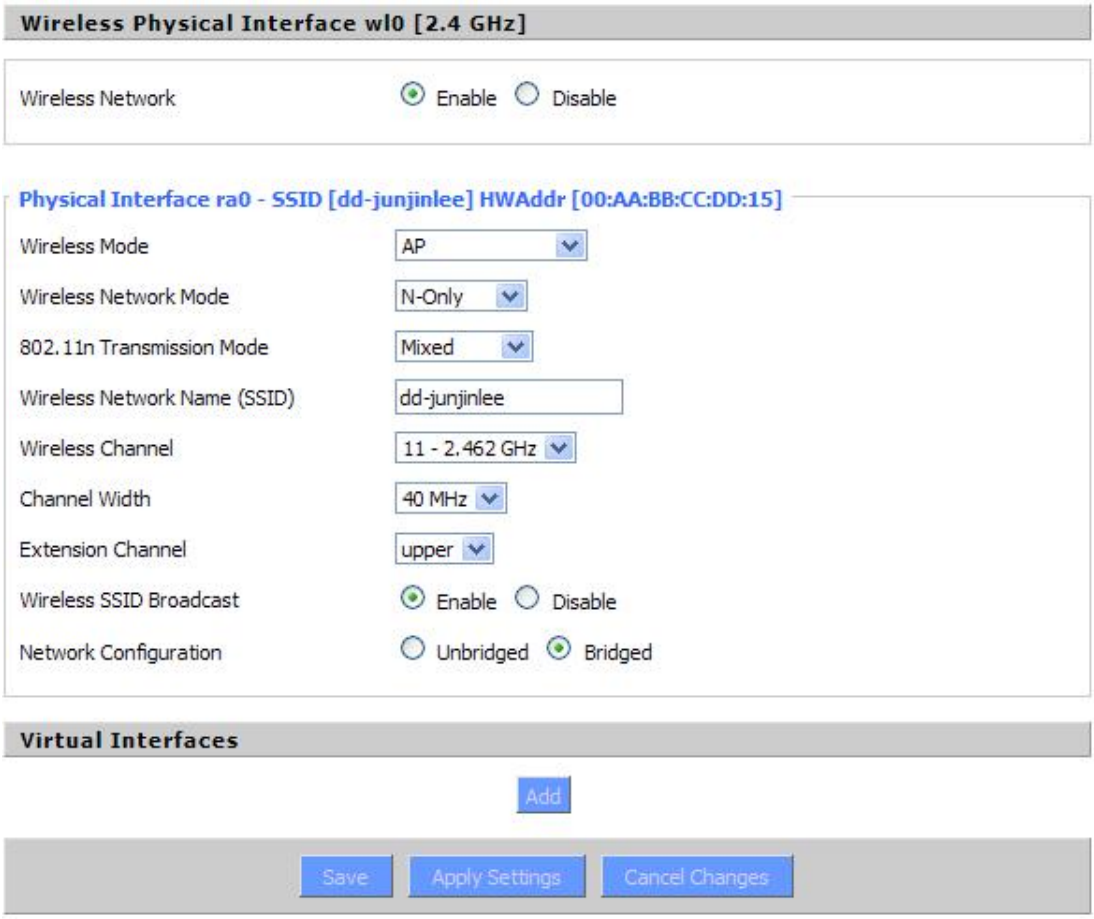
3.3.2 Wireless

3.3.2.1 Basic Settings



Wireless Network：“Eanble”, radio on.

“Disable”, radio off.

Wireless Mode：AP, Client, Adhoc, Repeater, Repeater Bridge four options。

Wireless Network Mode：

Mixed：Support 802.11b, 802.11g, 802.11n wireless devices.

BG-Mixed：Support 802.11b, 802.11g wireless devices.

B-only：Only supports the 802.11b standard wireless devices.

B-only：Only supports the 802.11b standard wireless devices.

G-only：Only supports the 802.11g standard wireless devices.

NG-Mixed：Support 802.11g, 802.11n wireless devices.

N-only：Only supports the 802.11g standard wireless devices.

8021.11n Transmission Mode：In the wireless network mode to "N-only" choose to transfer its

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transmission mode.

Greenfield: When you determine the surrounding environment, there is no other 802.11a/b/g devices use the same channel, use this mode to increase throughput. Other 802.11a/b/g devices use the same channel in the environment, the information you send may generate an error, re-issued.

Mixed： This mode is contrary to the green mode, but will reduce the throughput.

Wireless Network Name(SSID): The SSID is the network name shared among all devices in a wireless network. The SSID must be identical for all devices in the wireless network. It is case-sensitive and must not exceed 32 alphanumeric characters, which may be any keyboard character. Make sure this setting is the same for all devices in your wireless network.。

Wireless Channel： A total of 1-13 channels to choose more than one wireless device environment, please try to avoid using the same channel with other devices.。

Channel Width： 20MHZ and 40MHZ。

Extension Channel： Channel for 40MHZ, you can choose upper or lower.

Wireless SSID Broadcast：

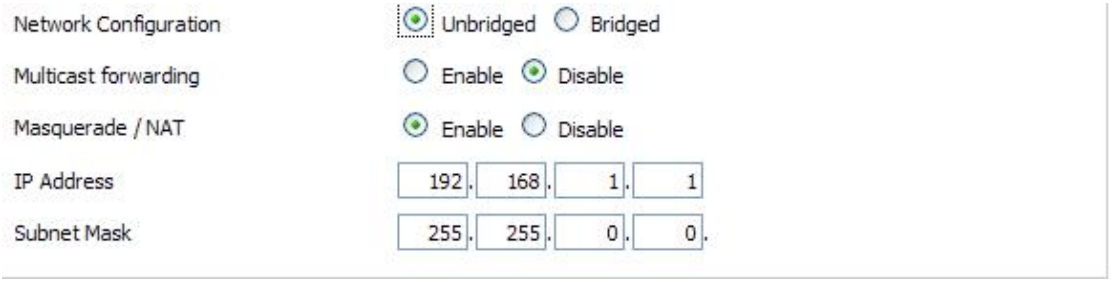
Enable： SSID broadcasting.

Disable： Hidden SSID.

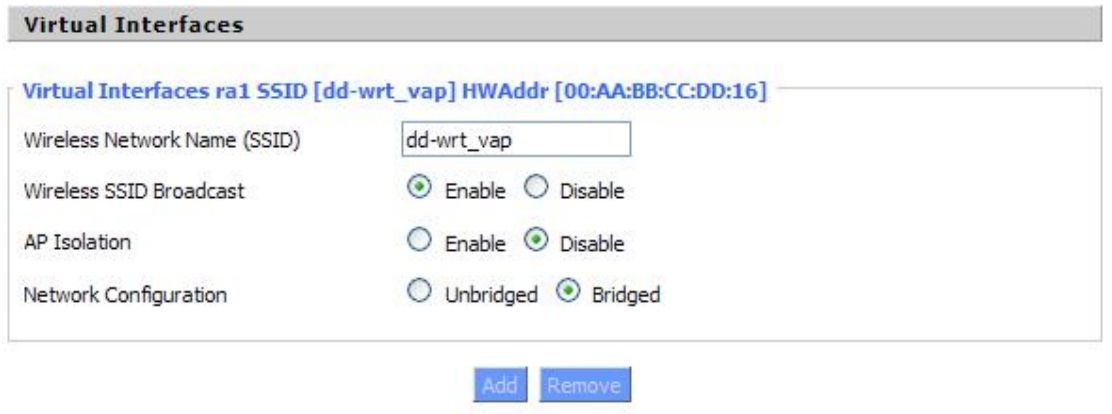
Network Configuration：

Bridged： Bridge to the router, under normal circumstances, please select the bridge.

Unbridged： There is no bridge to the router, IP addresses need to manually configure.



Virtual Interfaces： Click Add to add a virtual interface. Add successfully, click on the remove, you can remove the virtual interface。



AP Isolation： This setting isolates wireless clients so access to and from other wireless clients are stopped.

Note： Save your changes, after changing the "Wireless Mode", "Wireless Network Mode",

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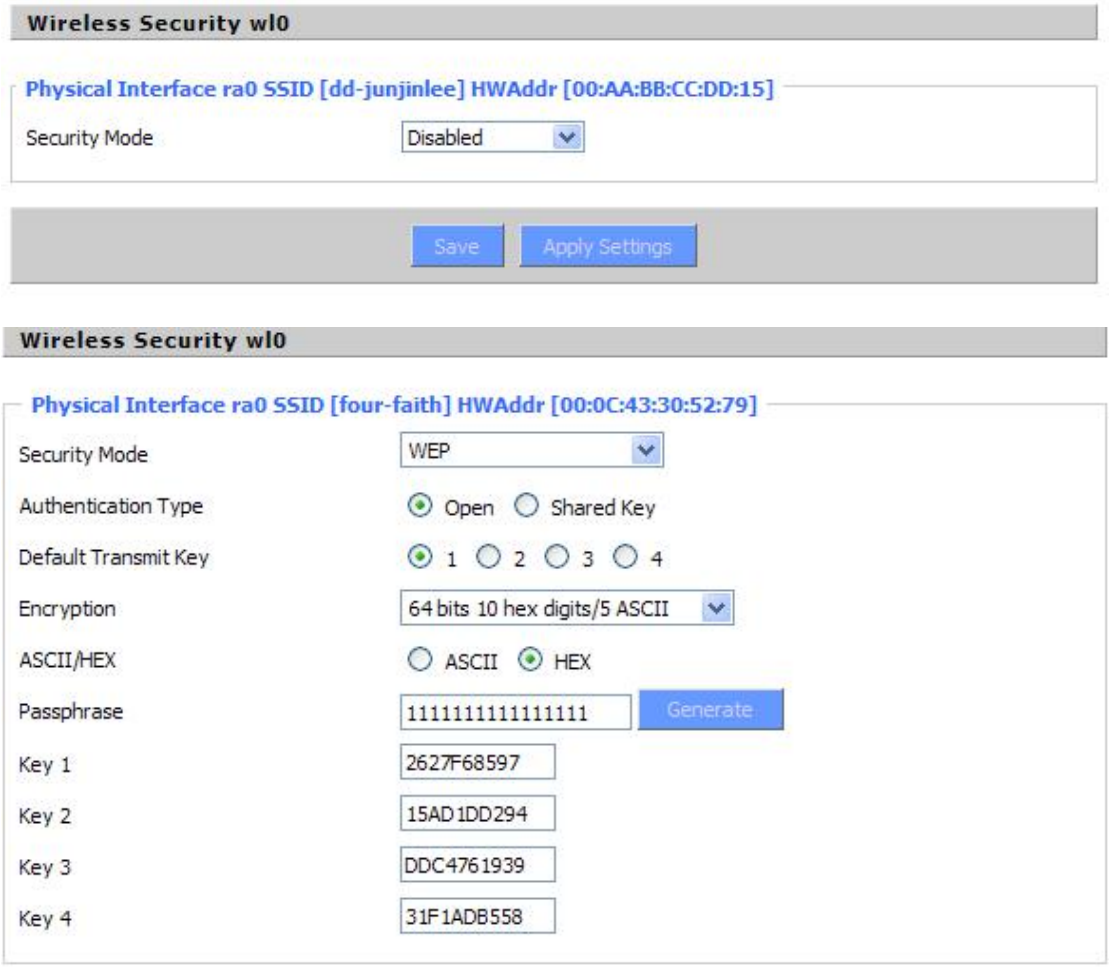
"wireless width", "broadband" option, please click on this button, and then configure the other options.

3.3.2.2 Wireless Security

Wireless security options used to configure the security of your wireless network. This route is a total of seven kinds of wireless security mode. Disabled by default, not safe mode is enabled. Such as changes in Safe Mode, click Apply to take effect immediately.



WEP：Is a basic encryption algorithm is less secure than WPA.Use of WEP is discouraged due to security weaknesses, and one of the WPA modes should be used whenever possible. Only use WEP if you have clients that can only support WEP (usually older, 802.11b-only clients).

Authentication Type：Open or shared key。

Default Transmit Key：Select the key form Key 1 - Key 4 key.

Encryption：There are two levels of WEP encryption, 64-bit (40-bit) and 128-bit. To utilize WEP, select the desired encryption bit, and enter a passphrase or up to four WEP key in hexadecimal format. If you are using 64-bit (40-bit), then each key must consist of exactly 10 hexadecimal characters or 5 ASCII charceters. For 128-bit, each key must consist of exactly 26 hexadecimal

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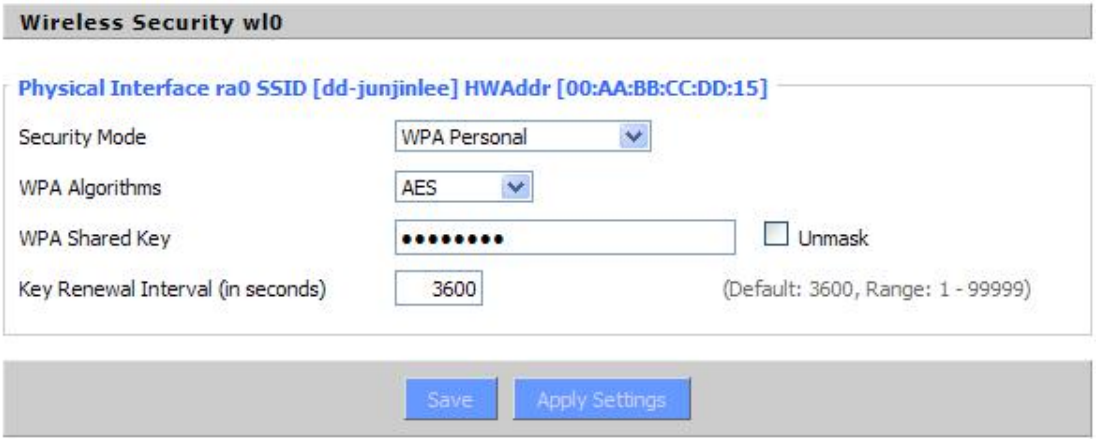
characters. Valid hexadecimal characters are "0"-"9" and "A"-"F".

ASCII/HEX: ASCII, the keys is 5 bit ASCII characters/13bit ASCII characters.
HEX, the keys is 10bit/26 bit hex digits.

Passphrase： The letters and numbers used to generate a key.

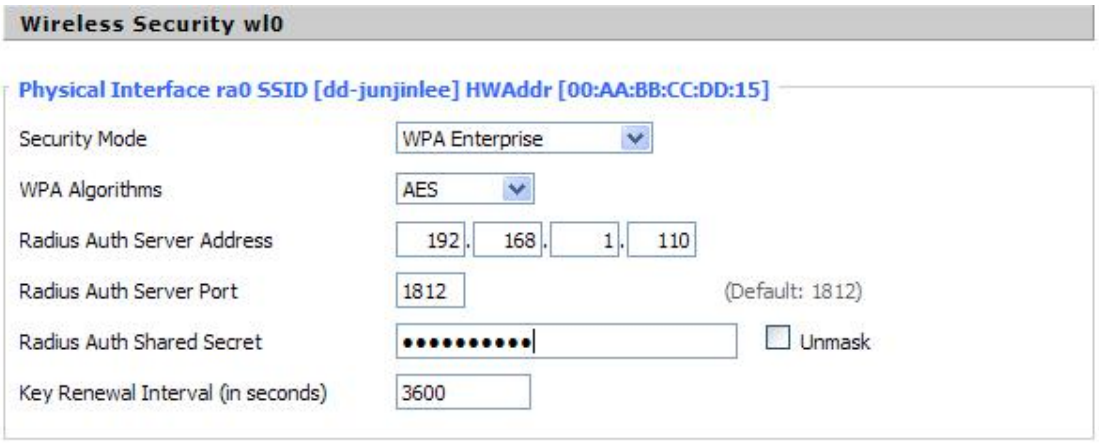
Key1-Key4： Manually fill out or generated according to input the pass phrase.



WPA Personal/WPA2 Personal/WPA2 Person Mixed：， TKIP/AES/TKIP+AES， dynamic encryption keys. TKIP + AES, self-applicable TKIP or AES. WPA Person Mixed, allow WPA Personal and WPA2 Personal client mix.

WPA Shared Key： Between 8 and 63 ASCII character or hexadecimal digits.。

Key Renewal Interval（in seconds）：1-99999。



WPA Enterprise/WPA2 Enterprise/WPA2 Enterprise Mixed: WPA Enterprise uses an external RADIUS server to perform user authentication.

WPA Algorithms: AES/TKIP/TPIP+AES.

Radius Auth Sever Address： The IP address of the RADIUS server.

Radius Auth Server Port： The RADIUS Port (default is 1812)。

Radius Auth Shared Secret： The shared secret from the RADIUS server。

Key Renewal Interva(in seconds): 1-99999。

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3.3.3 Services

3.3.3.1 Services

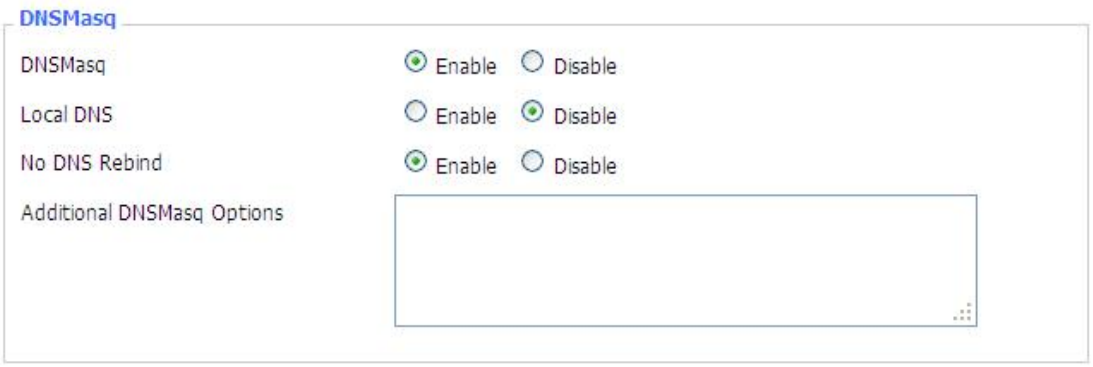
DHCP Server

DHCPd assigns IP addresses to users local devices. While the main configuration is on the setup page users can program some nifty special functions here.

Additional DHCPd Options: some extra options users can set by entering them

DNSMasq

DNSmasq is a local DNS server. It will resolve all host names known to the router from dhcp (dynamic and static) as well as forwarding and caching DNS entries from remote DNS servers. Local DNS enables DHCP clients on the LAN to resolve static and dynamic DHCP hostnames.



Local DNS: enables DHCP clients on the LAN to resolve static and dynamic DHCP hostnames

No DNS Rebind: when enabled, it can prevent an external attacker to access the router's internal Web interface. It is a security measure

Additional DNSMasq Options: some extra options users can set by entering them in Additional DNS Options.

For example:

static allocation: dhcp-host=AB:CD:EF:11:22:33,192.168.0.10,myhost,myhost.domain,12h

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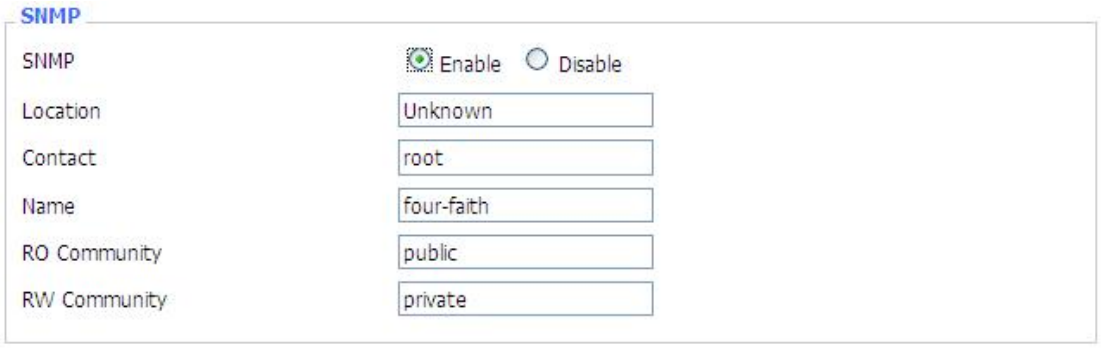
max lease number: dhcp-lease-max=2

DHCP server IP range: dhcp-range=192.168.0.110,192.168.0.111,12h

SNMP



Location: equipment location

Contact: contact this equipment management

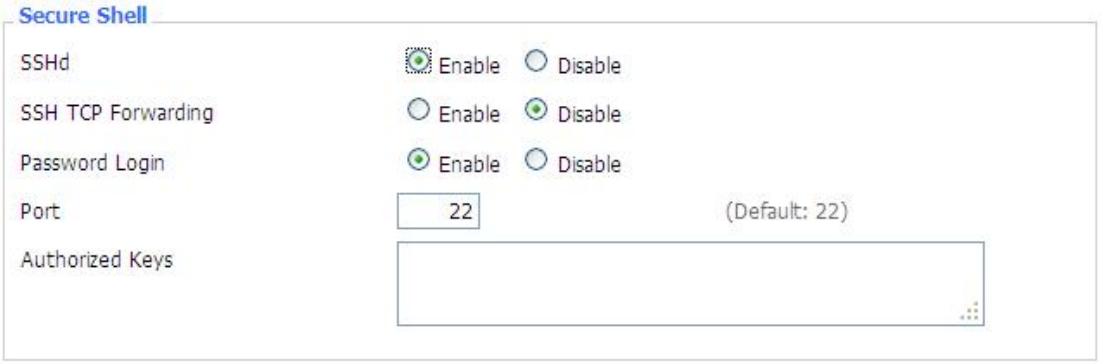
Name: device name

RO Community: SNMP RO community name, the default is public, Only to read.

RW Community: SNMP RW community name, the default is private, Read-write permissions

SSHD

Enabling SSHd allows users to access the Linux OS of their router with an SSH client



SSH TCP Forwarding: enable or disable to support the TCP forwarding

Password Login: allows login with the router password (username is admin)

Port: port number for SSHd (default is 22)

Authorized Keys: here users paste their public keys to enable key-based login (more secure than a simple password)

System log

Enable Syslogd to capture system messages. By default they will be collected in the local file /var/log/messages. To send them to another system, enter the IP address of a remote syslog server.

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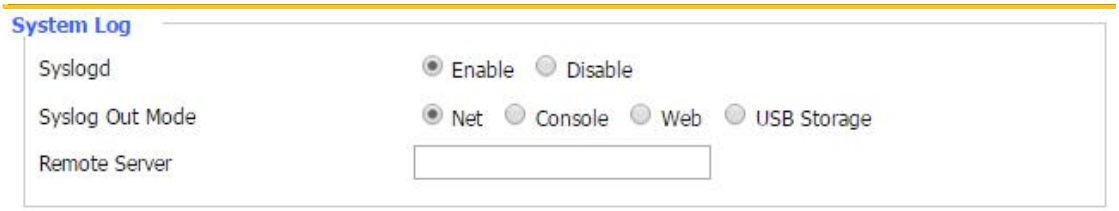

Syslog Out Mode: four log mode

Net: the log information output to a syslog server

Console: the log information output to console port

Web:the log will be shown in the web page(Starus->Weblog)

USB Storage: the log will be saved in the USB device for access

Remote Server: if choose net mode, users should input a syslog server's IP Address and run a syslog server program on it.

Telnet

Telnet: enable a telnet server to connect to the router with telnet. The username is admin and the password is the router's password.

Note: If users use the router in an untrusted environment (for example as a public hotspot), it is strongly recommended to use SSHd and deactivate telnet.

WAN Traffic Counter

Ttraff Daemon: enable or disable wan traffic counter function

3.3.3.2 USB

Enable the service to identify the U disk connected to the router, TF card or SD memory card, and use these types of storage media. Specific setup instructions screenshot below

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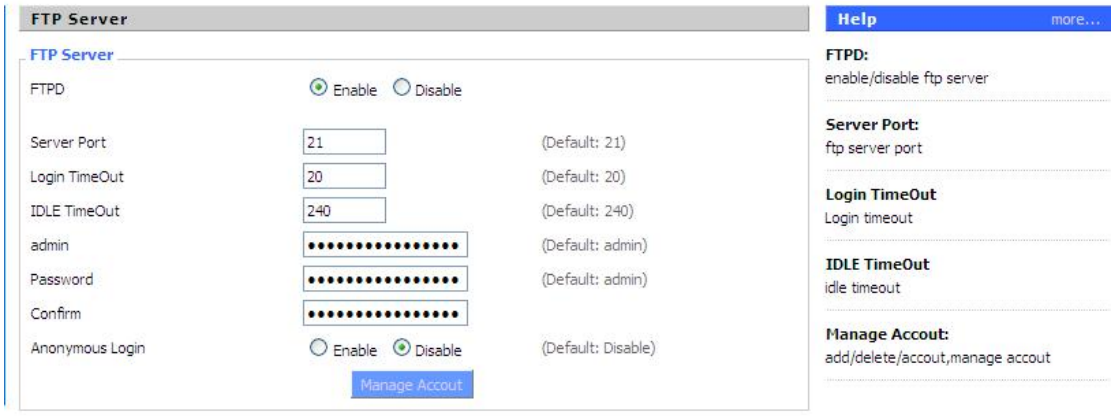
Storage Media Priority：used to choose which storage media to storage files.

Storage List：list the storage media that the router recognized

3.3.3.3 FTP Server

Enable the service to use the router as a simple FTP application server, the user can do an FTP client to upload or download files to an external router U disk, TF card or SD memory card inside.



Server Port：Router as a local FTP server listening port, the default is 21

admin： Log in to the router FTP server administrator account, the default user name “admin” router WEB configuration management

Password：Log on to the FTP server to the router's administrator password, the default is “admin”

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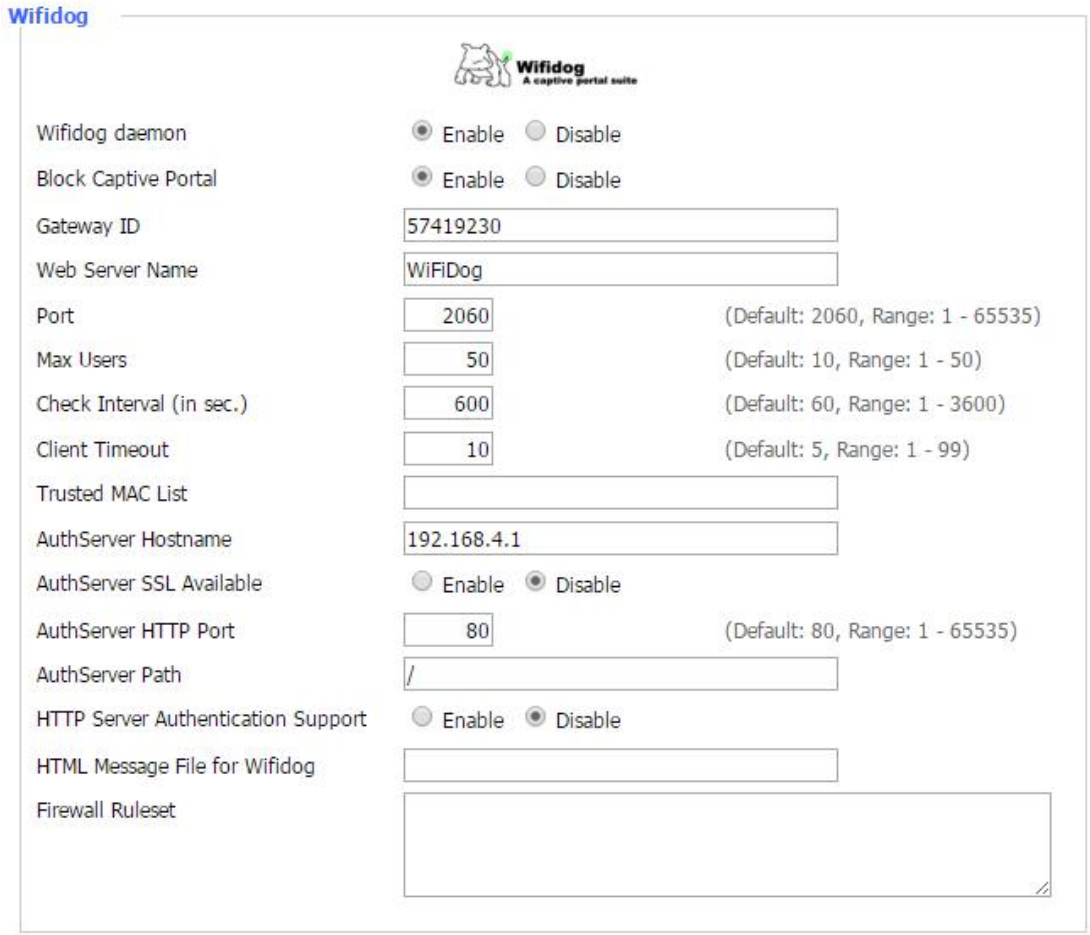
3.3.3.4 Hotspot

The service will enable wireless WIFI router for the bus, chain business model and other companies to provide customers with free internet access after authentication, while in play before certification can be played online business advertising and promotional activities specified function.



Gateway ID: hotspot remote / local authentication server that uniquely identifies the default is 57419230

Port: default 2060, range: 1 - 65535 Please note that no special circumstances do not arbitrarily modify

Max Users: limit the number of customers connected to the local WIFI Internet access, the default factory setting is 50

Check Interval (in sec.): Detection WIFI wireless client terminals (computers, mobile phones, etc.) and link status time interval of this station router, the default is 180 seconds

Client Timeout (minutes): detects the connection at the maximum timeout this station WIFI

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wireless router client terminals (computers, mobile phones, etc.) did not have the Internet to communicate, think 10 minutes by default. After this time customers need to re-authenticate login.

AuthServer Hostname: remote / local hotspot server host domain name or IP, if the authentication or jump in our station carried the router, please fill out this station router's LAN IP network segment

AuthServer Path: Remote / local server storage WIFI hotspot jump page advertisements path, the default is "/"

3.3.4 Security

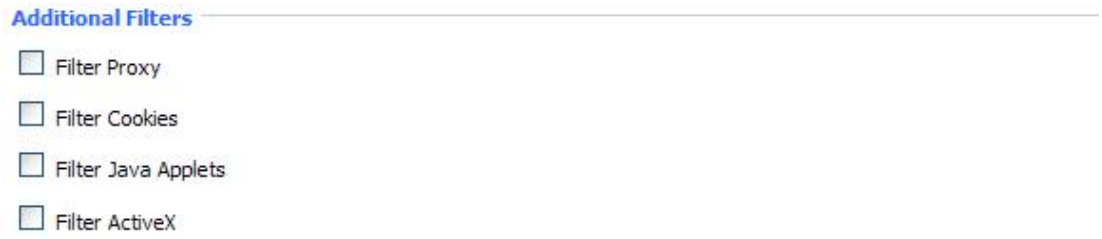
3.3.4.1 Firewall

You can enable or disable the firewall, filter specific Internet data types,and prevent anonymous Internet requests,ultimately enhance network security.

Firewall Protection

Firewall enhance network security and use SPI to check the packets into the network.To use firewall protection, choose to enable otherwise disabled. Only enable the SPI firewall, you can use other firewall functions: filtering proxy, block WAN requests, etc.

Additional Filters



Filter Proxy: Wan proxy server may reduce the security of the gateway, Filtering Proxy will refuse any access to any wan proxy server. Click the check box to enable the function otherwise disabled.

Filter Cookies: Cookies are the website of data the data stored on your computer.When you interact with the site ,the cookies will be used. Click the check box to enable the function otherwise disabled.

Filter Java Applets: If refuse to Java, you may not be able to open web pages using the Java programming.. Click the check box to enable the function otherwise disabled.

Filter ActiveX: If refuse to ActiveX, you may not be able to open web pages using the ActiveX programming. Click the check box to enable the function otherwise disabled.

Prevent WAN Request

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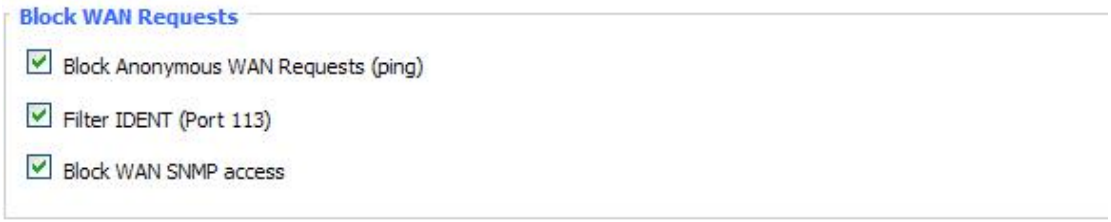


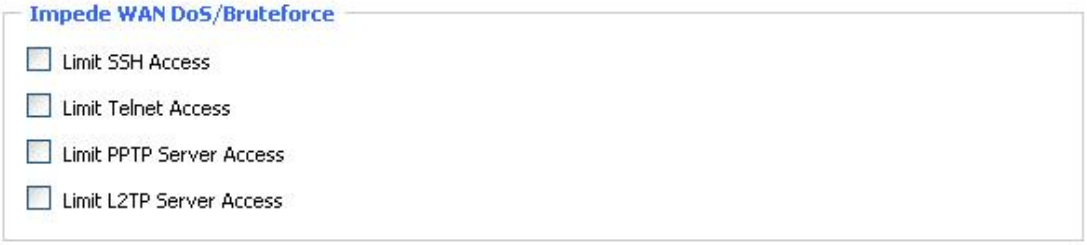
Block Anonymous WAN Requests (ping): By selecting "Block Anonymous WAN Requests (ping)" box to enable this feature, you can prevent your network from the Ping or detection of other Internet users. so that make More difficult to break into your network. The default state of this feature is enabled ,choose to disable allow anonymous Internet requests.

Filter IDENT (Port 113): Enable this feature can prevent port 113 from being scaned from outside. Click the check box to enable the function otherwise disabled.

Block WAN SNMP access: This feature prevents the SNMP connection requests from the WAN.

After Complete the changes, click the **Save Settings** button to save your changes. Click the **Cancel Changes** button to cancel unsaved changes.

Impede WAN DoS/Bruteforce



Limit ssh Access: This feature limits the access request from the WAN by ssh, and per minute up to accept two connection requests on the same IP. Any new access request will be automatically dropped.

Limit Telnet Access: This feature limits the access request from the WAN by Telnet, and per minute up to accept two connection requests on the same IP. Any new access request will be automatically dropped.

Limit PPTP Server Access: When build a PPTP Server in the router,this feature limits the access request from the WAN by ssh, and per minute up to accept two connection requests on the same IP . Any new access request will be automatically dropped.

Limit L2TP Server Access: When build a L2TP Server in the router, this feature limits the access request from the WAN by ssh, and per minute up to accept two connection requests on the same IP. Any new access request will be automatically dropped.

Log Management

The router can keep logs of all incoming or outgoing traffic for your Internet connection.

Log: To keep activity logs, select Enable. To stop logging, select Disable. When select enable, the following page will appear.

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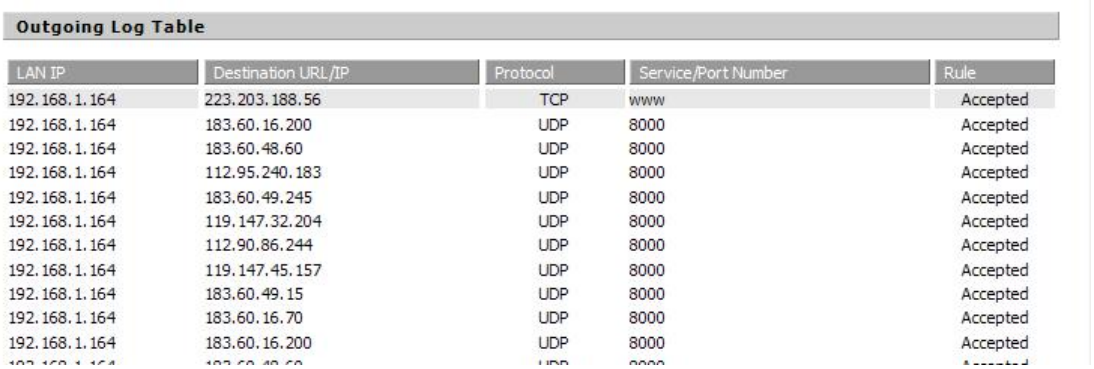
Log Level: Set this to the required log level. Set Log Level higher to log more actions.

Options: When select Enable, the corresponding connection will be recorded in the journal, the disabled are not recorded.

Incoming Log: To see a temporary log of the Router's most recent incoming traffic, click the Incoming Log button.

Outgoing Log: To see a temporary log of the Router's most recent outgoing traffic, click the Outgoing Log button.



Outgoing Log Table

LAN IP	Destination URL/IP	Protocol	Service/Port Number	Rule
192.168.1.164	223.203.188.56	TCP	www	Accepted
192.168.1.164	183.60.16.200	UDP	8000	Accepted
192.168.1.164	183.60.48.60	UDP	8000	Accepted
192.168.1.164	112.95.240.183	UDP	8000	Accepted
192.168.1.164	183.60.49.245	UDP	8000	Accepted
192.168.1.164	119.147.32.204	UDP	8000	Accepted
192.168.1.164	112.90.86.244	UDP	8000	Accepted
192.168.1.164	119.147.45.157	UDP	8000	Accepted
192.168.1.164	183.60.49.15	UDP	8000	Accepted
192.168.1.164	183.60.16.70	UDP	8000	Accepted
192.168.1.164	183.60.16.200	UDP	8000	Accepted

Click the **Save Settings** button to save your changes. Click the **Cancel Changes** button to cancel unsaved changes.

3.3.5 Access Restrictions

3.3.5.1 WAN Access

Use access restrictions, you can block or allow specific types of Internet applications. You

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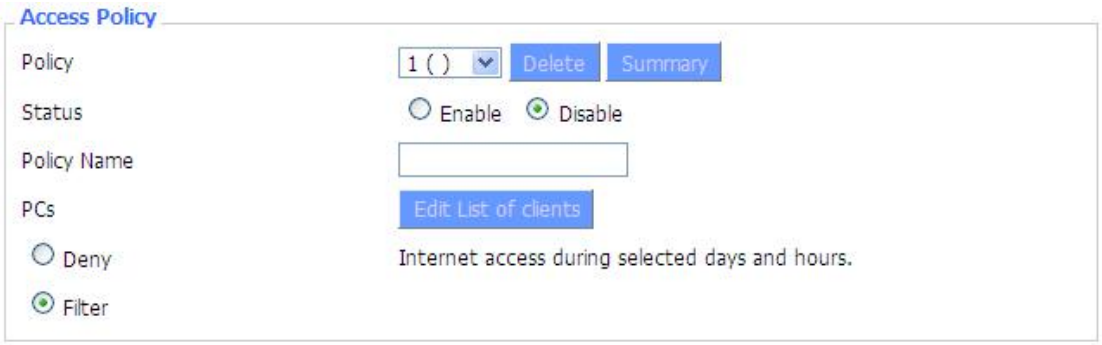
can set specific PC-based Internet access policies. This feature allows you to customize up to ten different Internet Access Policies for particular PCs, which are identified by their IP or MAC addresses.



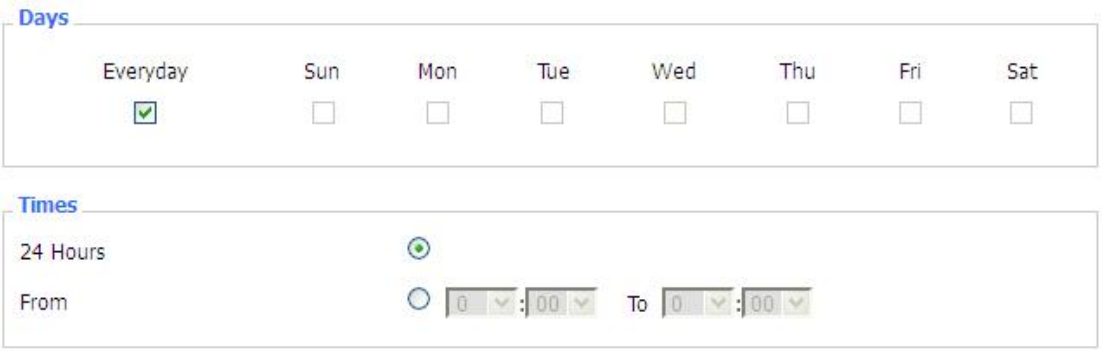
Two options in the default policy rules: "Filter" and "reject". If select "Deny", you will deny specific computers to access any Internet service at a particular time period. If you choose to "filter", It will block specific computers to access the specific sites at a specific time period. You can set up 10 Internet access policies filtering specific PCs access Internet services at a particular time period.

Access Policy: You may define up to 10 access policies. Click Delete to delete a policy or Summary to see a summary of the policy.

Status: Enable or disable a policy.

Policy Name: You may assign a name to your policy.

PCs: The part is used to edit client list, the strategy is only effective for the PC in the list.



Days: Choose the day of the week you would like your policy to be applied.

Times: Enter the time of the day you would like your policy to be applied.

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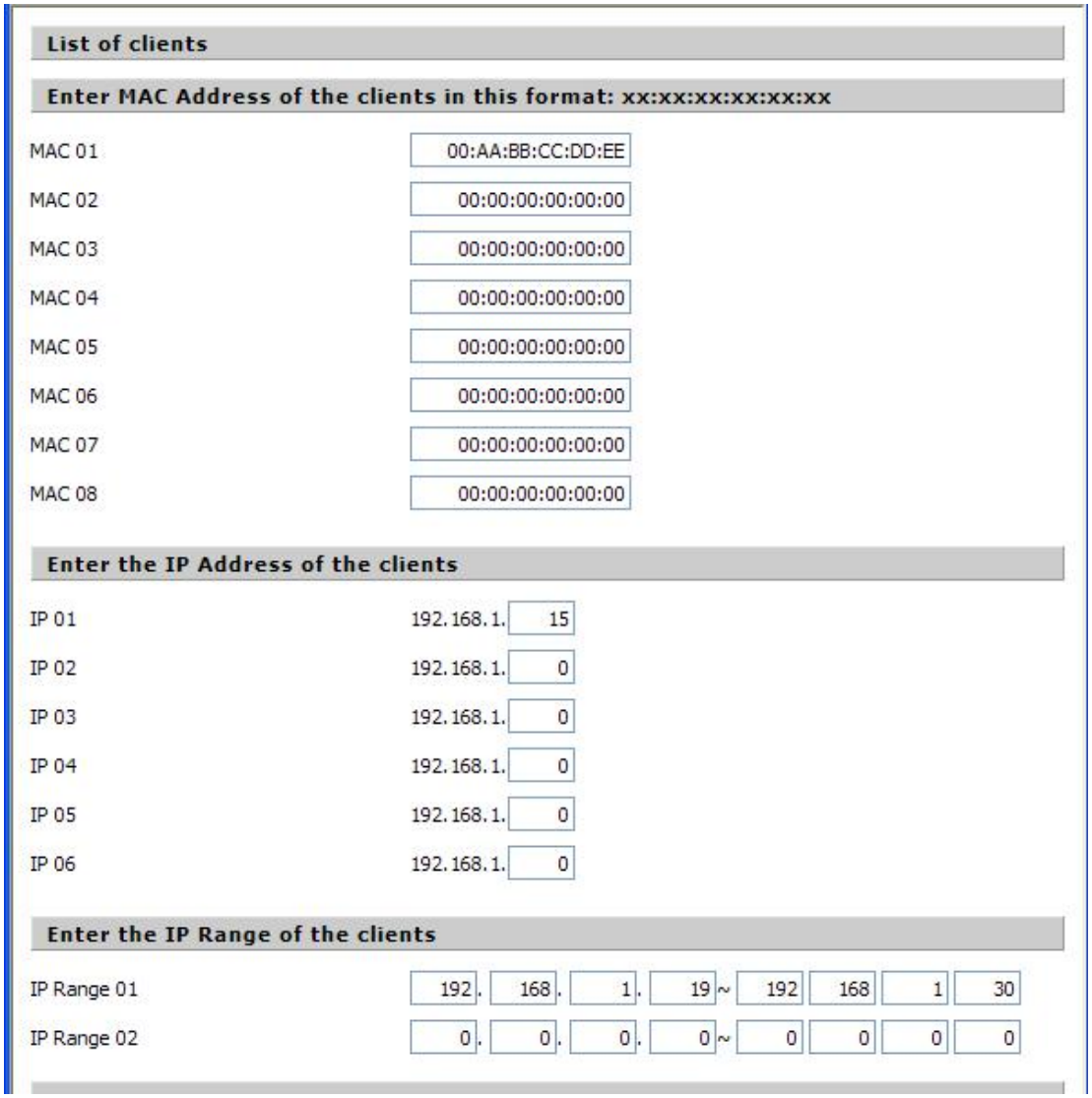
Website Blocking by URL Address: You can block access to certain websites by entering their URL.

Website Blocking by Keyword: You can block access to certain website by the keywords contained in their webpage



set up Internet access policy

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1. Select the policy number (1-10) in the drop-down menu.
2. For this policy is enabled, click the radio button next to "Enable"
3. Enter a name in the Policy Name field.
4. Click the Edit List of PCs button.
5. On the List of PCs screen, specify PCs by IP address or MAC address. Enter the appropriate IP addresses into the IP fields. If you have a range of IP addresses to filter, complete the appropriate IP Range fields. Enter the appropriate MAC addresses into the MAC fields.
6. Click the Apply button to save your changes. Click the Cancel button to cancel your unsaved changes. Click the Close button to return to the Filters screen.
7. If you want to block the listed PCs from Internet access during the designated days and time, then keep the default setting, Deny. If you want the listed PCs to have Internet filtered during the designated days and time, then click the radio button next to Filter.
8. Set the days when access will be filtered. Select Everyday or the appropriate days of the week.
9. Set the time when access will be filtered. Select 24 Hours, or check the box next to From and use the drop-down boxes to designate a specific time period.
10. Click the Add to Policy button to save your changes and active it.
11. To create or edit additional policies, repeat steps 1-9.
12. To delete an Internet Access Policy, select the policy number, and click the Delete button.

Note:

1） The default factory value of policy rules is "filtered". If the user chooses the default policy rules for "refuse", and editing strategies to save or directly to save the settings. If the strategy edited is the first, it will be automatically saved into the second, if not the first, keep the original number.

2） Turn off the power of the router or reboot the router can cause a temporary failure。After the failure of the router, if can not automatically synchronized NTP time server, you need to recalibrate to ensure the correct implementation of the relevant period control function.

3.3.5.2 URL Filter

If you want to prevent certain client access to specific network domain name, such as www.sina.com. We can achieved it through the function of URL filter.

URL filtering function

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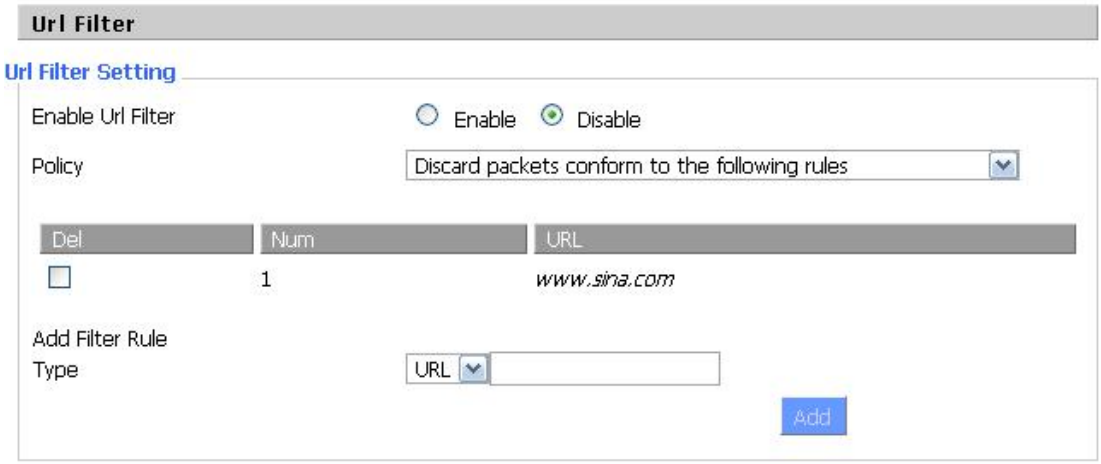


Discard packets conform to the following rules: only discard the matching URL address in the list .

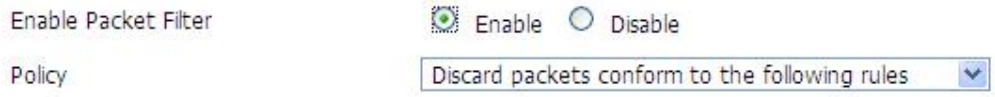
Accept only the data packets conform to the following rules: receive only with custom rules of network address, discarded all other URL address.

3.3.5.3 Packet Filter

To block some packets getting Internet access or block some Internet packets getting local network access, you can configure filter items to block these packets.

Packet Filter

Packet filter function is realized based on IP address or port of packets.



Enable Packet Filter: Enable or disable "packet filter" function

Policy: The filter rule's policy, you can choose the following options

Discard The Following--Discard packets conform to the following rules, Accept all other packets

Only Accept The Following-- Accept only the data packets conform to the following rules, Discard all other packets

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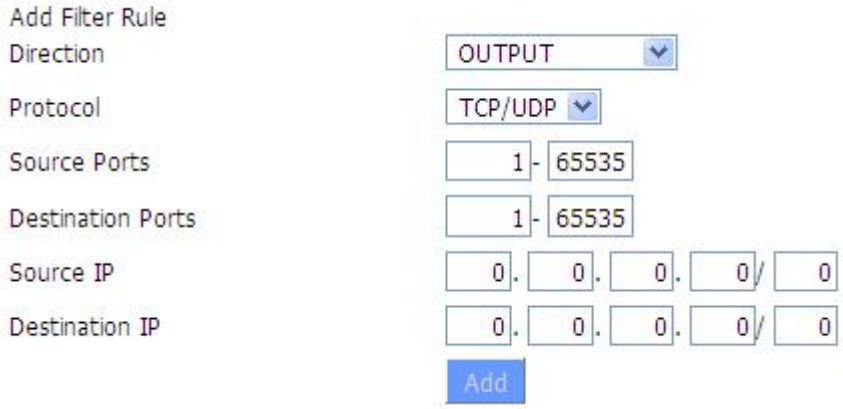

Direction

input: packet from WAN to LAN

output: packet from LAN to WAN

Protocol: packet protocol type
Source Ports: packet's source port
Destination Ports: packet's destination port
Source IP: packet's source IP address
Destination IP: packet's destination IP address

Note: "Source Port" ,"Destination Port" ,"Source IP" ,"Destination IP" could not be all empty ,you have to input at least one of these four parameters.

3.3.6 NAT

3.3.6.1 Port Forwarding

Port Forwarding allows you to set up public services on your network, such as web servers, ftp servers, e-mail servers, or other specialized Internet applications. Specialized Internet applications are any applications that use Internet access to perform functions such as videoconferencing or online gaming. When users send this type of request to your network via the Internet, the router will forward those requests to the appropriate PC. If you want to forward a whole range of ports, see Port Range Forwarding.

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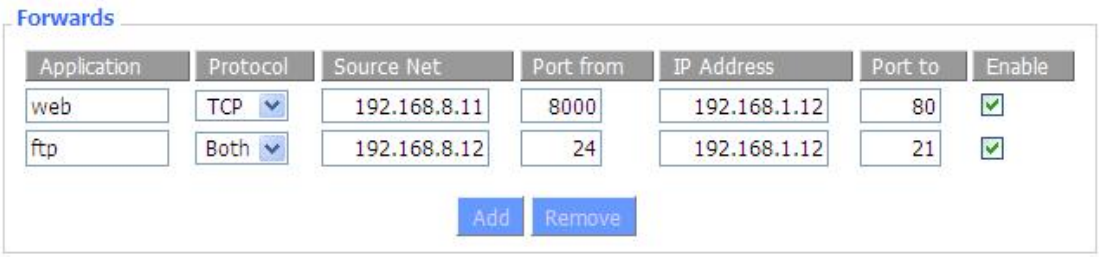

Application: Enter the name of the application in the field provided.
Protocol: Chose the right protocol TCP,UDP or Both. Set this to what the application requires.
Source Net: Forward only if sender matches this ip/net (example 192.168.4.0/24).
Port from: Enter the number of the external port (the port number seen by users on the Internet).
IP Address: Enter the IP Address of the PC running the application.
Port to: Enter the number of the internal port (the port number used by the application).
Enable: Click the Enable checkbox to enable port forwarding for the application.

Check all values and click **Save Settings** to save your settings. Click the **Cancel changes** button to cancel your unsaved changes.

3.3.6.2 Port Range Forward

Port Range Forwarding allows you to set up public services on your network, such as web servers, ftp servers, e-mail servers, or other specialized Internet applications. Specialized Internet applications are any applications that use Internet access to perform functions such as videoconferencing or online gaming. When users send this type of request to your network via the Internet, the router will forward those requests to the appropriate PC. If you only want to forward a single port, see Port Forwarding.

Application: Enter the name of the application in the field provided.
Start: Enter the number of the first port of the range you want to seen by users on the Internet and forwarded to your PC.
End: Enter the number of the last port of the range you want to seen by users on the Internet and forwarded to your PC.
Protocol: Chose the right protocol TCP,UDP or Both. Set this to what the application requires.
IP Address: Enter the IP Address of the PC running the application.
Enable: Click the Enable checkbox to enable port forwarding for the application.

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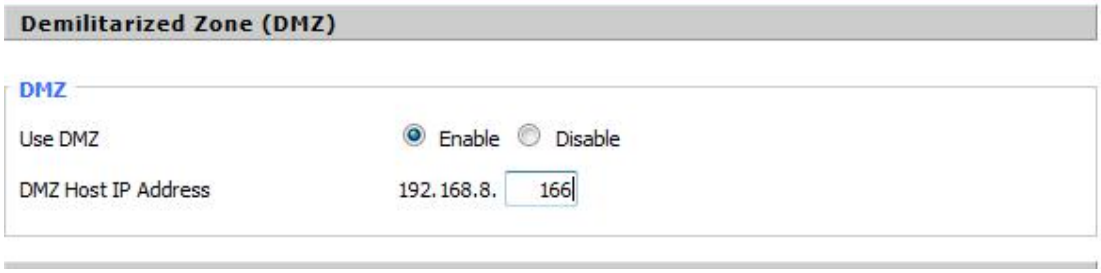
Check all values and click **Save Settings** to save your settings. Click the **Cancel changes** button to cancel your unsaved changes.

3.3.6.3 DMZ

The DMZ (DeMilitarized Zone) hosting feature allows one local user to be exposed to the Internet for use of a special-purpose service such as Internet gaming or videoconferencing. DMZ hosting forwards all the ports at the same time to one PC. The Port Forwarding feature is more secure because it only opens the ports you want to have opened, while DMZ hosting opens all the ports of one computer, exposing the computer so the Internet can see it.



Any PC whose port is being forwarded must should have a new static IP address assigned to it because its IP address may change when using the DHCP function.

DMZ Host IP Address: To expose one PC to the Internet, select Enable and enter the computer's IP address in the DMZ Host IP Address field. To disable the DMZ, keep the default setting：Disable

Check all values and click **Save Settings** to save your settings. Click the **Cancel changes** button to cancel your unsaved changes.

3.3.7 QoS Setting

3.3.7.1 Basic

QoS function can control the upload traffic and download traffic to balance the traffic, beside the block video is also a useful function.

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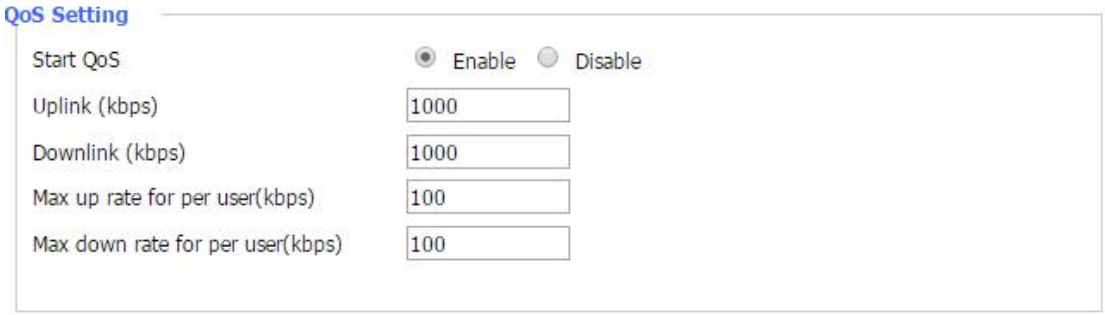

Uplink (kbps)： In order to use bandwidth management (QoS) you must enter bandwidth values for your uplink. These are generally 80% to 90% of your maximum bandwidth.
Downlink (kbps)：In order to use bandwidth management (QoS) you must enter bandwidth values for your downlink. These are generally 80% to 90% of your maximum bandwidth.

Enable Video Restrictions ： Restrict the video access that connected to the router, like the MP4,MKV,AVI format and other common video format

Enable Video and Flash Restriction：Besides the common Video Format restriction ,it can also restrict the Flash format video.

EMBED AD PAGE:
Enable or disable EMBED AD PAGE

3.3.8 Applications

3.3.8.1 Serial Applications

There is a console port on router. Normally, this port is used to debug the router. This port can also be used as a serial port. The router has embedded a serial to TCP program. The data sent to the serial port is encapsulated by TCP/IP protocol stack and then is sent to the destination server. This function can work as a DTU (Data Terminal Unit).

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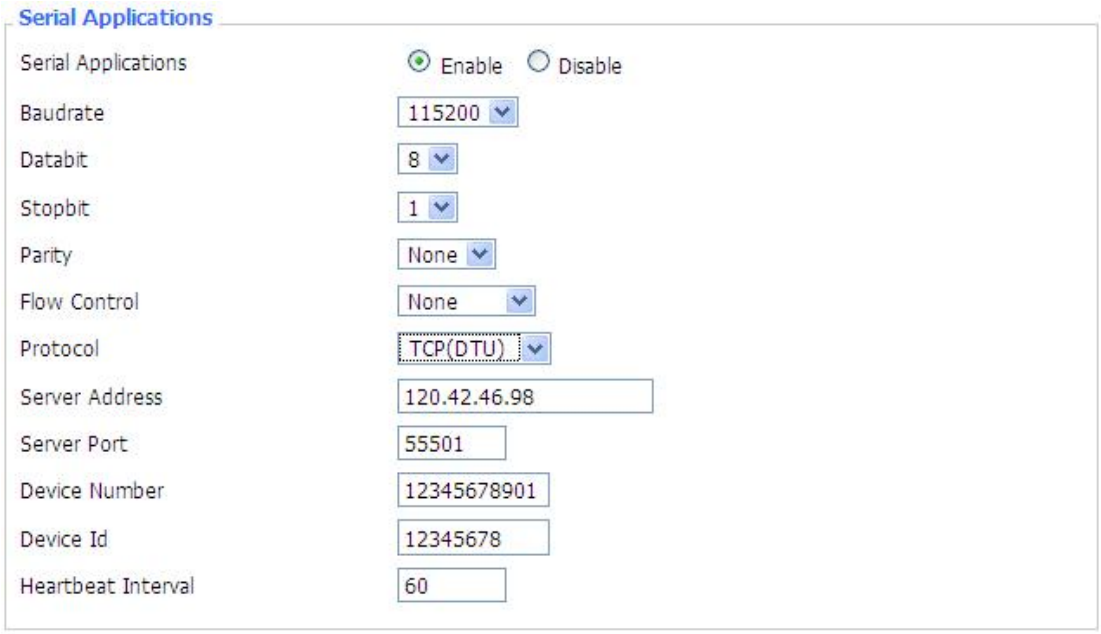

Baudrate: The serial port's baudrate

Databit: The serial port's databit

Parity: The serial port's parity

Stopbit: The serial port's stopbit

Flow Control: The serial port's flow control type.

Enable Serial TCP Function: Enable the serial to TCP function

Protocol Type: The protocol type to transmit data.

UDP(DTU) – Data transmit with UDP protocol , work as a DTU which has application protocol and hear beat mechanism.

Pure UDP – Data transmit with standard UDP protocol.

TCP(DTU) -- Data transmit with TCP protocol , work as a DTU which has application protocol and hear beat mechanism.

Pure TCP -- Data transmit with standard TCP protocol, router is the client.

TCP Server -- Data transmit with standard TCP protocol, router is the server.

TCST -- Data transmit with TCP protocol, Using a custom data

Server Address: The data service center's IP Address or domain name.

Server Port: The data service center's listening port.

Device ID: The router's identity ID.

Device Number: The router's phone number.

Heartbeat Interval: The time interval to send heart beat packet. This item is valid only when you choose UDP(DTU) or TCP(DTU) protocol type.

TCP Server Listen Port: This item is valid when Protocol Type is "TCP Server"

Custom Heartbeat Packet : This item is valid when Protocol Type is "TCST"

Custom Registration Packets: This item is valid when Protocol Type is "TCST"

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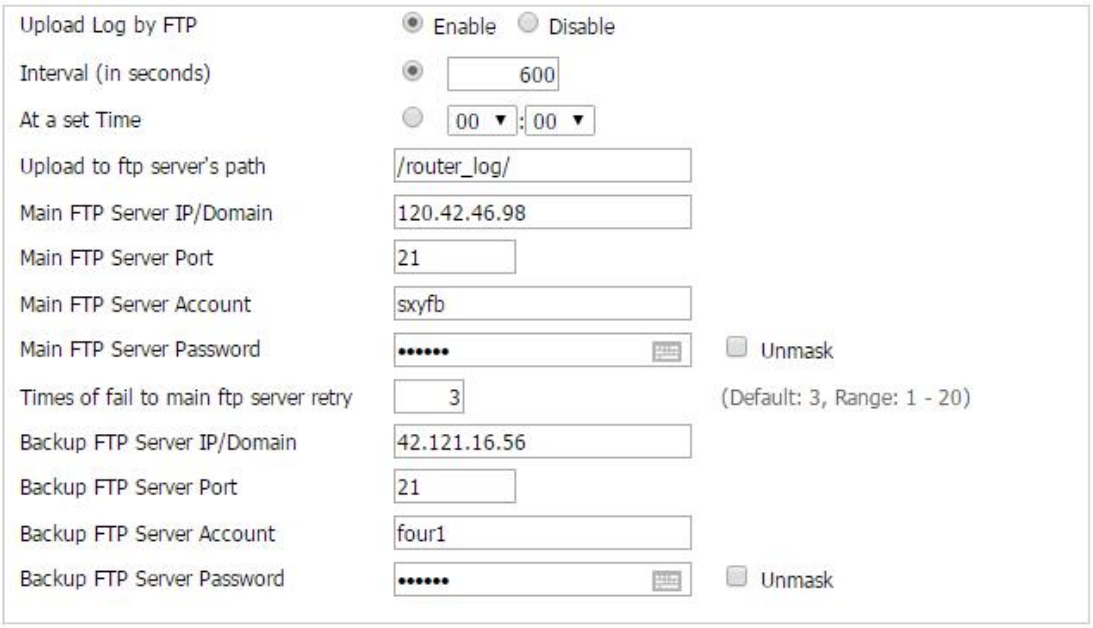
3.3.8.2 upload Log



Upload Log by FTP： Enable or disable upload function
Interval ： intelval of upload frequency
At a set Time： upload log at a set time
Upload to ftp server's path： The path of server
Main FTP Server IP/Domain： main ftp server's address
Main FTP Server Port： Main FTP Server listening Port
Main FTP Server Account： Main FTP Server Account
Main FTP Server Password: Main FTP Server Password
Times of fail to main ftp server retry:reconnect times
backup FTP Server IP/Domain： backup ftp server's address
backup FTP Server Port： backup FTP Server listening Port
backup FTP Server Account： backup FTP Server Account
backup FTP Server Password: backup FTP Server Password

3.3.9 Administration

3.3.9.1 Management

The Management screen allows you to change the router's settings. On this page you will find most of the configurable items of the router code.

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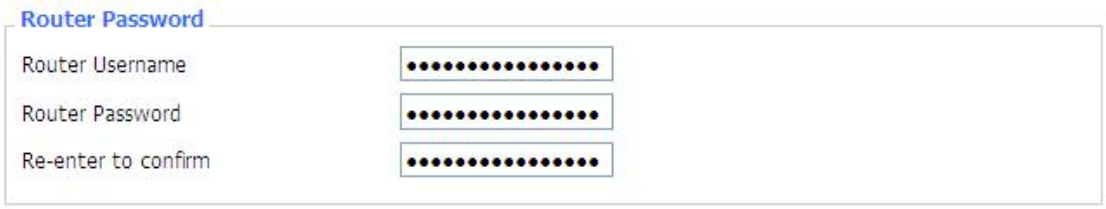


The new password must not exceed 32 characters in length and must not include any spaces. Enter the new password a second time to confirm it.

Note：

Default username is admin.

It is strongly recommended that you change the factory default password of the router, which is admin. All users who try to access the router's web-based utility or Setup Wizard will be prompted for the router's password.

Web Access

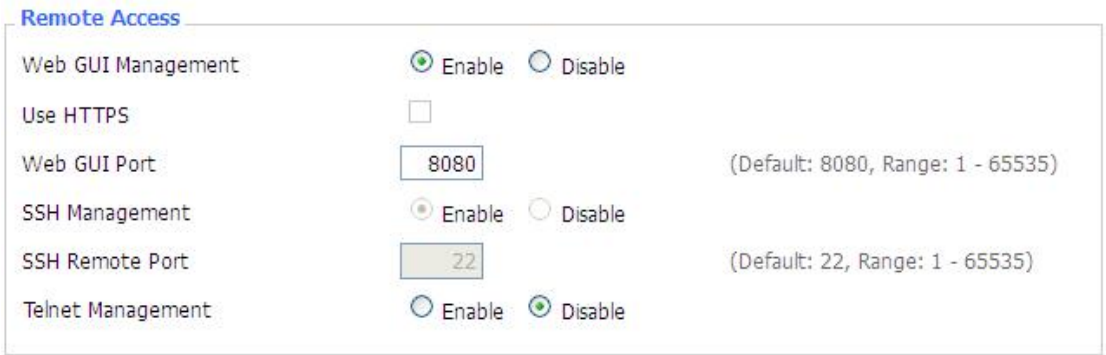
This feature allows you to manage the router using either HTTP protocol or the HTTPS protocol. If you choose to disable this feature, a manual reboot will be required.You can also activate or not the router information web page. It's now possible to password protect this page (same username and password than above).

Protocol： This feature allows you to manage the router using either HTTP protocol or the HTTPS protocol

Auto-Refresh： Adjusts the Web GUI automatic refresh interval. 0 disables this feature completely

Enable Info Site： Enable or disable the login system information page

Info Site Password Protection： Enable or disable the password protection feature of the system information page



Remote Access： This feature allows you to manage the router from a remote location, via the Internet. To disable this feature, keep the default setting, Disable. To enable this feature, select

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Enable, and use the specified port (default is 8080) on your PC to remotely manage the router. You must also change the router's default password to one of your own, if you haven't already.

To remotely manage the router, enter http://xxx.xxx.xxx.xxx:8080 (the x's represent the router's Internet IP address, and 8080 represents the specified port) in your web browser's address field. You will be asked for the router's password.

If you use https you need to specify the url as https://xxx.xxx.xxx.xxx:8080 (not all firmwares does support this without rebuilding with SSL support).

SSH Management： You can also enable SSH to remotely access the router by Secure Shell. Note that SSH daemon needs to be enable in Services page.

Note：

If the Remote Router Access feature is enabled, anyone who knows the router's Internet IP address and password will be able to alter the router's settings.

Telnet Management： Enable or disable remote Telnet function

Cron： The cron subsystem schedules execution of Linux commands. You'll need to use the command line or startup scripts to actually use this.

Language： Set up the router page shows the type of language, including simplified Chinese and English.

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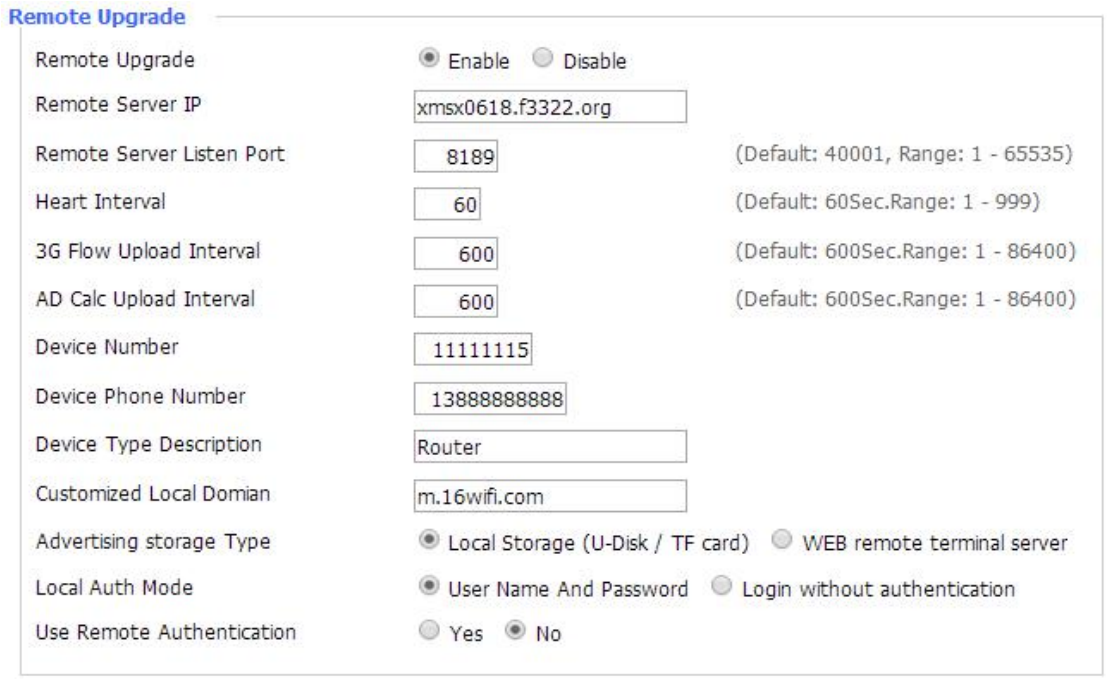
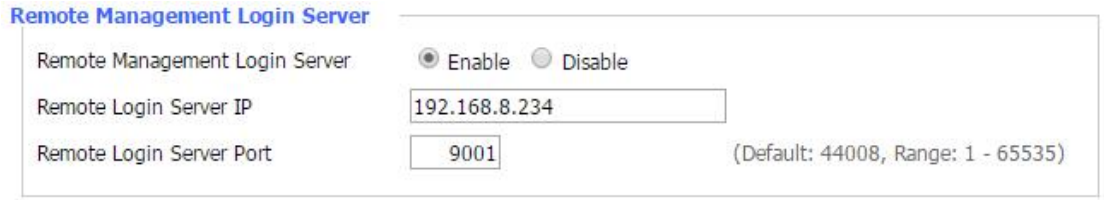


Remote Upgrade: custom-developed remote management server for this station router monitoring and management, configuration parameters, WIFI advertising updates.



Remote Management Login Server: In the case of more than one servers,the remote management login server is a general server.Connect the router to this login server, the login server will assign an available server IP and port for the router to connect for remote management.

Firmware Upgrade: custom-developed remote server for this station router upgrading firmware.

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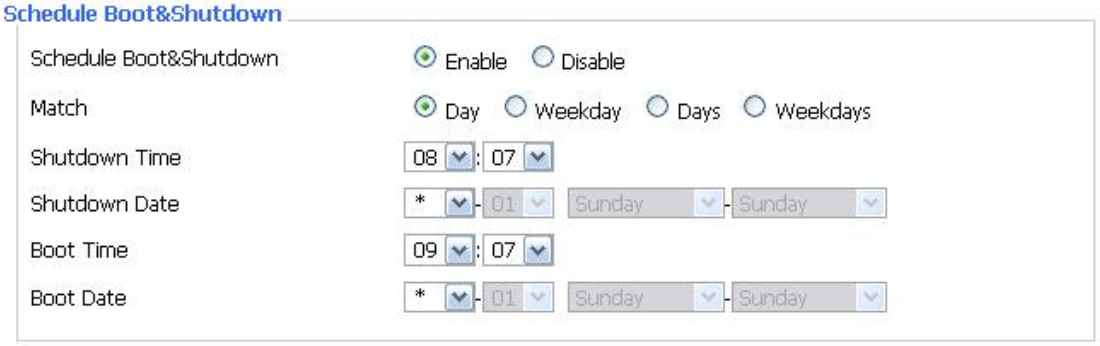
User Internet Records Reported: the router clients' webpages record submitted to the remote server center.

3.3.9.2 Keep Alive

Schedule Boot&Shutdown

The user can set the startup or shutdown time:

For example,the user want to set the start time at 8:07 and boot time at 9:07.



Schedule Reboot

You can schedule regular reboots for the router :

Regularly after xxx seconds.

At a specific date time each week or everyday.

Note:

For date based reboots Cron must be activated. See Management for Cron activation.

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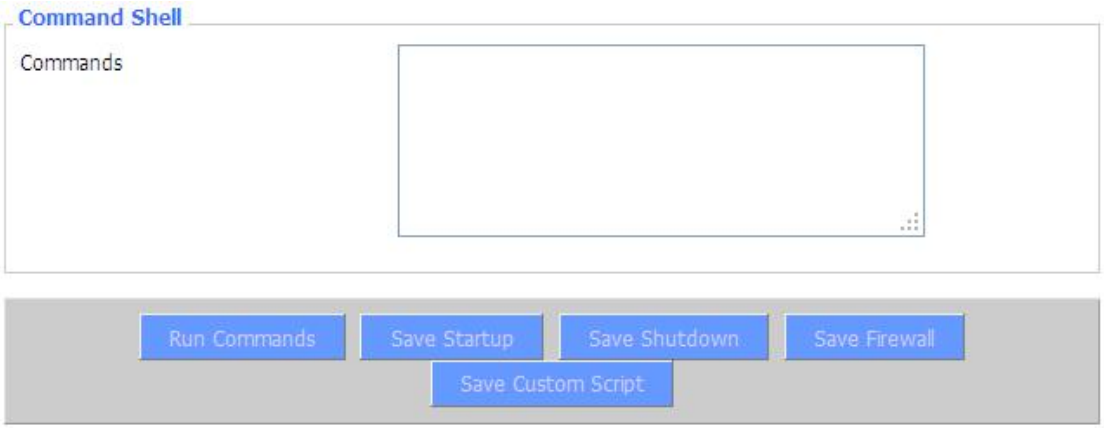
3.3.9.3 Commands

Commands： You are able to run command lines directly via the Webinterface.



Run Command： You can run command lines via the web interface. Fill the text area with your command and click Run Commands to submit.

Startup： You can save some command lines to be executed at startup's router. Fill the text area with commands (only one command by row) and click Save Startup.

Shutdown： You can save some command lines to be executed at shutdown's router. Fill the text area with commands (only one command by row) and click Save Shutdown.

Firewall： Each time the firewall is started, it can run some custom iptables instructions. Fill the text area with firewall's instructions (only one command by row) and click Save Firewall.

Custom Script： Custom script is stored in /tmp/custom.sh file. You can run it manually or use cron to call it. Fill the text area with script's instructions (only one command by row) and click Save Custom Script.

3.3.9.4 Factory Defaults

Reset router settings： Click the Yes button to reset all configuration settings to their default values. Then click the Apply Settings button.

Note：

Any settings you have saved will be lost when the default settings are restored. After restoring the router is accessible under the default IP address 192.168.4.1 and the default password admin.

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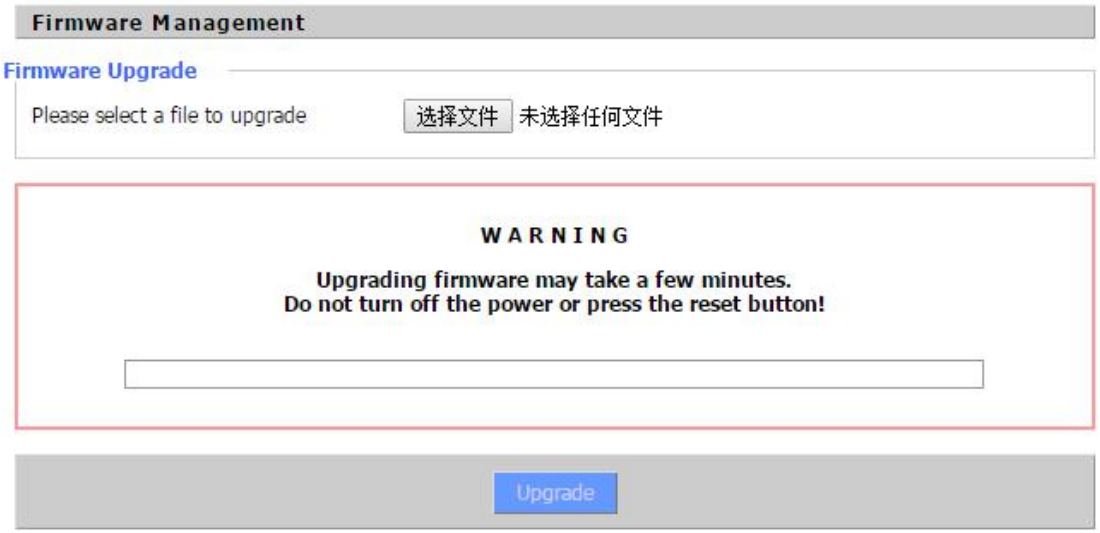
3.3.9.5 Firmware Upgrade



Firmware Upgrade： New firmware versions are posted at www..com and can be downloaded. If the Router is not experiencing difficulties, then there is no need to download a more recent firmware version, unless that version has a new feature that you want to use.

Note：

When you upgrade the Router's firmware, you lose its configuration settings, so make sure you write down the Router settings before you upgrade its firmware.

To upgrade the Router's firmware:

1. Download the firmware upgrade file from the website.
2. Click the Browse... button and chose the firmware upgrade file.
3. Click the Upgrade button and wait until the upgrade is finished.

Note：

Upgrading firmware may take a few minutes.

Do not turn off the power or press the Upgrade button!

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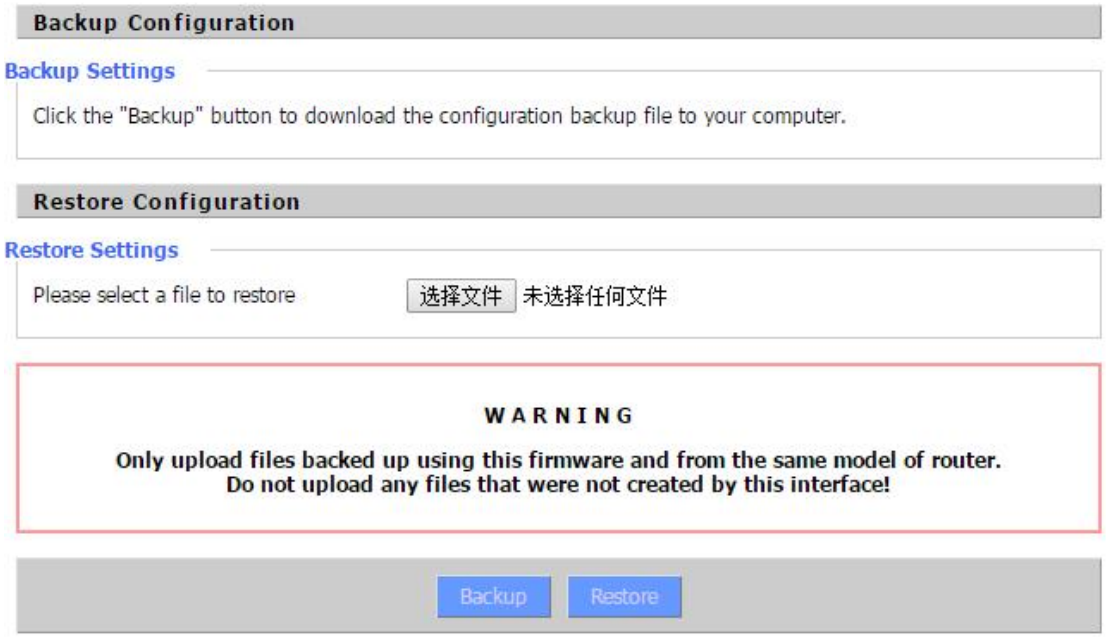
3.3.9.6 Backup



Backup Settings： You may backup your current configuration in case you need to reset the router back to its factory default settings.Click the Backup button to backup your current configuration.

Restore Settings： Click the Browse... button to browse for a configuration file that is currently saved on your PC.Click the Restore button to overwrite all current configurations with the ones in the configuration file.

Note：

Only restore configurations with files backed up using the same firmware and the same model of router.

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3.3.10 Status

3.3.10.1 Router

Router Name: name of the router, setting→basic setting to modify
Router Model: model of the router, unavailable to modify
Firmware Version: software version information
MAC Address: MAC address of WAN, setting→Clone MAC Address to modify
Host Name: host name of the router, setting→basic setting to modify
WAN Domain Name: domain name of WAN, setting→basic setting to modify
LAN Domain Name: domain name of LAN, unavailable to modify
Current Time: local time of the system
Uptime: operating uptime as long as the system is powered on

Total Available: the room for total available of RAM (that is physical memory minus some reserve and the kernel of binary code bytes)

Free: free memory, the router will reboot if the memory is less than 500kB

Used: used memory, total available memory minus free memory

Buffers: used memory for buffers,

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Cached: the memory used by high-speed cache memory

Active: active use of buffer or cache memory page file size

Inactive: not often used in a buffer or cache memory page file size

IP Filter Maximum Ports: preset is 4096, available to re-management

Active IP Connections: real time monitor active IP connections of the system, click to see the table as blow:

Active IP Connections 53

No.	Protocol	Timeout (s)	Source Address	Remote Address	Service Name	State
1	TCP	60	192.168.1.120	192.168.1.1	80	TIME_WAIT
2	TCP	30	192.168.1.120	192.168.1.1	80	TIME_WAIT
3	TCP	65	192.168.1.120	192.168.1.1	80	TIME_WAIT
4	TCP	96	192.168.1.120	192.168.1.1	80	TIME_WAIT
5	TCP	99	192.168.1.120	192.168.1.1	80	TIME_WAIT
6	TCP	70	192.168.1.120	192.168.1.1	80	TIME_WAIT
7	TCP	74	192.168.1.120	192.168.1.1	80	TIME_WAIT
8	TCP	115	192.168.1.120	192.168.1.1	80	TIME_WAIT
9	TCP	84	192.168.1.120	192.168.1.1	80	TIME_WAIT
10	TCP	3599	192.168.1.120	192.168.1.1	80	ESTABLISHED
11	TCP	3599	192.168.1.120	192.168.1.1	80	ESTABLISHED
12	TCP	108	192.168.1.120	192.168.1.1	80	TIME_WAIT
13	TCP	3600	192.168.1.120	192.168.1.1	80	ESTABLISHED
14	TCP	93	192.168.1.120	192.168.1.1	80	TIME_WAIT
15	TCP	102	192.168.1.120	192.168.1.1	80	TIME_WAIT
16	TCP	74	192.168.1.120	192.168.1.1	80	TIME_WAIT
17	TCP	3599	192.168.1.120	192.168.1.1	80	ESTABLISHED
18	TCP	15	192.168.1.120	192.168.1.1	80	TIME_WAIT
19	TCP	25	192.168.1.120	192.168.1.1	80	TIME_WAIT
20	TCP	90	192.168.1.120	192.168.1.1	80	TIME_WAIT
21	UDP	26	192.168.8.119	255.255.255.255	1947	UNREPLIED
22	TCP	77	192.168.1.120	192.168.1.1	80	TIME_WAIT
23	TCP	35	192.168.1.120	192.168.1.1	80	TIME_WAIT
24	TCP	74	192.168.1.120	192.168.1.1	80	TIME_WAIT
25	TCP	40	192.168.1.120	192.168.1.1	80	TIME_WAIT
26	TCP	3599	192.168.1.120	192.168.1.1	80	ESTABLISHED
27	TCP	74	192.168.1.120	192.168.1.1	80	TIME_WAIT
28	TCP	74	192.168.1.120	192.168.1.1	80	TIME_WAIT
29	TCP	4	192.168.1.120	192.168.1.1	80	TIME_WAIT
30	UDP	31	192.168.8.160	224.0.0.1	9166	UNREPLIED

Active IP Connections: total active IP connections

Protocol: connection protocol

Timeouts: connection timeouts, unit is second

Source Address: source IP address

Remote Address: remote IP address

Service Name: connecting service port

Status: displayed status

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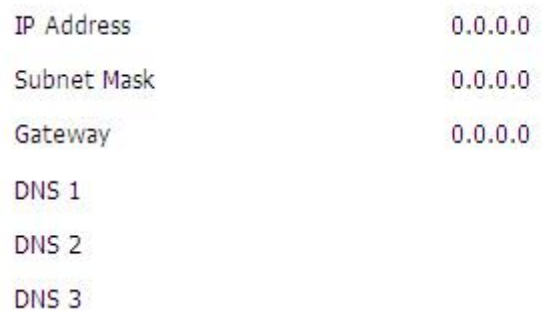
3.3.10.2 WAN

Connection Type: disabled, static IP, automatic configuration-DHCP, PPPOE, PPTP, L2TP, 3G/UMTS

Connection Uptime: connecting uptime; If disconnect, display Not available



IP Address: IP address of router WAN

Subnet Mask: subnet mask of router WAN

Gateway: the gateway of router WAN

DNS1, DNS2, DNS3: DNS1/DNS2/DNS3 of router WAN

Remaining Lease Time: remaining lease time of IP address in DHCP way

DHCP Release: release DHCP address

DHCP Renew: renew IP address in DHCP way, default is 1 day

Login Status: connection status of WAN

Disconnection: disconnect

Connection: connect

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Total Flow: flow from power-off last time until now statistics, download and upload direction
Monthly Flow: the flow of a month, unit is MB
Last Month: the flow of last month
Next Month: the flow of next month

Backup: backup data administration
Restore: restore data administration
Delete: delete data administration

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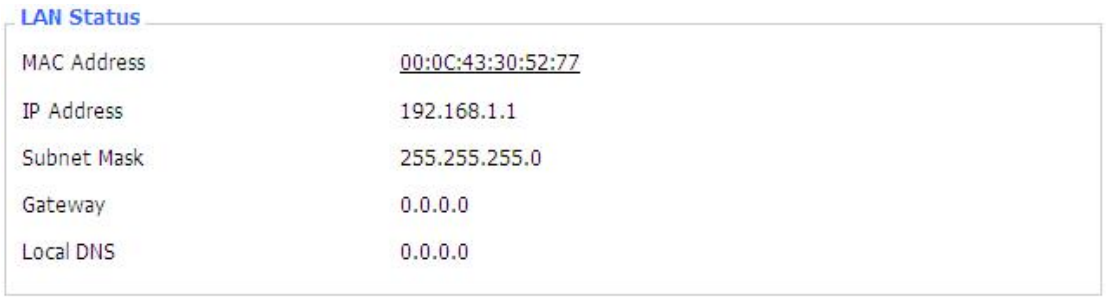
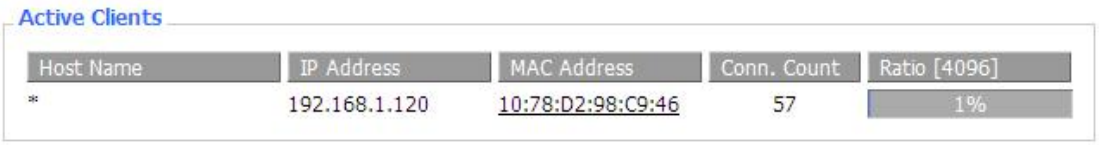
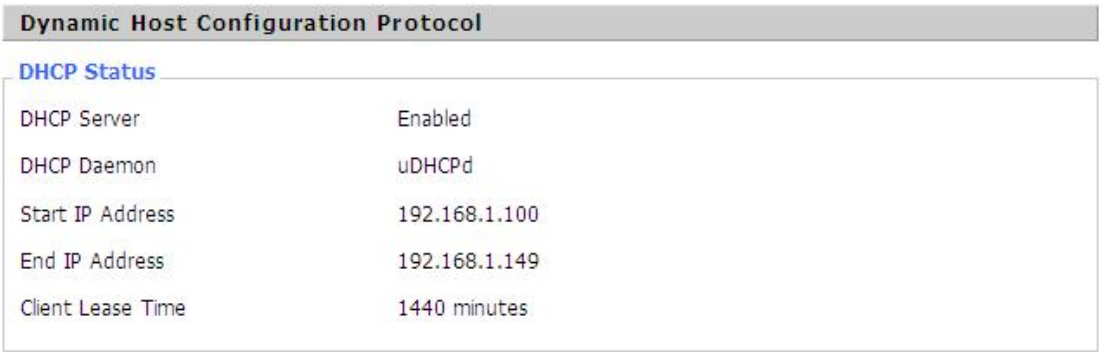
3.3.10.3 LAN



MAC Address: MAC Address of the LAN port ethernet
IP Address: IP Address of the LAN port
Subnet Mask: Subnet Mask of the LAN port
Gateway: Gateway of the LAN port
Local DNS: DNS of the LAN port



Host Name: host name of LAN client
IP Address: IP address of the client
MAC Address: MAC address of the client
Conn. Count: connection count caused by the client
Ratio: the ratio of 4096 connection



DNCP Server: enable or disable the router work as a DHCP server
DHCP Daemon: the agreement allocated using DHCP including DNSMasq and uDHCPd
Starting IP Address: the starting IP Address of the DHCP server's Address pool
Ending IP Address: the ending IP Address of the DHCP server's Address pool
Client Lease Time: the lease time of DHCP client

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DHCP Clients

Host Name	IP Address	MAC Address	Client Lease Time	Delete
PC-201011161332	192.168.1.142	00:21:5C:33:4D:29	1 day 00:00:00	
jack-lincw	192.168.1.117	44:37:E6:3F:45:54	1 day 00:00:00	
*	192.168.1.149	00:0C:E7:00:00:00	1 day 00:00:00	

Host Name: host name of LAN client
IP Address: IP address of the client
MAC Address: MAC address of the client
Expires: the expiry the client rents the IP address
Delete: click to delete DHCP client

Connected PPPOE Clients

Interface	User Name	Local IP	Delete
ppp0	hometest	192.168.10.10	

Interface: the interface assigned by dial-up system
User Name: user name of PPPoE client
Local IP: IP address assigned by PPPoE client
Delete: click to delete PPPoE client

Connected L2TP Server

Interface	Local IP	Remote IP	Delete
ppp0	172.168.8.2	172.168.8.1	

Interface: the interface assigned by dial-up system
Local IP: tunnel IP address of local L2TP
Remote IP: tunnel IP address of L2TP server
Delete: click to disconnect L2TP

Connected L2TP Clients

Interface	User Name	Local IP	Remote IP	Delete
ppp1	hometest	192.168.50.2	120.42.46.98	

Interface: the interface assigned by dial-up system
User Name: user name of the client
Local IP: tunnel IP address of L2TP client
Remote IP: IP address of L2TP client
Delete: click to delete L2TP client

Connected PPTP Server

Interface	Local IP	Remote IP	Delete
ppp0	172.168.8.2	172.168.8.1	

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Interface: the interface assigned by dial-up system
Local IP: tunnel IP address of local PPTP
Remote IP: tunnel IP address of PPTP server
Delete: click to disconnect PPTP

Connected PPTP Clients

Interface	User Name	Local IP	Remote IP	Delete
ppp1	hometest	192.168.5.1	120.42.46.98	

Interface: the interface assigned by dial-up system
User Name: user name of the client
Local IP: tunnel IP address of PPTP client
Remote IP: IP address of PPTP client
Delete: click to delete PPTP client

3.3.10.4 Wireless

Wireless Status

MAC Address	00:0C:43:30:52:79
Radio	Radio is On
Mode	AP
Network	Mixed
SSID	four-faith
Channel	6 (2437 MHz)
TX Power	71 mW
Rate	72 Mb/s
Encryption - Interface wl0	Disabled
PPTP Status	Disconnected

MAC Address: MAC address of wireless client
Radio: display whether radio is on or not
Mode: wireless mode
Network: wireless network mode
SSID: wireless network name
Channel: wireless network channel
TX Power: reflection power of wireless network
Rate: reflection rate of wireless network
Encryption-Interface wl0: enable or diasbal Encryption-Interface wl0
PPTP Status: show wireless pptp status

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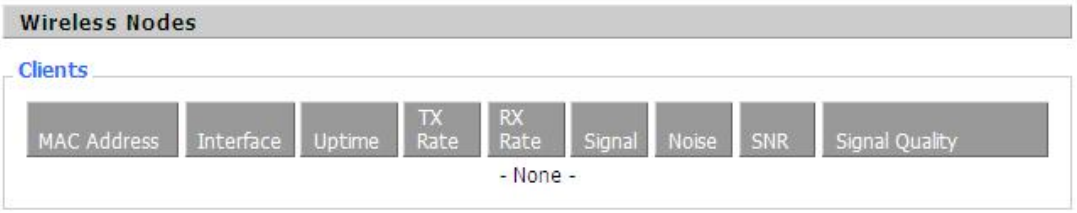
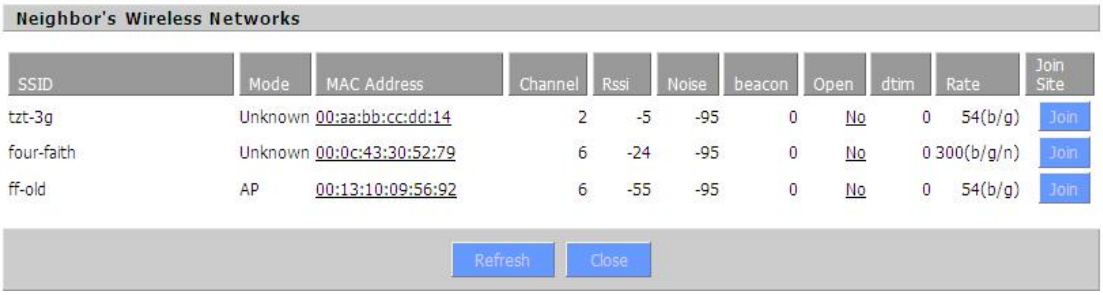
Received (RX): received data packet
Transmitted (TX): transmitted data packet



MAC Address: MAC address of wireless client
Interface: interface of wireless client
Uptime: connecting uptime of wireless client
TX Rate: transmit rate of wireless client
RX Rate: receive rate of wireless client
Signal: the signal of wireless client
Noise: the noise of wireless client
SNR: the signal to noise ratio of wireless client
Signal Quality: signal quality of wireless client



Neighbor's Wireless Network: display other networks nearby
SSID: the name of wireless network nearby
Mode: operating mode of wireless network nearby
MAC Address: MAC address of the wireless nearby
Channel: the channel of the wireless nearby
Rssi: signal intensity of the wireless nearby
Noise: the noise of the wireless nearby
Beacon: signal beacon of the wireless nearby
Open: the wireless nearby is open or not
Dtim: delivery traffic indication message of the wireless nearby
Rate: speed rate of the wireless nearby
Join Site: click to join wireless network nearby

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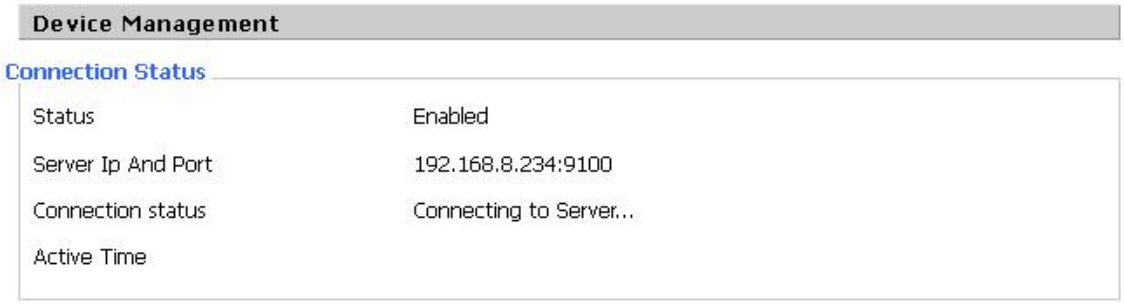
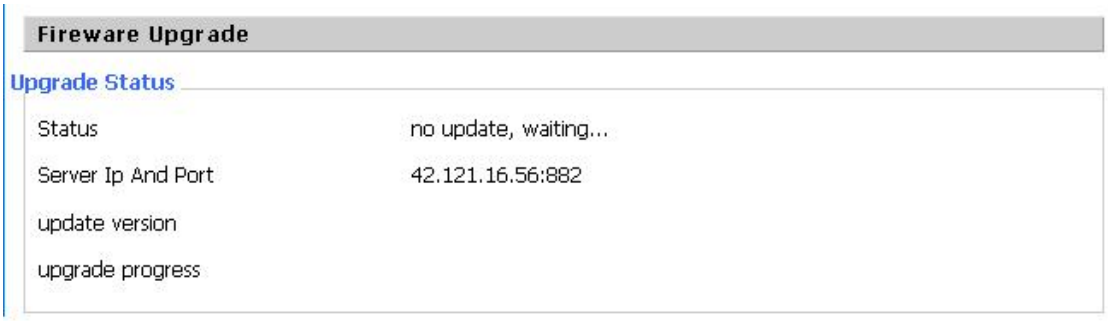
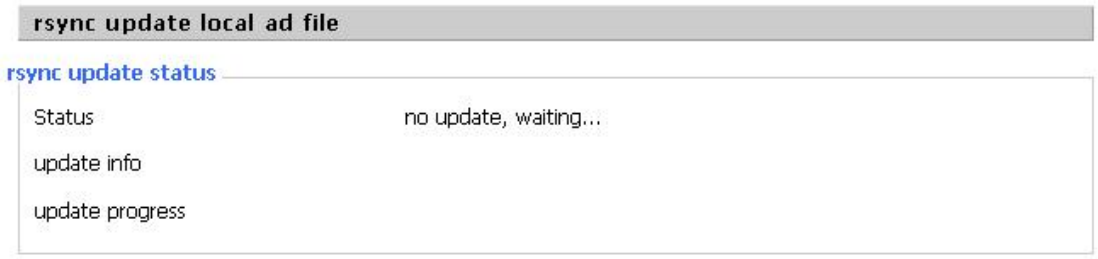
3.3.10.5 Device Management



Connection Status:display the connection status with the management platform.
Status:if the device management function is opened or not.
Server Ip And Port:the ip address and port of the management server.
Connection status:show if the device is connected to the server.
Active Time:show the during time that connected to server.



Upgrade Status: show the status of the firmware upgrade.
Status:show if the new firmware is in update.
Server Ip And Port:show the firmware upgrade server's ip and port.
update version:show the version in upgrading.
upgrade progress:show the progress of the upgrading firmware.



rsync update status:show the status of the rsync update
Status:show if the rsync is updating.
Update info:show the info of the update status.

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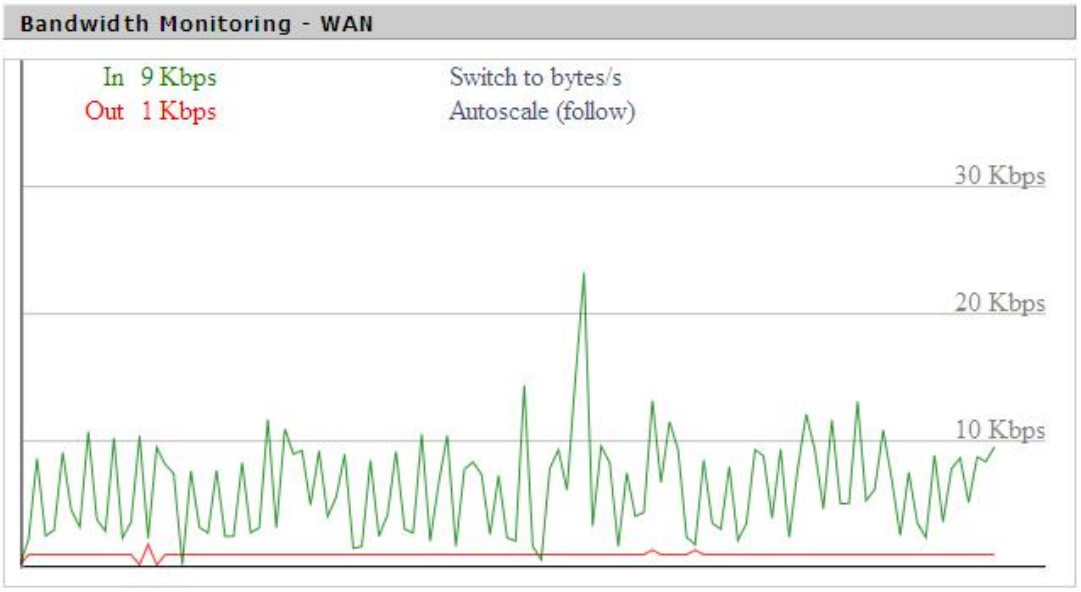
Update progress:show the progress of the rsync update.

3.3.10.6 Bandwidth

Bandwidth Monitoring-LAN Graph
abscissa axis: time
vertical axis: speed rate



Bandwidth Monitoring-WAN Graph
abscissa axis: time

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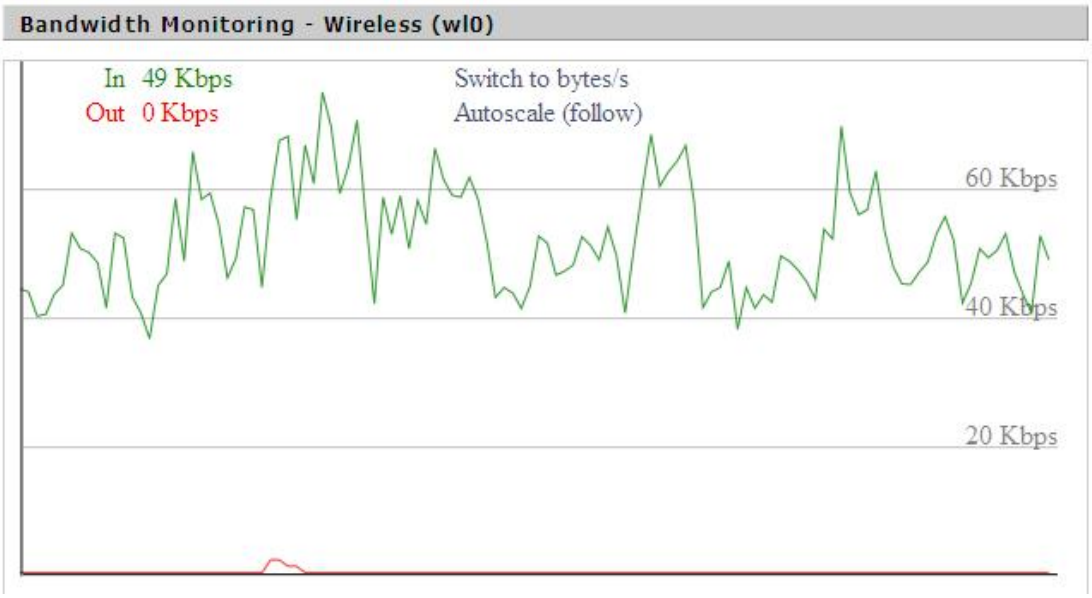
vertical axis: speed rate



Bandwidth Monitoring-Wireless (W10) Graph

abscissa axis: time

vertical axis: speed rate

3.3.10.7 Sys-Info

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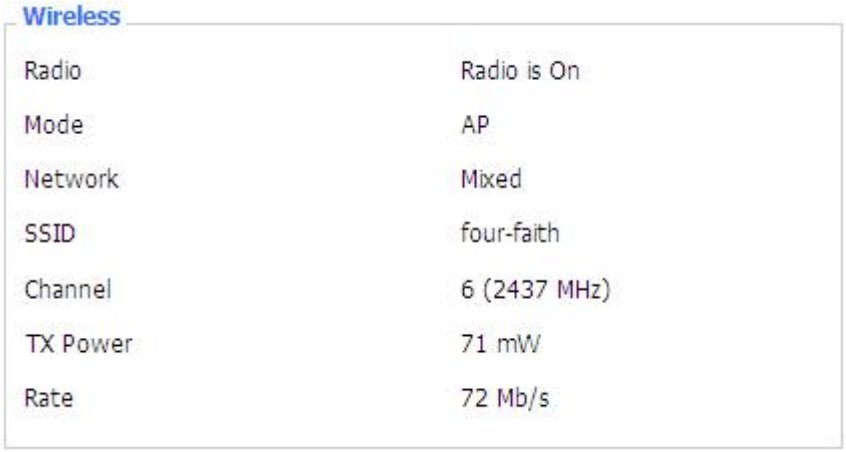
Router Name: the name of the router
Router Model: the model of the router
LAN MAC: MAC address of LAN port
WAN MAC: MAC address of WAN port
Wireless MAC: MAC address of the wireless
WAN IP: IP address of WAN port
LAN IP: IP address of LAN port



Radio: display whether radio is on or not
Mode: wireless mode
Network: wireless network mode
SSID: wireless network name
Channel: wireless network channel
TX Power: reflection power of wireless network
Rate: reflection rate of wireless network

Received (RX): received data packet
Transmitted (TX): transmitted data packet

MAC Address: MAC address of wireless client
Interface: interface of wireless client
Uptime: connecting uptime of wireless client
TX Rate: transmit rate of wireless client
RX Rate: receive rate of wireless client

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Signal: the signal of wireless client
Noise: the noise of wireless client
SNR: the signal to noise ratio of wireless client
Signal Quality: signal quality of wireless client

DHCP Server: enabled or disabled
ff-radauth: enabled or disabled
USB Support: enabled or disabled

Total Available: the room for total available of RAM (that is physical memory minus some reserve and the kernel of binary code bytes)

Free: free memory, the router will reboot if the memory is less than 500kB

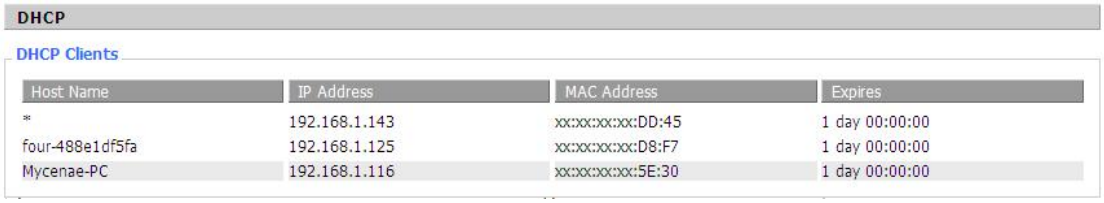
Used: used memory, total available memory minus free memory

Buffers: used memory for buffers, total available memory minus allocated memory

Cached: the memory used by high-speed cache memory

Active: Active use of buffer or cache memory page file size

Inactive: Not often used in a buffer or cache memory page file size



Host Name: host name of LAN client
IP Address: IP address of the client

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MAC Address: MAC address of he client

Expires: the expiry the client rents the IP address

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Appendix

The following steps describe how to setup Windows XP Hyper Terminal.

1. Press “Start”→”Programs”→”Accessories”→”Communications”→”Hyper Terminal”

2. Input connection name, choose “OK”

3. Choose the correct COM port which connects to modem, choose “OK”

4. Configure the serial port parameters as following, choose “OK”

Bits per second: 115200

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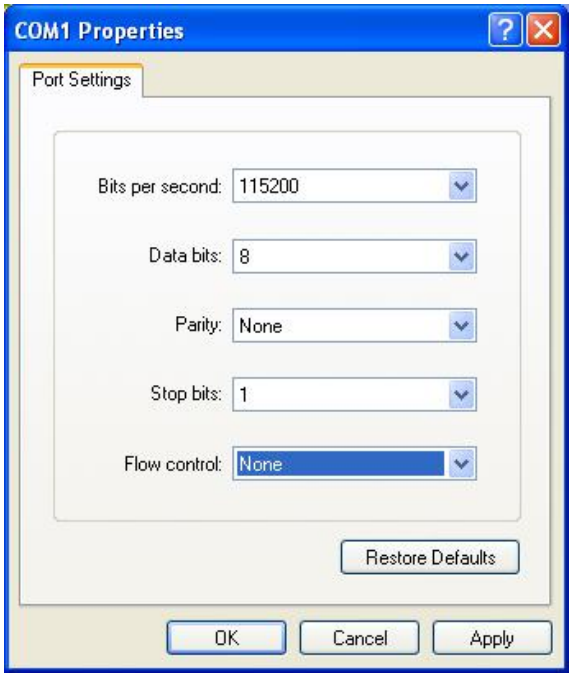
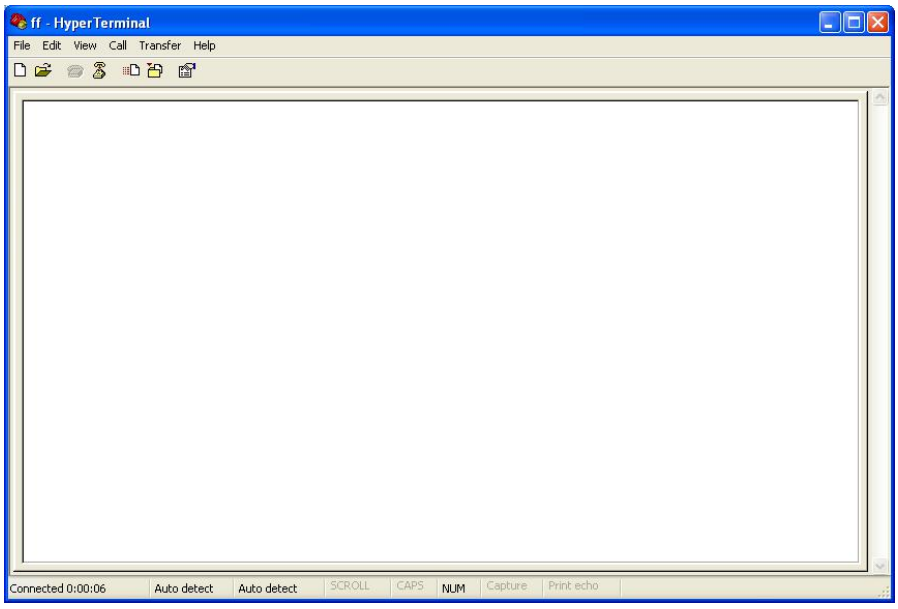
Data bits: 8
Parity: None
Stop bits: 1
Flow control: None



5. Complete Hyper Terminal operation, It runs as following



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