

USB 4-Port Over IP

User's Manual

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1. Introduction

Remote access & monitor USB device over TCP/IP networks to your local PC and provides four Hi-Speed USB (USB 2.0) ports.

1-1 Features and Benefits

- Extend USB cabling distance beyond 5 meters
- USB ports appear to be locally attached and provide same Plug-and Play user experience as on board USB ports
- Access and monitor devices over a TCP/IP connection
- 4-Port USB over IP is USB 2.0 capable and supports HID devices, printers, storages, and isochronous transmission such as USB audio and PC cam, etc

1-2 System Requirements

- Pentium 4 or equivalent computer with an available 10/100 Base –T Ethernet
- Windows XP/Server 2003/Vista.
- MAC OS 10.4.7/10.4.8/10.4.9/10.4.10
- CD-ROM drive

1-3 Layout

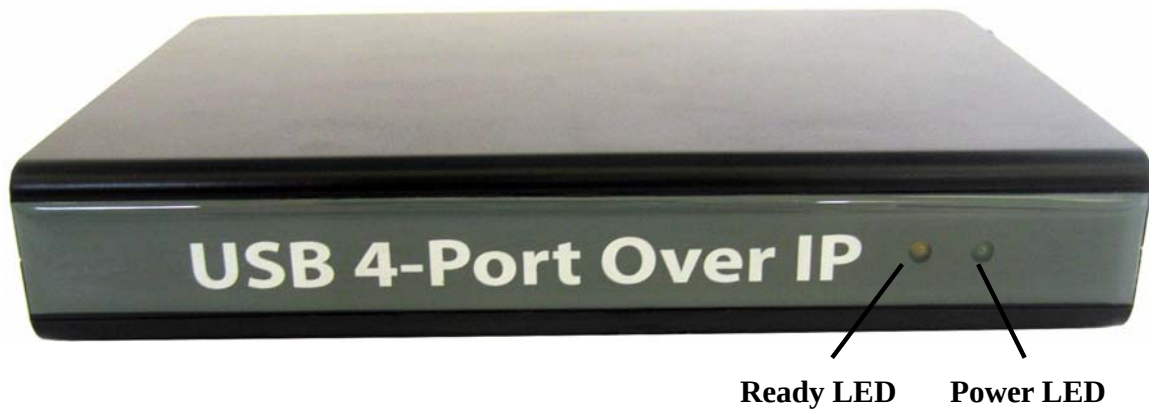


Figure 1. USB 4-Port Over IP Front Panel

Power LED: *USB 4-Port Over IP* is powered on

Ready LED: when the box is first powered on, the *USB 4-Port Over IP* goes through it's initialization/bootup sequence. The LED will blink for 10 seconds, then it will go off for 10-15 seconds, initialization is successful when the LED comes back on. If the Ready LED ever goes off, power-off then power-on the *USB 4-Port Over IP*. It is recommended to unplug all devices from the *USB 4-Port Over IP* during it's initialization/bootup sequence.

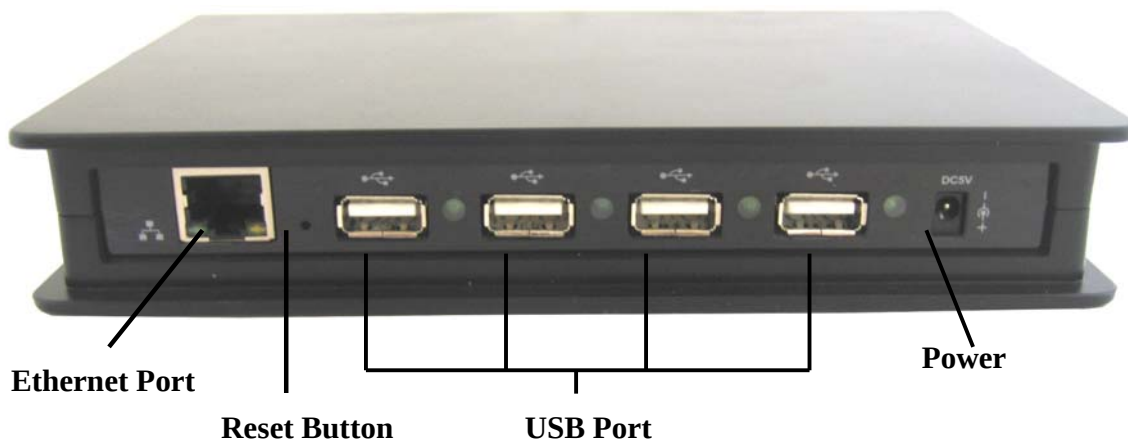


Figure 2. USB 4-Port Over IP Back Panel

Ethernet Port: This is where you will connect your Cat5 Ethernet RJ45 cable.

Reset: Used to restore USB 4-Port Over IP back to factory default settings.

USB Port sockets: The green LED glows steadily when USB device is connected in your local area network and used.

Power: Connect the power adapter to the power jack and into a reliable power source.

Notice

The *USB 4 Port Over IP* default IP address is 192.168.3.22. Please confirm your local network's subnet address before installing the products. If the address does not fit your network's subnet, the USB Server Admin Utility will not detect your USB devices. In this case, please change your network's subnet to match the *USB 4 Port Over IP*. Please see section 3-3 (page 22) to set IP Address.

2. Hardware Installation and Device Support

2-1 Hardware Installation

General hardware installation instructions are provided below. Since the design of computer cases and motherboards vary, refer to your computer's reference manual for further information, if needed.

Static Electricity Discharge may permanently damage your system. Discharge any static electricity build up in your body by touching your computer case for a few seconds.

1. Connect one end of your Ethernet cable to the **Ethernet Port** of the *USB 4-Port Over IP*.
2. Connect the other end of the Ethernet cable to an available RJ45 port on your Ethernet switch or hub.
3. Plug the power adapter into the *USB 4-Port Over IP*, then plug the power adapter into a reliable power source.
4. Wait for the *USB 4-Port Over IP* to complete its initialization/bootup sequence and the Ready LED to light up before proceeding to the next section.

2-2 Device Connection

The *USB 4-Port Over IP* supports up to four USB devices. Connect your USB device(s) to any port on the *USB 4-Port Over IP*. The green LED will light to show successful connection.

2-3 USB Device Support

USB 4-Port Over IP Admin client software is based on open architecture, wherein the *USB 4-Port Over IP* box virtualizes the connected USB devices onto the remote client. The Client, installed on the remote host, interacts with the *USB 4-Port Over IP* box and enables remote access. In this approach, device drivers of the connected USB device are installed on the remote host only, as if the device is connected to its USB ports.

3. Software Installation

3-1 Driver Installation

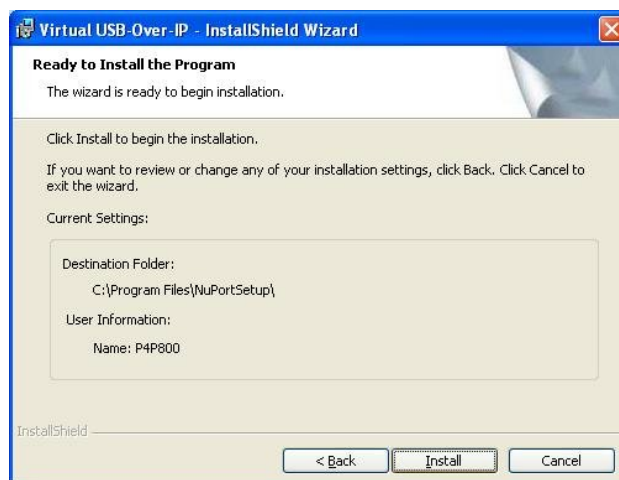
This section provides information on how to install the *USB 4-Port Over IP* drivers.

3-1.1 Windows XP

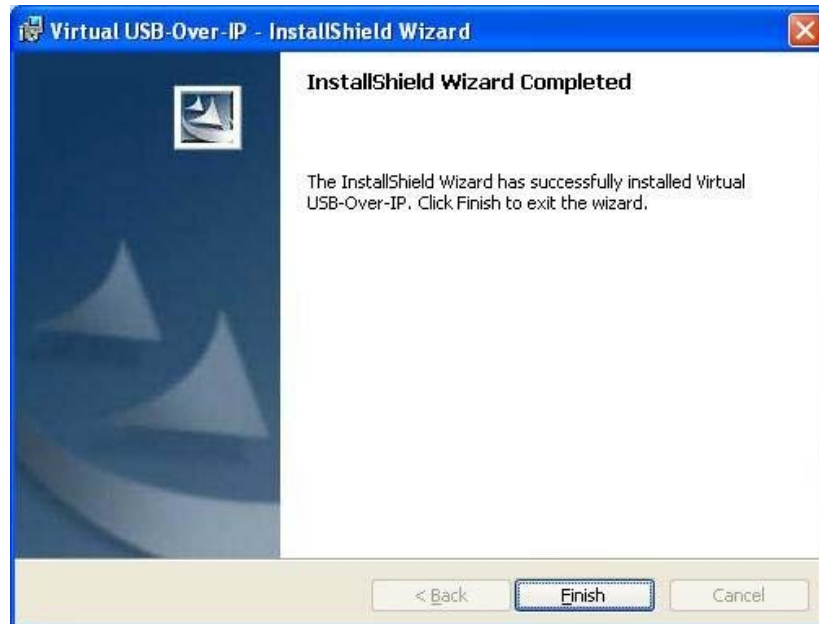
1. Connect the *USB 4-Port Over IP* to your network and boot up Windows.
2. At the Windows desktop insert the driver CD.
3. Click **Start** and then click **Run**. Type **E:\Setup32.exe** then click **OK**. (Change **E:** to match your CD-ROM drive letter).
4. Choose Setup language and then click **OK**.



5. When InstallShield Wizard appears then click **Next**, **Next** then click **Install**.

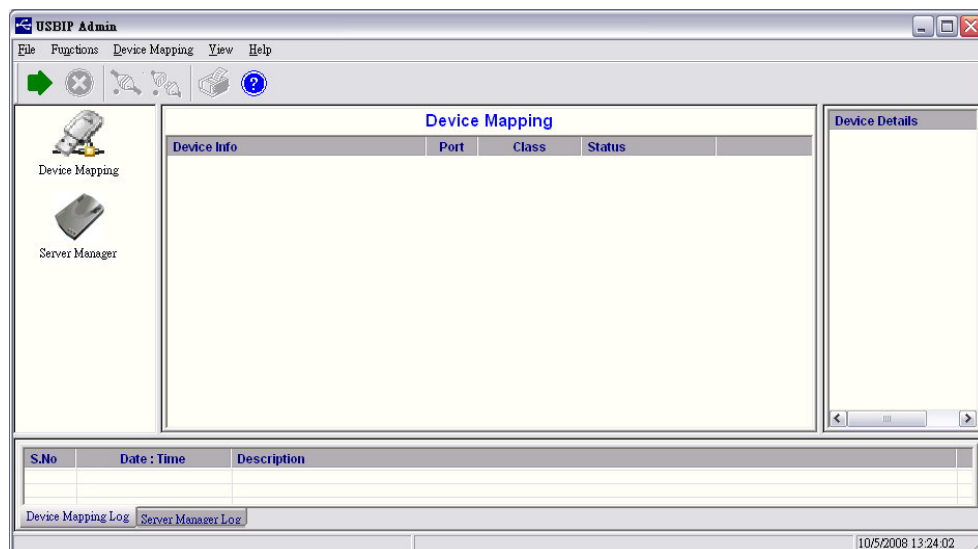


6. When InstallShield Wizard Completed appears then click **Finish**.



7. Double click **USB Server Admin Utility** from desktop icon.

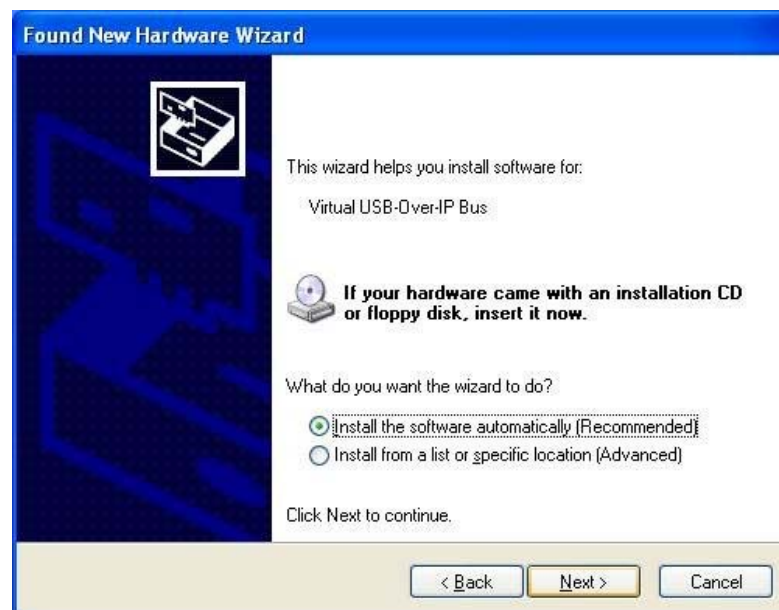
8. Click the green arrow icon to **Start Device Mapping**.



9. At the **Found New Hardware Wizard**, select **No, not this time**, click **Next**.
(skip this step if not prompted)



10. Windows detects a new device, at the **Found New Hardware Wizard**, select **Install the software automatically (Recommended)** then click **Next**.



11. Click **finish**.



12. At **Windows Security Alert**, click **Unblock**. (skip this step for 32-bit XP).



13. Repeat steps 9-12 for each *USB 4-Port Over IP* connected to your network.

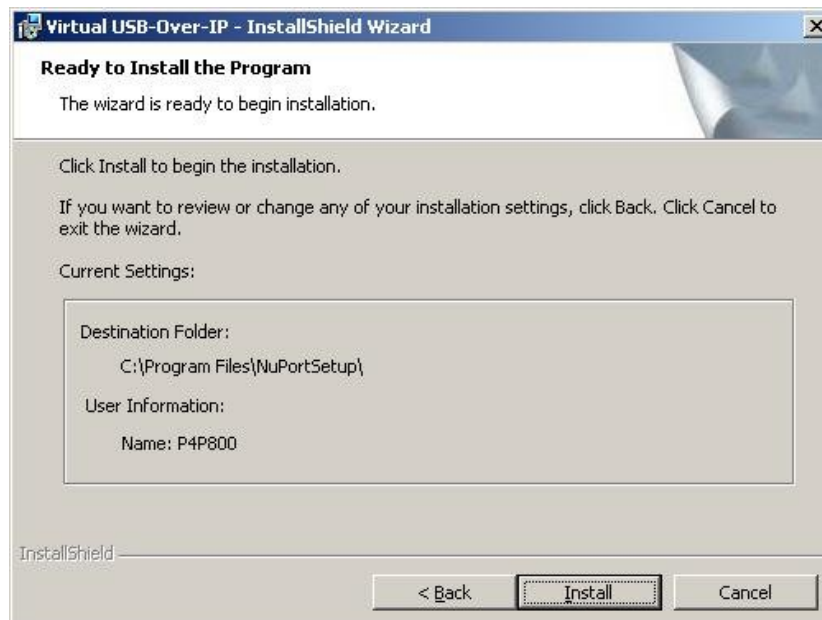
14. Restart XP to complete the installation.

3-1.2 Windows Server 2003

1. Connect the *USB 4-Port Over IP* to your network and boot up Windows.
2. At the Windows desktop insert the driver CD.
3. Click **Start**, then click **Run**. Type **E:\Setup32.exe** then click **OK**. (Change **E:** to match your CD-ROM drive letter).
4. Choose **Setup language** and then click **OK**.



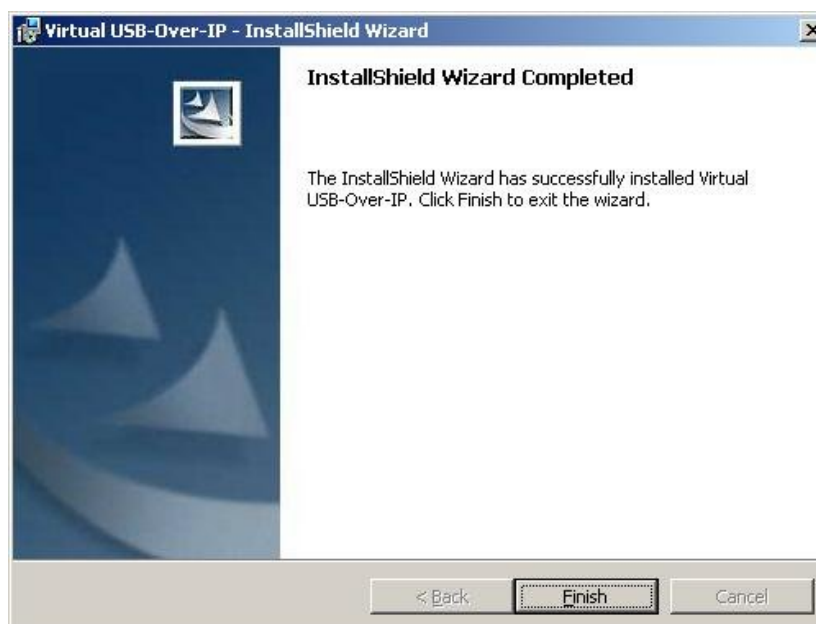
5. When **InstallShield Wizard** appears, clicks **Next**, **Next** then click **Install**.



6. At **Security Alert**, Click **Yes**.

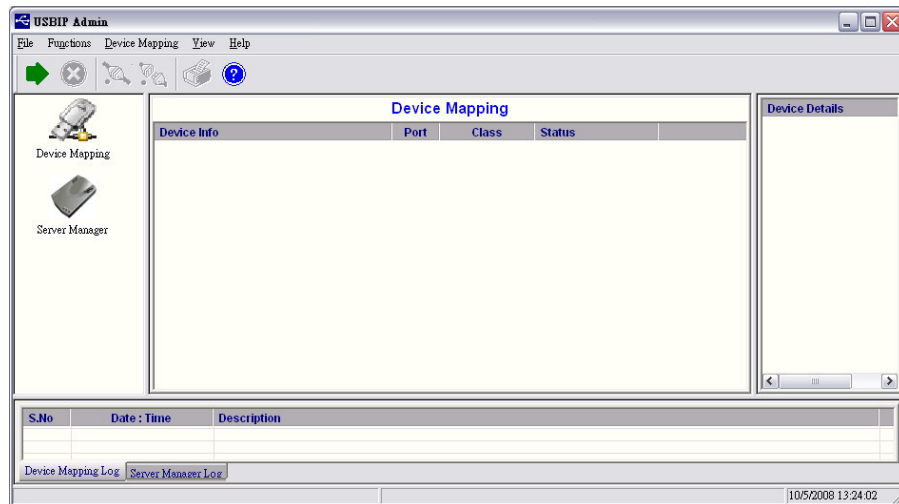


7. When **Install Shield Wizard** completed appear then click **Finish**.

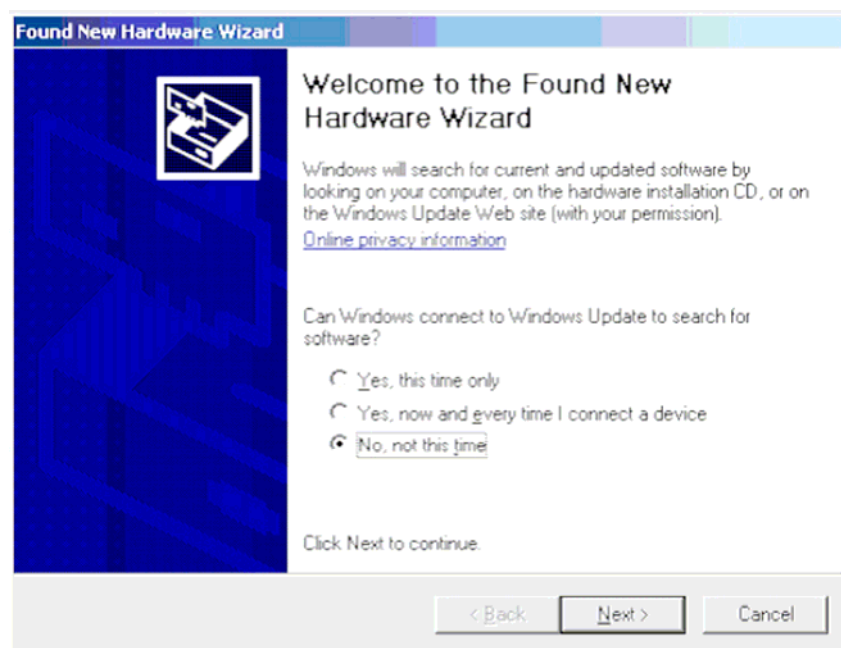


8. Double click **USB Server Admin Utility** located on the desktop.

9. Click the green arrow icon to **Start Device Mapping**.



10. At the **Found New Hardware Wizard**, select **No, not this time** then click **Next**. (skip this step if not prompted)



11. Windows detects a new device, at the **Found New Hardware Wizard**, check **Install the software automatically (Recommended)** then click **Next**.



12. At **Security Alert**, click **Yes**.



13. Click **finish**.

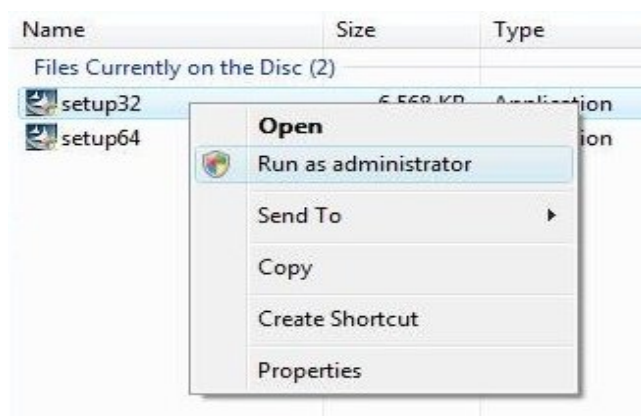


14. Repeat steps 9-12 for each *USB 4-Port Over IP* connected to your network.

15. Restart Windows Server 2003 to complete the installation.

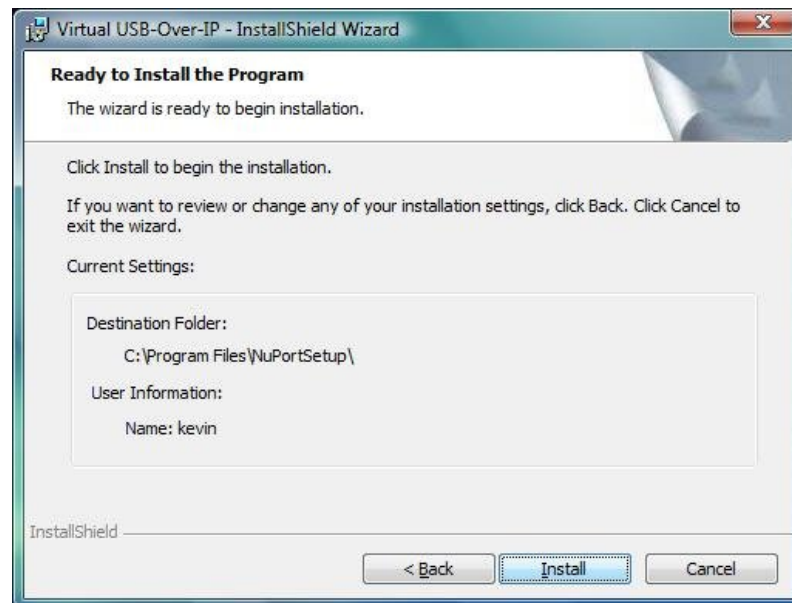
3-1.3 Windows Vista

1. Connect the *USB 4-Port Over IP* to your network and boot up Windows.
2. At the Windows desktop insert the driver CD.
3. Right click **Setup32**, click **Run as administrator** then Click **Allow**.

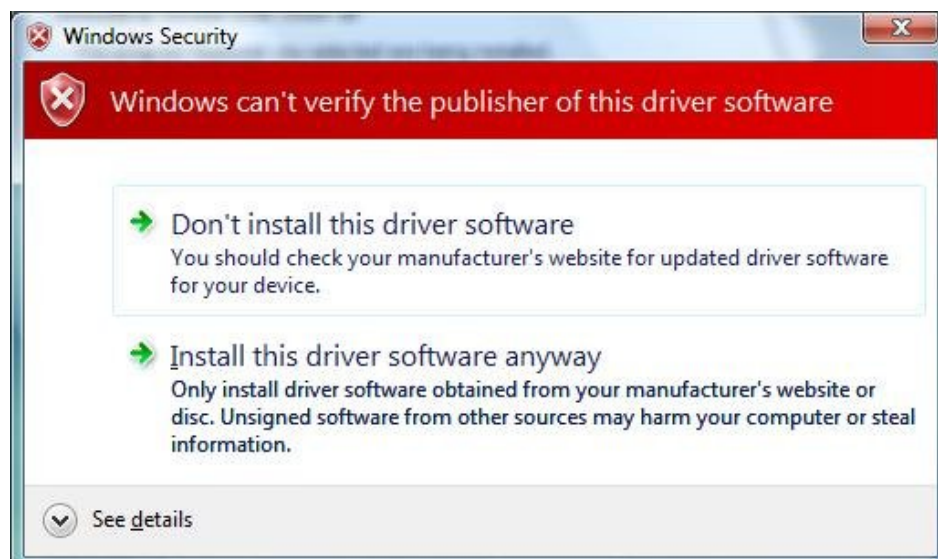


4. Choose Setup language and click **OK**.

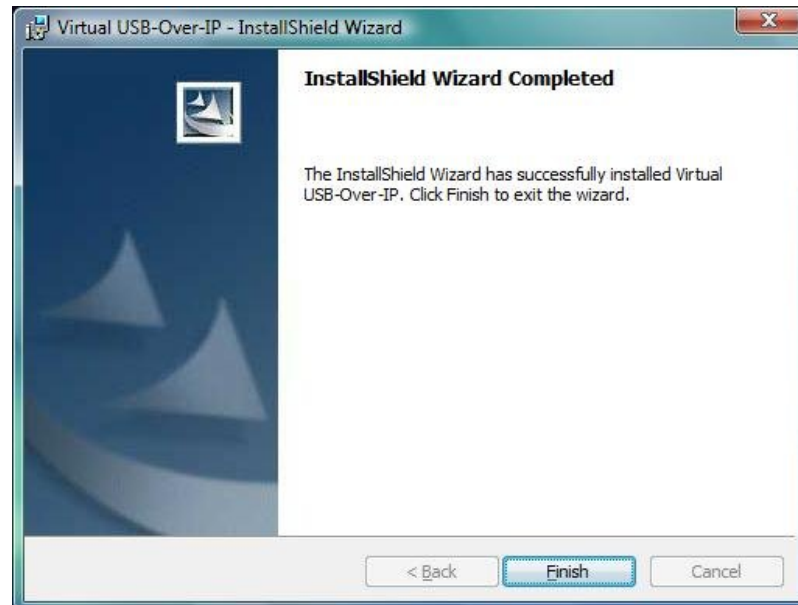
5. When InstallShield Wizard appears then clicks **Next**, **Next** then click **Install**.



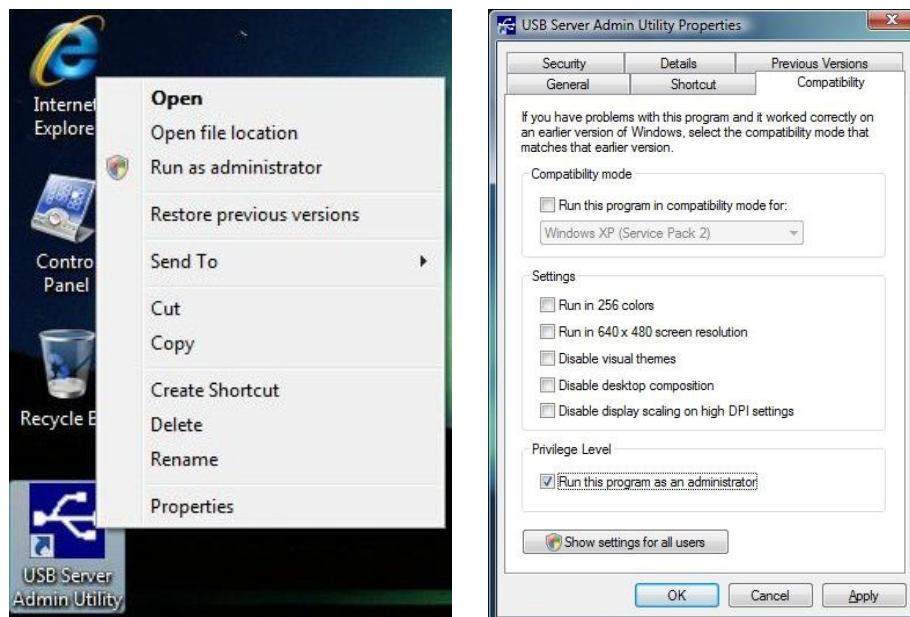
6. At **Windows Security**, click **Install this driver software anyway** two times.



7. When **Install Shield Wizard** completed appears then click **Finish**.



8. Right click the **USB Server Admin Utility** icon located on the desktop, click **Properties**.
9. Click Compatibility tab then Check **Run this program as an administrator** then click OK. (This step may take up to 30 seconds to complete).



10. Double click **USB Server Admin Utility** from desktop icon and then click **Allow**.
11. Click the green arrow icon to **Start Device Mapping**.
12. At **Windows Security Alert**, click **unlock**.



3-1.4 MAC OS Installation

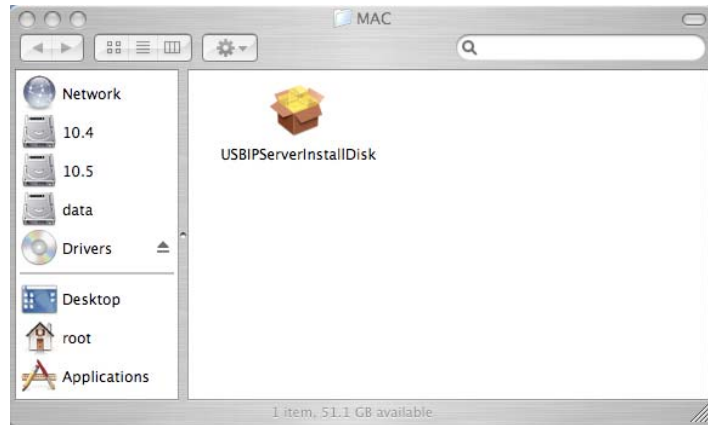
You must be logged in as root (System administrator) to install the USB-IP Admin Application.

How to use the root log in

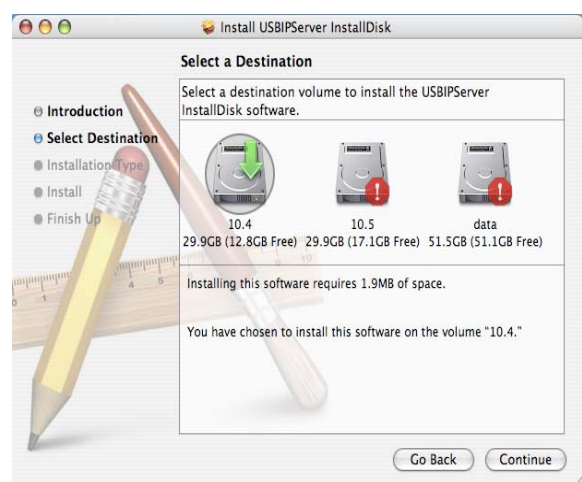
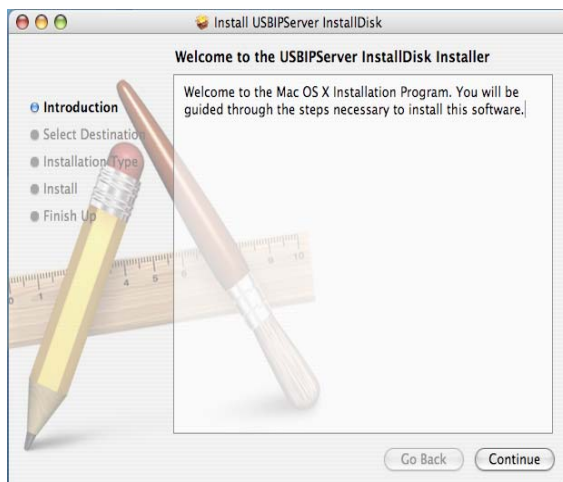
1. Click **Go** then click **Utility**.
2. Double click **NetInfo Manager** then unlock to make changes.
3. Choose **Security** then **Enable Root User** and set the password for the root account.
4. Choose **Apple** menu then click **Log Out**.
5. Choose **Other** in the login window then type root in the **Name** field and the root password in the **Password** field.

Driver Installation

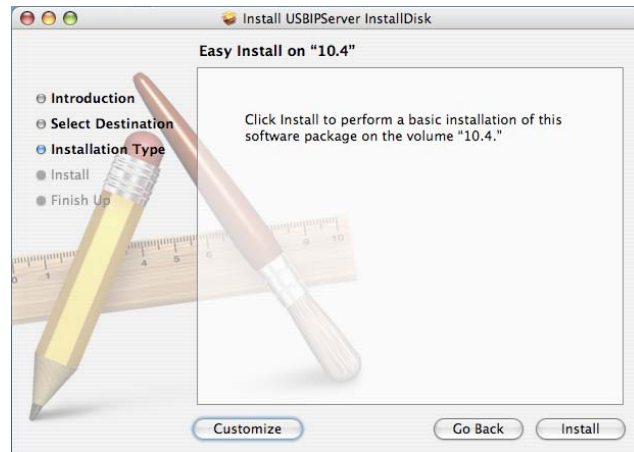
1. Insert the software CD into your DVD-ROM.
2. Double click the **USBIPServerInstallDisk** on the MAC folder from **Drivers** icon located on the desktop.



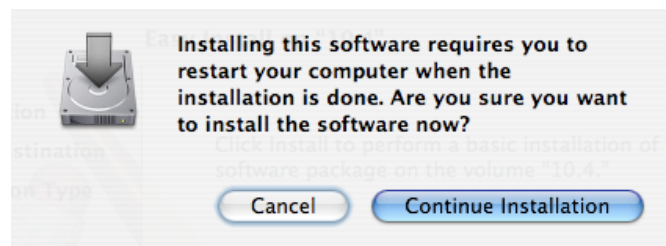
3. Click on **Continue** to install the software as shown below.
4. The Installation wizard pops **Select Destination**, Select a proper destination volume and click **Continue**.



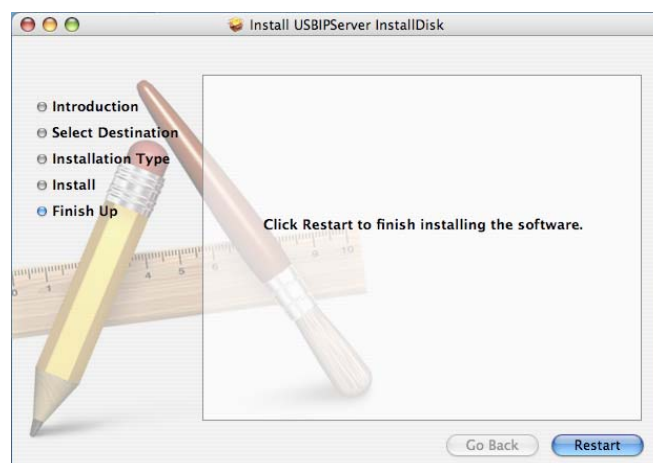
5. Click on the **Install** button for the basic installation of the USBIP driver on to the destination drive.



6. Click on **Continue installation** to install the software.



7. Then click the **Restart** to complete the software installation.



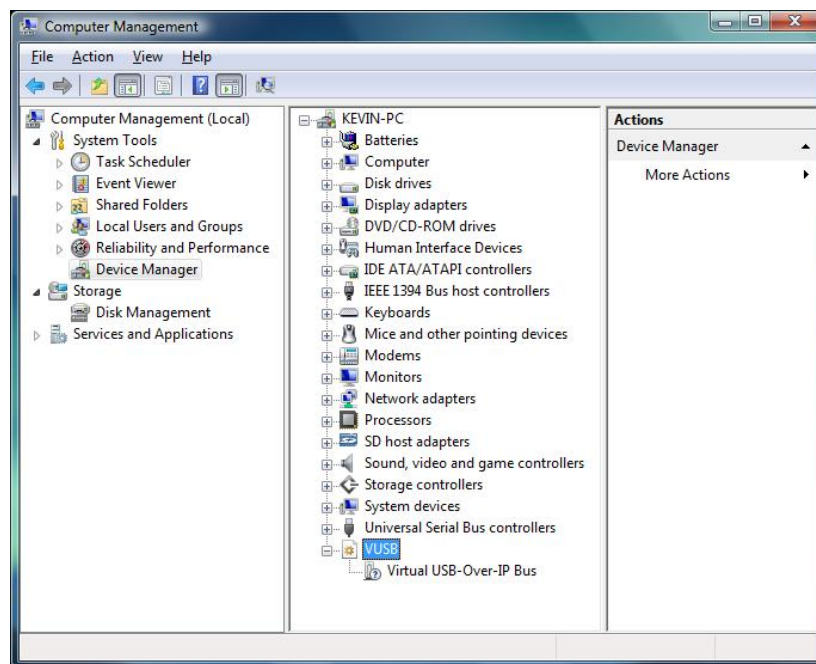
3-2 To Verify Installation

3-2.1 Windows XP/Server 2003

1. Right click **My Computer**, click **Manage** and click **Device Manager**.
2. Double click **VUSB**.
3. **Virtual USB-Over-IP Bus** should be list.

3-2.2 Windows Vista

1. Right click **Computer**, click **Manage** and click **Continue**.
2. Click **Device Manager**, double click **VUSB**.
3. **Virtual USB-Over-IP Bus** should be list.

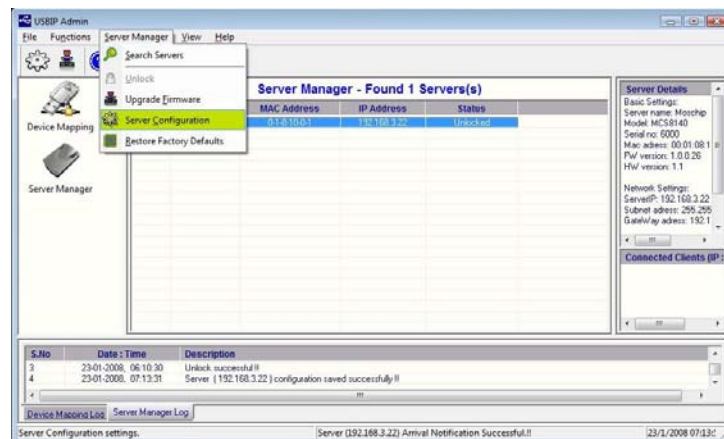


3-3 IP Address

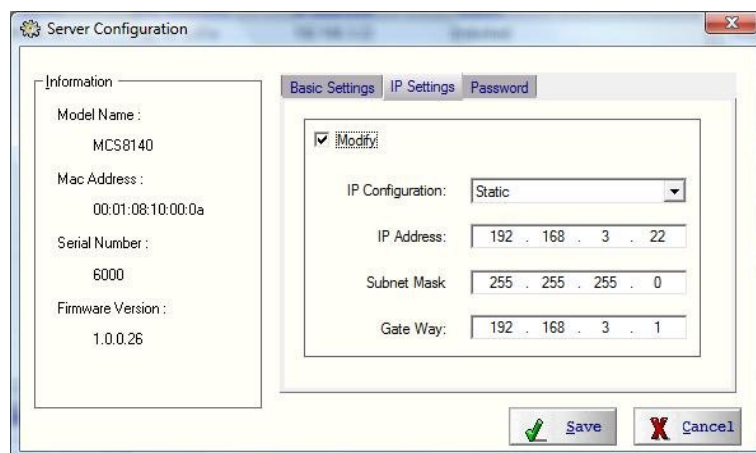
The factory default IP address given to the *USB 4-Port Over IP* is 192.168.3.22. This address may not match your network's subnet address; in this case, the USB Server Admin Utility will not detect your USB devices.

3-3.1 Set IP Address

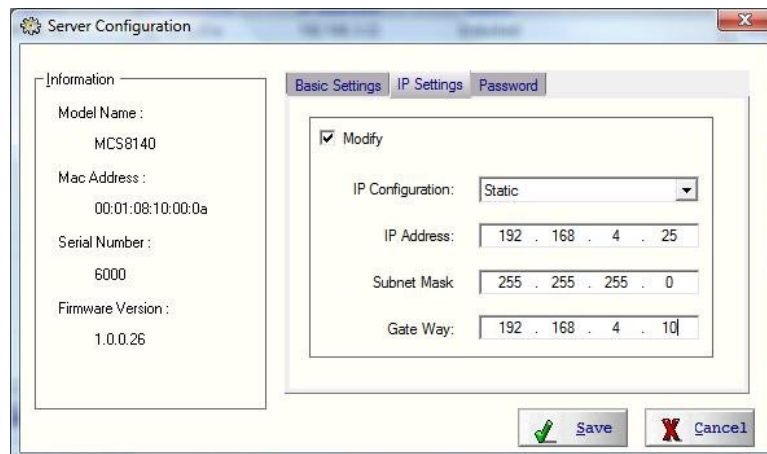
1. In Server Manager, click the server that you want to configure.
2. Click **Server Configuration** button.



3. Select **IP Settings** tab. Check **Modify**, At IP Configuration screen and either type in the IP address, Subnet mask, and Gate Way or select **DHCP**.

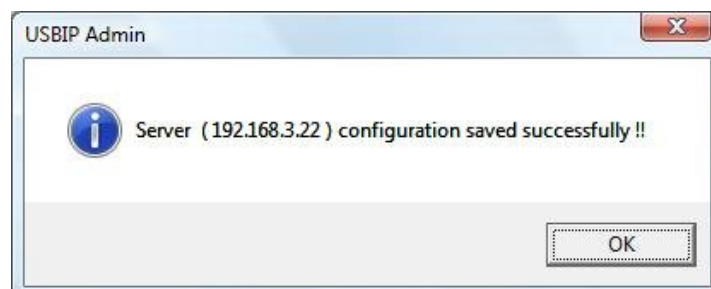


4. Click **Save** and exit.

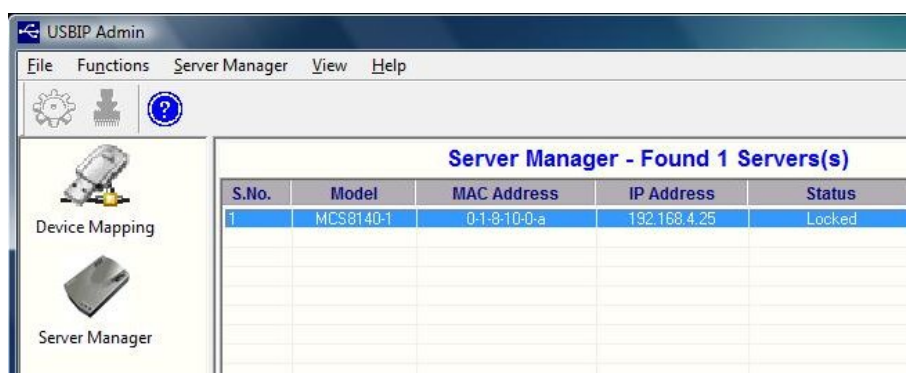


The 'Server Configuration' window has three tabs: 'Basic Settings', 'IP Settings', and 'Password'. The 'Basic Settings' tab is active, showing a 'Modify' checkbox that is checked. Below it, the 'IP Configuration' is set to 'Static'. The 'IP Address' field contains '192 . 168 . 4 . 25', the 'Subnet Mask' contains '255 . 255 . 255 . 0', and the 'Gate Way' contains '192 . 168 . 4 . 10'. On the left, the 'Information' section displays: Model Name: MCS8140, Mac Address: 00:01:08:10:00:0a, Serial Number: 6000, and Firmware Version: 1.0.0.26. At the bottom right are 'Save' and 'Cancel' buttons.

5. When **USBIP Admin** display **Server configuration saved successfully!!**, then click **OK**.



6. The Server device should be changed and list at the Server Manager screen.



The 'USBIP Admin' window shows the 'Server Manager' tab. On the left is a sidebar with 'Device Mapping' and 'Server Manager' icons. The main area is titled 'Server Manager - Found 1 Servers(s)' and contains a table with the following data:

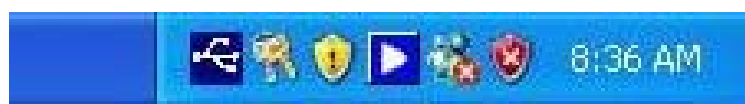
S.No.	Model	MAC Address	IP Address	Status
1	MCS8140-1	0-1-8-10-0-a	192.168.4.25	Locked

3-4 Using the USBIP Admin

The USBIP Admin is used to connect to your USB devices and configure your *USB4-Port Over IP* server.

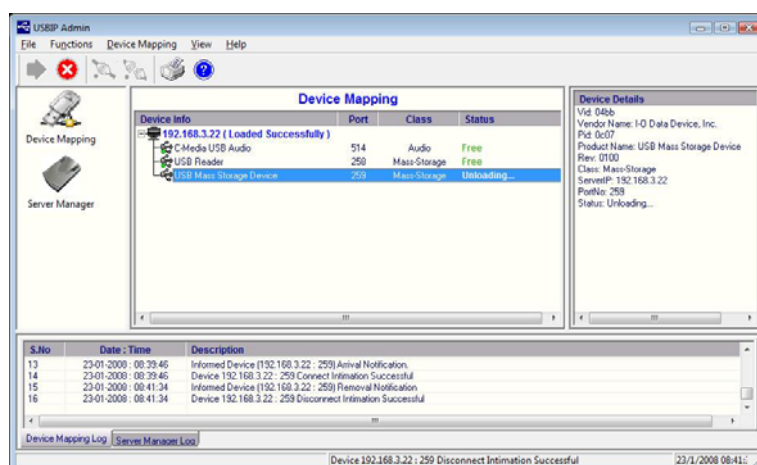
3-4.1 Quick Start Icon

The USB 4-Port Over IP Admin Quick Start Icon installs automatically during driver installation and is located on the right side of the taskbar by the system clock. Double click the icon to open the USB Server Admin.



3-4.2 USB Devices

The USB Devices window is divided some sections, **Device Mapping** and **Device Details** and **log information**. Device Mapping shows all detected USB devices; Device Details shows information about the USB device, log information shows detected USB devices Date, Time and Description.



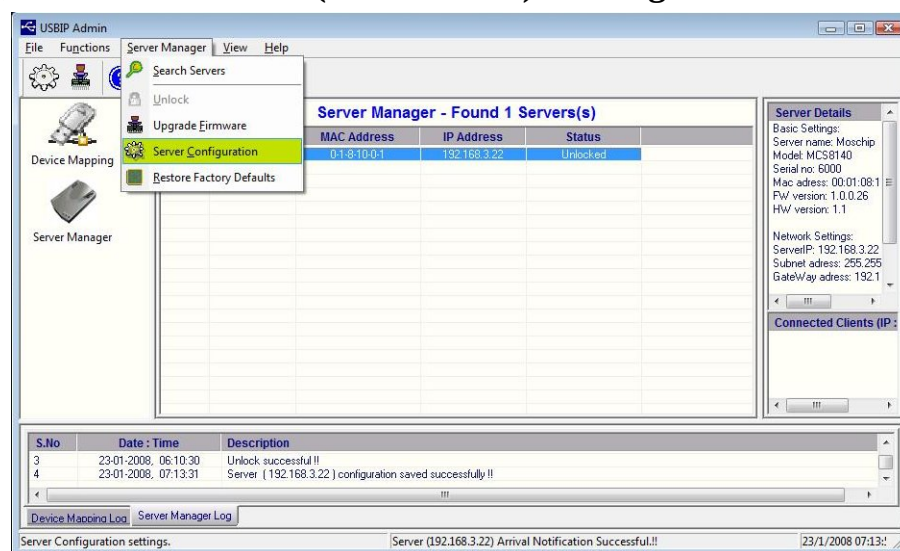
3-4.3 USB Function Buttons

- **Start Device Mapping:** Start USB 4-Port Over IP Device functionality

- **Stop Device Mapping:** Stop USB 4-Port Over IP Device functionality
- **Connect:** connects to a free USB device
- **Disconnect:** disconnects from a connected USB device
- **Printer Auto Connect:** automatically connects and disconnect to your printer when a print job is sent

3-4.4 Server Screen

The Server screen is divided into some sections, **Server Mapping**, **Server Details**, **Connected Clients (IP:USB Port)** and **Log information**



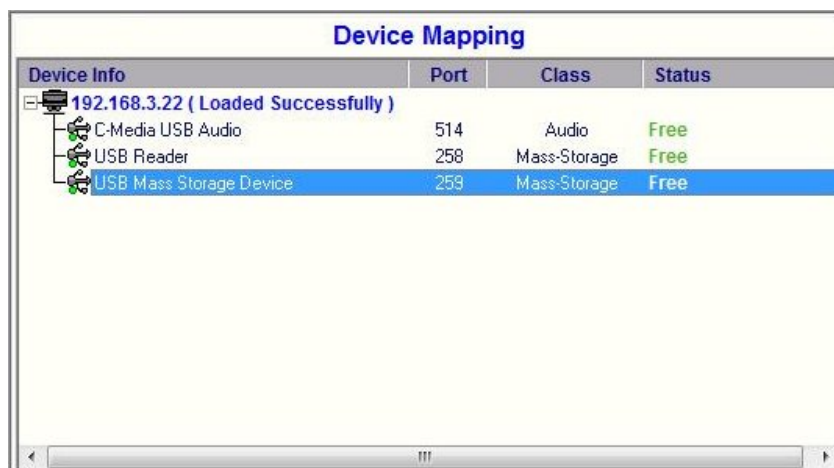
3-4.5 Server Function

- **Search Servers:** searches for servers
- **Unlock:** unlocks: password enabled servers
- **Upgrade Firmware:** upgrades server firmware
- **Server Configuration:** this button is disabled whenever a server is password enabled
- **Restore Factory Defaluts:** restores the box to its factory default IP settings of 192.168.3.22

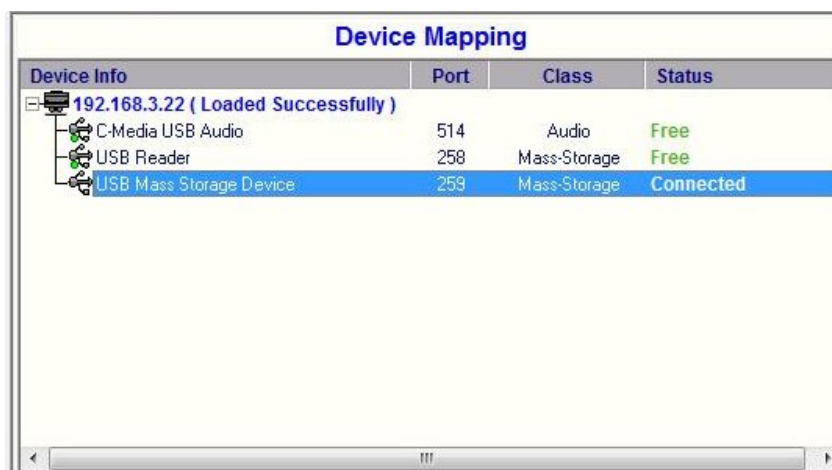
3-5 Device Mapping

3-5.1 How to Connect

1. In the Device Mapping window, select a device status is **Free**, then click the **Connect** button.



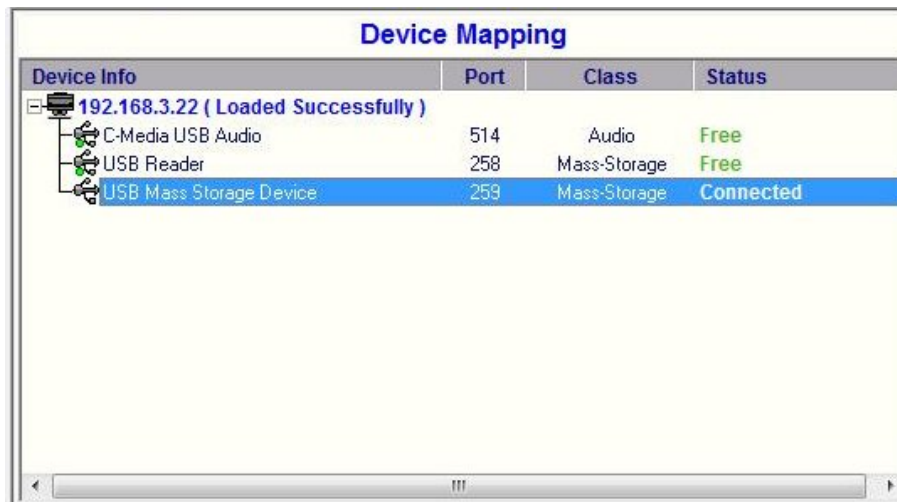
2. The **Status** will change to **Connected**.



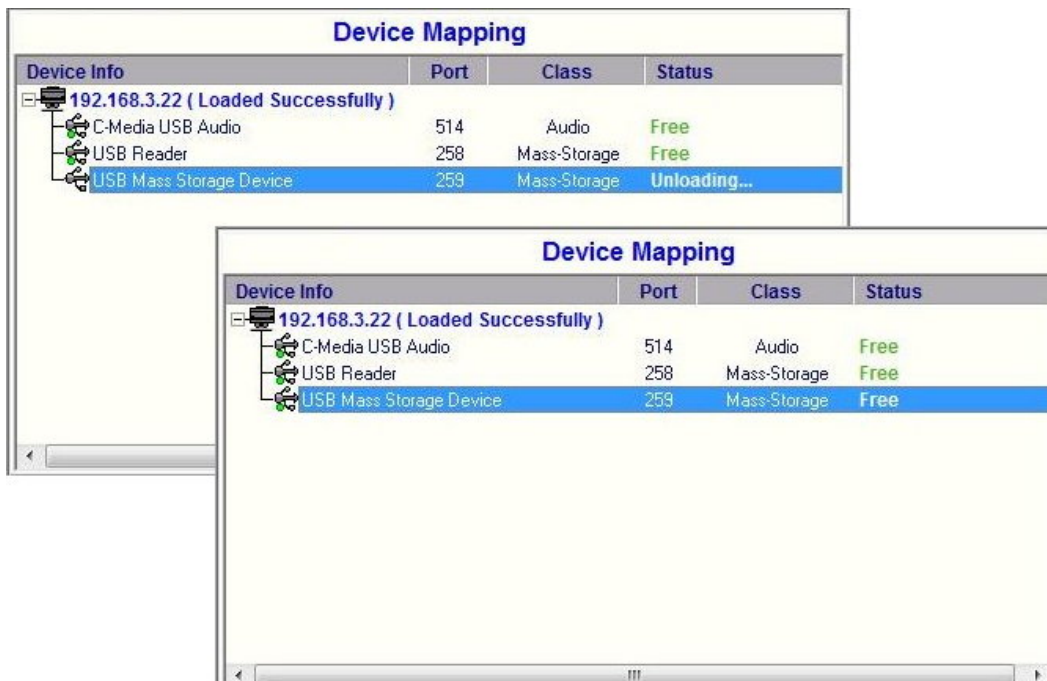
3. Depending on the device, Windows will either automatically install a driver for it or prompt you for a driver. Read the device's user's manual for driver installation instructions, if needed.

3-5.2 How to Disconnect

1. In the Device Mapping window, select a device status is **Connected**, then click the **Disconnect** button.



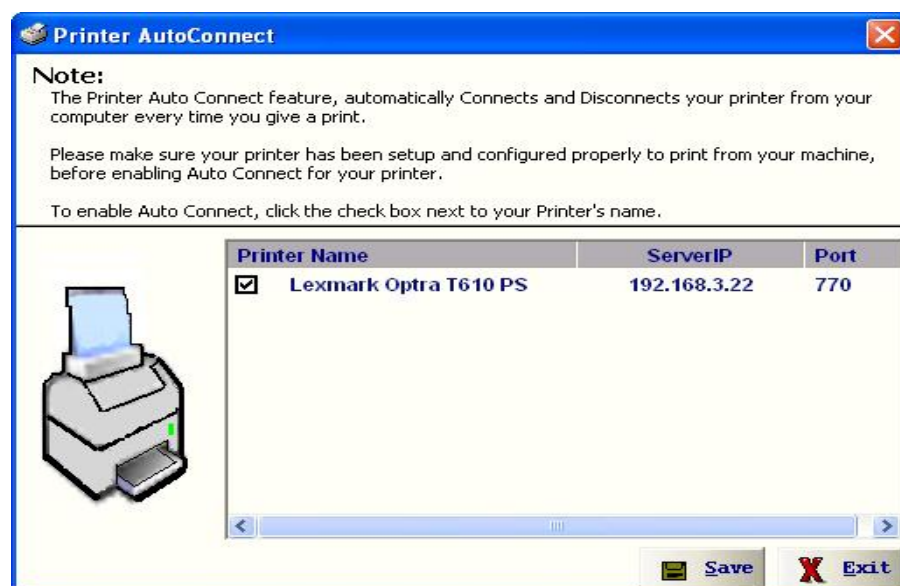
2. The **Status** will change to **Unloading** then to **Free**.



3-5.3 Printer Auto Connect

The Printer Auto Connect feature automatically connects and disconnects your printer from your computer every time you send a print job to the printer. Make sure the printer driver has been installed and the printer is configured to print from your computer before enabling this feature. Make sure you are **disconnected** from the printer before continuing; see section 3-5.1.2 on how to disconnect.

1. Click the **Printer** auto connect button.
2. Select the check box next to the printer's name.
3. Click **Save**.



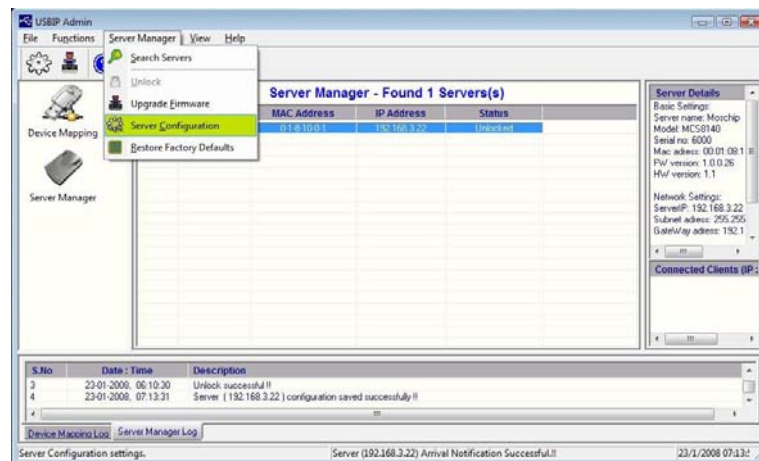
Note: Only printers that have been setup and configured properly to print from your computer will show up on the printer list. Check in Windows Printers icon in Control Panel for proper installation. Consult your printer's users manual for more information, if needed.

3-6 Server Manager

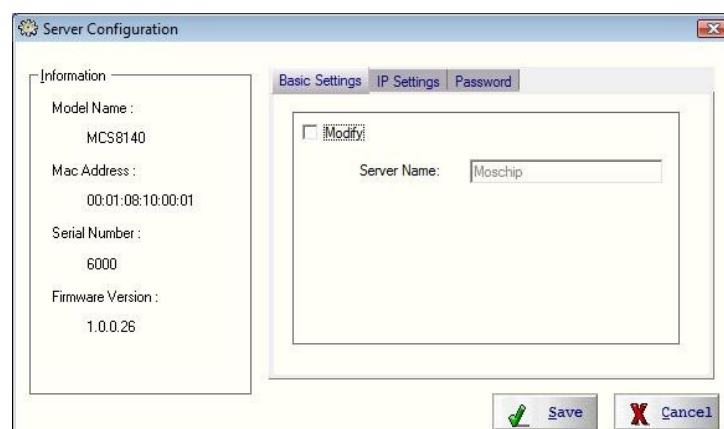
3-6.1 Server Configuration

Use the **Server Configuration** button to change server name, modify IP settings and enable or disable password. If the server is password protected the setup button will be disabled. To enable the **Server Configuration** button, go to section 3-6.2 **Unlock Server and Reset Password**.

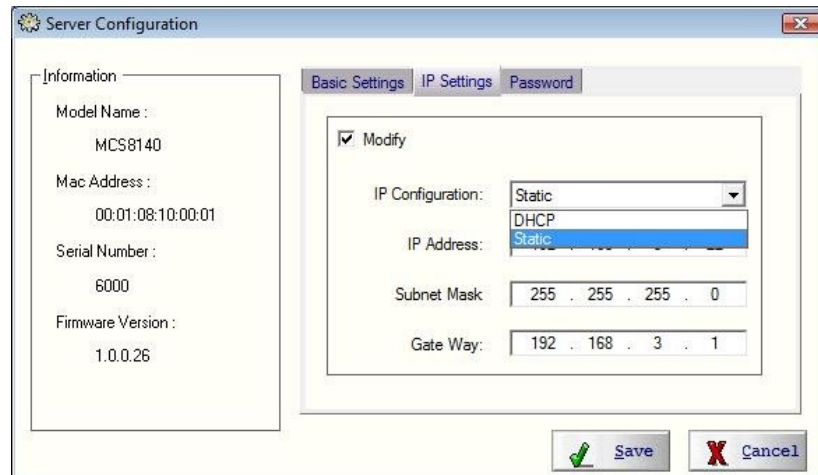
1. In Server Manager, click the server that you want to configure.
2. Click **Server Configuration** button.



3. Select **Basic Settings** tab to modify the server name.



4. Select **IP Settings** tab. Check **Modify**, then either select **Static** and type in your IP address and gateway or, to have your server configured automatically, select **DHCP**.



Server Configuration

Information

Model Name : MCS8140

Mac Address : 00:01:08:10:00:01

Serial Number : 6000

Firmware Version : 1.0.0.26

Basic Settings IP Settings Password

☒ Modify

IP Configuration: Static

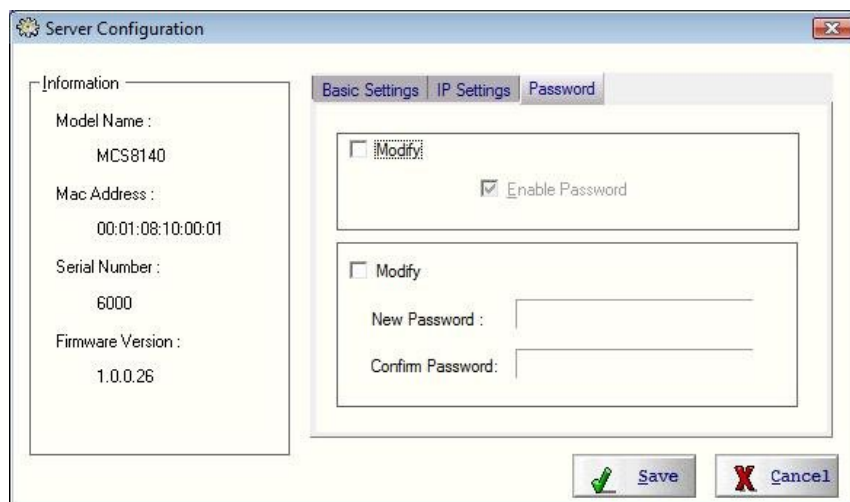
IP Address: DHCP

Subnet Mask: 255 . 255 . 255 . 0

Gate Way: 192 . 168 . 3 . 1

Save Cancel

5. Select **Password** tab. Check **Modify**, then enable, disable or change your password.



Server Configuration

Information

Model Name : MCS8140

Mac Address : 00:01:08:10:00:01

Serial Number : 6000

Firmware Version : 1.0.0.26

Basic Settings IP Settings Password

☒ Modify

☒ Enable Password

☐ Modify

New Password :

Confirm Password:

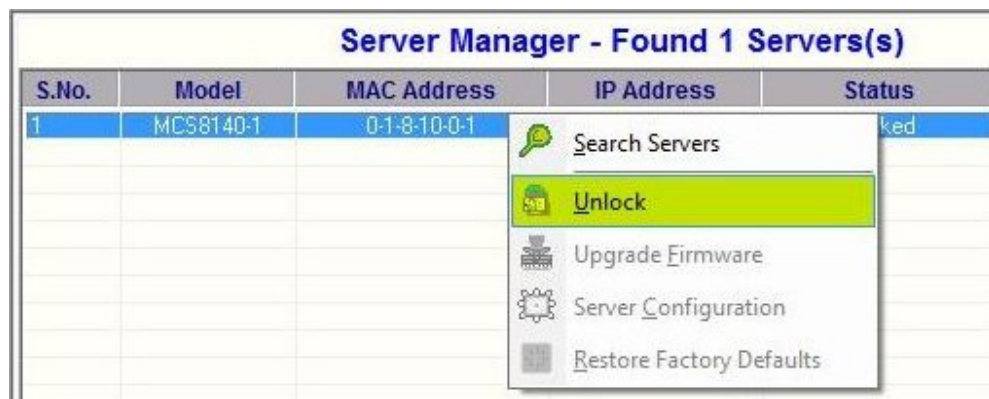
Save Cancel

6. Click **Save** to save your changes and exit.

3-6.2 Server Configuration

Whenever the *USB 4-Port Over IP* is password protected, it's **Status** will be **Locked**. Follow the steps in the order that they appear to unlock the server.

1. Select the locked server and click the Unlock button.



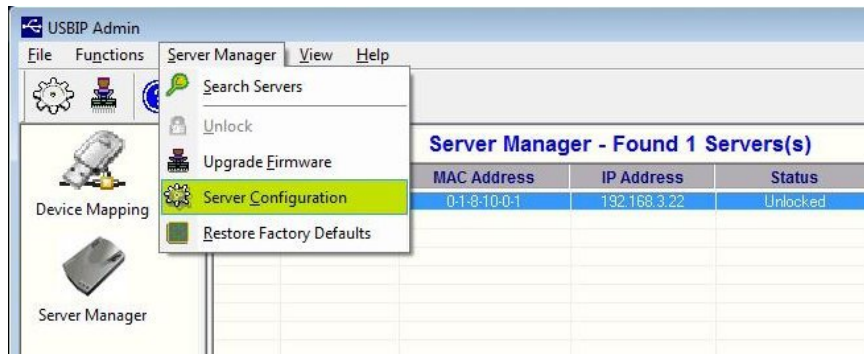
2. Type in your current password, and click **OK**. (The default password for the USB IP Server is **moschip**)



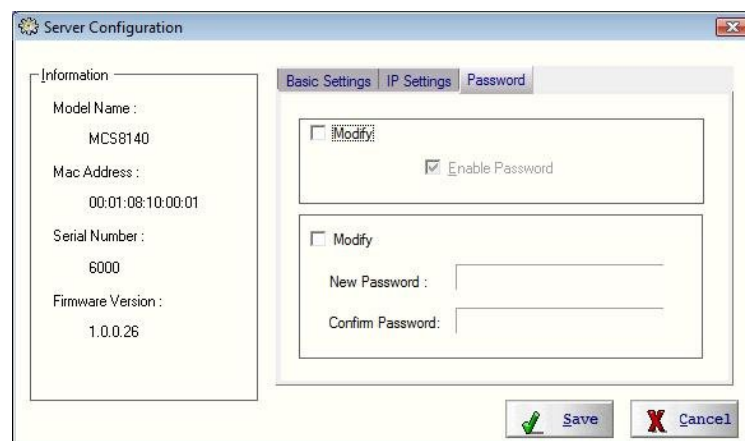
3. Your password will be confirmed or denied, click **OK**. If failed, try again. If you continue to have problems, check with your system administrator for the correct password.



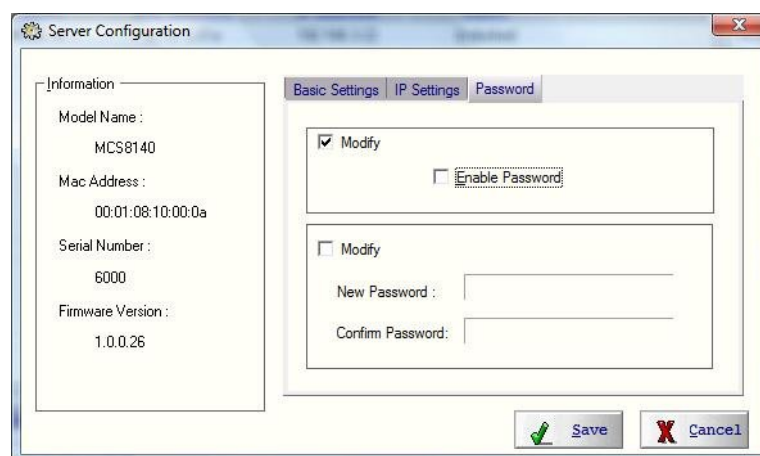
4. Click **Search Servers** button, the server status should be **Unlocked**. Click the **Server Manager** button.



5. Select the **Password** tab.



6. Check **Modify**; uncheck **Enable Password** and then click **Save**.

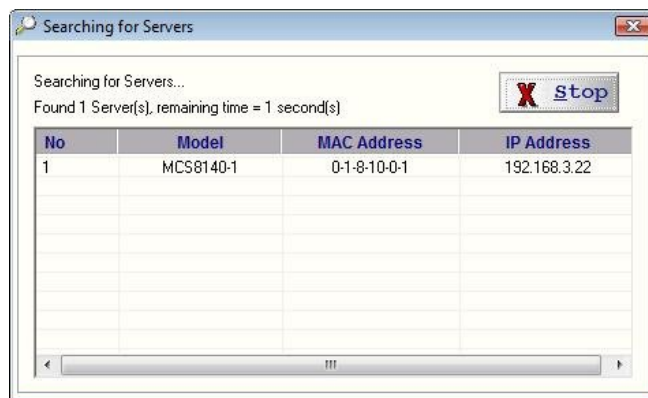


3-6.3 Search (Search Servers)

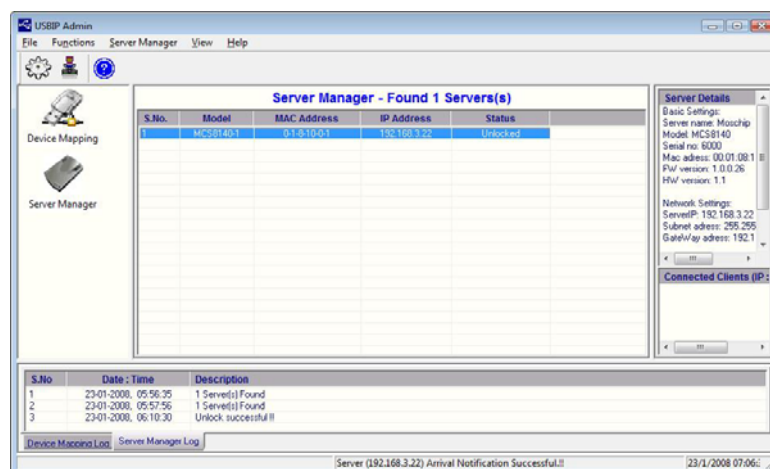
1. Right click then click **Search Servers** button.



2. The Searching for Servers box will pop up.



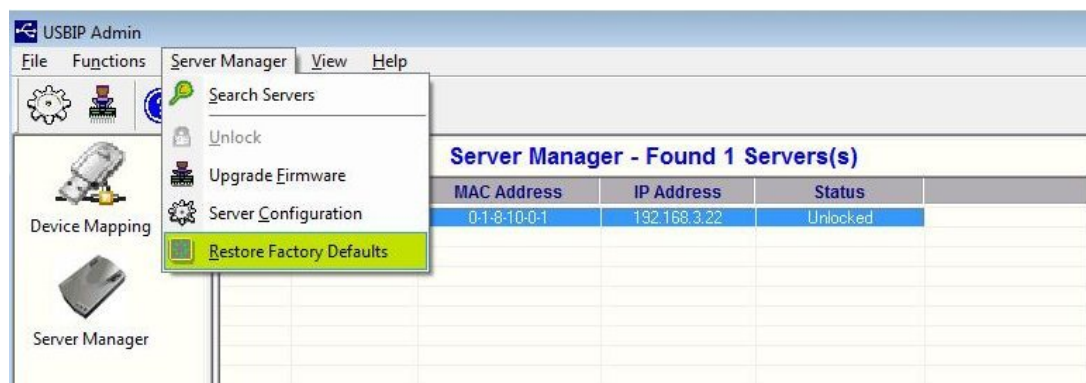
3. The Server Manager list will be searched.



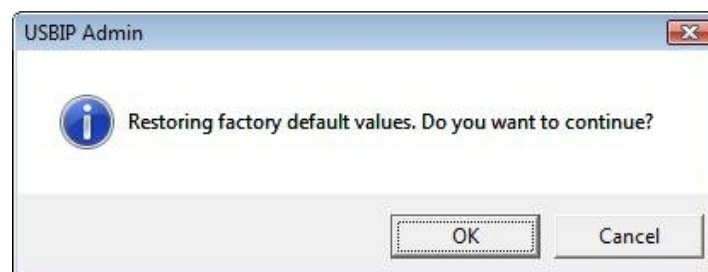
3-6.4 Restore (Restore Factory Default Settings)

The factory default settings are: **Moschip** (Server Name), **192.168.3.22** (IP) and **192.168.3.1** (Gateway).

1. Click the **Server Manager** tab then click **Restore Factory Defaults** button.



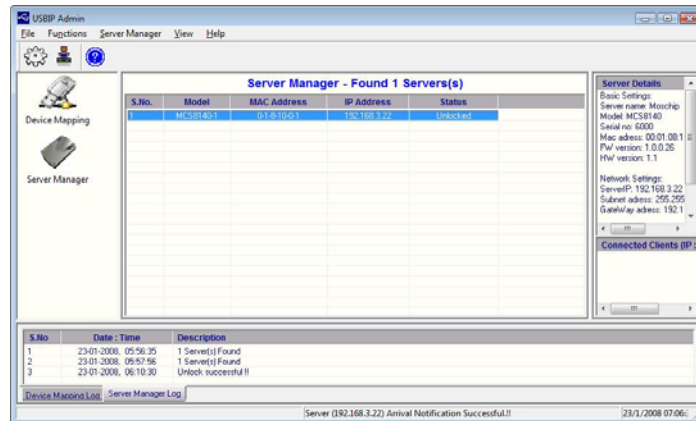
2. Click **OK**.



3. Click **OK**.

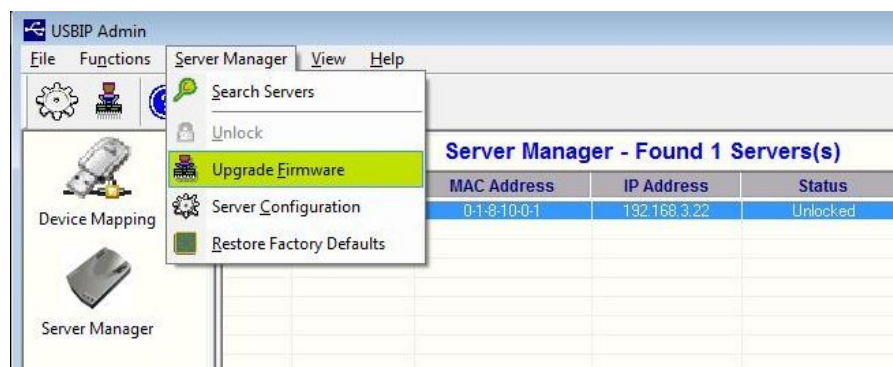


- Click **Search Servers** to display the server list.



3-6.5 Upgrade (Upgrade Firmware)

- Select a server, click the Server Manager tab then click **Upgrade Firmware** button.



- In Select File box, browse to or type in the location of the file, then click **Transfer**. Do not unplug the power adapter from the *USB 4-Port Over IP* during the update process.

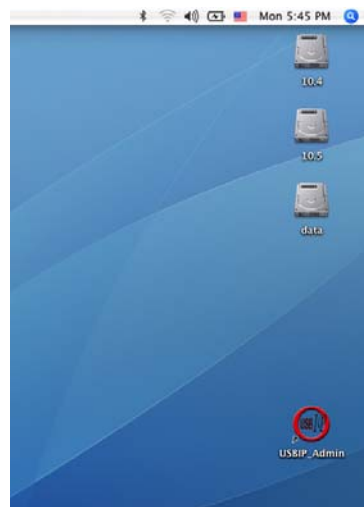


3-7 USBIP Admin Utility for MAC

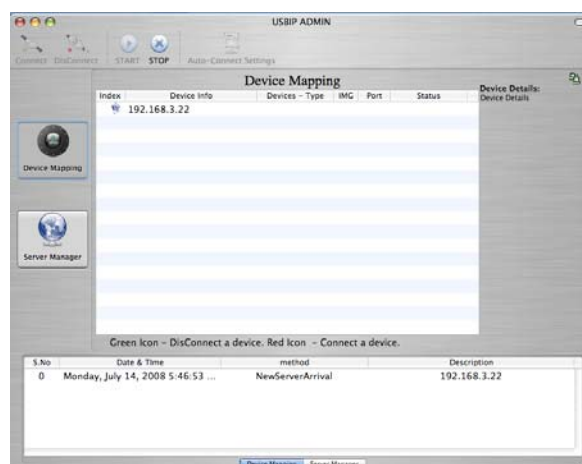
USB-IP Admin Utility is an application, which virtual the devices that are connected on the remote USB-Server. USB-IP Admin utility can also be used for configuring the USB server device.

3-7.1 Virtual USB-IP

1. As soon as the utility is installed this application will be placed on the desktop.



2. Double click the USBIP_Admin icon on the desktop to view the Full screen mode of the PC client applications shown below.

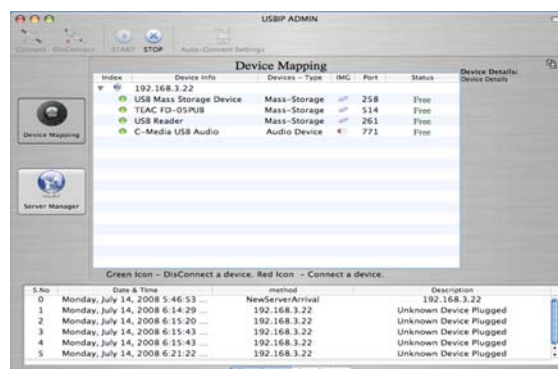


3. The application has four panels, which are docked in the application

- **Main window:** This display all the Device server and the USB Devices connected on them.
- **Function Panel:** This panel enables to switch between the Device Mapping and Server Manager Application.
- **Server/Device Details Panel:** This displays the more verbose information of the server and the device selected on the main window.
- **Log panel:** Any event on the USB server creates a log in the Log panel. This helps in continuous monitoring of USB device servers on the network.

3-7.2 Device Mapping

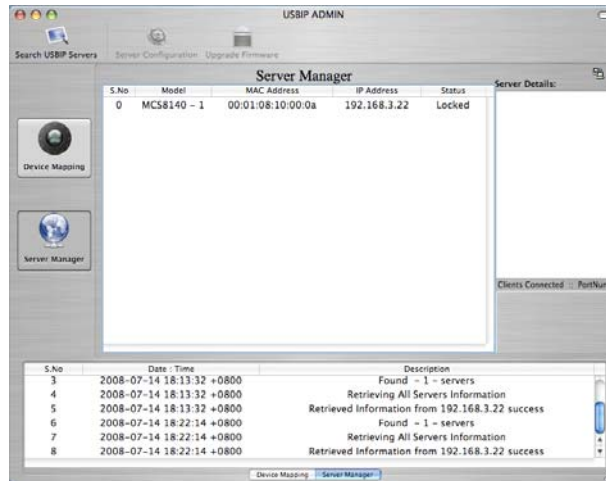
1. **Device Mapping** enables virtual of all USB Devices connected to the USB 4-Port Over IP board on to your local PC.
2. Device mapping start automatically, as soon as you launch the Admin Utility. You can also start the device mapping by clicking on the **Start** button in the Admin utility to start the device mapping.
3. To stop device mapping, click on **Stop** button in the Admin Utility window.



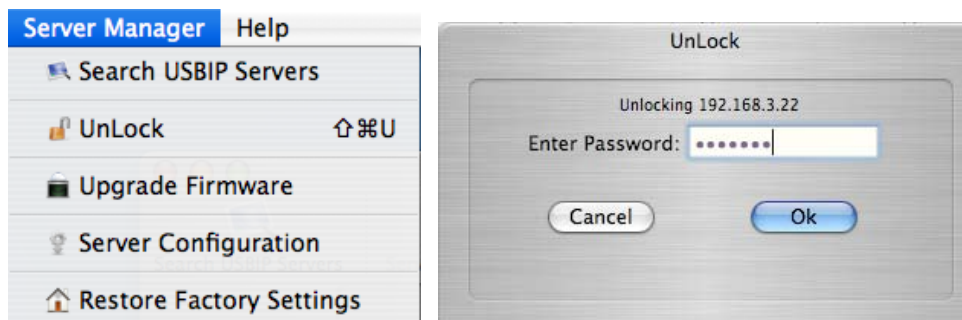
4. In the Device mapping Window, all the USB devices are shown as a tree under the USB Server. Right click on any device and click on **Connect** to virtual that USB device onto your Mac machine

3-7.3 Server Manager

1. Server manager enables the Administrator to configure USB 4-Port Over IP USB server on the network.



2. The Server Manger will auto search for the USB servers on the Network.
3. On selecting **UnLock** a password dialog pops up as shown below. Enter the password in the dialog box. The default password for the USB IP Server is **moschip**.

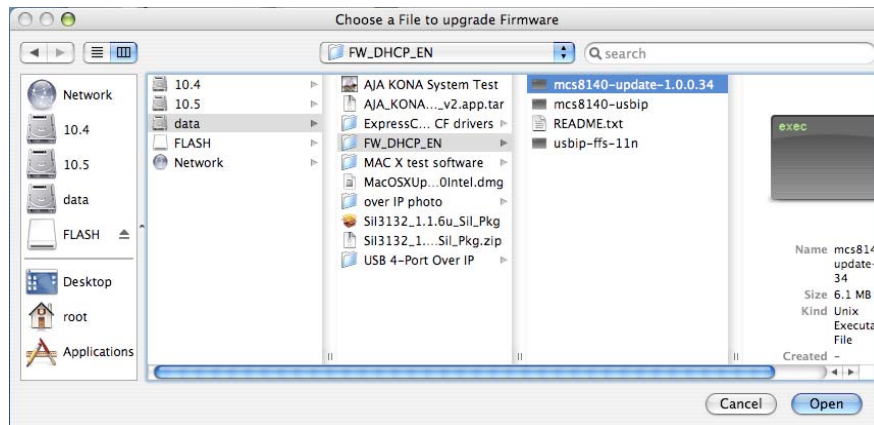


Note: The unlock feature will not work if any of the devices connected to the server are in use.

Now the Device server can be configured for various settings and given below.

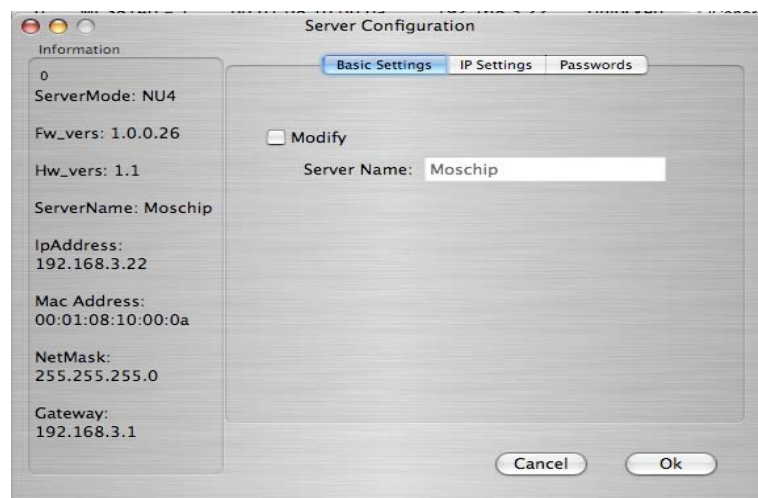
4. Upgrade Firmware

Choosing the upgrade file and click **Open** can do upgrading USBIP Server Firmware.



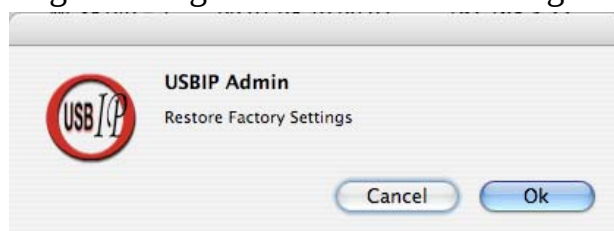
5. Server Configuration

USBIP Servers setting like Basic Settings, IP Settings and Passwords can be modified.



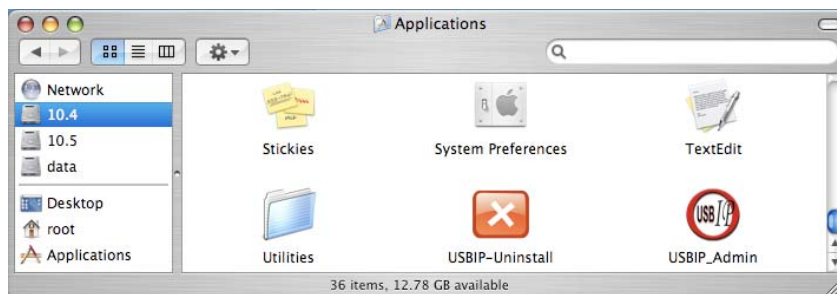
6. Restore factory defaults

Will replace the changed settings with the default settings.

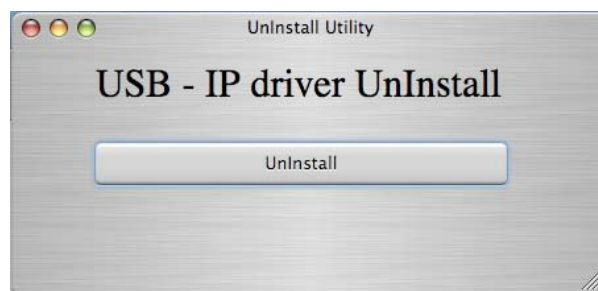


3-7.4 Un-installation

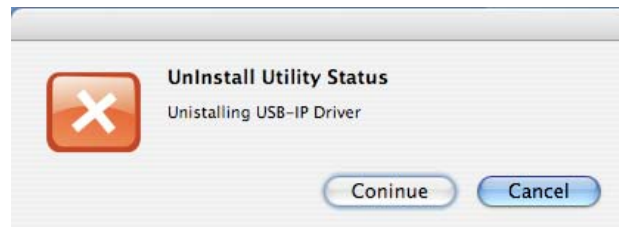
1. You can uninstall the USBIP Server client by double clicking on USBIP-Uninstall Utility available in Application folder.



2. Click **Uninstall**.



3. Click **Continue** to uninstall the USBIP Driver.



4. Clicking on **OK** will Un-install the driver completely from the Macintosh Machine





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