

Square One

User's Guide



This User's Guide is needed for general use and installation.
Please keep it for your future reference.

Copyright

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Safety Instructions and Precautions

Please read the safety instructions and precautions below carefully before using Square One.



Installation Safety Precautions

- Use grounded socket/outlet.
- Use rated voltage as indicated in the manual.
- Place Square One where there is good ventilation condition (At least 3.9 inches away from a wall).
- Do not place Square One where it could be exposed to high temperature or direct sun light.
- Install where there is no electromagnetic interference.
- Do not put wet or heavy objects on Square One.
- Do not install or leave Square One, power cable, or LAN cables in pass through areas.
- Do not install Square One where there is moisture (eg. bathroom, rain, or splashes of water).
- Do not place Square One near any magnetic objects.
- Keep Square One out of reach from infants or children.
- Only use good quality standard cables.
- Install on a level and stable surface.
- Do not install where the product may fall.

Hard Disk Drive Handling Precautions

- The Hard Disk Drive is a very sensitive device that may become faulty due to external environments or impact during use.
- Any damages to or loss in data resulting from damages to Hard Disk Drive caused by user negligence or external environment will be the sole responsibility of the user and ITian Corporation will not be responsible for any such damages or loss.
- Make sure to back up important data from Hard Disk Drive as ITian Corporation will not be responsible for any damages or loss caused by data loss.

Power Precautions

- Do not use multiple power plugs on a single socket and make sure that the plugs are inserted fully so they may not move.
- Do not touch power plug with wet hands.
- Make sure power cable is not forcefully bent, pulled, or pressed by heavy objects.
- Unplug the power cable and store it separately when not in use for a prolonged period of time
- Unplug the power cable and disconnect the power during lightening and thunder strikes.
- Do not use damaged power cable, plug, or worn out socket.

Handling Precautions

- Do not insert foreign object through product vents and holes.
- Keep product packaging materials out of reach of children.
- Do not place containers of liquids such as water, juice, or coffee on the product.
- Disconnect power plug before cleaning, and do not splash with water directly, or wipe with benzene, thinner, or alcohol
- If you detect smoke or any abnormal smell from the product, immediately disconnect and remove the power cable from the product and contact our customer service center.
- Do not block the product's vents.
- Keep product packaging materials out of reach from infants and children.
- Be careful in handling product packaging materials, there are sharp corners.
- Power off the product and disconnect power cable before moving the product, and do not move the product during use.
- Do not drop product and do not apply any impact to the product.
- Do not disassemble, repair, or modify the product.
- Do not use within a vehicle.

FCC Notice – Class B

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

WARNING

While installing and operating this transmitter and antenna combination the radio frequency exposure limit of $1\text{mW}/\text{cm}^2$ may be exceeded at distances close to the antennas installed. Therefore, **the user must maintain a minimum distance of 20 cm from the antenna.**



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1. Square One Product Overview

1.1. Introduction

Square One Personal Internet Server is a revolutionary network appliance that combines network storage, broadband router, hardware firewall, print server, and Web server—all in one compact, easy-to-manage box. Square One gives you everything you need to share an Internet connection among several computers, backup and share files on the network, share a USB printer, access your files from the Internet, and even host your own Web site or blog. Square One also features a built-in memory card reader, and the included Memeo AutoBackup software backs up your precious files to Square One continuously and transparently while you work.

1.2. Features

- **High Capacity Network Drive**
Square One's internal large capacity hard drive provides convenient backup and storage for Windows, Linux, and Mac OS clients through an industry-standard Samba interface. Administrators can define folder access permissions for individual users and groups. Award-winning Memeo software is included for instant, automatic backup from Windows PCs.
- **Broadband Router**
Square One also acts as a Network Address Translation (NAT) router and hardware firewall, allowing a single public IP address to provide secure Internet connectivity for up to 250 computers. In addition to the integral 4-port 10/100 Mbps switch, a special DMZ port lets advanced users run public servers behind the Stateful Packet Inspection (SPI) firewall without compromising the security of the rest of the network.
- **Printer Sharing**
With its USB port and integral print server, Square One turns an inexpensive USB printer into a shareable IP-based printer. Print from any computer on the network as if the printer were directly attached to it.

- **Web Server**

Despite its small size, Square One is a potent Web server. With Apache HTTP Server, PHP, and MySQL all preinstalled, Square One is ready to serve up the most advanced Web sites, right out of the box. And with Square One's built-in router directly connected to the Internet, there's no need to set up port forwarding to make your Web site visible to the world.

- **Network Card Reader**

Insert a memory card into Square One's built-in card reader, and its contents appear as a shared folder on the network drive. CompactFlash (Type I & II), SD/MMC, xD, Memory Stick, MS Pro, and SmartMedia formats are all supported.

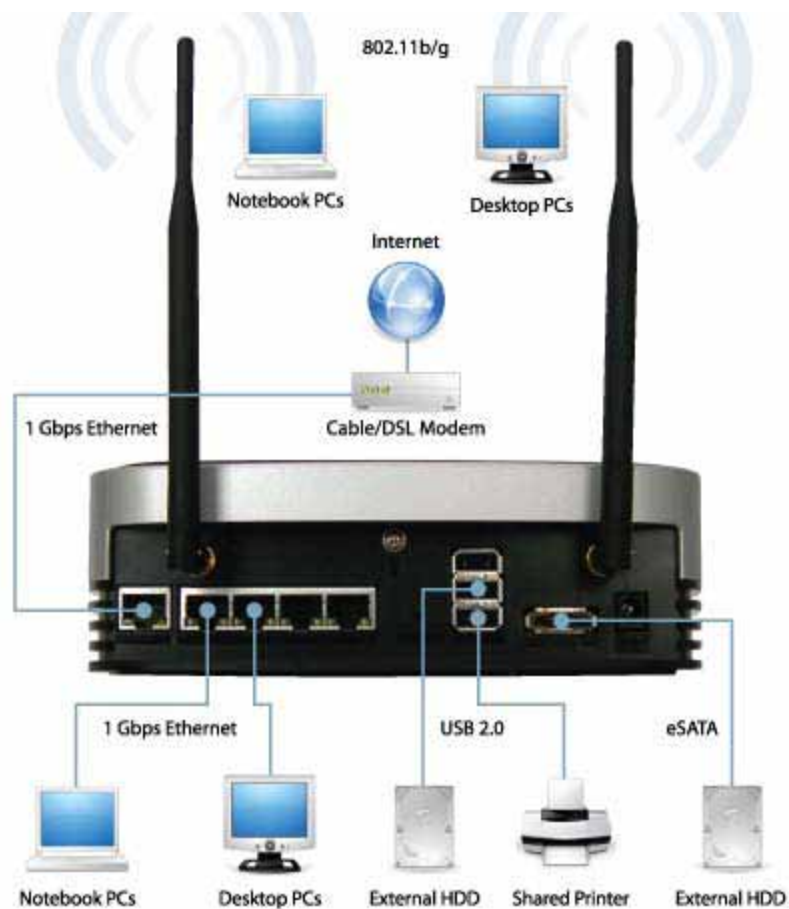


Figure 1-1 Networking with Square One

1.3. Specifications

Specifications	
Product Name	Square One Personal Server SQ201-W
Hard disk interface	7200-RPM SATA Fluid Dynamic Bearing
Processor	300-MHz ARM9 32-bit RISC CPU w/ 16KB L1 cache
Memory	128 MB DDR SDRAM / 16 MB Flash ROM
Network interfaces	1 x Gigabit Ethernet WAN/NA5 port 4 x Gigabit Ethernet LAN ports 802.11 b/g Wireless (Wi-Fi)
Expansion ports	3 x USB 2.0 (supports hard drives, thumb drives, printers, and memory card readers) 1 x eSATA (supports hard drives)
External drive support	FAT32, NTFS, XFS, ext2, ext3
Internet services	Web server, WebDAV, FTP, SFTP, Telnet, SSH, Samba, VPN
Installed applications	site builder, blog server, BBS, web drive, P2P client, Casgle multimedia download client
Dimensions	62 x 200 x 200 millimeters (2.44 x 7.87 x 7.87 inches) HWD
Weight	1.3 kg (2.87 lbs)
Power	Adapter input: 90–220V AC, 50/60 Hz Adapter output: 12V DC, 4A Max power consumption: 24W
Certifications	FCC Class B, CE, MIC Class A, VCCI, CTick
Operating temperatures	0° - 40° C (32° - 104° F)
Warranty	1 year

Feature Comparison			
	Square One Personal Server	Typical Network Drive	Typical SOHO Server
Network			
Expandable File Storage	YES		YES
Wireless Router	YES		
SPI Firewall	YES		
Print Server	YES		YES
Services & Applications			
Remote File Access	YES		YES
Web Server	YES		YES
Mail Server	YES		YES
Pre-Installed Web Applications	YES		
Pre-Installed PHP/MySQL Support	YES		
P2P Downloading Support	YES		
Other			
Browser-based Administration	YES	YES	
Upgradeable Firmware	YES	YES	
Upgradeable Software	YES		YES

Table 1-1 Square One Specifications

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Note!

Your Square One's performance may vary depending on the quality of your Internet connection type, bandwidth, transmission length, line characteristics, and other environmental characteristics.

.....

1.4. Package Contents

The Square One package contains the following. If any of the contents shown below are missing, inquire at the place of purchase.



Square One Main Body – 1EA



LAN Cable – 1EA



Power Adapter – 1EA



USB Cable – 1EA



Power Cable – 1EA



Antenna – 2EA
(Wireless model only)



Square One User's Guide - 1EA

1.5. Product Exterior

Front View



Figure 1-2 Front

- ① Wireless LAN Activity Indicator (Used only in the wireless version)
- ② Hard Disk Activity Indicator
- ③ Power Activity Indicator
- ④ Memory Card Indicator
- ⑤ Network Status Indicator
- ⑥ Power Button (Press to power on; hold down for 5 seconds and release to power off.)

Indicator	Solid	Blinking
Wireless LAN	Wireless client(s) connected	Wireless LAN transmitting data
Hard Disk	-	Accessing HDD
Power	System is on	-
Memory Card	Memory card inserted	Memory card transmitting data
Network Status	Connected to a network	Connecting to network

Table 1-2 LED Indicator Meanings

Rear View

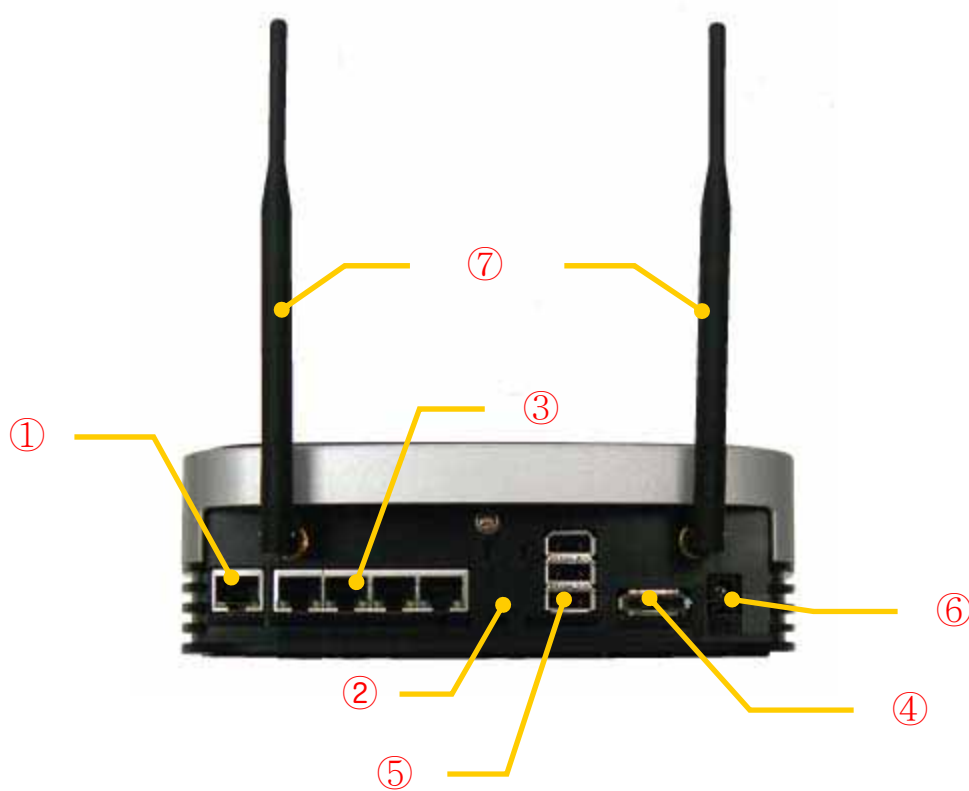


Figure 1-4 Rear

- ① WAN port
- ② System Reset Button
- ③ LAN port
- ④ E-SATA
- ⑤ USB Hub port
- ⑥ Power connector(12V/4A)
- ⑦ Wireless LAN Antenna

2. Preparing Your PCs

Before you can install Square One to your network, you should make sure that each computer that will connect to Square One has an Ethernet network adapter. You may choose to connect a Wi-Fi wireless access point to Square One and connect your PCs to Square One wirelessly via the access point.

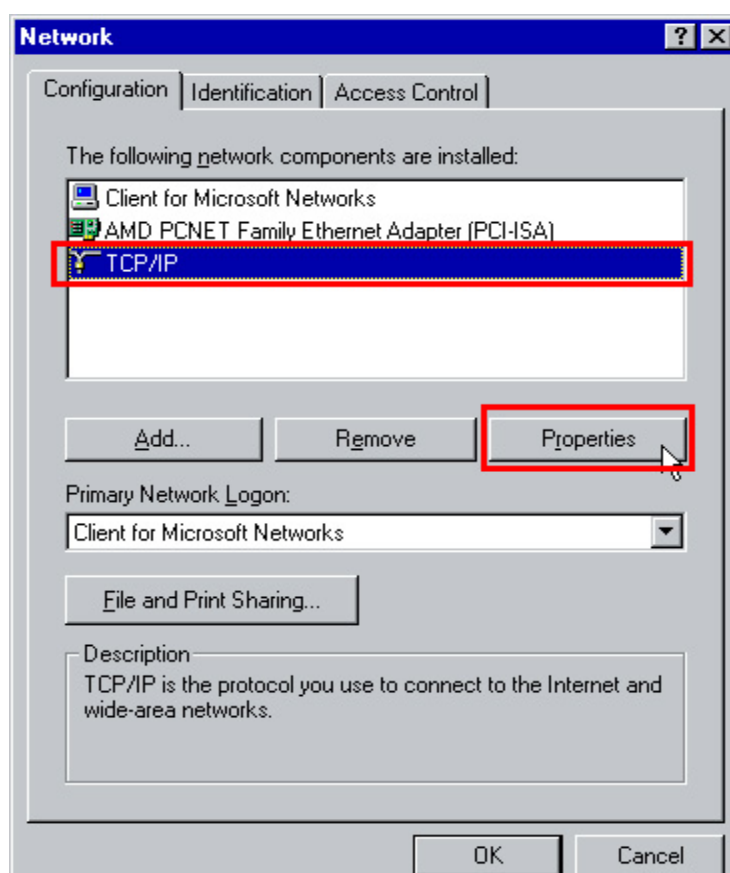
You should configure each computer that will connect to Square One to obtain an IP address automatically from a DHCP server. The instructions below are for computers running Microsoft Windows and networking with an Ethernet adapter. If your computer runs Mac OS or Linux, or connects to the network wirelessly, please refer to appropriate networking documentations.

2.1. PCs Running Windows 95/98/Me

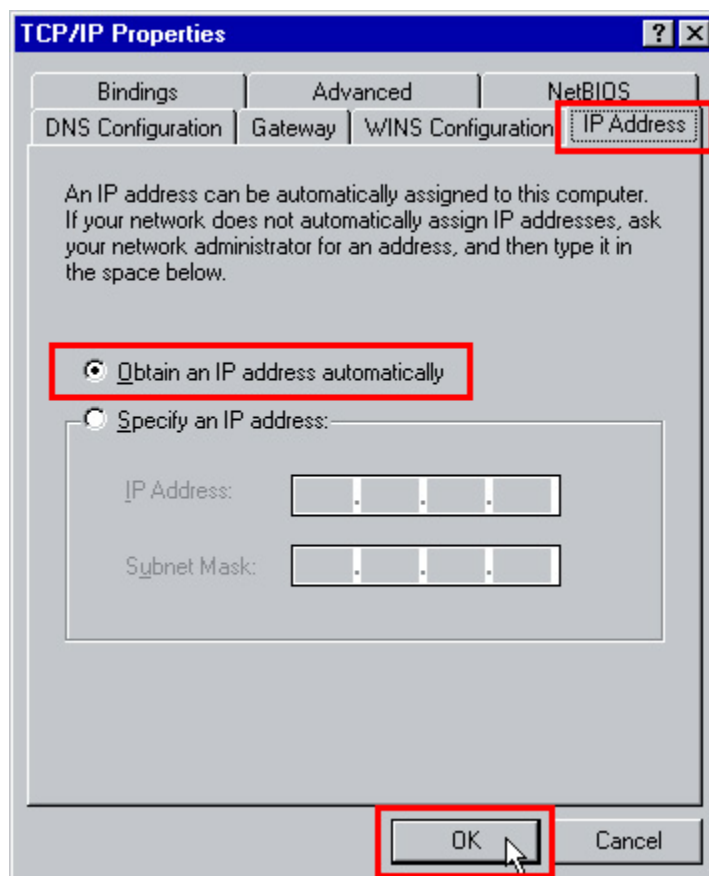
1. Click Start > Settings > Control Panel > Network.



2. Select **TCP/IP** and click on the **Properties** button as shown below.



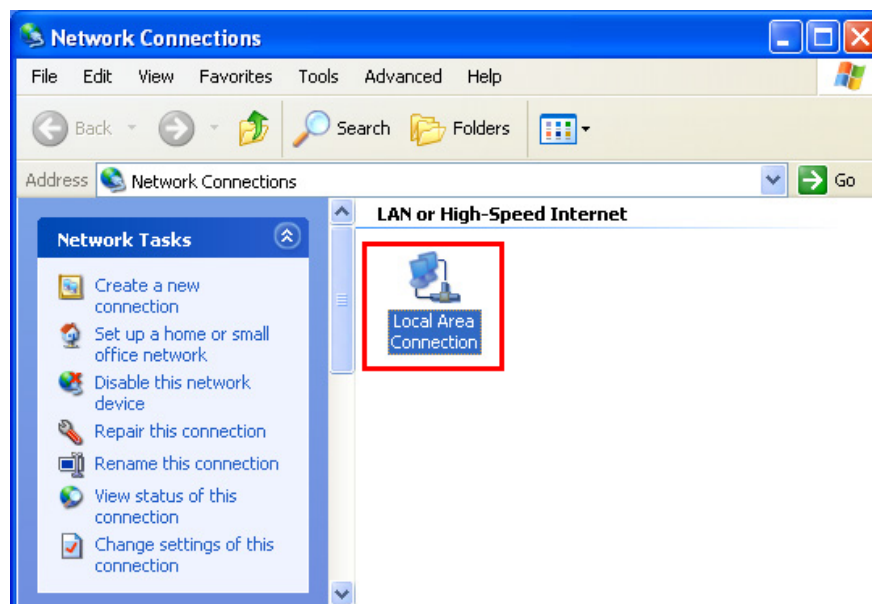
3. Select the **IP Address** tab and select **Obtain an IP address automatically**, then click **OK** as shown below.



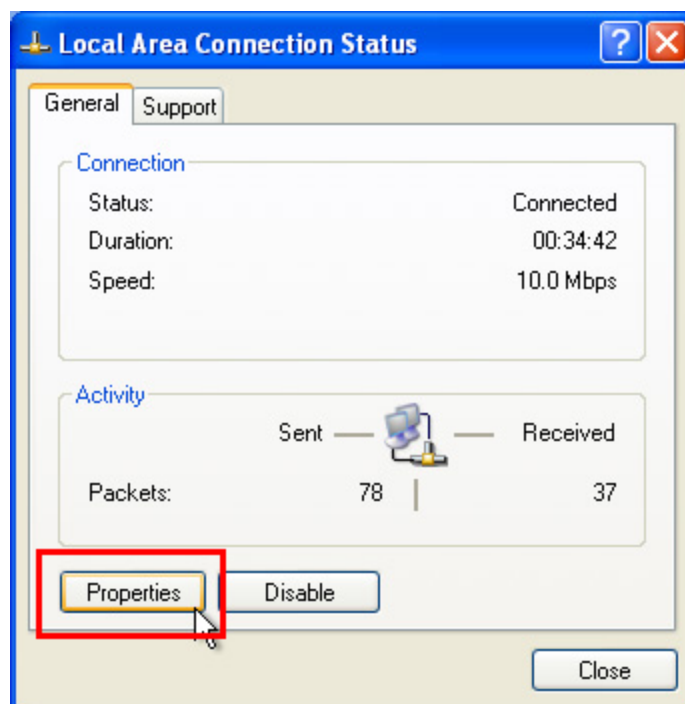
4. Restart the computer. Go to Section 3 to install Square One.

2.2. PCs Running Windows 2000/XP

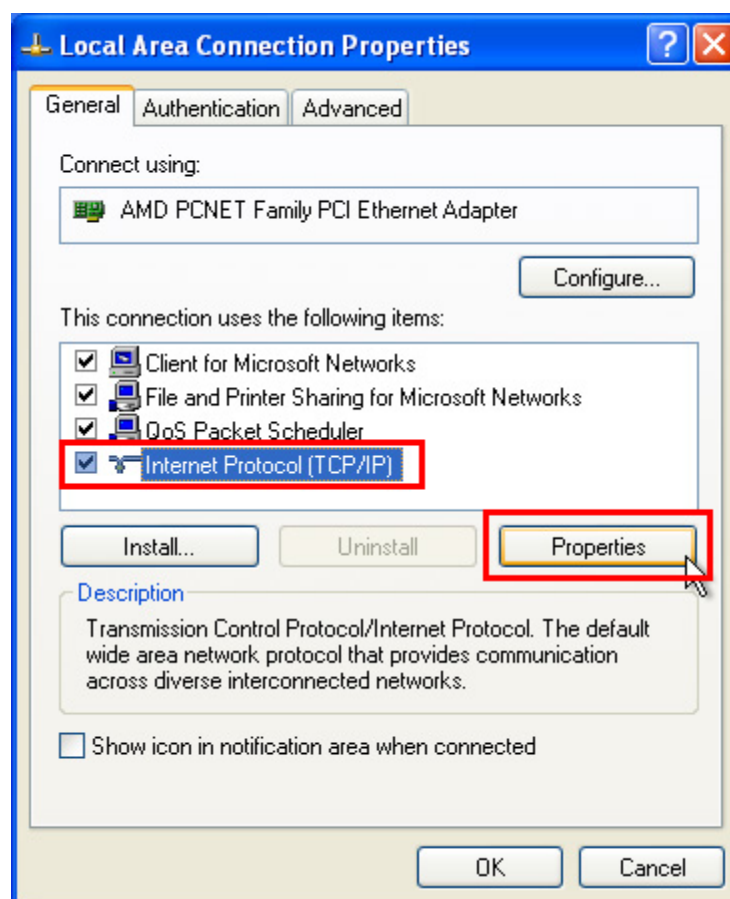
1. Click **Start > Control Panel > Network Connections**.
2. Right-click **Local Area Connection**.



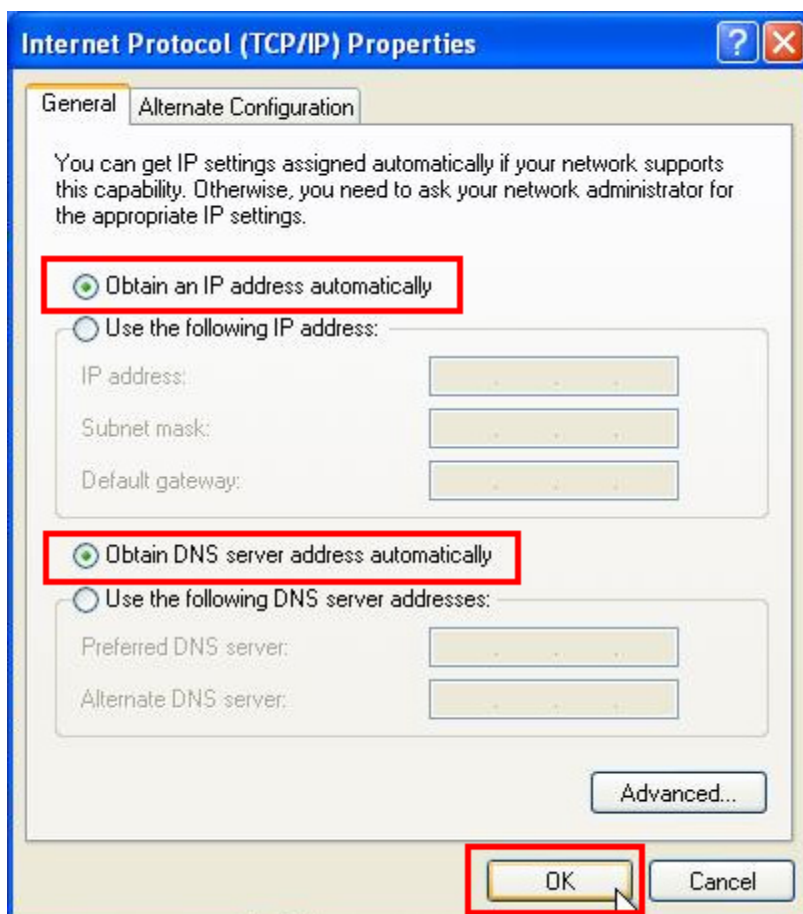
3. Click on the **Properties** button as shown below.



4. Select **Internet Protocol (TCP/IP)** and click on the **Properties** button as shown below.



5. Select **Obtain an IP address automatically** and **Obtain DNS Server address automatically** and click **OK** as shown below.

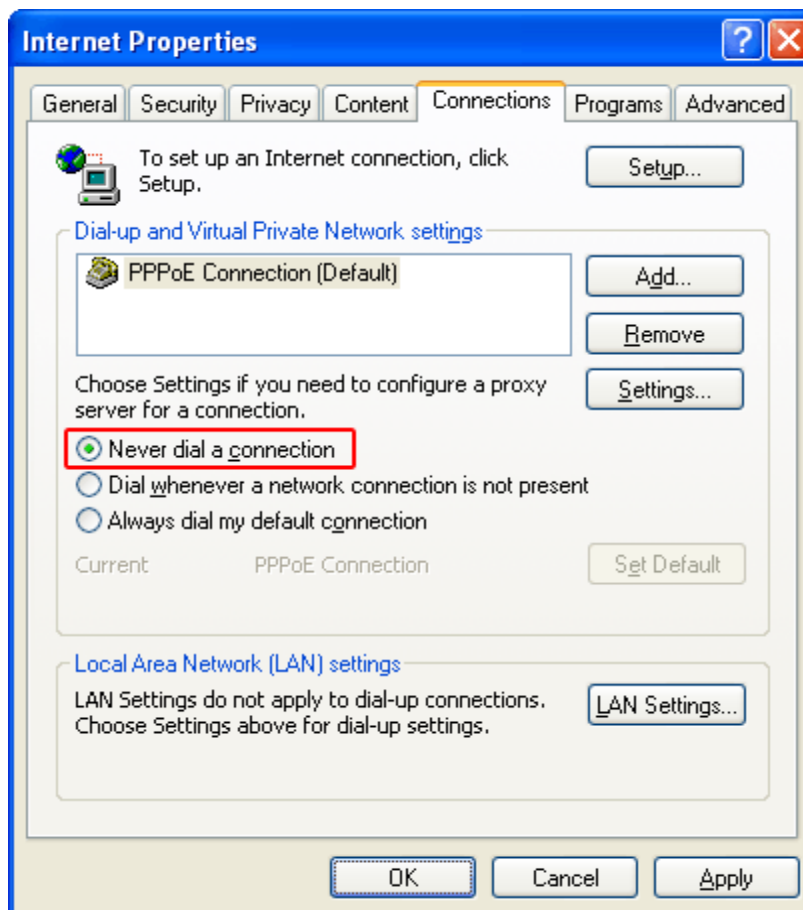


6. Connection status can be checked by clicking **Start > Settings > Control Panel > Network Connections > Local Area Connection > Support Tab**.
7. Go to Section 3 to install Square One.

Note!

For PPPoE Users: If your Internet connection uses Point-to-Point Protocol over Ethernet (PPPoE), you will need to disable the PPPoE login window, since PPPoE login will be handled from now on by Square One.

1. On the **Start** menu, click **Control Panel**, and then double-click **Internet Options**.
2. On the **Connections** tab, select **Never dial a connection**, and then click **OK**.



3. Connecting Square One

Once you have finished preparing your PCs, you are ready to connect Square One to your network. Follow the instructions below.

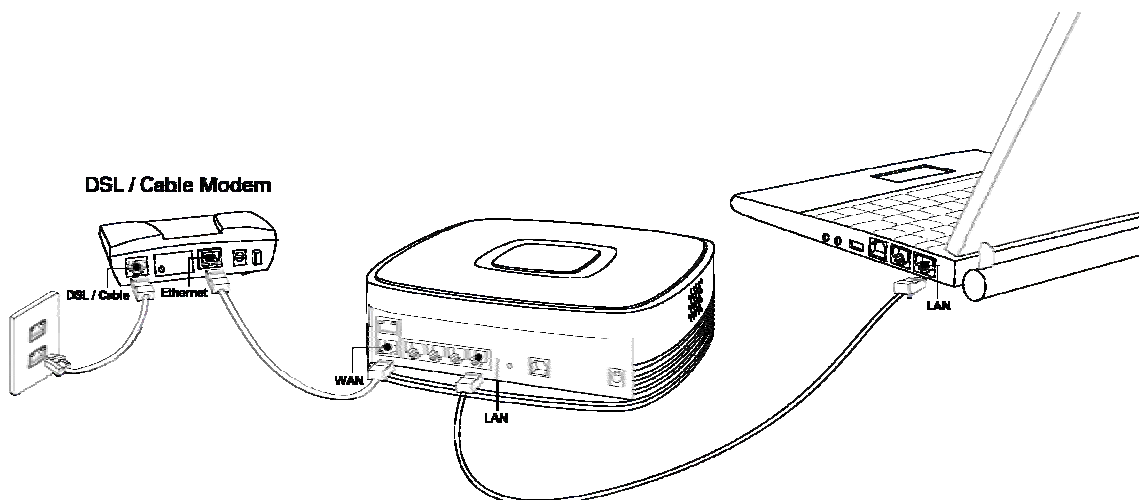


Figure 2-1 Connecting Square One

1. Using the supplied Ethernet cable or another Ethernet cable (Cat 5 or higher), connect your DSL/cable modem to the WAN port on the back of Square One.
2. Connect Square One's AC adaptor to the power port on Square One and plug the adaptor into an electrical outlet.
3. Turn Square One on by pressing the chrome button on its front.
4. Plug one end of an Ethernet cable (Cat 5 or higher) into one of the four LAN ports on the back of Square One, and plug the other end into your computer's LAN or Ethernet port.

.....
Note!

If more than four PCs need to be connected to Square One, a hub or switch may be connected to one of the four LAN ports and PCs can be connected to the hub or switch. By adding hubs or switches, up to 253 PCs can share the Internet connection through Square One.

4. Configuring Square One

This section contains the instruction on configuring Square One. Before you configure your Square One, determine the type of your Internet connection before configuring Square One.

- If you have cable Internet service, no extra information is needed.
- If you have DSL Internet service with PPPoE, the user ID and the password that were assigned to you by your Internet Service Provider (ISP) are required.
- If a static IP address is used to connect to the Internet, the IP address, subnet mask, default gateway, and primary & secondary DNS server addresses provided by your Internet Service Provider are required.

.....

Note!

If a DSL service with PPPoE is being used for connecting to the Internet and a connection program supplied by your ISP is used to connect to the Internet, the connection program must be removed from your PC.

.....

4.1. Using the Setup Wizard

Based on the type of your Internet connection, go to the appropriate sections listed below to configure your Square One.

- DSL/cable broadband connection
 - ① 4-2-1. Connecting to Square One Administrator Interface
 - ② 4-2-2. Setting Up for DSL/Cable Broadband Internet
- DSL connection using PPPoE
 - ① 4-2-1. Connecting to Square One Administrator Interface
 - ① 4-2-3. Setting Up for DSL with PPPoE
- Static IP connection
 - ① 4-2-1. Connecting to Square One Administrator Interface
 - ② 4-2-4. Setting Up for Internet Connection with Static IP Address
- PPTP connection
 - ① 4-1-1. Connecting to Square One Administrator Interface
 - ③ 4-1-5. Setting Up for PPTP

4.1.1. Connecting to the Square One Administrator Interface

1. Open your web browser and enter the address below in the web browser's **Address** field as shown, and press **Enter**.

http://192.168.10.1:666

2. In the user authentication window, type in the following user name and password and click **OK**.
 - **User name:** admin
 - **Password:** admin



3. When the Welcome page opens, click the **Configuration Wizard** button.



4. When Configuration Wizard page opens, click **Next**.



4.1.2. Setting Up for DSL/Cable Internet

If you connect to the Internet via DSL or cable without any user name or password, follow the steps in this section.

1. Select **Dynamic IP** as the connection type, and then click **Next**.



2. In most cases, you do not need to perform MAC cloning and just click **Next** at this step. A MAC address is a physical address of a network card. If your ISP requires you to connect to their network from one authorized PC, you must “clone” the MAC address of that PC’s network card so that Square One may assume the authorized MAC address. Fill in the Mac Address field, If ISP authenticates using MAC address of LAN card that was connected previous type in the MAC address of LAN card that was connected. Then click the **Next** button.



3. Type in the **Host Name** and **IP address** that you wish to assign to Square One for identification within the local network, then click **Next**. You may select any host name. (Examples: Home, Frank, or Smith). The IP address should come from one of the ranges of IP addresses that are reserved for private networks. By convention, private IP addresses are selected from one of the following ranges:

- 192.168.0.1 through 192.168.255.255
- 172.16.0.1 through 172.31.255.255
- 10.0.0.1 through 10.255.255.255

For example, you could set the IP address to 192.168.12.1 or 172.16.29.100. The default value of 192.168.1.1 is suitable for most users.



- This screen allows you to configure the method of assigning IP addresses to the PCs that connect to Square One and share the Internet connection. If you wish to let Square One dynamically allocate IP addresses to the PCs, answer **Yes** to the question: **Enable DHCP?** You may also specify the range of IP addresses (from 0 to 255) that can be assigned dynamically by Square One. Dynamically assigned IP addresses are valid for the specified lease duration. After the lease duration, new addresses are assigned. If you are not sure what settings you need here, we recommend that you leave the settings as shown below. After configuring DHCP, click **Next**.



.....

Note! If you do not enable DHCP, you will need to assign a static IP address to each PC that connects to Square One.

.....

- If you are satisfied with the choices you made in the configuration wizard, select **Yes** to apply the settings and click **Next**. If you wish to go back to previous screens to change any of your selections, click the **Previous** button until you get to the screen that you wish to mo, click the **Previous** button until you get to the section you wish to modify.



- To make the new settings take effect, click the **Yes** button to restart Square One. It may take a few minutes to restart Square One.



7. After completing the configuration wizard once, you will see the following screen when you go to the administrator's interface at **http://192.168.1.1:8090** and log in. You can always run the configuration wizard again by clicking the **Configuration Wizard** button at this screen.



4.1.3. Setting Up for DSL with PPPoE

If you connect to the Internet using PPPoE with a user name and password assigned by your ISP, follow the steps in this section.

1. Select **ADSL-PPPoE** as the Internet connection type and click **Next**.



2. Type in the user ID and password provided by your ISP. You may choose to have Square One connect to the Internet always by selecting **Always on** for **Connection type**, or specify the number of seconds after which Square One disconnects from the Internet. Click **Next** when finished.



3. In most cases, you do not need to perform MAC cloning and just click **Next** at this step. A MAC address is a physical address of a network card. If your ISP requires you to connect to their network from one authorized PC, you must “clone” the MAC address of that PC’s network card so that Square One may assume the authorized MAC address. Fill in the Mac Address field, If ISP authenticates using MAC address of LAN card that was connected previous type in the MAC address of LAN card that was connected. Then click the **Next** button.



4. Type in the **Host Name** and **IP address** that you wish to assign to Square One for identification within the local network, then click **Next**. You may select any host name. (Examples: Home, Frank, or Smith). The IP address should come from one of the ranges of IP addresses that are reserved for private networks. By convention, private IP addresses are selected from one of the following ranges:

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- 172.16.0.1 through 172.31.255.255
- 10.0.0.1 through 10.255.255.255

For example, you could set the IP address to 192.168.12.1 or 172.16.29.100. The default value of 192.168.1.1 is suitable for most users.



- This screen allows you to configure the method of assigning IP addresses to the PCs that connect to Square One and share the Internet connection. If you wish to let Square One dynamically allocate IP addresses to the PCs, answer **Yes** to the question: **Enable DHCP?** You may also specify the range of IP addresses (from 0 to 255) that can be assigned dynamically by Square One. Dynamically assigned IP addresses are valid for the specified lease duration. After the lease duration, new addresses are assigned. If you are not sure what settings you need here, we recommend that you leave the settings as shown below. After configuring DHCP, click **Next**.



.....

Note!

If you do not enable DHCP, you will need to assign a static IP address to each PC that connects to Square One.

.....

6. If you are satisfied with the choices you made in the configuration wizard, select **Yes** to apply the settings and click **Next**. If you wish to go back to previous screens to change any of your selections, click the **Previous** button until you get to the screen that you wish to mo, click the **Previous** button until you get to the section you wish to modify.



7. To make the new settings take effect, click the **Yes** button to restart Square One. It may take a few minutes to restart Square One.



8. After completing the configuration wizard once, you will see the following screen when you go to the administrator's interface at **http://192.168.1.1:8090** and log in. You can always run the configuration wizard again by clicking the **Configuration Wizard** button at this screen.



4.1.4. Setting Up for Internet Connection with Static IP Address

If you connect to the Internet with a fixed IP address, follow the steps in this section.

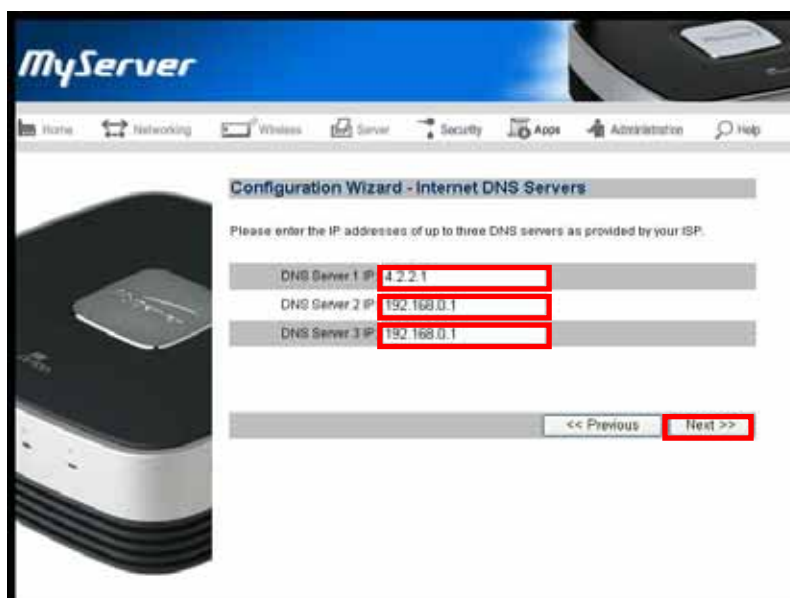
1. Select **Static** as your connection type and click the **Next** button.



2. Type in the IP address, subnet mask, and gateway address provided by your ISP or network administrator and click **Next**.



3. Type in the domain name server's IP addresses (DNS Server IPs) provided by your ISP or network administrator and click **Next**.



4. In most cases, you do not need to perform MAC cloning and just click **Next** at this step. A MAC address is a physical address of a network card. If your ISP requires you to connect to their network from one authorized PC, you must “clone” the MAC address of that PC’s network card so that Square One may assume the authorized MAC address. Fill in the Mac Address field, If ISP authenticates using MAC address of LAN card that was connected previous type in the MAC address of LAN card that was connected. Then click the **Next** button.



5. Type in the **Host Name** and **IP address** that you wish to assign to Square One for identification within the local network, then click **Next**. You may select any host name. (Examples: Home, Frank, or Smith). The IP address should come from one of the ranges of IP addresses that are reserved for private networks. By convention, private IP addresses are selected from one of the following ranges:

- 192.168.0.1 through 192.168.255.255
- 172.16.0.1 through 172.31.255.255
- 10.0.0.1 through 10.255.255.255

For example, you could set the IP address to 192.168.12.1 or 172.16.29.100. The default value of 192.168.1.1 is suitable for most users.



6. This screen allows you to configure the method of assigning IP addresses to the PCs that connect to Square One and share the Internet connection. If you wish to let Square One dynamically allocate IP addresses to the PCs, answer **Yes** to the question: **Enable DHCP?** You may also specify the range of IP addresses (from 0 to 255) that can be assigned dynamically by Square One. Dynamically assigned IP addresses are valid for the specified lease duration. After the lease duration, new addresses are assigned. If you are not sure what settings you need here, we recommend that you leave the settings as shown below. After configuring DHCP, click **Next**.



.....

Note! If you do not enable DHCP, you will need to assign a static IP address to each PC that connects to Square One.

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- If you are satisfied with the choices you made in the configuration wizard, select **Yes** to apply the settings and click **Next**. If you wish to go back to previous screens to change any of your selections, click the **Previous** button until you get to the screen that you wish to mo, click the **Previous** button until you get to the section you wish to modify.



- To make the new settings take effect, click the **Yes** button to restart Square One. It may take a few minutes to restart Square One.



9. After completing the configuration wizard once, you will see the following screen when you go to the administrator's interface at **http://192.168.1.1:8090** and log in. You can always run the configuration wizard again by clicking the **Configuration Wizard** button at this screen.



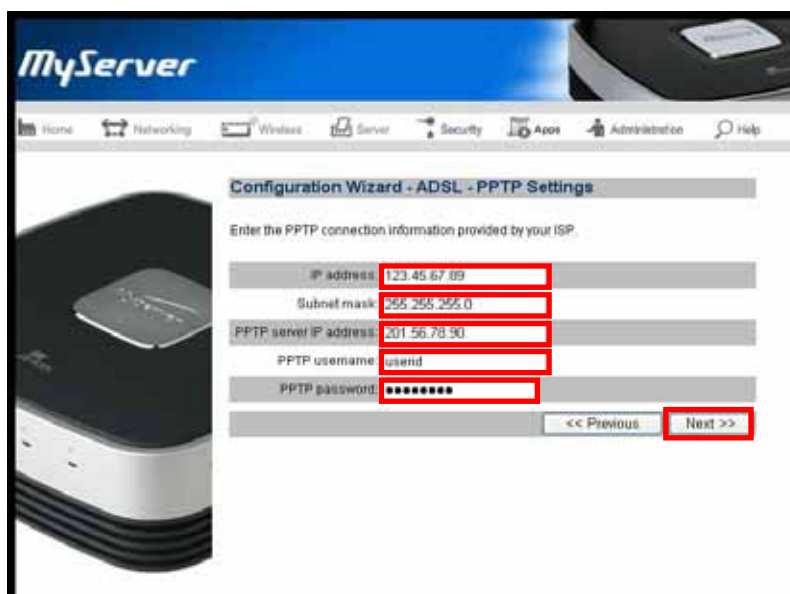
4.1.5. Setting Up for a PPTP Connection

Point to point Tunneling Protocol (PPTP) is typically used in Europe. If you connect to the Internet using PPTP, follow the steps in this section.

1. Select **ADSL-PPTP** as your connection type and click **Next**.



2. Type in the IP address, subnet mask, PPTP server's IP address, PPTP user name, and PPTP password assigned by your ISP and click **Next**.



MyServer

Home Networking Wireless Server Security Apps Administration Help

Configuration Wizard - ADSL - PPTP Settings

Enter the PPTP connection information provided by your ISP.

IP address: 123.45.67.89

Subnet mask: 255.255.255.0

PPTP server IP address: 201.56.78.90

PPTP username: usend

PPTP password: *****

<< Previous Next >>

3. In most cases, you do not need to perform MAC cloning and just click **Next** at this step. A MAC address is a physical address of a network card. If your ISP requires you to connect to their network from one authorized PC, you must “clone” the MAC address of that PC’s network card so that Square One may assume the authorized MAC address. Fill in the Mac Address field, If ISP authenticates using MAC address of LAN card that was connected previous type in the MAC address of LAN card that was connected. Then click the **Next** button.



4. Type in the **Host Name** and **IP address** that you wish to assign to Square One for identification within the local network, then click **Next**. You may select any host name. (Examples: Home, Frank, or Smith). The IP address should come from one of the ranges of IP addresses that are reserved for private networks. By convention, private IP addresses are selected from one of the following ranges:

- 192.168.0.1 through 192.168.255.255
- 172.16.0.1 through 172.31.255.255
- 10.0.0.1 through 10.255.255.255

For example, you could set the IP address to 192.168.12.1 or 172.16.29.100. The default value of 192.168.1.1 is suitable for most users.



- This screen allows you to configure the method of assigning IP addresses to the PCs that connect to Square One and share the Internet connection. If you wish to let Square One dynamically allocate IP addresses to the PCs, answer **Yes** to the question: **Enable DHCP?** You may also specify the range of IP addresses (from 0 to 255) that can be assigned dynamically by Square One. Dynamically assigned IP addresses are valid for the specified lease duration. After the lease duration, new addresses are assigned. If you are not sure what settings you need here, we recommend that you leave the settings as shown below. After configuring DHCP, click **Next**.



.....

Note! If you do not enable DHCP, you will need to assign a static IP address to each PC that connects to Square One.

.....

- If you are satisfied with the choices you made in the configuration wizard, select **Yes** to apply the settings and click **Next**. If you wish to go back to previous screens to change any of your selections, click the **Previous** button until you get to the screen that you wish to mo, click the **Previous** button until you get to the section you wish to modify.



- To make the new settings take effect, click the **Yes** button to restart Square One. It may take a few minutes to restart Square One.



8. After completing the configuration wizard once, you will see the following screen when you go to the administrator's interface at **http://192.168.1.1:8090** and log in. You can always run the configuration wizard again by clicking the **Configuration Wizard** button at this screen.



4.2. Administrator Interface

Whenever you need to configure Square One, you can open the administrator interface by pointing your browser to **http://[Square One's LAN IP]:8090**. For example, if you did not change Square One's LAN IP from the default one, you can open the admin interface by going to **http://192.168.1.1:8090**.

The admin interface is divided into six sections as follows.



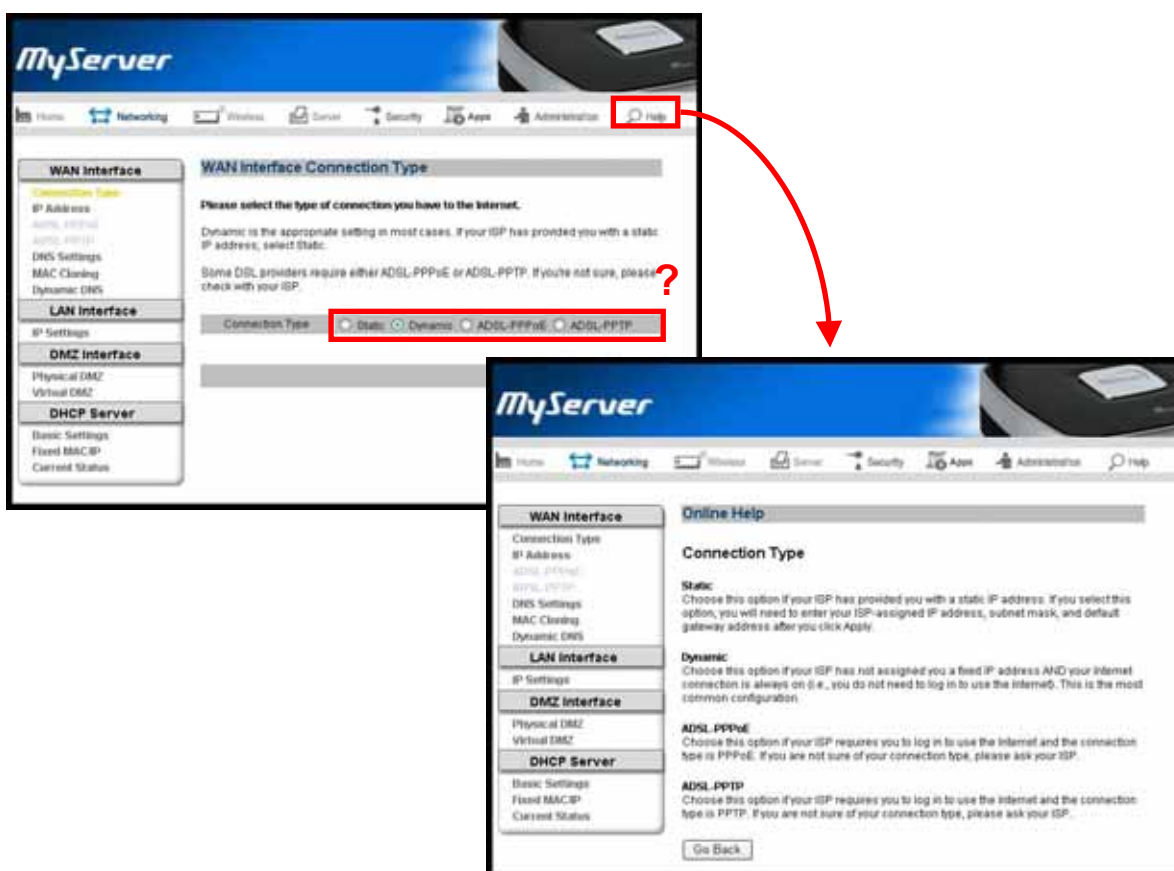
- **Networking**
The Networking section of the admin interface allows you to configure Square One's connection to the Internet and the settings that govern how PCs and devices connect to Square One from external networks as well as internal.
- **Wireless**
The Wireless section allows you to configure the Wi-Fi access point component of Square One. This section is only available in the wireless model.
- **Server:**
Square One can function as a file server, print server, and FTP server serving multiple users. Square One's built-in Web server and MySQL database allows you to host your own Website or run PHP-based Web applications. The Server section will help you take advantage of these powerful features in Square One.
- **Security:**
As the gateway between your local network and the Internet, Square One's firewall monitors and filters incoming and outgoing network traffic. The Security Section allows you to configure the firewall and network policies to control the flow of various types of data packets in and out of your network.
- **Apps:**
The ability to run Web applications sets Square One apart from other network hard drives. Square One does more than just store and serve files to users. Square One can be programmed to run MySQL database-driven Web applications written in PHP or Perl. At the Apps section, you can access and configure the applications that are pre-installed in Square One.

- **Administration:**

At the Administration section, you can manage the administrator's account, restart or shut down Square One, or update the system software.

- **Help:**

At any screen of the Square One admin interface, click on the Help button, and the context-sensitive Help will guide you.



5. Using Square One

Unlike other network appliances or network storage devices, Square One is not merely a network-enabling device but a tool for facilitating enhanced productivity or enjoyment in your home or office computing. There are many ways to implement and use Square One. We introduce a few basic uses of Square One's server functionalities in the following sections.

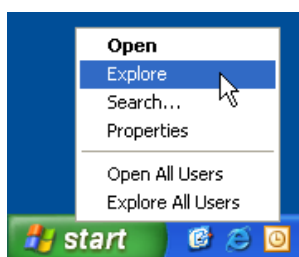
5.1. Using Network Storage

Square One's network storage can be accessed by computers and devices connecting to Square One over the LAN. There are two ways to access the network storage: 1) using the network address and 2) mapping a network drive. **Using the network address** establishes temporary access that is valid until you log off from your computer. **Mapping a network drive** creates a convenient "shortcut" by assigning a drive letter to the network folder.

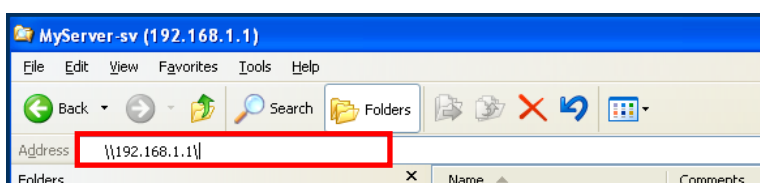
Using the Network Address

There are multiple ways to connect to a network folder. Here is one simple method:

1. Right-click the **Start** button and select **Explore**.



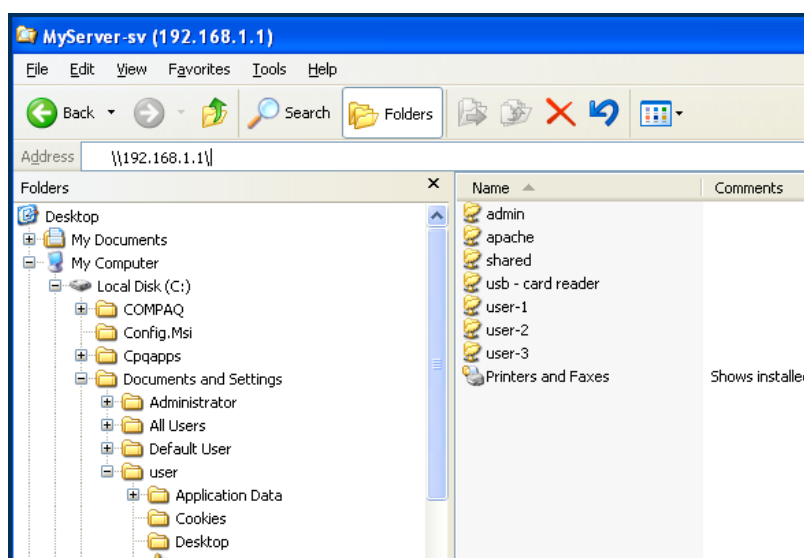
2. At the **Windows Explorer** screen, type in [\\192.168.10.1](http://192.168.10.1) and press enter.



3. Enter your Square One **User Name** and **Password**.



4. If you have entered the correct user name and password, you will see the network folders on Square One.



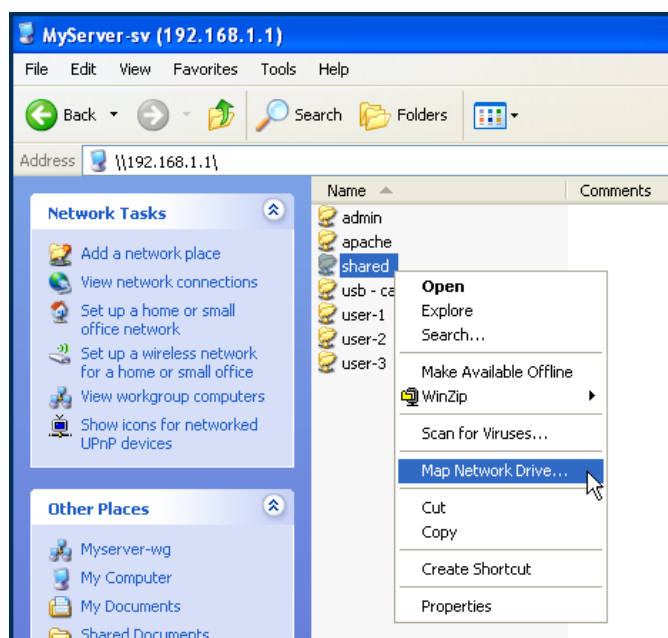
Note!

Network Drive connector can be downloaded from www.myITianCorporation.com.

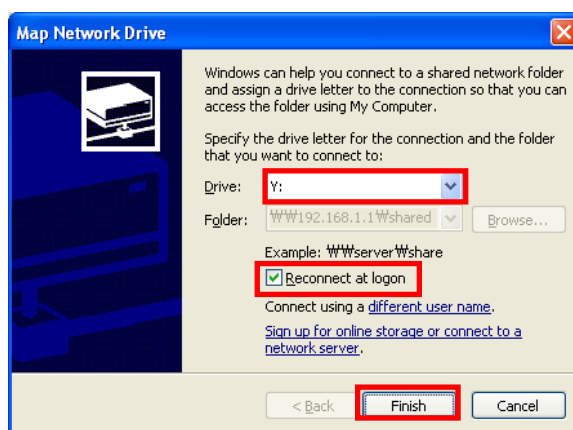
Mapping a Network Drive

Instead of using the network address each time you wish to access the network storage, you can map a Network Drive to establish a permanent shortcut. You can then address the network drive as though it is one of the local drives on your computer.

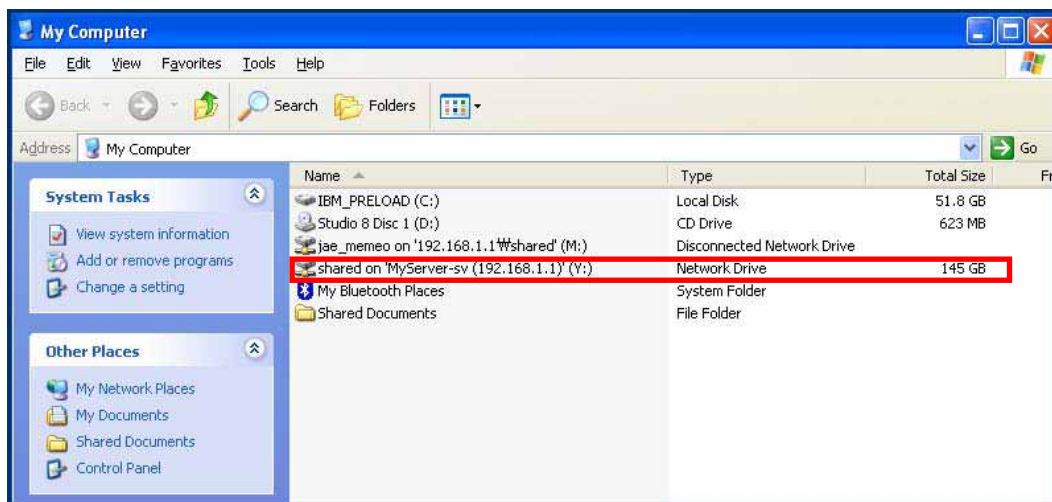
1. First, connect to Square One's network storage using the network address.
2. At **Windows Explorer**, right-click the network folder you wish to map to a drive letter, then select **Map Network Drive**.



3. Select a drive letter. Check **Reconnect at logon** if you want a permanent mapping of the drive letter. Click **Finish** when satisfied with your settings.

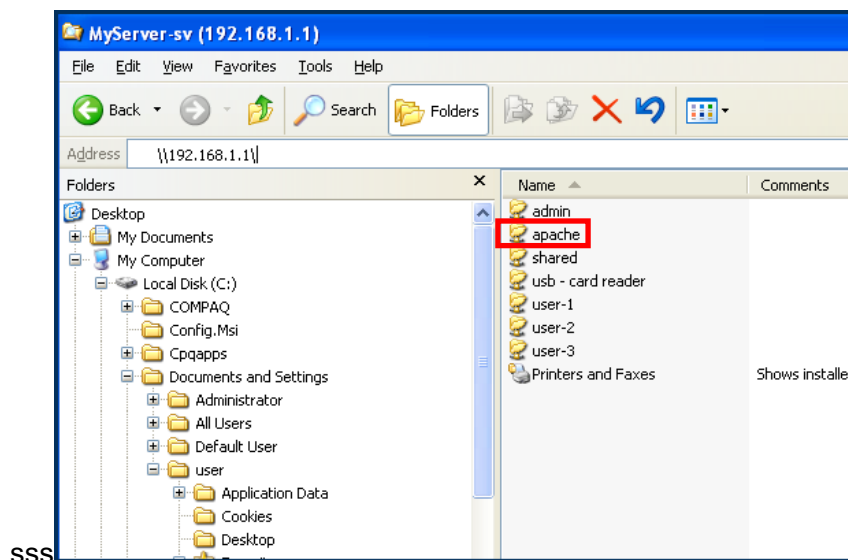


4. When the network drive is successfully mapped, you will see a new drive letter under **My Computer**.

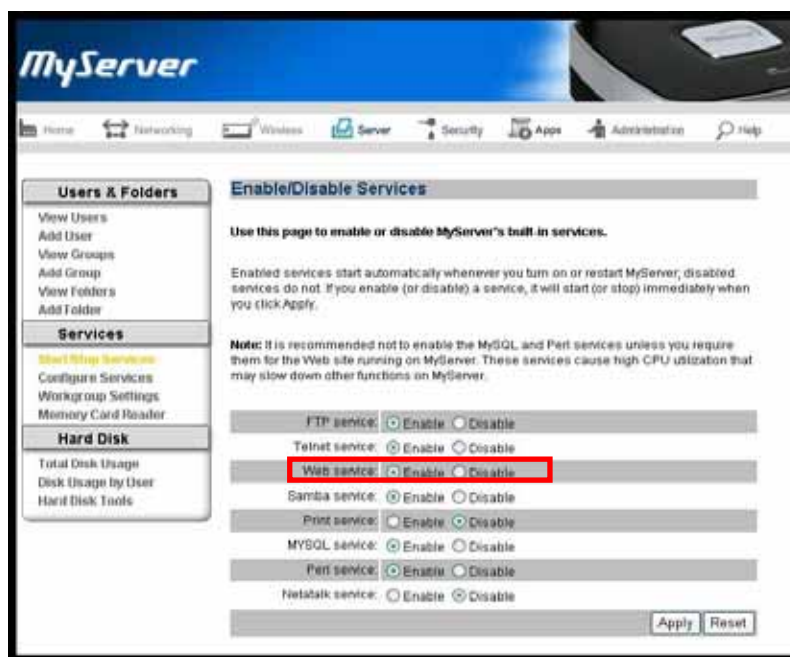


5.2. Using Web server

Square One is pre-installed with Apache Web server, Perl, PHP, and MySQL. Web page file can be created and uploaded to Square One using Windows Explorer or an FTP program. The Web files must be stored in `/hdd/3/apache/htdocs/` folder.



In order to publish your Website to the public, the **Web service** must be enabled at the Start/Stop Services page under the Server section in the admin interface.



.....
Note! Refer to the Apache administrator's manual to configure your Web server.
.....

.....
Note! By default, only the admin user may upload or modify Website content.
.....

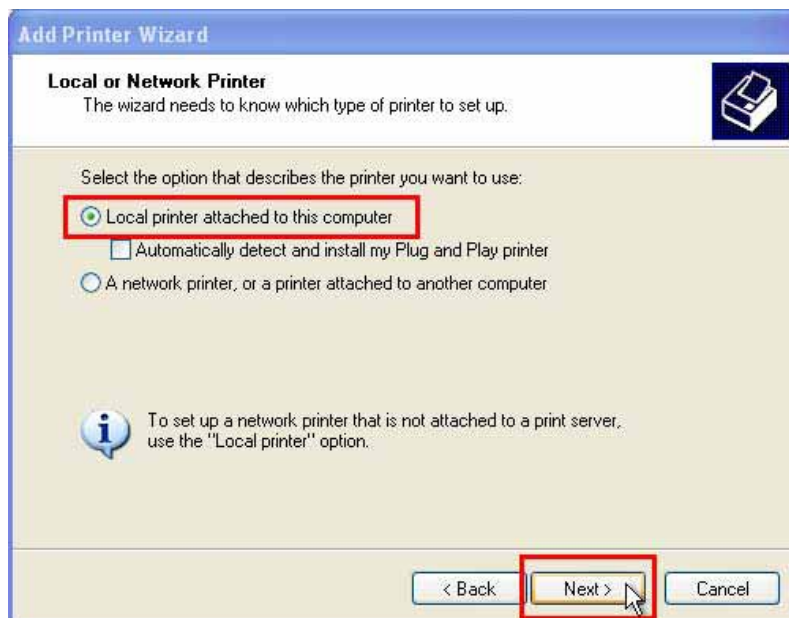
5.3. Using Print Server

Square One allows the computers on your network to share a USB printer. In order to take advantage of Square One's print server functionality, follow the steps below to configure the computers that need access to the USB printer connected to your Square One's USB port.

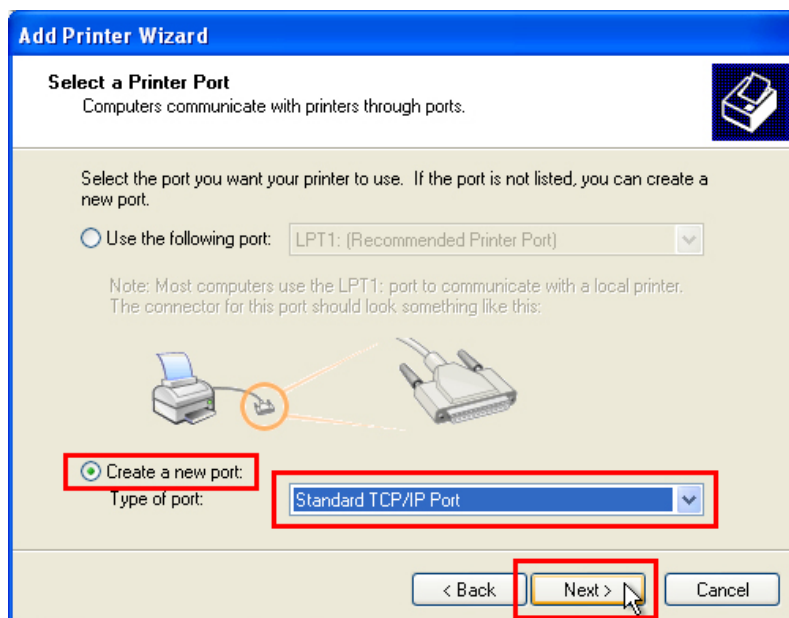
1. Select **Start > Control Panel > Printers and Faxes > Add a printer.**
2. Click the **Next** button when **Add Printer Wizard** comes up as shown below.



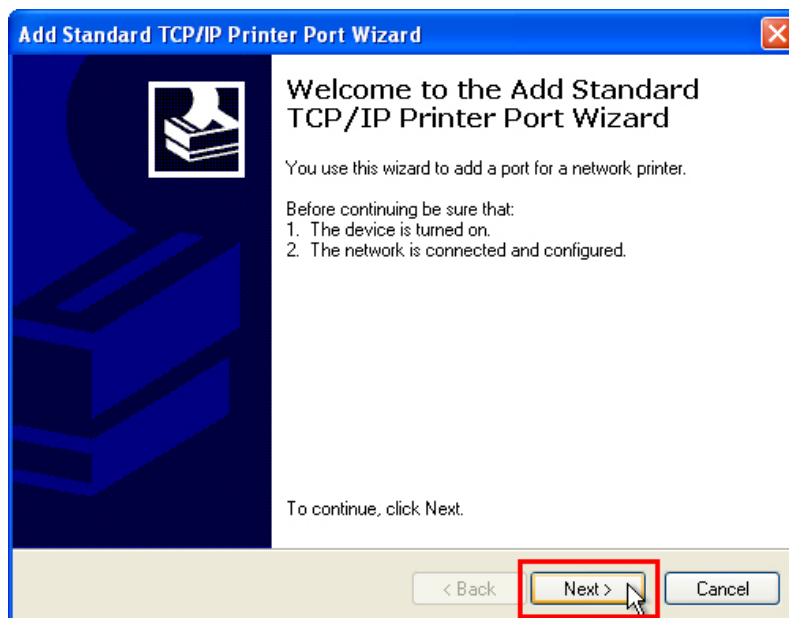
3. Select the Local printer attached to this computer then click the **Next** button.



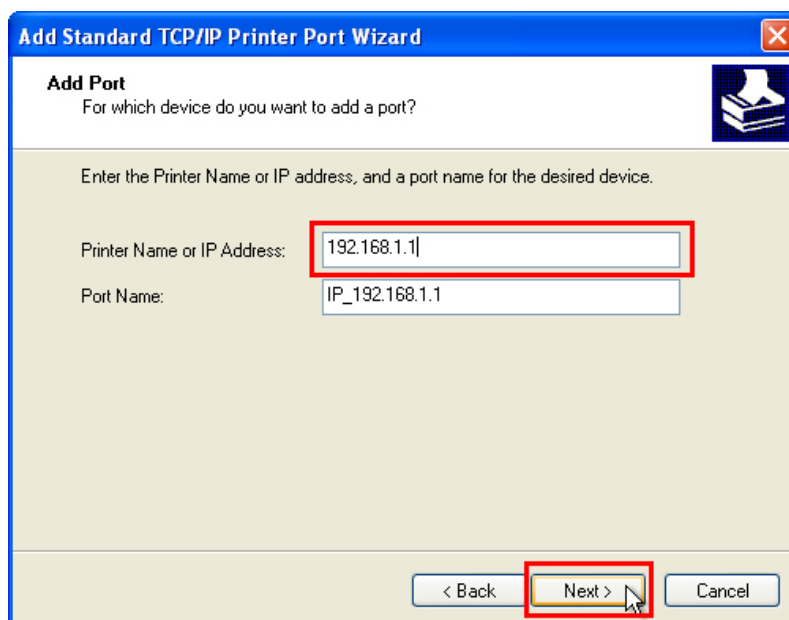
4. Select the **Create a new port** and then **Standard TCP/IP Port** then click **Next**.



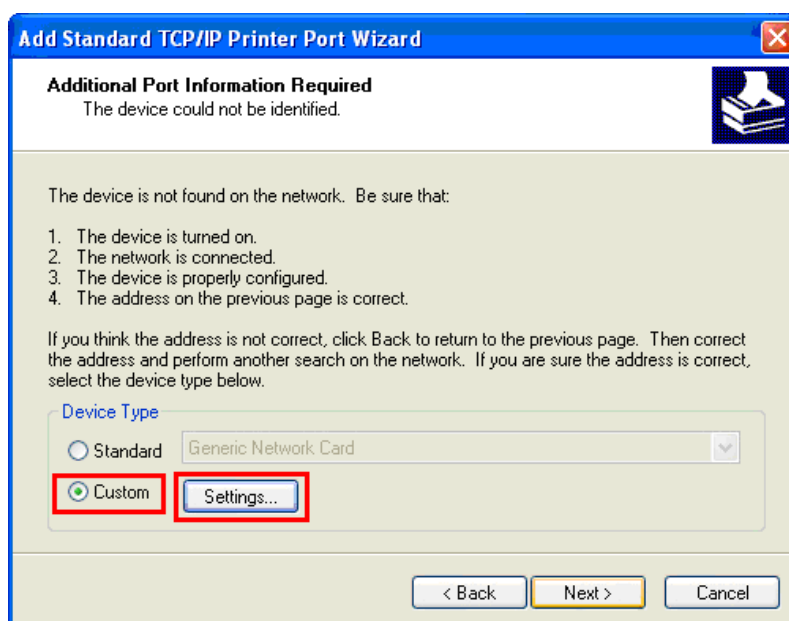
5. Click the **Next** button at the **Add Standard TCP/IP Printer Port Wizard** screen.



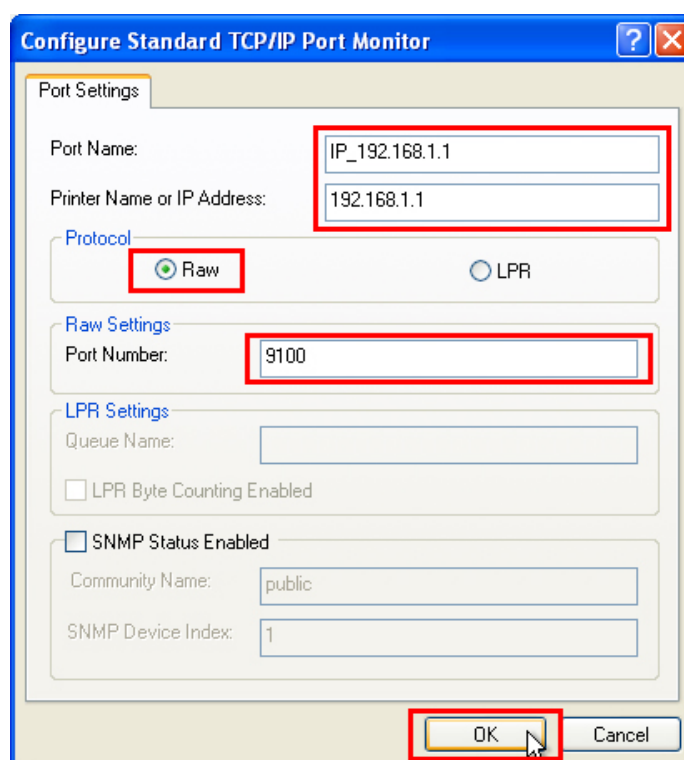
6. Enter Square One's IP address as shown below in the **Printer Name or IP address** field and click **Next**.



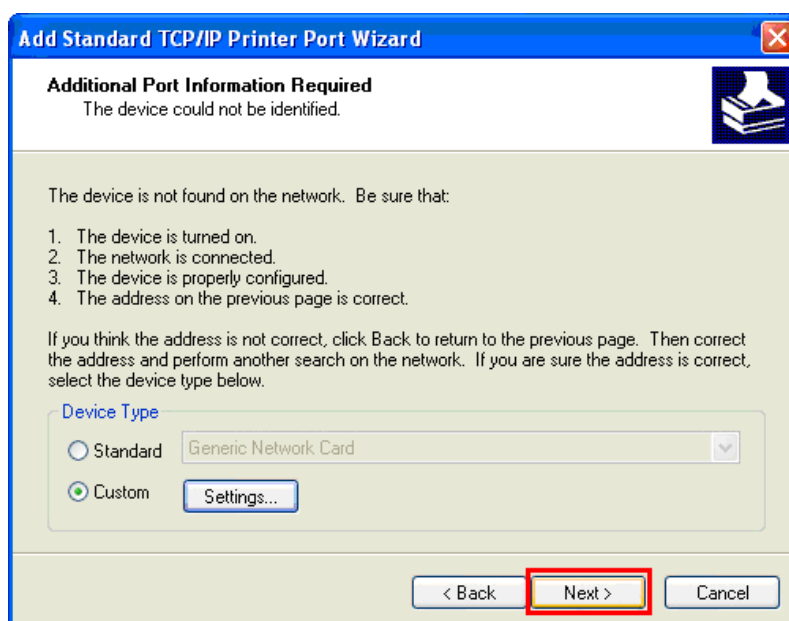
7. Select **Custom** for **Device Type** and click **Settings**.



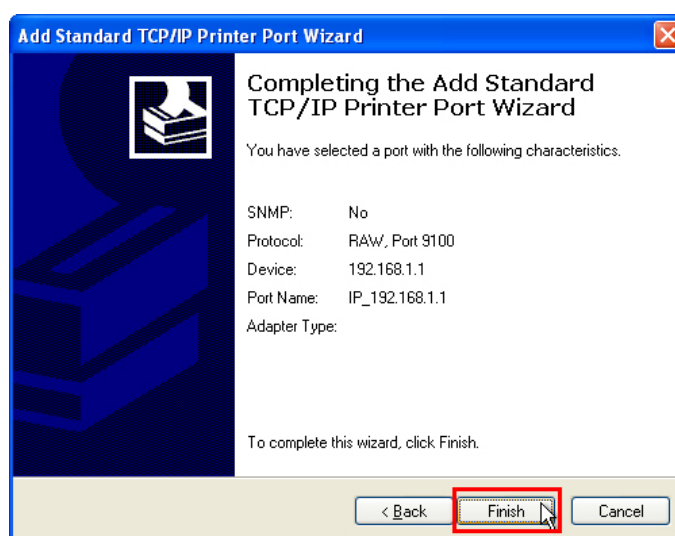
8. Type in your Square One's IP address. The **Port Name** will be IP_[Square One's IP address] by default. Set **Protocol** to **Raw**. Set **Raw Settings** port number to 9100. Click **OK**.



9. After confirming Custom setting, click the **Next** button.



10. Click the **Finish** button to close the Add printer port wizard, then configure the printer driver for the printer that will be connected to Square One.



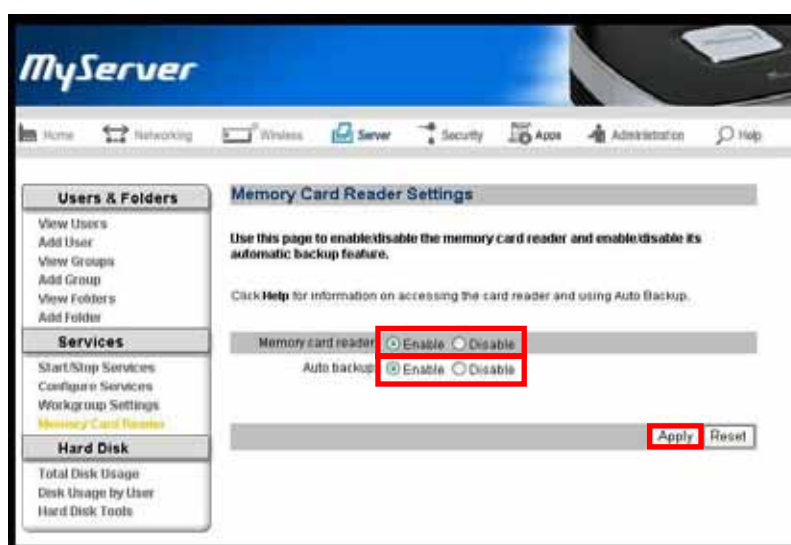
.....
Note!

Refer to your printer's manual for configuring the printer driver.
.....

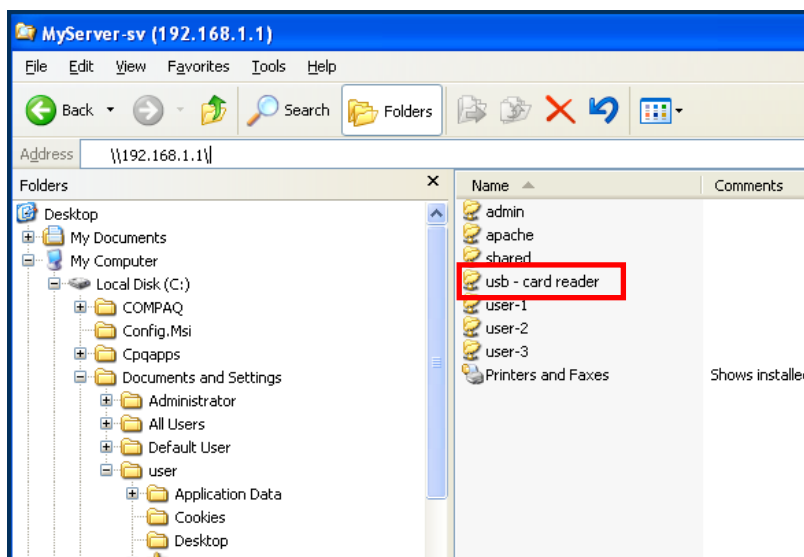
5.4. Using Memory Card Reader

When a memory card is inserted into the memory card reader in Square One, the memory card is mounted as a network folder.

In order to use the memory card reader, however, you must enable the service at the **Memory Card Reader** page under the **Server** section in the admin interface. If you wish to have the content of your memory card copied to Square One automatically, enable the **Auto backup** feature as well.



Once you have enabled the memory card reader, access the network storage as instructed in Section 5.1. The memory card's content can be found in the folder named **usb-card reader**.



Upon entering the **usb-card reader** folder, you will see multiple folders, each corresponding to a distinct type of memory card as follows.

Folders	Memory Card Type
CF_MD	Compact Flash and Micro Drive
XD_SM	Extreme Digital and Smart Media
SD_MMC	Secure Digital and Multimedia Card
MS_MSPRO	Memory Stick and Memory Stick Pro

Table 5-1 Memory Card Folders

Note!

Do not insert multiple memory cards at once. Only insert one memory card at a time.

Note!

Removing memory card while Square One is reading the card may cause problems. Remove the card when operation is complete.

5.5. Using Wireless LAN

This basic configuration required for **Wireless LAN**.

1. Select **Wireless LAN** mode.

Mixed	This mode supports IEEE802.11b and IEEE802.11g.
B-only	This mode supports IEEE802.11b only. Basic transmission speed : 1, 2, 5.5, 11Mbps
G-only	This mode supports IEEE802.11g only. Basic transmission speed : 1, 2, 5.5, 11Mbps Extended transmission speed : 9, 18, 36, 48, 54Mbps

- ① Specify a SSID to be used as network ID in **Wireless LAN** environment. Same SSID is used between AP and terminal equipment under **wireless LAN** environment to provide access and network service. Since APs provide SSID to all terminal equipments, it is recommended that **Wireless LAN** security authentication such as MAC Filter is used.
- ② Specify a Radio channel. IEEE802.11b and IEEE802.11g standards specify a 2.4GHz frequency range to be subdivided into 14 channels. From the 14 channels, it is recommended that a channel that is not being used by other AP is selected.



Note!

Automatic channel selection feature that avoids channels currently being used by other APs

2. Wireless LAN Security

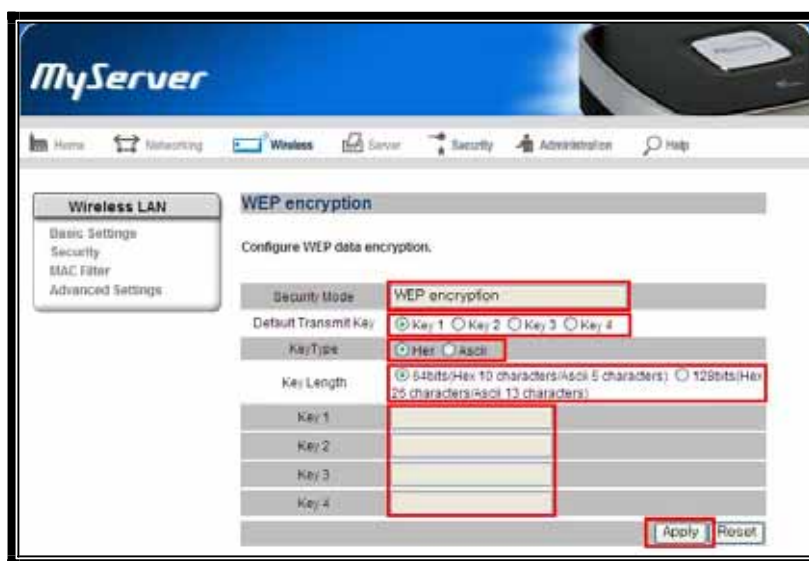
Authentication in a **Wireless LAN** environment is a step that takes place when terminal equipments first make connection attempts to Square One and gets registered to see if the end device will be allowed to communicate over the network.

- ① Open mode (NONE) registers end PCs to Square One without any authentication.
- ② Shared mode (WEP encryption) uses WEP Key password in all data communications.



Security mode (WEP encryption)

- ① Select a Key number to be used.
- ② Specify a WEP Key type to be used. (Hex or ASCII)
- ③ Specify a WEP Key length to be used. (64bit or 128bit)
 64bit Hex: 10 HEX characters (Key may consist of 0-9 and A-F)
 64bit ASCII: 5 characters (All numbers and letters)
 128bit Hex: 26 HEX characters (Key may consist of 0-9 and A-F)
 128bit ASCII: 13 characters (All numbers and letters)
- ④ Type in encryption Keys (Key 1-4) then, click the Apply button.

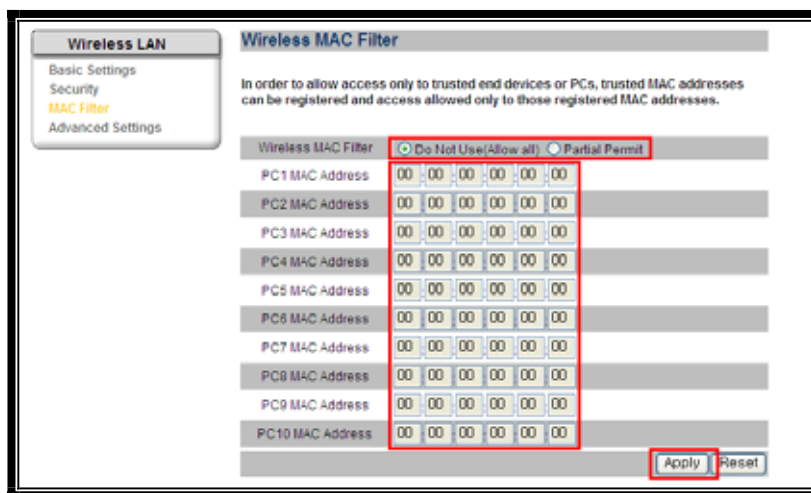


Example)	128bit	Hex	ASCII
	Key 1	ABCDEF12345678901234567890	1234567890abc
	Key 2	12345678901234567890ABCDEF	jkl1234567890
	Key 3	1234512345ABC6789067890DEF	j123k456l7890
	Key 4	123ABC456D78E901F23A45B678	123j456k7890l

3. MAC Filter

In order to allow access only trusted end devices or PCs, trusted MAC addresses can be registered to Square One and allowed only those registered MAC addresses to access **wireless LAN**.

- ① Select Do Not Use (Allow all) if you do not need to use MAC Filter feature.
- ② Select Partial Permit to allow access specified MAC Address only.
- ③ Type in MAC Addresses, and then click the Apply button.



Wireless LAN

- Basic Settings
- Security
- MAC Filter**
- Advanced Settings

Wireless MAC Filter

In order to allow access only to trusted end devices or PCs, trusted MAC addresses can be registered and access allowed only to those registered MAC addresses.

Wireless MAC Filter Do Not Use (Allow all) Partial Permit

PC1 MAC Address	00	00	00	00	00	00
PC2 MAC Address	00	00	00	00	00	00
PC3 MAC Address	00	00	00	00	00	00
PC4 MAC Address	00	00	00	00	00	00
PC5 MAC Address	00	00	00	00	00	00
PC6 MAC Address	00	00	00	00	00	00
PC7 MAC Address	00	00	00	00	00	00
PC8 MAC Address	00	00	00	00	00	00
PC9 MAC Address	00	00	00	00	00	00
PC10 MAC Address	00	00	00	00	00	00

Apply Reset

4. **Wireless LAN** Advanced Setup

This page sets up detailed **Wireless LAN** environments.

- ① Basic Rate specifies basic transmission rate. The default value of Basic Rate is 4095.
- ② Transmission Rate (Baud Rate) specifies the data transmitting bits per second.
- ③ Beacon Interval indicates a frequent interval value packet broadcasted by the router to synchronize end devices within the wireless network. If Beacon Interval is too big, synchronization will take too long. Basic unit of Beacon Interval is in milliseconds (ms).

The default value of Beacon Interval is 100 ms and the range of Beacon Interval is 1-65,535 ms.

- ④ DTIM Interval is a packet sent as a part of beacon. It alerts to a client device (PCs or Printers) from sleep mode (Power Save Mode). DTIM packets are transmitted at an interval of DTIM interval multiplied by Beacon interval. (Example, If Beacon interval is 100 and DTIM Interval is 3, DTIM packets are transmitted every $100 * 3 = 300$ ms)
- ⑤ Fragmentation threshold indicates maximum packet size before data gets fragmented into smaller but multiplied packets. This is used when large packets are fragmented into smaller packets according to network's physical requirement. Values between 256 and 2346 bytes are used and the default value is 2346 bytes.
- ⑥ RTS threshold is used for data flow control during wireless data communication by using RTS/CTS protocol. Square One sends Request to Send (RTS) frames to a particular receiving station and negotiates the sending of a data. After, Square One send an RTS, the wireless end device (Client Device) responds with a Clear to Send (CTS) frame to let Square One know when or how to begin data transmission. The range of RTS threshold is values between 0 to 2347 bytes and the default value is 2347 bytes.

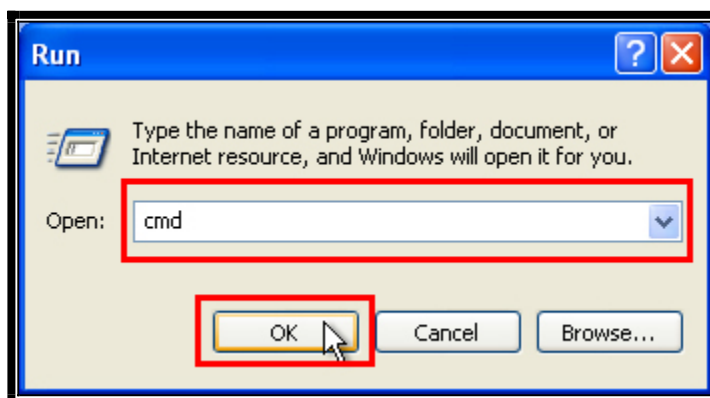


6. Technical Information

Verifying the MAC address

At times, you will need to verify the MAC address of the network adapter in your computer in order to configure Square One's security settings. Follow the steps below to verify the MAC address.

11. Click **Start > Run**.
12. Type '**cmd**' as shown below and click **OK**.



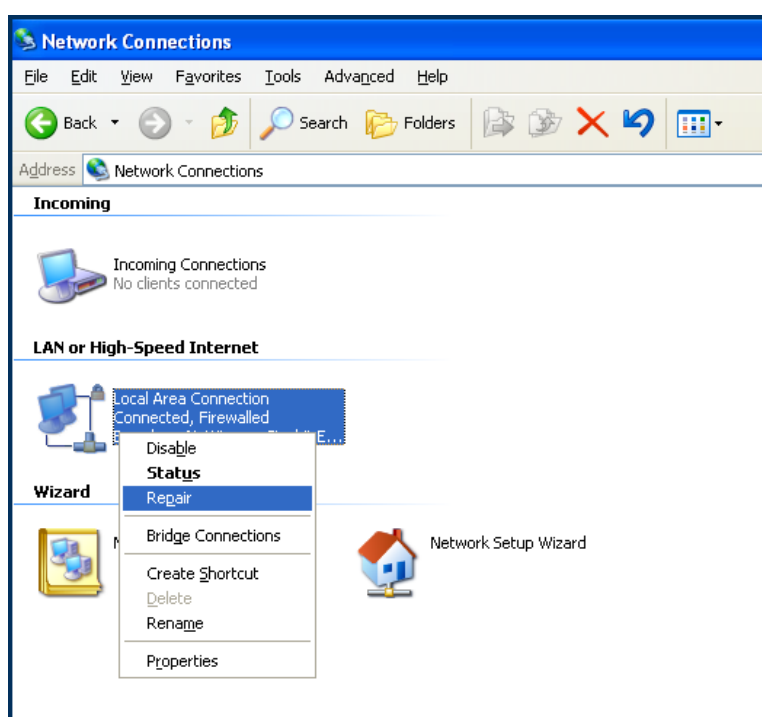
13. When the DOS window appears, type **ipconfig /all** at the prompt.
14. The MAC address is the hexadecimal numbers labeled **Physical Address**.

```
Ethernet adapter Local Area Connection:
Connection-specific DNS Suffix . . . . . : itian
Description . . . . . : AMD PCNET Family PCI Ethernet Adapter
Physical Address . . . . . : 00-CC-CC-CC-CC-CC
Dhcp Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes
IP Address. . . . . : 192.168.100.234
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.100.1
DHCP Server . . . . . : 192.168.100.1
DNS Servers . . . . . : 210.94.0.73
                          61.78.52.5
```

Re-establishing Network Connection

At times, you will need to re-establish the network connection between Square One and your computer, because your computer failed to receive a new IP address from Square One's DHCP server. In order to re-establish the connection, follow the steps below.

1. Click **Start > Control Panel > Network Connections**.
2. At the **Network Connections** window, right-click the icon that corresponds to your network connection and select **Repair** as shown below.



3. The network adapter will be restarted and your computer's network connection with Square One will be re-established.

Product Registration

Thank you for purchasing Square One.

Please visit our Website and register your Square One in order for us to serve you better. We count on our customers' feedback and suggestions in improving our products and services. Your input would be much appreciated.

How to register your Square One:

1. Connect to Square One homepage--www.myitian.com
2. Click the **Register Square One** banner.
3. Fill out the product registration form online and submit.

Product registration is a good way to ensure you receive timely news about updates to Square One and technical support. If desired, registered customers will receive news about new products from ITian Corporation.

Product Warranty

Model Name		Serial Number	
Customer Name		Customer Phone No	
Customer Address			
Place of Purchase		Place of Purchase	
Place of Purchase Address			
Date of Purchase	Year	Date	

◆ Warranty Period - 1 Year

Warranty period without compensation is calculated from the date of purchase, so please be sure to keep a statement indicating the date of purchase.

If purchase date cannot be confirmed, product warranty period is calculated from 3 months after the product manufacturing date.