802.11g 54M WLAN

Internet Broadband Router

User Manual



#4829610ASGZ1

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1. Introduction

This 802.11g 54M Wireless LAN Broadband Router is an ideal solution for wireless/wired Internet surfing and office resources sharing. It provides the fast, robust and flexible features with high transmission rate up to 54Mbps bandwidth in the 2.4GHz frequency. Not only connect with 802.11g devices, it is backward compatible with 802.11b products and can be worked under .11b and .11g mixed environments. It employs WEP encryption to ensure a more secure wireless connection. With web-based configure interface, users can easily build up wire or wireless connection within minutes.

Besides, with firewall function, the Wireless LAN Broadband Router can always protect your LAN from outsider's break-ins and yet expose your local servers such as Web Server, E-mail Server, FTP server, for remote access by Virtual Server or DMZ setting.

1.1 Features

Wireless – Built in with IEEE 802.11g 54Mbps Access Point

- Complies with 2.4GHz 802.11g Standard
- · Backward compatible with 802.11b products
- · Up to 54Mbps data rate, auto fallback under noisy environment
- Support 802.1x Authentication feature and 64/128-bits WEP Encryption

Router – Built in with 4 Port 10/100M Internet Broadband Router

- 1 port 10/100M WAN and 4 ports 10/100M switch LAN (RJ-45) interface
- · Quick Setup Wizard enable user to setup internet connection within 3 steps
- · Advanced Access control based on URL, IP, Service Port and MAC address
- · ALG function for on-line gaming, MSN, conference and P2P software
- · Configurable through User-friendly web base management interface
- (Optional) With reverse SMA Antenna connector increase flexibility
- · Intruder event log by packet inspection features
- DMZ and Virtual Server Mapping support
- UPnP function Supported

1.2 Specification

Model: 802.11g 4-Port Wireless LAN Broadband Router

Radio: Complies with IEEE 802.11b/g

Frequency Band: 2.412-2.462GHz (U.S.)

2.412-2.484GHz (Japan)

2.412-2.472GHz (ETSI)

Modulation TYPE: BPSK, QPSK, CCK, 16-QAM, 64-QAM

Operating Channels: 11 channels (US) 13 channels (ETSI) 14 channels (Japan)

Data Rate: 1 / 2 / 5.5 / 6/9/11/12/24/36/48/54Mbps

Output Power: 18dBm@11Mbps; 14dBm@54Mbps

Receive sensitivity: Min.80dBm for 11Mbps (@BER 8%)

Min. -70dBm for 54 Mbps (@BER 10%)

Current Consumption: 3.3V, TX mode 400 mA (Max.)

RX mode 250 mA (Max.)

Media	100BASE-TX: UTP/STP Cat. 5
No. Of Port	WAN: 1x 10/100M RJ-45 port, LAN: 4 x 10/100M RJ-45 ports
	Reset: 1 x Reset Button , USB :1xPrinter Server
Auto MDI/MDIX	Yes
PPPoE/PPTP Client	Yes
Static /Fixed IP	Yes
DHCP Server/Client	Yes
UPnP	Yes
DMZ Host	Multi-DMZ Host
Routing	Static, RIP I/II, Transparent mode support
Event Log	System / Security Log, Remote Security Log
Firewall	DoS, URL Blocking, Mac Blocking, Service Port Blocking,
	IP Address Blocking, Deny/Allow Ping,
	Service Time allocation
VPN	PPTP, IP Sec pass through
Management	Local Web-based configuration, Telnet
LED Indicator	Power, Diag, WLAN, Link/Act.

4

Environmental Temperature Storage -20°C to 60°C		
	Operating 0°C to 45°C	
Humidity	10%~90%, non condensing	
Power Consumption	Input : 100V, 50/60Hz / 120V, 60Hz / 230V, 50Hz / 240V,	
	50Hz	
	Output : DC7.5V / 1000mA	
Conformance	FCC class B, CE mark class B	

1.3 Package Contents

- 1. One WLAN Broadband Router
- 2. One CD-ROM (User Manual on CD)
- 3. One Quick Installation Guide
- 4. One Power Adapter
- 5. (Optional)One Reverse SMA Antenna

2. Hardware Installation

2.1 Product Description

You can place this Wireless LAN Broadband Router horizontally or hang it on the wall.



2.1.1 Front Panel and LEDs

Front Panel :

With its Diagnostic LEDs, you could easily get status information find out where the problem is.

The LEDs are explained in the following tables.

802.11g 54M Wireless LAN			_	L	AN	_
Broadband Router		· ·	Ч			占
	Power Dieg	WLAN WAN	1	2	3	4

Label	Color	Status	Meaning	Number of LEDs	
		On	Link On		
Link/Act.	Green	Blinking	Activity	4 x LAN,1 x WAN	
		Off	Link Off		
Bower Green		On	Power ON	1	
Fower Git	Green	516611	Off	Power OFF	1
Diag	Groop	On	Work mode fail	1	
Diag	Gleen	Off	Normal work mode		
WLAN	Vellow	On	Link On	1	
(Link)		Off	Link Off		

2.1.2 Rear Panel

The following graphic shows the rear panel of Wireless Router.



- DC In: To connect the adapter to receive power.
- LAN 1~4: To connect networked PC or uplink to Switch or Hub.
- WAN: To connect the Cabel/DSL modem via Cat.5 RJ-45 cable.
- USB: To connect the USB Printer
- Reset: Pressing the Reset button for more than 5 seconds, the router will restore to factory default setting.
- Antenna Connector: (Optional, only exists in the model with reverse SMA connector) This is standard reverse SMA connector where any antenna with reverse SMA connector can connect to this Wireless LAN Broadband Router.

2.2 Getting Started

Please refer to the following sections of this manual for additional information about setting up a network.

2.2.1 System Requirement

Before you getting started, make sure that you meet the following requirements.

- 1. An Internet connection through a cable or DSL modem
- 2. A computer with an Ethernet network card
- 3. Your Windows CD, if your computer is running Windows 95, 98, or ME
- 4. UTP network cable with RJ-45 connector
- 5. Either Microsoft Internet Explorer 4.0 (or above version) or Netscape Navigator 4.0 (or above version)
- 6. For Wireless Connection, you need Wireless LAN Card / USB Adapter.

2.2.2 Before Installation

Before you start to connect your router to any network device, make sure you get the following values from your ISP. You will need those values to setup the Router and configure you networked PCs to accept the IP address the Router chooses to assign them.

- PPPoE User Name and Password or Fixed Internet IP Address assigned by your local ISP
- Your Subnet Mask
- Your Default Gateway
- Your Primary DNS IP address

You are supposed to have all those information mentioned above from your ISP. If not, contact your ISP and they will be able to supply all the information you need.

2.2.3 Setting Hardware Connection

Follow the steps listed below to install your Router when you have all the information mentioned above.

Step 1. Power all devices down.

This should include your PCs, Cable or DSL modem and the Router.

Step 2. Connecting a Cable Modem or DSL Modem.

Connect your Cable or DSL modem to the WAN port on the rear panel.

Step 3. Connect the Wireless Router to your PCs.

Connect computers directly to the Router on ports 1~4 on the rear panel. If you have more than 4 computers need to be connected, connect a hub or a switch (using its uplink port) and connect additional computers to that device.

Step 4. Power on.

Plug the power cord into the power jack. And power on computers.



2.2.4 Configure your computer

Windows 95/98/ME

Step 1. TCP/IP Configuration

After you have completed the hardware setup by connecting your devices, you need to configure your computer to connect to your Router.

- 1. From the Windows desktop, click the "Start" button and choose "Settings", then click "Control Panel".
- 2. From "Control Panel", double-click the "Network" icon.
- 3. In the "Network" window, under the "Configuration" tab, double-click the "TCP/IP" entry that is listed with your network card.

Network	×
Configuration Identification Access Control	
The following network components are installed:	
📃 Client for Microsoft Networks 📃	
Sector Se	
Dial-Up Adapter	
■ Card 10/100	
TCP/IP -> Dial-Up Adapter	
Primary Network Logon:	
Client for Microsoft Networks	
<u>F</u> ile and Print Sharing	
TCP/IP is the protocol you use to connect to the Internet and	
wide-area networks.	
OK Cancel	

4. On the "Internet Protocol (TCP/IP) Properties" dialog box, make sure "Obtain an IP address automatically" and "Obtain DNS server address automatically" are selected. If not, select them and click "OK" and lose window.

TCP/IP Properties	Advanced	1 N	etBIOS
DNS Configuration	Gateway WINS C	Configuration	IP Address
An IP address can If your network doe your network admir the space below.	be automatically assi is not automatically a nistrator for an addres	gned to this c ssign IP addr s, and then ty	omputer. esses, ask ype it in
● Obtain an IP	address automatically	1. Marie	
-C Specify an IP	address:		
IP Address:			
S <u>u</u> bnet Mas	k:		
		OK	Cancel

- 5. Locate your IP address and Subnet Mask. Type them in the spaces provided below.
- 6. Click the "Gateway" tab and record the numbers listed under "Installed gateways."
- 7. Click the "DNS Configuration" tab. Locate the DNS servers listed under "DNS Server Search Order". And Click "OK".
- 8. System may need your Windows 95/98/ME CD to copy some files. After it finishes copying, please restart your system.

Step. 2 Disable HTTP Proxy

• Internet Explorer

1. Open Internet Explorer and click the stop button. Click "Tools" then "Internet Options".

2. In the "Internet Options" window click the "Connections" tab. Then click the "LAN

Settings" button.

neral Security Content Connections Progr	ams Advanced
Use the Internet Connection Wizard to connect your computer to the Internet.	Setyp
Dial-up settings	
	Add
	<u>R</u> emove
	✓ Settings
C Dial whenever a network connection is not p C Always dial my default connection	oresent Set Default
Burrent derburd – Sum Sourt Renform system security check before dialing)
.ocal Area Network (LAN) settings	LAN Settings

3. Clear all the checkboxes.

Local Area Network (LAN) Settings	<u>? ×</u>
- Automatic configuration	
Automatic configuration may override r use of manual settings, disable automa	nanual settings. To ensure the atic configuration.
Automatically detect settings	
Use automatic configuration script	
Address	
Deserver	
Addr <u>e</u> ss: P	or <u>t</u> : Advan <u>c</u> ed
Bypass proxy server for local and	ddresses
	UK Cancel

4. Click "OK", and then click "OK" again to close the "Internet Options" window.

Netscape

- 1. Open Netscape and click the stop button. Click "Edit", then click "Preferences..."
- 2. In the "Preferences" window, under "Category" double-click "Advanced", then click "Proxies". Select "Direct connection to the Internet." Click "OK".

Step. 3 Obtain IP Settings from Your Router

- 1. Click "Start", then "Run...". Type "winipcfg" to open the IP Configuration utility.
- 2. Click the "Release All" button.
- 3. Click the "Renew All" button
- Verify that your IP address is now 192.168.1.xxx, your Subnet Mask is 255.255.255.0 and your Default Gateway is 192.168. 1.1. Click "OK" to close the "IP Configuration" window.

Windows NT/2000/XP

Step 1. TCP/IP Configuration

After you have completed the hardware setup by connecting your devices, you need to configure your computer to connect to your Router.

1. From the Windows desktop, click the "Start" button. Choose "Settings", then click "Control Panel".

- 2. From "Control Panel", double-click the "Network & Dial-Up Connections" icon.
- 3. Double-click the icon that corresponds to the connection to your router.
- 4. Click "Properties" and double-click "Internet Protocol (TCP/IP)".
- 5. On the "Internet Protocol (TCP/IP) Properties" dialog box, make sure "Obtain an IP address automatically" and "Obtain DNS server address automatically" are selected. If not, select them and click "OK" and close window.

Step. 2 Disable HTTP Proxy

Internet Explorer

- 1. Open Internet Explorer and click the stop button. Click "Tools" then "Internet Options".
- 2. In the "Internet Options" window click the "Connections" tab. Then click the "LAN Settings" button.
- 3. Clear all the checkboxes.
- 4. Click "OK", and then click "OK" again to close the "Internet Options" window.

Netscape

- 1. Open Netscape and click the stop button. Click "Edit," then click "Preferences..."
- 2. In the "Preferences" window, under "Category" double-click "Advanced", then click "Proxies". Select "Direct connection to the Internet". Click "OK".

Step. 3 Obtain IP Settings from Your Router

- 1. From the Windows desktop, click the "Start" button, then "Programs", then "Accessories" and then click"Command Prompt".
- 2. Type "IPCONFIG /RELEASE" and press "Enter".
- 3. Type "IPCONFIG /RENEW" and press "Enter".
- Verify that your IP address is now 192.168.1.xxx, your Subnet Mask is 255.255.255.0 and your Default Gateway is 192.168.1.1. Click "OK" to close the "IP Configuration" window.
- 5. Type "Exit" and close window.

MAC OS 7.X or above

Step 1. TCP/IP Configuration

- 1. Pull down the Apple Menu. Click "Control Panels" and select TCP/IP.
- In the TCP/IP dialog box, make sure that "Ethernet" is selected in the "Connect Via." field. Make sure "Using DHCP Server" is already selected in the "Configure" field and close window.

	TCP/IP	E
Connect via:	Ethernet 🗘	
Configure :	Using DHCP Server	
DHCP Client ID :		
IP Address:	< will be supplied by server >	
Subnet mask:	< will be supplied by server >	
Router address:	< will be supplied by server >	
		Search domains :
Name server addr.:	< will be supplied by server >	
0		

2. Another box will appear asking whether you want to save your TCP/IP settings. Click Save.

Step. 2 Disable HTTP Proxy

- Internet Explorer
- 1. Open Internet Explorer and click the stop button. Click "Edit" then "Preferences"

🥰 File	Edit	View	Go	Favor
	Cu	t		ЖЖ
	Co	ру		жc
	Pa	ste		ЖV
Back	Cle	ear		
Address :	Se	lect All		ЖA
Marc.	Fir	id		₩F
	Fir	d Agaiı	n	⊯G
	Pre	eferend	:es	96;

2. Select "Proxies" and uncheck all checkboxes and click "OK".

• Netscape

- 1. Open Netscape and click the stop button. Click "Edit", then click "Preferences..."
- 2. In the "Preferences" window, under "Category" double-click "Advanced", then click "Proxies". Select "Direct connection to the Internet". Click "OK".

		Internet Explorer Preferences
Security		If you are accessing the internet from a private network, you can set acted out to allow internet access. Contact your petriork manager for
Security Zones		more information. Note: These settings are shared with other
Ratings		applications through Internet Config.
Advanced		Use Proxy Servers
🗢 Forms AutoFill		Web Proxy: Settings
Forms AutoComplete		Use Web Proxy for all
AutoFill Profile		Bypass Web Proxy for FTP
🗢 Receiving Files		Secure Proxy: Settings
Download Options		
File Helpers		Mail Proxy:
Cookies		Gopher Proxy: Settings
🕁 Network		Link the other courses the second to dimention to second the provide
Protocol Helpers		set above. Put a space or comma between each site.
Proxies		
Site Passwords		
⊽ E-mail		
General	-	
0		Cancel OK

Step. 3 Obtain IP Settings from Your Router

- 1. Pull down the Apple Menu. Click "Control Panels" and select TCP/IP.
- In the TCP/IP window, your new settings will be shown. Verify that your IP address is 192.168.1.xxx, Subnet Mask is 255.255.255.0 and Default Gateway is 192.168.1.1. Close Window.

3. Using Configuration Menu

After configuration of your network, you can access the Router via Web browser and type the IP Address of Router. The default IP address of this Router is http://192.168.1.1.



Please note that if you have changed the default IP Address assigned to the Router, make sure to enter the correct IP Address. **The default "User Name" and "Password" are both "admin".** Please refer to "Administrator Settings" page to check how to change your password.



3.1 Setup Method

You can choose WIZARD SETUP for step-by-step Installation or choose BASIC SETUP for basic configuration or choose ADVANCE SETUP for advanced configuration.

1. Setup Wizard

	Welcome to the SOHO Router Configuration Utility!
WIZARD SETUP BASIC SETUP	Use Wizard Setup to go through the basic configuration process step by step. You need to have your ISP information handy for reference. Click Next to start the Wizard. To return to this screen at any time, click Wizard Setup on the main menu. Advanced users can click Basic Setup or Advanced Setup on the main menu for additional configuration settings.
ADVANCED SETUP	Next>>

If you choose WIZARD SETUP, please refer to Quick Installation Guide for step by step instruction.

2. Basic Setup



If you choose **BASIC SETUP**, you will see setup screen as below. Click the upper frame to change settings.

Se	tup <u>Global</u> Address Wireless	Tools Status DHCP Log Statistics Printer	Advanced Help
	Host Name:	(Required by some ISPs)	Use the Setup screen to configure your SOHO Router.
	Domain Name:	(Required by some ISPs)	Although most users will be able
	Firmware Version:	30-01-10T20P6, Mar 23 2005 12:37:05	every Internet Service Provider (ISP) is different. Check with
	Time:	Thu Jan 1 16:25:39 1970	your ISP if you're not sure which
	Set Time Zone:	(GMT-08:00)Pacific Time(US&Canada);Tijuana 🗸	settings they require.
	Timer Server:	192.5.41.40	
	Other Timer Server:		
	Daylight Savings:	🔘 Enable 💿 Disable	
	Daylight Period:	JAN v 01 v JAN v 01 v	
	LAN IP Address:	LAN IP Address: 192 . 168 . 1 . 1 Subnet Mask: 255 . 255 . 0	
	WAN IP Address:	Obtain an IP Address Automatically	
		Pre-Request IP:	
		Specify an IP Address	
		WAN IP Address: 0 0 0 0	

3.Advanced Setup



If you choose **ADVANCE SETUP**, you will see setup screen as below. Click the upper frame to change settings.

<u>Virtual</u> Filters	IP/URL Special	DMZ MAC	Dynamic	Proxy Ro	uting SNMB	Basic Holp		
Servers 1 mers	<u>Block Apps</u>	Host Clone	DNS	DNS	acing Stan			
[Use the Virtual Comment		
Service	Public IP Addres	ss Public Port	Private Por	t Protocol	Private IP Address	screen to provide remote		
	0.0.00	0	0		192.168.1.	services from computers in your network.		
	0.0.0.0 🗸	0	0	TCP 🗸	192.168.1 . 0			
	0.0.0.0 🔽	0	0	TCP 🗸	192.168.1. ⁰	Well-known Ports		
	0.0.0.0 🗸	0	0	TCP 🔽	192.168.1. 0	Weil-Kilowil Purts		
	0.0.0.0 🗸	0	0	TCP 🔽	192.168.1. 0			
	0.0.0.0 🐱	0	0	TCP 🔽	192.168.1. 0	Echo		
	0.0.0.0 🗸	0	0	TCP 🔽	192.168.1. 0	TELNET		
	0.0.0.0 🗸	0	0	TCP 🔽	192.168.1. 0	DNS 19 finger		
	0.0.0.0 🗸	0	0	TCP 💌	192.168.1. 0	POP3		
	0.0.0.0 🗸	0	0	TCP 🔽	192.168.1. 0	NNTP SNMP		
	0.0.0.0 🗸	0	0	TCP 🗸	192.168.1. 0	1748 PPTP		
	0.0.0.0 🗸	0	0	TCP 👻	192.168.1. 0			
		Apply Cancel	l Help					

3.2 Basic Setup

3.2.1 Setup Router

In this page, you can configure your WLAN Router.

Setup Address Wireless	Tools Status DHCP Log Statistics Printer	Advanced Help
Host Name:	(Required by some ISPs)	Use the Setup screen to configure your SOHO Router.
Domain Name:	(Required by some ISPs)	Although most users will be able
Firmware Version:	30-01-10T20P6, Mar 23 2005 12:37:05	to accept the default settings, every Internet Service Provider
Time:	Thu Jan 1 16:25:39 1970	(ISP) is different. Check with your ISP if you're not sure which
Set Time Zone:	(GMT-08:00)Pacific Time(US&Canada);Tijuana	settings they require.
Timer Server:	192.5.41.40	
Other Timer Server:		
Daylight Savings:	🔘 Enable 💿 Disable	
Daylight Period:	JAN V 01 V JAN V 01 V	
LAN IP Address:	LAN IP Address: 192 . 168 . 1 . 1 Subnet Mask: 255 . 255 . 0	
WAN IP Address:	Obtain an IP Address Automatically Pre-Request IP: 0.0.0.0	
	Specify an IP Address	
	WAN IP Address: 0 0 0 0	

Host Name:

Provide a host name (also called system name or account name) if your ISP requires this information.

Domain Name:

Provide the ISP domain name (e.g. xyz.isp.com) if your ISP requires this information.

Firmware version:

The current firmware version is shown for your convenience.

Time:

Select your **Time Zone** and **Enable** or **Disable** the application of Daylight Savings Time.

LAN IP Address:

These fields show the LAN IP Address and the Subnet Mask as seen by others on your Local Area Network (LAN). Most users will not need to change these values.

If you change the LAN IP Address with the DHCP server running, you'll need to restart your client machines. If you change the LAN IP Address without the DHCP server running, you'll need to manually reconfigure your clients' IP addresses.

WAN IP Address:

Choose either **Obtain an IP Address Automatically** (most users)(you can specify the IP you want to get by filling the **Pre-Request IP**) or **Specify an IP Address** (if your ISP assigns static IPs). If you choose the second option, type in the Wide Area Network (**WAN**) **IP Address**, **Subnet Mask**, **ISP Gateway Address**, and **DNS values**. You can obtain those information from your ISP.

PPPoE Login:

If your ISP uses Point-to-Point Protocol over Ethernet (PPPoE), choose **Enable**; otherwise, choose **Disable**. PPPoE allows your ISP to authenticate your connection by requiring you to submit a username and password.

Type the **User Name** and **Password** provided by your ISP in the boxes. For PPPoE connection types, you can select either **Connect on Demand** or **Connect Manually**. And moreover, if you want to limit the idling minutes, select **Max Idle Time** and type a maximum number in minutes. Change **MTU** to specify the largest size for network transmission. It is recommendated to use default value 1492.

UPNP:

Universal Plug and Play (UPnP) enable devices such as PCs, routers or other devices to be plugged into a network and automatically know about each other.

Click **Apply** when you finish choosing your settings, or click **Cancel** to undo your changes.

3.2.2 Global Address

Use the Global Address screen for Network Address Translation (NAT), a process that provides internal to external IP address mapping. If your gateway is configured to retrieve an IP address dynamically, you will not need to use this function. On this page, you can set up NAT (Network Address Translation) to provide internal-to-external IP address mappings.

Setup Global Wi	reless	<u>Tools</u>	<u>Status</u>	DHCP	<u>Log</u>	<u>Statistics</u>	<u>Printer</u>	Advanced Help
External-Internal	0.0.0	0.0(defau	lt public II	P)				The Global Address screen is used for Network Address
	1	0.0	.0	. 0				Translation (NAT), a process that provides internal to external ID address manning
	2	0.0	. 0	. 0				Because your gateway is configured to retrieve an IP address dynamically, you do not
	3	0.0	.0	. 0				need to configure anything here.
	4	0.0	. 0	. 0				
	5	0.0	.0	. 0				
	Aŗ	oply Car	ucel Help					

Default Public IP

If your gateway is configured to retrieve an IP address dynamically, you will only see the default WAN IP address (specified in the Setup screen); you will not see the sections below.

External-Internal Address Mapping

This section allows you to define global IP addresses for your LAN network. Use the lines in the table to list up to six static, external IP addresses provided by your ISP. Click Apply when you finish entering the IP addresses, or click Cancel to undo your changes.

3.2.3 Wireless

Use this screen to configure your gateway for wireless access. Note that the Wireless settings are divided into **Wireless Radio**, **Wireless Security** and **Wireless Status**.

Setup <u>Global</u> Address Wireless	Tools <u>Status</u> <u>DHCP</u> <u>Log</u> <u>Statistics</u> <u>Printer</u>	<u>Advanced</u> Help
	• Radio Setting • Security Setting • Status	Use the Wireless Radio Setting
Wireless:	Enable Wireless Disable Wireless	Gateway for wireless access. If you do not know how to change it, please leave the default value, as following table lists.
Mode:	MIXED V	Default Values for Radio
ESSID:	WLAN	Settings Beacon 100
Channel:	6 🗸	Interval RTS Threshold 2432
		Fragmentation 2346
Beacon Interval:	100 mcec	DTIM Interval
RTS Threshold:	2432 (256-2432)	Preamble Type Long Preamble
Fragmentation Threshold:	2346 (256-2346, even numbers only)	Distribution Disable
DTIM Interval:	1 (1-255)	
Preamble Type:	Short Preamble 💿 Long Preamble	
Distribution System:	🔘 Enable 🖲 Disable	
Peer AP MAC Address 1:		
	Apply Cancel Help	

Radio Setting:

Use this screen to configure your Gateway for wireless access. If you do not know how to change it, please leave the default value, as following table lists.

Setup Global Address Wireless	Tools Status DHCP Log Statistics Printer	<u>Advanced</u> Help
	Radio Setting O Security Setting O Status	Use the Wireless Radio Setting screen to configure your
Wireless:	Enable Wireless Disable Wireless	Gateway for wireless access. If you do not know how to change it, please leave the default value, as following table lists.
FirmWare Version:		Defaul t Values fo r Radio
Houe.	WIAN	Settings
ESSID:		Beacon 100 Interval
Beacon Interval:	100 msec	RTS Threshold 2432 Fragmentation 2346 Threshold 2346
RTS Threshold:	2432 (256-2432)	Preamble Type Long Preamble
Fragmentation Threshold:	2346 (256-2346, even numbers only)	Distribution Disable
DTIM Interval:	1 (1-255)	Joren
Preamble Type:	🔿 Short Preamble 💿 Long Preamble	
Distribution System:	🔘 Enable 💿 Disable	
Peer AP MAC Address 1:		
	Apply Cancel Help	

Mode:

Select the Wireless Mode your router support. It support three modes: 802.11B, 802.11G, and MIXED which supports both 802.11B and 802.11G. The default value is MIXED

ESSID:

Unique identifier for the Extended Service Set which is shared by client stations in an infrastructure association, such as WLAN-test. It is case-sensitive and cannot exceed 32 characters.

Channel:

Specifies the bandwidth which the wireless radio operates. AP and the client stations that is associated work in one of channels from 1 to 14.

Beacon Interval:

Time interval between beacons broadcast by the Access Point (AP).

RTS Thresold:

Minimum size of data frames above which Request-To-Send (RTS) protocol is used. RTS helps prevent data collision from hidden nodes.

Fragmentation Threshold:

For efficiency in high-traffic situations, large files are split into fragments. This

parameter specifies the fragment packet size.

DTIM Interval:

Number of beacon intervals between successive Delivery Traffic Indication Maps (DTIMs).

Preamble Type:

Shows the length of preamble, either Short (72 bits) or Long (144 bits).

Authentication Type:

Type of authentication used in your wireless network.

Enhanced Security:

Option to enable additional security measures, like hiding your Service Set Identifier (SSID) or blocking unspecified SSIDs.

Peer AP MAC Address:

When **Wireless Distribution System** is enabled, wirelessly connect Access Points using several MAC Addresses of PC cards, so that you can extend a wired infrastructure to locations where cabling is not available.

Security Setting: Use this screen to configure your Gateway for wireless security access.

<u>Setup</u>	<u>Global</u> Address	<u>Wireless</u>	<u>Tools</u>	<u>Status</u>	<u>DHCP</u>	<u>Log</u>	<u>Statistics</u>	<u>Printer</u>	4	<u>Advanced</u>	Help
			O <u>Radio</u>	Setting	Secu	rity Set	ting St	atus	Use the Wirele Setting scree	ess Securit [.] n to configi	y ure your
Αι	uthenticat	ion Type:	🔘 Оре	en Systen	n 🔿 Shar	ed Key	Soth		Gateway for v access.	vireless sec	urity
	Securi	ity Mode:	No Encry	ption	🖌 Set S	ecurity					
Wirele	ess Access	Control:	O On Set Ao	⊙ Off cess List							
I	Enhanced	Security:	🗌 Hide	e SSID in	Beacon f	frame					
			Apply	Cancel	Help						

Authentication Type:

Select any of **Open System**, **Shared Key** or **Both** authentication algorithm which can be supported by the Access Point. The default value is Both.

Security Mode:

This is regard to the security for wireless access, please select one of the security mode. The default value is No Encryption

Wireless Access Control:

If you enable Wireless Access Control, then click **Set Access List** to launch the Wireless Control List window.

Enhanced Security:

If you choose Enable, you can choose to Hide SSID (Service Set Identifier) in Beacon frame.

Status: This screen is to show your Gateway's AP Radio Statistics and Association Client Table.

<u>Setup</u>	<u>Global</u> <u>Address</u>	<u>Wireless</u>	<u>Tools</u>	<u>Status</u>	<u>DHCP</u>	<u>Log</u>	<u>Statistics</u>	<u>Printer</u>		Adv	<u>anced</u>	Help
	○ <u>Radio Setting</u> ○ <u>Security Setting</u> ⊙ <u>Status</u>										Status eway's	screei AP
	AP Radio									Radio Statistics a Client Table.	nd Asso	ociatio
		Status: MAC A	up Max. Addr: 00:	. Mb/s: 54 08:11:11:	MBps IP 11:8a Ra	Addr: : adio SSI	192.168.1.1 D: WLAN					
		Receive					Transmi	it				
succes	ssful unicas	t frames	82	613	succes	sful unic	ast frames	4	19			
success	sful multica	st frames	82	610	success	sful multi	cast frames	7	79			
d	ropped fran	nes	706	5384	d	ropped f:	rames		59			
	failed frames 0 failed frames 458											
			Disı	olay Associatio	on Table	Help]					

3.2.4 Tools:

Setup Global Address W	ireless Tools Status DHCP Log Statistics Printer	Advanced Help
Change Password:	Old Password:	Use the Tools screen to change the administrative password for
	New Password: (* Maximum 31 characters)	your SOHO Router, to restore the factory default settings and to ungrade firmware. We
	Confirm Password:	strongly recommend that you change the password once
	Apply Cancel Help	you've accessed the router for the first time.
Backup Settings:	Backup Settings	
Restore Settings:	Browse Restore	
Restore Factory Defaults:	Restore to Default Backup/Restore Help	
Reset Gateway:	Reset	
Upgrade Firmware:	Browse Upgrade now Help	
	Note: The firmware upgrade takes about 10 seconds. Please don't power off the unit when it is being upgraded.	

Change Password:

Change the administrative password for your WLAN Router.

Backup Settings:

Backup the current settings to your local disk

Restore Factory Defaults:

Restore the factory default settings.

Reset Gateway:

Restart your device or reset the hardware.

Upgrade Firmware:

Upgrade firmware image file that you download from the gateway 's website.

3.2.5 Status:

This page is a read-only display that gives you the information about the gateway.

Setup Address Wireles	<u>s Tools</u> Status DHC	P Log Statistics Printer	Advanced Help
Host Name: Domain:			The Status screen is a read- only display that gives you information about your gateway
PPPoE Login:	Disabled		
PPTP Dial-up:	Disabled		
L2TP Dial-up:	Disabled		
LAN:			
	IP Address:	192.168.1.1	
	Subnet Mask:	255.255.255.0	
WAN:	Static		
	IP Address:	0.0.0.0	
	Subnet Mask:	255.255.255.0	
	Default Gateway:	0.0.0.0	
	DNS:	0.0.0.0	
		0.0.0.0	
		0.0.0.0	
UP time:	32 minutes 49 seconds		
DDNS Status:	Soruor	The convice is disabled	
	Otatus:	The service is disabled	
	อเลเนระ	The account is not set vet	

3.2.6 DHCP:

Use the DHCP screen to set up your gateway as a Dynamic Host Configuration Protocol (DHCP) server. DHCP servers automatically assign IP addresses to all the clients on your network.

Setup <u>Gla</u>	obal tress Wi	<u>reless</u>	<u>Tools</u>	<u>Status</u>	DHCP	Log	<u>Statistics</u>	<u>Printer</u>			<u>Advanced</u>	Help
	Internal:	1	DHCP Se	erver:	۲	Enable	🔘 Disable			Use t set uj	he DHCP screi p your Gatewa mic Host Conf	en to ay as a iguration
		1	IP Pool S Address	starting :		192.168	3.1. ²			Proto DHCP assign	col (DHCP) se servers autor n IP addresses	rver. matically s to all
]	IP Pool E Address	Ending :		192.168	3.1. ⁵⁰			the c netwo	lients on your ork.	
		:	Static DI	HCP:	0	Enable	💿 Disable	э				
			192 . 168 192 . 168 192 . 168 192 . 168 192 . 168	3 1 3 1 3 1 3 1 3 1 3 1	0 <> 0 <> 0 <> 0 <> 0 <>			00 : 00 00 : 00 00 : 00 00 : 00 00 : 00 00 : 00	: 00 : 00 : 00 : 00			
		1	Lease Ti	me:		24	Hours.					
			Displ	ay DHCP Ta	ble							
		A	pply C	ancel He	łp							

DHCP Server

If you choose to enable DHCP, make sure there is not already a DHCP server on your network.

If you don't enable DHCP, you'll need to manually configure an IP address for each computer on your network. If you do enable DHCP, make sure that each computer is configured to retrieve an IP address automatically.

IP Pool Starting Address/IP Pool Ending Address:

Specify the **IP Pool Starting Address** to designate the first IP address that can be assigned to a computer on the network. Similarly, specify the **IP Pool Ending Address** to designate the last IP address that can be assigned. For example, if you choose 10.10.10.51 as the starting address and 10.10.10.100 as the ending address, the DHCP server will assign addresses to network clients that are between 10.10.10.51 and 10.10.100.

Static DHCP:

This is for static mapping of MAC address and IP address assigned by DHCP. Input the MAC address and corresponding IP address into the boxes for each mapping entry.

The IP address in mapping table should be within DHCP pool, otherwise that entry is invalid.

Lease Time

This is the lease time assigned if the computer (DHCP client) requests one. If it set to $\mathbf{0}$, the life time of IP assigned by the gateway for client computer will be infinity. Default lease time is 24 hours.

Display DHCP Table

The **DHCP Active IP Table** lists information about the computers that have been assigned IP addresses by the DHCP server.

3.2.7 Log:

On this page you can view log files that record the access activity of LAN and WAN clients.

<u>Setup</u>	Global Address Wireless	Tools Status DHCP Log Statistics Printer	Advanced Help
	Access Log:	🖲 Enable 🔘 Disable	Use the Log screen to set up and view log files that record the access activity of LAN and WAN clients.
		Session Event Log Block Event Log	
		Intrusion Event Log Wireless Event Log	
		Apply Cancel Help	

3.2.8 Statistics:

On this page displays statistics data for LAN , WAN and AP ports.

Setup Global Address Wireless	Tools Status [HCP Log Statistics Pr	inter	Advanced Help					
	This page displays statistics data for LAN, WAN and AP ports.								
Status: up Max.Mb/	Status: up Max.Mb/s: 100.0 IP Addr: 192.168.1.1 MAC Addr: 00:08:11:11:11:88								
Receive	15000	Transmit							
total bytes	45336	total bytes	619501						
unicast pkts	819	unicast pkts	625						
multicast pkts	23	multicast pkts	54						
discards	0	discards	0						
errors	0	errors	0						
unknown protocols 2		packets queued	0						
Status: up Max.M									
Receive		Transmit							
unicast pkta	0	unicast pkts	0						
unicasi pkis	0	unicast pkis	0						
muncasi pkis	0	municasi pris	0						
discards	0	discards	0						

3.2.9 Printer:

This page allows you to configure the setting of the Printer Server to share the printing service for LAN users.

<u>Setup</u> <u>Global</u> <u>W</u>	reless <u>Tools</u> <u>Status</u> <u>DHCP</u> Log <u>Statistics</u> Printer	Advanced Help
Print Server:	🔘 Enable 🖲 Disable	This page allows you to configure the setting of the Printer Server to share the
Device Name:	lptl	printing service for LAN users.
Printer Cache Size:	2048 KBytes	
Printer Server IP:	192.168.1.1	
Printer :	Manufacturer: (VID: -1) Model: (PID: -1) Status: Off Line	
Command Set:		
	Printer Monitor Status	
	Apply Cancel Help	

Print Server:

You may choose to Enable or Disable the Print Server.

Device Name:

The name of the print server hardware used for identification purposes. Client PCs should use this name as queue name for printing.

Printer Cache Size:

This field used for system evaluation. If the printer does not work properly, you may augment this value, e.g. 4096, 8192. Suggest use the same value as your printer supported.

Printer Server IP:

This field shows the Print Server IP, which equals LAN IP.

Printer:

This field shows the Manufacturer, VID(Vendor ID), Model, PID(Product ID), Status of current Printer, which connected to the device's USB port.

Command Set:

This field shows you Command Set of the printer. When the printer connected with the print server, it will be shown on it.

Printer Monitor Status:

Click Printer Monitor Status to launch Printer Monitor Status Table window. In this screen the table lists all printing tasks queue. Each task has the information of Rank, Owner, Job, Files and Total Size.

3.2.9.1. Use LPD network print in window2000/window XP

3.2.9.1.1 Host setup:

Add New Printer's driver (from the printer manufacture); If it was a new printer type (no install in local host), please select "Control Panel / Printers / Add Printer" and complete this procedure:



Setup procedure as below:

1.select local printer without detecting local printer;

Add Printer Wizard
Local or Network Printer Is the printer attached to your computer?
If the printer is directly attached to your computer, click Local printer. If it is attached to another computer, or directly to the network, click Network printer.
 Local printer Automatically detect and install my Plug and Play printer Network printer
< <u>B</u> ack <u>N</u> ext > Cancel

2.the add printer wizard screen will appear, select my computer;

3.in available port, select LPT1;

Add Printer Wizard							
Select the Printer Port Computers communicate with printers through ports.							
Select the port you want your printer to use. If the port is not listed, you can create a new port.							
	Port	Description	Printer]			
	LPT1:	Printer Port					
	LPT2:	Printer Port Printer Port					
	COM1:	Serial Port					
	COM2:	Serial Port	•				
	Note: Most c	computers use the LPT1: p	ort to communicate with a local printer.	·			
0	Create a nev	v port:					
	Туре:	Local Port	*	1			
		,	_	·			
			< <u>B</u> ack <u>N</u> ext >	Cancel			

- 4. Select the appropriate printer manufactory;
- 5.Select printer type;
| Add Printer Wizard |
|---|
| Add Printer Wizard
The manufacturer and model determine which printer to use. |
| Select the manufacturer and model of your printer. If your printer came with an installation disk, click Have Disk. If your printer is not listed, consult your printer documentation for a compatible printer. |
| Manufacturers:
Fujitsu
GCC
Generic
HP
IRM
Pinters:
Foson Stylus COLOR 640 ESS/P 2
Epson Stylus COLOR 740 ESC/P 2
Epson Stylus COLOR 800 ESC/P 2
Epson Stylus COLOR 900 ESC/P 2
Epson Stylus COLOR 900 ESC/P 2
Epson Stylus Photo 1200 ESC/P 2
Epson Stylus COLOR P 2
Epson Stylus |
| < Back Next > Cancel |

6.Type printer name or use default;

Add Printer Wizard
Name Your Printer You must assign a name for this printer.
Supply a name for this printer. Some programs do not support server and printer name combinations of more than 31 characters.
Epson Stylus COLOR 900 ESC/P 2
< Back Next > Cancel

7.In printer sharing, click next;

Add Printer Wizard
Printer Sharing You can share this printer with other network users.
Indicate whether you want this printer to be available to other users. If you share this printer, you must provide a share name.
O not share this printer
Share as:
< Back Next > Cancel

8.In printing testing page, select "no";

Add Printer Wizard	
Print Test Page To confirm that the printer is installed properly, you can print a tes	st page.
Do you want to print a test page?	
C Yes	
(No	
< Back	Next > Cancel

9.Done;

Configure Port properties:

1.Select printer that you want to configure(setting by step 1 at local printer);

😼 Printers		
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> oo	ls <u>H</u> elp	-
🗢 Back 👻 🤿 👻 🔯 Search	Pa Folders 🎯 階 🧏 🗙 ᡢ 🛙 🎟 -	
Address 🞯 Printers	▼	<i>i</i> ∂Go
	☑ Add Printer ☑ Acrobat Distiller ☑ EPSON Stylus COLOR 980 on MS1	
Printers	Jefex Contraction of the second secon	
Test (Epson)	Test (Epson)	
Documents: 0		
Status: Ready		
Model: Epson Stylus COLOR 900 ESC/P 2		
Waiting Time: 0		
Epson Support Windows 2000 Support		
Status: Ready Documents: 0		/

2.Select "properties";

3.Select "port";

爹 Test (Epson) Properties	<u>?</u> ×
Color Management Security General Sharing	Device Settings Utilities
Test (Epson)	
Location:	
<u>C</u> omment:	
Model: Epson Stylus COLOR 9	00 ESC/P 2
- Features	
Color: Yes	Paper available:
Double-sided: No	Letter 🔺
Staple: No	
Speed: Unknown	
Maximum resolution: 720 dpi	<u> </u>
Printing P	references Print <u>T</u> est Page
	OK Cancel Apply

4.Select "add port";

爹 Test (Epsor	n) Properties				?
Color Mana General	gement Shar est (Epson)	Security ring	Devi Ports	ce Settings	Utilities Advanced
Print to the for checked por Port	ollowing port(s). t. Description	Documen	ts will print t Printer	to the first fr	ee
 ✓ LPT1: □ LPT2: □ LPT3: □ COM1: □ COM2: □ COM3: □ COM4: 	Printer Port Printer Port Printer Port Serial Port Serial Port Serial Port Serial Port		Test (Epso	on)	
Add P	ort directional supp inter pooling	<u>D</u> elete	Port	Confi	gure Port
		0	K 🛛	Cancel	Apply

5.In available ports, select "Standard TCP/IP port", done;

Printer Ports	<u>?</u> ×
<u>Available port types:</u>	
Local Port PDF Port	
Standard TCP/IP Port	
1	
New Port Type	New Port Cancel

6.Select "add port";

tandard TCP/1P Printer Port Id Port	. Wizaro	
For which device do you want	to add a port?	
Enter the Printer Name or IP ad	ddress, and a port name for the desir	red device.
Printer Name or IP <u>A</u> ddress:	192.168.1.1	
Port Name:	IP_192.168.1.1	
	K Back N	levt \ Cancel

7.Enter network print server "IP Address" and name new port or default; 8.Finish;

9.Select "properties", and modify port setting;

爹 Test (Epson) Pro perti	es 👘	? ×
Color Management General S	Security Devic haring Ports	e Settings Utilities Advanced
Print to the following port(checked port.	s). Documents will print to	o the first free
Port	Description	Printer 🔺
Сом2:	Serial Port	
🗆 сомз:	Serial Port	
🗆 сом4:	Serial Port	
FILE:	Print to File	
IP_192.168.1.1	Standard TCP/IP Port	
C:\Documents an	PDF Port	Acrobat Distiller
Add Port	<u>D</u> elete Port	<u>C</u> onfigure Port
 Enable bidirectional su Enable printer pooling 	ipport.	
	Close	Cancel Apply

Configure Standard TLP/	'IP Port	Monitor		? ×
Port Settings				
Port Name:		IP_192.168.1.1	1	
Printer Name or IP <u>A</u> ddres	\$\$:	192.168.1.1		
Protocol C <u>R</u> aw			⊙ <u>L</u> PR	
Raw Settings Port <u>N</u> umber:	9100			
- LPB Settings				
<u>Q</u> ueue Name:	Test			
Queue Name:	Test Enabled			
Queue Name:	Test Enabled			
Queue Name:	Test Enabled led public			
Queue Name:	Test Enabled led public			

10.Enter you network print queue name and set port is LPR

11.Done;

3.2.9.1.3 LPD Server setup

Use Web Page setting LPD server;

1.Enable the Print server

2.Enter the Device Name

The setting of Device Name must be the same as the Queue Name in host; e.g, Test, here

Setup Global M	ireless <u>Tools</u> <u>Status</u>	DHCP I	Log <u>Statistics</u>	Printer	<u>Advanced</u> Help
Print Server:	🔘 Enable 💿 Disable				This page allows you to configure the setting of the Printer Server to share the
Device Name:	lpt1				printing service for LAN users.
Printer Cache Size:	2048 KBytes				
Printer Server IP:	192.168.1.1				
Printer :	Manufacturer: (VID: -l) Model: (PID: -l) Status: Off Line				
Command Set:					
	Printer Monitor Status				
	Apply Cancel Help				

3.Finish.

Monitor queue list:

4	🚰 Printer Monitor Status Table - Microsoft Internet Explorer										
L	Printer Monitor Status Table										
	Refresh										
	Rank	Owner	Job	Files	Total Size						
L	active	Administrator	0 x 0	Microsoft Word - ZOT Print Serv	2e6f1						
L											
L					-						
L											

2. Support printer list:

ESPON Stylus C41, HP Deskjet 3820, Canon S520, Epson stylus photo 830, Epson stylus Color 860

3.2.9.2 Use LPD network print in window98/window ME

3.2.9.2.1Installation

Step 1. Double click the **setup.exe** in the CD.





Step 2. In the following step, click the "Next".

Step 3. If you accept the license agreement, click "Yes".

InstallShield Wizard	>
License Agreement Please read the following license agreement carefully.	
Press the PAGE DOWN key to see the rest of the agreement.	
Bilicon Data, Inc. SOFTWARE LICENSE AGREEMENT Please read this license carefully. You are purchasing a license to use the LPD print Software. The Software is owned by and remains the property of Silicon Data, Inc., is protected by international copyrights, and is transferred to the original purchaser and any subsequent owner of the Software media for his/her use only according to the license terms set forth below. Opening the packaging and/or using the Software indicates Do you accept all the terms of the preceding License Agreement? If you choose No, the setup will close. To install LPD print, you must accept this agreement.	
InstallShield <u>Back Yes No</u>	

Step 4. Then click "Next", after copying file, the following window will be displayed.

InstallShield ₩izard	
	InstallShield Wizard Complete Setup has finished installing LPD print on your computer.
	< Back Finish Cancel

Step 5. Click "**Finish**", and select "**Yes**", I want to restart my computer now" to complete the installation.

print
Setup has finished copying files to your computer. Before you can use the program, you must restart your computer.
Choose one of the following options and click OK to finish setup.
 Yes, I want to restart my computer now. No, I will restart my computer later.
ОК

Step 6. Once you reboot system, the installation will be completed. And a detailed LPD print setup manual can be found in \Program Files\LPR Clent\LPD Port Win98.



3.2.9.2.2 Configuration

Installing the driver of your printer connected to the Printer Server gateway. Step 1. Go to "**Printers**" by clicking the Start button, selecting Settings, and clicking Printers.



Step 2: Click the **"Add printer"** and click **"Next"** in the **"Adding printer wizard"** Window".



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Step 3: Select the "Local printer" and click the "next".

Step 4: Select the Manufacturer and insert corresponding printer driver disk and click **"Install from disk...**

🤕 Printers						_ 8 ×
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>G</u> o F <u>a</u>	vorites <u>H</u> elp					(
│ ← → ⇒ ↓ (Back Forward	1 Up Cut C	Copy Paste	ピク Undo	N Delete Pr	operties Vi	ews
Address 😺 Printers						•
Add Printers Add Printer The Add Printer wizard walks you step-by-step through installing a printer. Just follow the instructions on each screen.	Add Printer Wizard Click the m installation documenta Manufacturers: GCC Generic Gestether Hermes HP IBM Kodak	Annufacturer and mo disk, click Have Dis stion for a compatible Printers HP Do HP Do HP Do HP Do HP Do HP Do	edel of your print sk. If your print e printer. s: eskJet 550C Pri eskJet 550C Pri eskJet 550C Pri eskJet 650 (Co eskJet 650 (Co eskJet 680C eskJet 680C	ter. If your pri er is not listed rinter lor) prochrome) lor)	nter came with , consult your p <u>H</u> ave Disk.	an printer
		_				

Step 5: install printer the driver file

Step 6: Select the compatible printer, and click "Next".



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Step 8: Click "Finish"

Step 9: Click "**OK**" to complete the installation.

3.2.9.2.3 Printer Server Port configuration

Step 1: Right click on the printer you just added, and click the "Properties".

3	Prin	ters											
]	<u>F</u> ile	<u>E</u> dit	⊻iew	<u>G</u> o	F <u>a</u> vorites	<u>H</u> elp							
	< Bac	i ⊸ k	⇒ Forwar	ď	€ Up	X Cut	Copy		Paste	ピク Undo		Properties	[
]/	\ <u>d</u> dres	s 🧕	Printers										
	3)				Add Printer	Printe	5	Open				
ŀ	Pr	int	ers				i inte	~	P <u>a</u> use Pr Set as Di	iinting e <u>f</u> ault			
	Prin	ter Se	erver						Purge Pri	int Documen	ts		
	Docu	iment:	s: 1						Create <u>S</u> i <u>D</u> elete Rena <u>m</u> e	hortcut			
									P <u>r</u> opertie	8			

Step 2: Select the "**Detail**..." tab on the window pop up. Step 3: Click the "**Add port**..."

📴 Printers		
∫ <u>F</u> ile <u>E</u> dit <u>V</u> iew <u>G</u> o F	Printer Server Properties	
Back Forward	General Details Paper Graphics Fonts Device Options	es [
Address 🥪 Printers	Printer Server	
S	Print to the following port:	
Printers	LPT1: (Printer Port) Add Port	
Printer Server Documents: 1	Print using the following driver: Delete Port HP D 640 New Driver	
	Capture Printer Port End Capture	
	Timeout settings Not selected: 15 seconds	

Step 4: Select the "**Others...**" option from the "**Adding port**" window, choose the "**LPR port**" item in list, then click "**OK**".

	<u>.</u>	Epson T-1000 Properties	
Му	📴 Prit	General Details Paper Graphics Device Options	
. (J	🧳 Epson T-1000	
Му С	Addre	Add Port ? ×	
		LPT1: (Pri	
<u> </u>		C Network	
· ľ	Pi	Print using I Browse	
- 1		Epson T-1	
· D -	Eps 100	Click the type of port you want to add:	
не	Doc	Timeout s Local Port	
	0	Not sel	
Se		Transm	
Int			
. 1		OK Cancel	
() Online		
S	ervices		
	Start	💋 🥭 🗊 🛛 📴 Printers	🛂 6:49 PM

Step 5: You can choose a favorite name for this port, but the IP address of the printer server (gateway) and the printer name must match the configuration on your gateway.

Configuration dialog:	×	?×		
Enter a port name:				
lance				
Enter the Gatoway's IP:	ЭК	2 2		
192.163.45.123				
Enter the printer name:	Carcel			
tesi				
		<u>B</u> rowse	•	
			e e e	
Re 100 Timeout s Local Poi	rt			
Doc 0 Not selv				
Se		· · ·	•	
	ОК	Cancel	An States	
Online O	K Cancel Ap	ply	· ·	
🙀 Start 🛛 🧭 🈂 🎲 🗍 🕢 Printers			110 6:43	9 PM

Step 6: Then the port you added is shown in the port list. Please click "**Apply**" and then click "**OK**".

Step 7: After you clicked the "**OK**", the installation is completed.

3.3 Advanced Setup

3.3.1 Virtual Servers

This provides remote services from computers in your network by virtual servers.

Virtual Servers	<u>Filters</u>	<u>IP/URL</u> <u>Block</u>	<u>Special</u> <u>Apps</u>	<u>DMZ</u> <u>Host</u>	<u>MAC</u> <u>Clone</u>	<u>Dynamic</u> <u>DNS</u>	<u>Proxy</u> <u>DNS</u>	<u>Routi</u>	<u>ing</u>	<u>SNMP</u>			<u>Basic</u>	Help
Se	rvice	Public	IP Addres	ss Publ	ic Port	Private Po	rt Proto	col	Priv	ate IP A	ddress	Use the	Virtual Se o provide	rvers remote
		0	.0.0.0 🔽	0		0	TCP	*	19	2.168.1.	0	services	from com	puters
		0	.0.0.0 🔽	0		0	TCP	*	19	2.168.1.	0	in your n	ietwork.	
		0	.0.0.0 🔽	0		0	TCP	*	19	2.168.1.	0	Well-I	known Pc	orts
		0.0.0.0 🗸		0		0	TCP	*	192.168.1 . 0		well-known Ports			
		0	.0.0.0 🔽	0		0	TCP	*	192.168.1 . 0					
		0	.0.0.0 🔽	0		0	TCP	*	19	2.168.1.	0		7 Echo	
	0.0.0.0 🗸		0.0.0.0 🗸			0	TCP	*	19	2.168.1.	0	23 TELN 25 SMT		-
		0	0 🗸 🗸 0.0.0			0	TCP	*	192.168.1.		0		DNS finger HTTP	
		0	.0.0.0 🔽	0		0	TCP 🔽		19	2.168.1.	0	110 POP3 113 auth		
		0	.0.0.0 🔽	0		0	TCP	*	19	2.168.1.	0		NNTP SNMP	Fran
		0.0.0.0 🗸		0		0	TCP	*	192.168.1 . ⁰		0		PPTP	
		0	.0.0.0 🔽	0		0	TCP	*	19	2.168.1.	0			
				Apply	Cancel	Help								

3.3.2 Filters

Use this screen to create and apply filters that can selectively allow traffic to pass

in and out of your network. If no filters are enabled, all traffic will be blocked.

<u>Virtu</u> <u>Serve</u>	al Filters <u>IP/URL</u> <u>Block</u>	SpecialDMZMAAppsHostClo	AC Dynamic Prov ne DNS DNS	<u>«¥</u> <u>Routing</u> <u>SNMP</u>		<u>Basic</u>	Help
	Filtering Page:	Page1(1~12)				Use this scree create and ap filters that car	n to ply n
ID	Filtering Layer	Proto Num	Direction	Private Port Range	Protocol	traffic to pass	ow in and
1	Port Filtering 🔽	0	Outbound 🖌	21 _ 21	TCP 🖌	out of your ne	etwork.
2	Port Filtering 🔽	0	Outbound 🖌	1720 _ 1720	TCP 🖌	enabled, all tra	e affic will
3	Port Filtering 🐱	0	Outbound 🔽	80 _ 80	TCP 🔽	Gateway come	ne es with
4	Port Filtering 🐱	0	Outbound 😽	53 _ 53	UDP 🗸	nine filters pre for you.	defined
5	Port Filtering 😽	0	Outbound 🗸	25 _ 25	TCP 🖌		
6	Port Filtering 🐱	0	Outbound 🖌	110 _ 110	TCP 🖌		
7	Port Filtering 🐱	0	Outbound 🖌	1503 _ 1503	TCP 🖌		
8	Port Filtering 🐱	0	Outbound 🖌	443 _ 443	TCP 🖌		
9	Raw IP 🛛 🖌	1	Both 🖌	00	TCP 🗸		
10	Port Filtering 🐱	0	Inbound 🖌	00	TCP 🔽		
11	Port Filtering 🐱	0	Inbound 🖌	00	TCP 🔽		
12	Port Filtering 🐱	0	Inbound 🖌	00	TCP 🔽		
	Firewall:	🔍 Enable 💿 Disabl	le				
R	emote Management:	🔍 Enable 💿 Disabl	e(port:8080)				
	IPSec Pass Through:	🔍 Enable 💿 Disabl	e				
	PPTP Pass Through:	🔘 Enable 💽 Disabl	e				

3.3.3 IP/URL Block

Use the IP/URL Block screen to create and apply filters to selectively block traffic from specific IP addresses or specific domain name from passing in and out of your network.

<u>Virtual</u> <u>Servers</u>	Filters	<u>Special</u> <u>Apps</u>	<u>DMZ</u> <u>Host</u>	<u>MAC</u> <u>Clone</u>	<u>Dynamic</u> <u>DNS</u>	<u>Proxy</u> <u>DNS</u>	<u>Routing</u>	<u>SNMP</u>		<u>Basic</u>	Help
		<u> </u>	<u>Block</u> () <u>URL Bla</u>					Use this screen t apply filters that	to create can sel	e and ectively
	IP Block Starting	Address		IP	Block End	ing Addr	ess		block traffic to p	iass in ai	nd out
1	0.0.0	. 0		0	. 0 .	0.0)		the IP addresses	accorum	iy tu
2	0.0.0	. 0		0000							
3	0.0.0	. 0		0000							
4	0.0.0	. 0		0 . 0 . 0 . 0							
5	0.0.0	0000									
6	0.0.0	• 0		0	. 0 .	0.0)				
		Ap	oly Can	cel Clea	r All Help]					

3.3.4 Special Apps(Special Applications)

Use the Special Apps screen to allow certain ports to communicate with computers outside your network. This feature may be necessary for multi-session applications like online gaming and video conferencing.

<u>Vir</u> Ser	<u>tual</u> vers	<u>Filter</u>	<u>s</u> <u>IP/URL</u> <u>Block</u>	<u>Special</u> <u>Apps</u>	<u>DMZ</u> Host	<u>MAC</u> <u>Clone</u>	<u>Dynamic</u> <u>DNS</u>	<u>Proxy</u> <u>DNS</u>	<u>Routi</u>	ng <u>SNMP</u>		Basic	Help
ID	Proto	col	Trigger Po Range	rt Ma A Ir	ximum ctivity iterval	Session Chaining	Chaining on UDP	Addro Replace	ess ment	Address Translation Type	Two Way Only	Use the Speci screen to allo ports to comm	al Apps w certain nunicate
1	TCP	~	21 _ 21		1000	Disable 🗸	Disable 🗸	Disable	•	TCP 🖌	Enable 🔽	your network.	rs outside This
2	TCP	~	1720 <u>-</u> 1720)	10000	Enable 🔽	Disable 🗸	Enable	*	TCP 🖌	Disable 🗸	necessary for	e special
3	TCP	~	00	4	i0	Enable 👻	Enable 👻	Enable	*	TCP 🖌	Enable 🔽	gaming and vi	(e online deo
4	TCP	~	00	-	60	Enable 🐱	Enable 👻	Enable	*	TCP 🖌	Enable 🔽	conferencing.	
5	TCP	~	00	-	i0	Enable 👻	Enable 👻	Enable	*	TCP 🖌	Enable 🔽		
6	TCP	~	00	<u>+</u>	i0	Enable 🔽	Enable 🔽	Enable	*	TCP 🖌	Enable 🐱		
7	TCP	~	00	-	i0	Enable 🐱	Enable 🗸	Enable	*	TCP 🖌	Enable 🐱		
8	TCP	~	00		60	Enable 🔽	Enable 🗸	Enable	*	TCP 🖌	Enable 🐱		
9	TCP	~	00	-	60	Enable 🔽	Enable 👻	Enable	*	TCP 🔽	Enable 🔽		
10	TCP	~	00		i0	Enable 🔽	Enable 🗸	Enable	*	TCP 🖌	Enable 🐱		
11	TCP	~	00		60	Enable 🔽	Enable 🗸	Enable	*	TCP 🖌	Enable 🐱		
12	TCP	~	00	-	60	Enable 🔽	Enable 🔽	Enable	*	TCP 🔽	Enable 🔽		
Apply Cancel Help Popular Applications: select one V Copy to ID: V													

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3.3.5 DMZ Host

Use the DMZ Host screen to expose one or more computers on your network to the internet. This feature is often used for online games that require unrestricted two-way communication. Note that the computer you designate won't have any firewall protection.

<u>Virtual</u>	<u>Filters</u>	IP/URL	Special	DMZ	MAC Clana	Dynamic	Proxy	<u>Routing</u>	<u>SNMP</u>	Basic	Help
<u>Servers</u>		BIOCK	<u>whhs</u>	riose		DIVS	<u>DN3</u>				
	Public 0. 0. 0. 0. 0. 0.	IP Addres 0.0.0 0.0.	55		Ρ	Private IP A 192.168.1 192.168.1 192.168.1 192.168.1 192.168.1 192.168.1	o o o o o o o o o o			Use the DMZ Host screa expose one or more con on your network to the This feature is often us online games that requi unrestricted two-way communication. Note th computer you designate have any firewall protect	en to nputers internet, ed for re at the a won't ction.
AI	pply C:	uncel Hel	P								

3.3.6 MAC Clone

If your ISP restricts service to PCs only, use the Mac Clone feature to copy a PC Media Access Control (MAC) address to your Gateway. This procedure will cause the gateway to appear as a single PC, while allowing online access to multiple computers on your network.

Virtual ServersFiltersIP B	/URL <u>Special</u> <u>DMZ</u> <u>MAC</u> <u>Proxy</u> <u>Routing</u> <u>SNMP</u> lock <u>Apps</u> <u>Host</u> <u>Clone</u> <u>DNS</u> <u>DNS</u> <u>Routing</u> <u>SNMP</u>	<u>Basic</u> Help
WAN Port Mac Address:	00:02:3f:08:41:41	If your ISP restricts service to PCs only, use the Mac Clone feature to copy a PC Media
Current WAN Port Mac Address:	00:08:11:11:11:89	to your Gateway. This procedure will cause the gateway to appear as a single PC, while allowing online access
Factory Default Mac Address:	00:08:11:11:11:89	to multiple computers on your network.
	Mac Clone Restore Help	

3.3.7 Dynamic DNS

Use the Dynamic DNS screen to configure the router to retrieve an IP address from a dynamic DNS provider. These providers allow you to associate a static hostname with a dynamic IP address. This allows you to connect to the Internet with a dynamic IP address and use applications that require a static IP address.

Vietual			Special	DMZ	MAC	Dunamio	Drown					
Servers	<u>Filters</u>	Block	<u>Apps</u>	Host	<u>Clone</u>	Dynamic	DNS	<u>Routing</u>	<u>SNMP</u>		<u>Basic</u>	Help
	Dynam	nic DNS:	🔘 Enab	le 💿 Di	sable					Dynamic DNS p	rovides us	sers a
	Dyna Pr	mic DNS ovider:	DynDNS.org	g 😽						names to comp	p their do uters or s	omain servers.
	Domain	Name:										
1	Account/I	E-mail:										
	Passwor	d/Key:										
			Apply	Cancel	Help							

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3.3.8 Proxy DNS

Use the Proxy DNS screen to map a domain name to its server IP address. This feature acts as a DNS server for the internal and DMZ networks, allowing you to connect to local machines without using an external DNS server. This simplifies network configuration and management.

<u>Virtual</u> <u>Servers</u>	<u>Filters</u>	<u>IP/URL</u> <u>Block</u>	<u>Special</u> <u>Apps</u>	<u>DMZ</u> <u>Host</u>	<u>MAC</u> <u>Clone</u>	<u>Dynamic</u> <u>DNS</u>	<u>Proxy</u> <u>DNS</u>	<u>Routing</u>	<u>SNMP</u>		<u>Basic</u>	Help
			Don	nain Nan	ne		Virtual	IP Addres	55 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Proxy DNS acts for the Internal networks.	as a DNS and DMZ	Server

3.3.9 Routing

Use the Routing screen to configure the routing features. It includes static routing and dynamic routing.

<u>Virtual</u> <u>Servers</u>	<u>Filters</u>	<u>IP/UR</u> Block	L <u>Special</u> <u>Apps</u>	<u>DMZ</u> <u>Host</u>	<u>MAC</u> Clone	<u>Dynamic</u> <u>DNS</u>	<u>Proxy</u> <u>DNS</u>	Routing	<u>SNMP</u>			<u>Basic</u>	Help
Dum			Working Mode:	O Router	r 💿 Gat	eway					Dynamic Routing	and Stati Setting.	С
Dyna	amic Kou	ting: I	Ix: Rx:	Disable 🗸									
			Apply Ca	ncel Help									
			Show Rout	ing Table)								
S	tatic Rout	ting:											
Dest	ination LA	N IP	Subi	net Mask		Gate	way	Нор	Interface				
].	255 . 255	. 255 . 0			[WAN 🗸	<< Add			
	None		I	None		No	ne	None	None	Delete			

3.3.10 SNMP

Use the SNMP screen to edit the Agent information, configure the trap receiver's IP address and Community Names for the SNMP feature. Using SNMP, you can control and monitor the network in a simple way.

<u>Virtual</u> <u>Servers</u>	<u>Filters</u>	<u>IP/URL</u> <u>Block</u>	<u>Special</u> <u>Apps</u>	<u>DMZ</u> <u>Host</u>	<u>MAC</u> <u>Clone</u>	<u>Dynamic</u> <u>DNS</u>	<u>Proxy</u> <u>DNS</u>	<u>Routing</u>)	Bas	<u>ic</u>	Help
		Name: Contact: Location:	SOHO Ro	utêr							SNMP Setting		
SN SN SN SN SN	MP Trap I MP Trap I MP Trap I MP Trap I MP Trap I MP Trap I	Host IP 1: Host IP 2: Host IP 3: Host IP 4: Host IP 5: Host IP 6:		. 0 . 0 . 0 . 0 . 0 . 0	. 0 . 0 . 0 . 0 . 0 . 0								
			Apply	Cancel	Help								
			tommu 1	SNMP Co	: ommunity public		SNMP Ac Read Read-W	rite	< Add Delete]			

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4. Glossary

Ad-Hoc Mode

An Ad-hoc integrated wireless LAN is a group of computers, each has a Wireless LAN adapter, Connected as an independent wireless LAN. Ad hoc wireless LAN is applicable at a departmental scale for a branch or SOHO operation.

BSS ID

A specific Ad hoc LAN is called a Basic Service Set (BSS). Computers in a BSS must be configured with the same BSS ID.

DHCP (Dynamic Host Configuration Protocol)

DHCP is a protocol for dynamically assigning IP addresses to networked computers. With DHCP, a computer can automatically be given a unique IP address each time it connects to a network—making IP address management an easier task for network administrators. When a computer logs on to the network, the DHCP server selects an IP address from a master list and assigns it to the system.

DMZ Host (De-Militarized Zone Host)

DMZ is the portion of a private network that is visible through the network's firewalls. DMZ Host allows a local computer exposed to the Internet. Therefore, an incoming packet will be checked by Firewall and NAT algorithms in the router then pass to the DMZ host when packet is not sent by hacker and is not limited by Virtual Server list. Besides, there are some IP protocols that do not have port number information. There is no way to use Virtual Server setting to forward incoming packet. Thus, DMZ host is the way to forward such kind of packets. If you try to enable DMZ host and setup Virtual Server, the precedence is Virtual Server and then DMZ. For example, the incoming packet will be checked with Firewall rules, Virtual Server rules and

then DMZ host.

DSSS (Direct-Sequencing Spread-Spectrum)

DSSS operate over the radio airwaves in the unlicensed ISM band (industrial, scientific, medical). DSSS uses a radio transmitter to spread data packets over a fixed range of frequency band.

Encryption

It's a security method that applies a specific algorithm to data in order to alter the data appearance and prevent other devices from reading the information.

Firewall

A firewall is a device that sits between your computer and the Internet that prevents unauthorized access to or from your network. A firewall can be a computer using firewall software or a special piece of hardware built specifically to act as a firewall. In most circumstances, a firewall is used to prevent unauthorized Internet users from accessing private networks or corporate LAN's and Intranets.

A firewall watches all of the information moving to and from your network and analyzes each piece of data. Each piece of data is checked against a set of criteria that the administrator configures. If any data does not meet the criteria, that data is blocked and discarded. If the data meets the criteria, the data is passed through. This method is called packet filtering.

A firewall can also run specific security functions based on the type of application or type of port that is being used. For example, a firewall can be configured to work with an FTP or Telnet server. Or a firewall can be configured to work with specific UDP or TCP ports to allow certain applications or games to work properly over the Internet.

Firmware

Program that is inserted into programmable read-only memory (programmable read-only memory), thus becoming a permanent part of a computing device.

Fragmentation Threshold Value

Indicates how much of the network resources are devoted to recovering packet errors. The value should remain at its default setting of 2,432. If you experience high packet error rates, you can decrease this value but it will likely decrease overall network performance. Only minor modifications of this value are recommended.

Fragmentation

Breaking a packet into smaller units when transmitting over a network medium that cannot support the original size of the packet.

IEEE

The Institute of Electrical and Electronics Engineers

IEEE 802.11b/g standard

The IEEE 802.11b/g Wireless LAN standards subcommittee formulates standards for the industry. The objective is to enable wireless LAN hardware from different manufacturers to communicate.

Infrastructure Mode

A client setting provides connectivity to an Access Point. As compared to Ad-Hoc mode where PCs communicate directly with each other, clients set in Infrastructure mode all pass data through a central Access Point. The Access Point not only mediates Wireless network traffic in the immediate neighborhood but also pro-vides communication with the wired network. An integrated wireless and wireless and wired LAN is called an Infrastructure configuration. Infrastructure is applicable to enterprise scale for wireless access to central database, or wireless application for mobile workers.

LAN (Local Area Network)

Local Area Networking (LAN) is the term used when connecting several computers together over a small area such as a building or group of buildings. LAN's can be connected over large areas. A collection of LAN's connected over a large area is called a Wide Area Network (WAN). A LAN consists of multiple computers connected to each other. There are many types of media that can connect computers together. The most common media is CAT.5 cable (UTP or STP twisted pair wire.) On the other hand, wireless networks do not use wires; instead they communicate over radio waves. Each computer must have a Network Interface Card (NIC), which communicates the data between computers. A NIC is usually a 10Mbps network card, or 10/100Mbps network card, or a wireless network card. Most networks use hardware devices such as hubs or switches that each cable can be connected to in order to continue the connection between computers. A hub

simply takes any data arriving through each port and forwards the data to all other ports. A switch is more sophisticated, in that a switch can determine the destination port for a specific piece of data. A switch minimizes network traffic overhead and speeds up the communication over a network.

NAT (Network Address Translation)

For a computer to communicate with other computers on the Internet, it must have an IP address. An IP (Internet Protocol) address is a unique 32-bit number that identifies the location of your computer on a network. However, with the explosion of the Internet, the number of available IP addresses is simply not enough.

This is where NAT comes to the rescue. Network Address Translation allows a single device, such as a router, to act as an agent between the Internet (or "public network") and a local (or "private") network. This means that only a single, unique IP address is required to represent an entire group of computers.

Roaming

The ability to use a wireless device is able to move from one access point range to another without losing the connection.

RTS/CTS Threshold Value

It should remain at its default setting of 2,347. A preamble is a signal used to synchronize the transmission timing between two or more systems. A series of transmission pulses is sent before the data to indicate that someone is about transmit data. This ensures that systems receiving the information correctly when the data transmission starts.

Shared Key

It's when both the sender and recipient share a secret key. Both units use this key for an extended length of time, sometimes indefinitely. Any eavesdropper that discovers the key may decipher all packets until the key is changed.

Signal Strength

The signal level indicates the strength of the signal as received at the wireless network interface.

SSID (Service Set Identifier)

It's the unique name shared among all points in a wireless network. The SSID must be identical for all points in the network. It is case sensitive and must not exceed 32 characters.

TCP/IP

Transmission Control Protocol (TCP) with Internet Protocol (IP). The main internetworking protocol used in the Internet.

UDP (User Datagram Protocol)

UDP provides a procedure for application programs to send messages to other programs with a minimum of protocol mechanism. The protocol is transaction oriented, and delivery and duplicate protection is not guaranteed. Applications requiring ordered reliable delivery of streams of data should use the TCP.

What is Router?

A router is a device that forwards data packets from a source to a destination. Routers forward data packets using IP addresses and not a MAC address. A router will forward data from the Internet to a particular computer on your LAN. A router also determines the best route that data packets should follow to ensure that the data packets are delivered properly.

WEP (Wired Equivalent Privacy)

A data privacy mechanism based on a 40 bit shared key algorithm, as described in the IEEE 802 .11 standard. The optional cryptographic confidentiality algorithm specified by IEEE 802.11 used to provide data confidentiality that is subjectively equivalent to the confidentiality of a wired LAN medium that does not employ cryptographic techniques to enhance privacy.

WPA (Wi-Fi Protected Access)

Wi-Fi Protected Access, a specification to improve the security level of wireless networks. It uses 802.1x and EAP to control network access. Temporal Key Integrity Protocol (TKIP) is

used to secure data during transmission.

5. TCP/IP Port List for Internet Service

The list of TCP/IP Port for Internet service is as following table. Please note that the list is just for your reference. You may check the service provider's manual to see more details.

Service Name	TCP	UDP	Notes
AOL	5190-5193	5190-5193	American OnLine
AOL ICQ	5190, dyn >=1024		Message
AOL Instant Messenger	5190	5190	American OnLine
Citrix ICA	1494, dyn >=1023	1604, dyn	Remote application
		>=1023	access
DirectX Gaming	47624, 2300-2400	47624,	many network games
		2300-2400	
Distributed.Net RC5/DES	2064		Distributed computation
DNS		53	Domain name Service
Doom	666	666	Network game
FTP	21		File Transfer Protocol
Glimpseserver	2001		Search engine
Gopher	70		
H.323 Host Call	1720	1720	H.323 host call
HTTPs	443		Secure HTTP (SSL)
ichat client, server	4020	4020	Chat rooms
ICU II	2000-2003		Videoconferencing
iSpQ	2000-2003		Videoconference
LDAP	389	389	Lightweight Directory
			Access Protocol
Mirabilis ICQ	dyn >=1024	4000	Locator, chat
MS ICCP	1731	1731	Audio call control
			(Microsoft)
MS Netmeeting	dyn >=1024,	dyn >=1024	Video conference
MS NetShow	1755	1755	Streaming video
MSN Gaming Zone	28800-29000	28800-29000	Network Game
MSN Messenger	1863		Instant messenging
Netscape Conference	6498, 6502	2327	Audio conference
NNTPs	563		Secure NNTP news
			(SSL)

Palm Computing Network	14237	14238	Data synchronization
Hotsync			
pcAnywhere	5631	5632	Remote control
POP3	110		Post Office Protocol
			Version 3
QuickTime 4	RTSP	RTP	Streaming audio, video
Real Audio & Video	RTSP, 7070	6970-7170	Streaming audio and
			video

Remotely Possible	799		Remote control software
(ControlIT)			by CA
RTSP	554		Real Time Streaming
			Protocol
SMTP	25		Simple Mail Transfer
			Protocol
SOCKS	1080		Internet proxy
Squid	3128	3130	Web proxy cache
SSH	22		Secure Shell
Telnet	23		
Timbuktu	1417-1420	407	Remote control
ULP	522	522	User Location Protocol
Virtual Places	1533		Conferencing
VocalTec Internet Phone	1490, 6670,	22555	Video conference
	25793		
Win MX	6399	6399	Peer to Peer file
			exchange
Xing StreamWorks		1558	Streaming video
Yahoo Messenger –	5050		Message
messages			
Yahoo Messenger –	5100		Video
Webcam			

 Above TCP/IP Port List is from the following web page: http://www.akerman.ca/port-table.html (The copyright is belong to the writer of the web)

FCC Statement

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions in this manual, may cause interference to radio communications. This equipment has been tested and found to comply with the limits for a class B computing device pursuant to Subpart J of Part 15 of the FCC rules, which are designed to provide reasonable protection against radio interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures are necessary to correct the interference.



WARNING! Any changes or modifications to this product not expressly approved by the manufacturer could void any assurances of safety or performance and could result in violation of Part 15 of the FCC Rules.

CE Declaration of conformity

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55022 class B for ITE and EN 50082-1. This meets the essential protection requirements of the European Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

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