

PREFACE

Congratulations on your purchase of the TS-S402 Network Storage Enclosure. Read this manual carefully and keep it in a safe place for future reference.

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Notice

Product features and specifications described in this manual are subject to change without notice. The manufacturer shall not be liable for any damage or loss of the personal data caused by delay in performance, wrong operation, product service, or other accidental circumstances.

Conventions

The manual uses the following symbols to help you quickly identify the important information.



Used to indicate additional information you need to Know when using your TS-S402 Network Storage Enclosure.



Used to indicate and avoid the risk of data loss or damage to your TS-S402 Network Storage Enclosure.

Regulations

FCC Warning



This equipment has been tested and found to comply with the regulations 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 when the equipment is operated in a commercial environment. This

equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this user's guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

CE Mark Warning



This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate

VCCI Warning



This is a product of VCCI Class B Compliance.

この装置は、情報処理装置等電波障害自主規制協議会(VCCI)の基準 に基づくクラス B 情報技術装置です。この装置は、家庭環境で使用すること を目的としていますが、この装置がラジオやテレビジョン受信機に近接して 使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。

WEEE Notice



This symbol indicates that the product should not be treated as household waste. To ensure protection of the environment, this product should be disposed of in a manner consistent with EU regulations.

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OVERVIEW

Read this section to familiarize yourself with some of the basic features of the product.

Package Contents

Make sure that the following items are present the package. If anything is missing or damaged, contact your vendor immediately.

TS-S402 Network Storage Enclosure
Power Cord

Power Adapter







RJ-45 Cable







HDD Brackets x 4

Screws x 8





Features

- Supports one 10/100/1000Mbps Auto-MDIX Gigabit Ethernet port for network connection.
- Provides two USB ports for printer and USB storage device connections.
- Supports Windows based utility for Auto-IP discovery and setup, Disk status monitor, Network drive wizard and remote backup.
- Automatically detects new drives when inserted.
- Web-based UI for easy configuration, uses AJAX technology to monitor the disk status (disk usage, format progress, etc) instead of simply refreshing the web page.
- Supports EXT2/EXT3 HDD file formats.
- Supports FAT16, FAT32, and NTFS USB storage file formats.
- Supports JBOD with software, treats two attached disks as one logical disk for access.
- Supports Mirrored (RAID 1), and Striped (RAID 0) RAID formats.
- Supports firmware upgrade via Web UI.
- Supports installation of packages from remote devices.
- Built-in FTP server for users to transfer files using FTP client.
- Supports CIFS/SMB/NFS for Microsoft Network remote users easily retrieve files through"My Neighborhood".
- Supports NTP protocol to synchronize clock time.
- Supports unified account management to control all sharing protocols.
- Provides USB one-click backup, to copy USB contents to HDD by pressing just one button.
- Supports file-level backup, speeds up the file transfer rate by transferring only files that are different between remote and local devices.
- Supports scheduler to plan backup events/schedules.
- Supports digital media server compatible with DLNA certified digital media players, and iTunes server.
- Provides formatting function for new HDDs or USB storage devices.
- Supports up to 32 connected users (Samba & FTP) at one time.
- Supports code-page for multiple-language file names (English, German, French, Italian, Spanish, Portuguese, Russian, Japanese, Traditional Chinese, Simplified Chinese, and Korean).

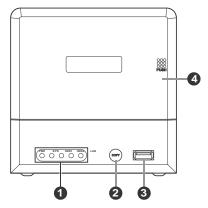
System Requirements

Before using the TS-S402 Network Storage Enclosure, make sure you have a computer with the following requirements:

- 1Ghz processor or higher
- 512 MB RAM or above
- 30 MB available hard disk space
- CD-ROM drive (for software installation)
- Installed network adapter
- Any installed web browser to view the web UI
- Windows XP SP2, Windows 2000 SP6, or Windows Vista (for Windows based configuration utility) operating system

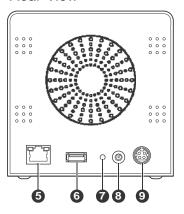
Product Overview

Front View



- 1 Front panel LED indicators
- 2 USB one-click backup button
- 3 USB port
- 4 HDD enclosure door

Rear View

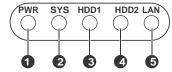


- 5 LAN port
- 6 USB port
- 7 Reset button
- 8 Power button
- Power jack

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LED Definitions

The TS-S402 Network Storage Enclosure comes with five LED indicators on the front panel. See the below table for descriptions of these LED indicators.



No.	LED	LED Color	Description	
1	Power LED	Green	Indicates the TS-S402 Network Storage	
		Off	Indicates the TS-S402 Network Storage	
2	System LED	Green	Indicates the TS-S402 Network Storage	
		Blinking Green	Indicates the TS-S402 Network Storage Enclosure is in the system boot process.	
3	HDD1	Green	Indicates HDD1 link.	
	Access LED	Amber	Indicates HDD1 link and the capacity is less than 10%.	
		Blinking Green	Indicates HDD1 activity.	
		Blinking Amber	Indicates HDD1 activity and the capacity is less than 10%.	
4	HDD2	Green	Indicates HDD2 link.	
	Access LED	Amber	Indicates HDD2 link and the capacity is less than 10%.	
		Blinking Green	Indicates HDD2 activity.	
		Blinking Amber	Indicates HDD2 activity and the capacity is less than 10%.	
5	LAN LED	Green	Indicates network link.	
		Blinking Green	Indicates network activity.	

The LAN port, on the rear of the TS-S402 Network Storage Enclosure, is equipped with two LED indicators representing the LAN link mode. The following table gives the detailed definitions for each LED indicator.

No.	LED Color	Description	
1	Green	Indicates Ethernet link in 1000Mbps mode.	
2	Amber	Indicates Ethernet link in 10/100Mbps mode.	

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UNDERSTANDING RAID LEVELS

This section introduces the basic concepts of RAID 0, RAID 1, and JBOD. Each one is accompanied with illustrations, to help deepen your understanding of RAID. This allows you to make use of the RAID feature with your hard disks for improved performance and data security.

RAID 0

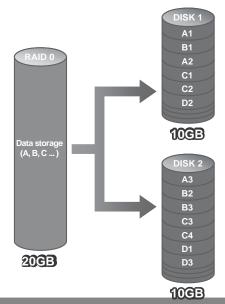
RAID 0, known as disk striping, has generally the best performance, but does not offer any redundancy. In this level, data is broken into small units called sectors, and sectors are distributed across all disks in the array. As it does not provide any data protection, if any disk in the array fails then all data in the array is lost. Such stripes allocation allows to enhance I/O performance.

Characteristics

- Storage capacity = (number of disks) x (size of the smallest disk)
- A minimum of two disks is required.
- Extremely high performance in both read and write
- No fault-tolerance

The following diagram shows how the TS-S402 Network Storage Enclosure implements the RAID 0 algorithm

by dividing data into blocks and distributing them across the two installed disks.



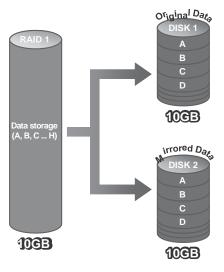
RAID 1

RAID Level 1, known as disk mirroring, is a popular approach to protect data from a disk failure. To implement RAID Level 1, you need at least two physical hard drives. As the disks are paired up, all disk writes are duplicated on both disks. You can back up data without interruption using this algorithm. In case of a disk failure, the system can continue to run without being affected.

Characteristics

- Storage capacity is equal to the size of the smallest disk.
- The disks are peers, containing the same data. (Minimum of two disks)
- Twice the read transaction rate of single disks
- Very high fault-tolerance
- One of most available solutions
- 100% data redundancy. Suitable for users who require data stability and the ability to back up data.

The following diagram shows how both physical disks are seen as a single drive by the TS-S402 Network Storage Enclosure. If one disk fails, you do not need to worry about damage to the data as the other one contains an identical copy of the data.



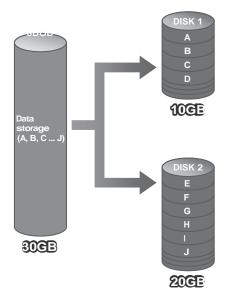
JBOD

JBOD (Just a Bunch Of Disks) is a group of disks. JBOD is not technically RAID but "disk spanning." In this mode, all the disks are grouped together so they appears as a large single disk. Each disk can operate independently and is seen as an individual disk. Therefore, the total capacity of JBOD is the sum of the capacities of each disk. This allows the user to add disks until the desired total capacity is reached. Since JBOD provides no performance increase and data protection, it is seldom used.

Characteristics

- Large capacity
- No redundancy

The following diagram shows how each disk represents a separate physical disk drive. The JBOD algorithm simply groups these two hard disks to increase the storage capacity on the TS-S402 Network Storage Enclosure. Each hard disk still functions as an individual disk.



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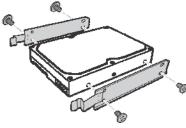
GETTING STARTED

This section provides information to help you set up your TS-S402 Network Storage Enclosure before you can use it.

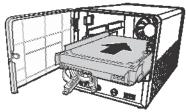
Installing Hard Disks

The TS-S402 Network Storage Enclosure supports up to two Serial ATA (SATA) hard disks. To install hard disks into the TS-S402 Network Storage Enclosure, follow the steps as described below.

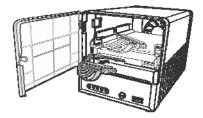
1. Secure the supplied HDD brackets to the both sides of a 3.5" hard disk using four screws as shown.



2. Push to open the HDD enclosure door and install the hard disk into the TS-S402 Network Storage Enclosure as shown.



3. Connect the SATA cable connector to the hard disk.



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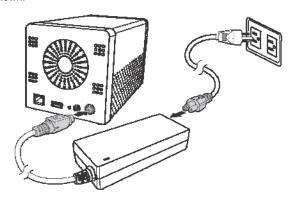
4. Repeat the same steps to install the second hard disk.

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5. Close the HDD enclosure door when the installation is complete.

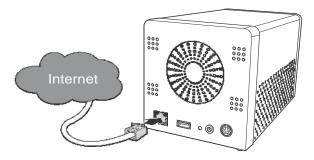
Connecting the Power

- Connect one end of the supplied power adapter to the power jack on the rear of the TS-S402 Network Storage Enclosure.
- 2. Then connect one end of the power cord to the power adapter and the other end to a wall outlet as shown.



Connecting to a Network

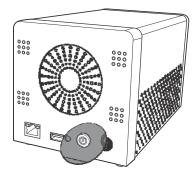
- Connect one end of the supplied RJ-45 cable to an available port on your network hub or router.
- 2. Connect the other end of the RJ-45 cable to the LAN port on the rear of the TS-S402 Network Storage Enclosure.



Turning Your TS-S402 Network Storage Enclosure On and Off

To turn your TS-S402 Network Storage Enclosure on, press and hold the POWER button on the rear of the TS-S402 Network Storage Enclosure at least 1 second.

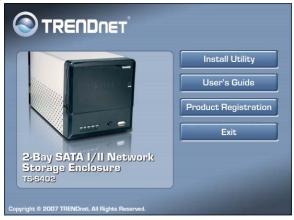
To turn your TS-S402 Network Storage Enclosure off, press and hold the POWER button on the rear of the TS-S402 Network Storage Enclosure at least 5 seconds.



Installing the NAS Utility

You can run the NAS Utility on either a Windows® XP or Windows® Vista operating system. Follow the steps below to install the NAS Utility onto your computer.

- 1. Turn on your computer and insert the supplied Utility CD into the CD-ROM Drive.
- Select Install Utility from the following pop-up screen. The installation program starts automatically.



3. If the CD does not start up automatically, browse your CD-ROM drive and double click the Setup.exe file.

- 4. Follow the on-screen instructions to install the utility.
- Upon completion, you can start to manage your TS-S402 Network Storage Enclosure with the NAS Utility.

Uninstalling the NAS Utility

Follow the steps below to uninstall the NAS Utility from your computer.

- You can remove the NAS Utility from the program entry in the Start menu or via the Control Panel.
- Windows Vista users:
 - Go to Start > All Programs > NAS Utility > Uninstall NAS Utility.
 OR
 - Go to Control Panel > Programs and Features, select NAS Utility, and click the Uninstall/Change button to start uninstallation.
- Windows XP users:
 - Go to Start > Programs > NAS Utility > Uninstall NAS Utility.
 OR
 - Go to Control Panel > Add or Remove Programs, select NAS Utility, and click the Change/Remove button to start uninstallation.

If your installation directory is different other than the default, locate from the directory you specified for the **NAS Utility**.

- A message pops up for the NAS Utility uninstalling confirmation. Click Yes to continue or No to abort.
- 3. The uninstaller starts to remove the NAS Utility from your computer.

Initializing and Accessing Your TS-S402 Network Storage Enclosure



To launch the NAS Utility, double click the NAS Utility icon (NAS Utility) from your desktop or the program entry in the Start menu. If you are using the default installation directory, locate the NAS Utility as described below:

- Windows Vista users: Go to Start > All Programs > NAS Utility > NAS Utility.
- Windows XP users: Go to Start > Programs > NAS Utility > NAS Utility.

If the hard disks are being installed for the first time, you need to initialize the disks before you can use them. Follow the steps described below.

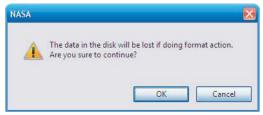
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Formatting the installed hard disks

- 1. Select the format mode and type from the drop-down menus. The available options are listed as below. After making your selection, click Next to continue.
 - Format Mode: Individual disks, RAID 0 (Striped), RAID 1 (Mirrored), and JBOD (Just a Bunch of Disks)
 - Format Type: EXT2 and EXT3



The following message pops up to make you aware of the data loss resulting in this action. Click OK to continue.



3. The system starts to format the hard disks.





The time required to format hard disks may differ depending on the hard disk size.

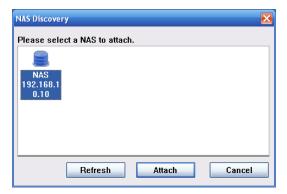
4. When the format is complete, click Finish.



Attaching to the TS-S402 Network Storage Enclosure via NAS Utility

Each time you launch the NAS Utility, the following screen appears. All the Multimedia NAS devices connected to the network are displayed here. Select a TS-S402 Network Storage Enclosure

and click Attach. You can click Refresh to refresh the screen at any time (The default IP address of the TS-S402 Network Storage Enclosure is 192.168.10.10).



Each TS-S402 Network Storage Enclosure device may be displayed as one of the following icons according to its connectivity.



The TS-S402 Network Storage Enclosure is connected correctly.



The TS-S402 Network Storage Enclosure cannot be detected in one of the following conditions:

 The TS-S402 Network Storage Enclosure is not turned on, unplugged or is in an incorrect subnet.

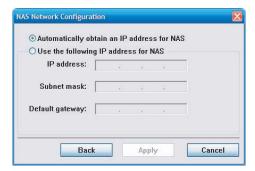


The assigned IP address of the TS-S402 Network Storage Enclosure is incorrect for the current network.

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Network configuration

If the IP address of the TS-S402 Network Storage Enclosure is inconsistent with your network domain, the following screen appears to prompt you to change the IP address of the TS-S402 Network Storage Enclosure. Ensure the changed IP address belongs to your network domain.



Login

After you have connected to a TS-S402 Network Storage Enclosure, the following screen appears. Enter the default administration username (admin) and password (admin). Click **Login** to launch the NAS Utility.



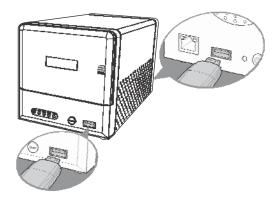


Check the **Remember my password** option so that you do not have to type in the username and password for each time login.

USING EXTERNAL USB DEVICES

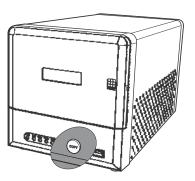
Connecting USB Devices

Connect a USB device, such as a USB flash drive or USB printer, to one of the USB ports on the front or rear of the TS-S402 Network Storage Enclosure as shown.



Using the USB One-Click Backup Button

With the convenient USB one-click backup button on the front of the TS-S402 Network Storage Enclosure, you can backup the data stored in the connected USB devices to your computer by simply pressing the USB one-click backup button as shown. All the data from the connected USB devices will be backed up to the share folder in the TS-S402 Network Storage Enclosure.



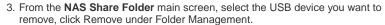
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Disconnecting USB Devices

To safely remove a USB device from the TS-S402 Network Storage Enclosure, we suggest first remove the device via the NAS Utility or the Web-based Configuration Tool.

When removing USB devices via the NAS Utility:

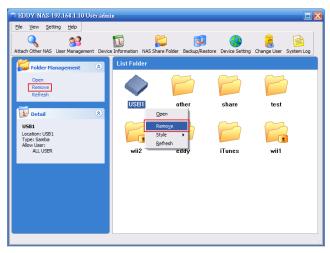
- Open the NAS Utility as described in the section "Initializing and Accessing Your TS-S402 Network Storage Enclosure".
- Select View > Share Folder from the menu bar, OR click NAS Share Folder (from the guick access tool bar. The NAS Share Folder screen displays.



OR

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Right-click the USB device you want to remove, and then select **Remove** from the popup menu.



- 4. A confirmation message appears. Click **OK** to confirm or **Cancel** to abort.
- 5. When the USB device is removed, a message pops up telling you that it is safe to unplug the USB device from the TS-S402 Network Storage Enclosure.

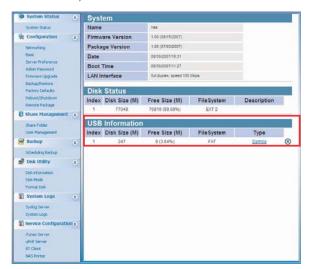
When removing USB devices via the Web-based Configuration Tool:

 Open the Web-based Configuration Tool as described in the section "Launching the Web-based Configuration Tool".

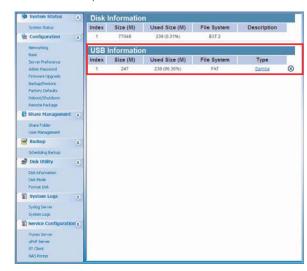
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- From the left panel of the Web-based Configuration Tool, click System Status > System Status or Disk Utility > Disk Information.
- 3. All connected USB devices are displayed in the USB Information section.

(The System Status screen)



(The Disk Information screen)



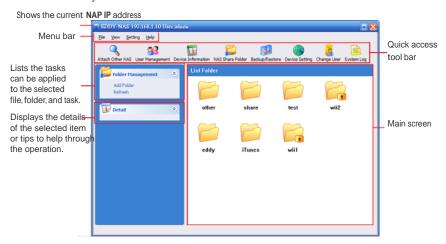
- 4. Click the **Delete** (igotimes) button to remove the USB device from the list.
- 5. You can now unplug the USB device from the TS-S402 Network Storage Enclosure.

USING THE NAS UTILITY

Read this section to learn about the main features of the NAS Utility.

NAS Utility Overview

The NAS Utility provides an user-friendly interface for you to manage your TS-S402 Network Storage Enclosure in a fast and easy way. The following illustrates the layout of the NAS Utility main screen.



The following table provides a list of options under each menu.

File		
Attach Other NAS	Allows you to attach other TS-S402 Network Storage Enclosure on your network.	
User Management Exit	Allows you to configure and manage the user's access to the TS-S402 Network Storage Enclosure. Exit the NAS Utility.	
View		
Share Folder	Allows you to configure and view the folders in your TS-S402 Network Storage Enclosure.	
Backup/Restore	Allows you to configure a backup task.	

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System Log Allows you to manage and view all the log messages generated from the TS-S402 Network Storage Enclosure.

Setting

Device Setting Opens the Web-based Configuration Tool.

Help

About Displays the current firmware version of the TS-S402 Network Storage Enclosure.

Attach Other NAS



Use this feature to connect to another TS-S402 Network Storage Enclosure on your network.

Select File > Attach Other NAS from the menu bar, OR click Attach Other NAS

(\int \)) from the quick access tool bar. The **NAS Discovery** screen displays. Select a TS-S402 Network Storage Enclosure and log in with the correct username and password.

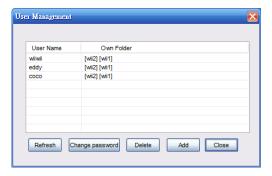
User Management



Use this feature to add users, remove users, change the password of a user, and view the users who have the access right for the current attached TS-S402 Network Storage Englosure

To configure the settings, select File > User Management from the menu bar, OR click

User Management () from the quick access tool bar. The following screen displays.



See below for descriptions of each button function.

Button	Description	
Refresh	Click to refresh the user list.	
Button	Description	
Change password	Click to change the password of the selected user.	
Delete	Click to delete the user.	
Add	Click to create a new user account. Enter the username and password as required.	
Close	Click to exit the window.	

Device Information



Use this feature to view the current attached TS-S402 Network Storage Enclosure system and storage disk information.

Select View > Device Information from the menu bar, OR click Device Information



() from the quick access tool bar. The following screen displays.



The following details are displayed in this screen. Click OK to exit this screen.

remaining destants and anoptayou in time destation destate of the exist time dest		
System Info	NAS system name	Package version
	• IP address	• Boot time
	MAC address	• LAN interface
	Firmware version	• Disk mode
Storage Info	Name of installed disks	• Used size
	• File system	• Free size

Total size

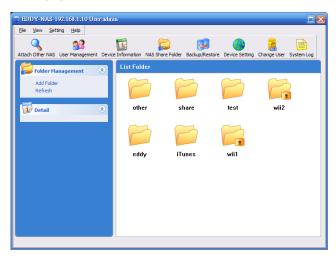
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NAS Share Folder



To open the NAS Share Folder screen, select View > Share Folder from the menu

bar, OR click **NAS Share Folder** () from the quick access tool bar. The **NAS Share** Folder screen displays.



The NAS Utility provides these icons to indicate each type of the folder or drive.



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Creating a new folder

To create a new folder, do the following:

From the NAS Share Folder screen, click Add Folder under Folder Management.
 OR

Right-click anywhere in the **NAS Share Folder** main screen, and then select **Add Folder** from the pop-up menu.

2. The following window appears.



Specify the following options, then click Create.

- Disk Name: The disk for the new folder to be created on.
- Folder Name: Type the name for the folder.
- Protocol Type: Samba (default), FTP, or NFS
- Folder Type: Public (default), or Private
- 3. A new folder is created.

Deleting a folder

To remote a new folder, do the following:

- From the NAS Share Folder screen, select the folder you want to delete, then click Delete under Folder Management. OR
 - Right-click the folder you want to delete, and then select **Delete** from the pop-up menu.
- 2. A confirmation message appears. Click OK.
- 3. The selected folder is deleted.

Editing folder properties

Use this function to rename the folder, change the folder protocol, or configure the folder for public or private access.

To edit a folder, do the following:

 From the NAS Share Folder screen, select the folder you want to edit, and then click Edit under Folder Management.

OR

Right-click the folder you want to edit, and then select **Edit** from the pop-up menu.

2. Make required changes to the folder.



The **share** folder is the system default folder, you cannot delete it or modify its settings.

Mounting a folder as a network drive

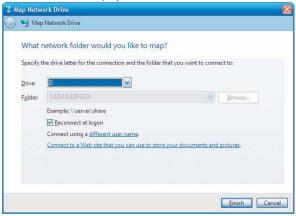
To mount a folder as a network drive, do the following:

 From the NAS Share Folder screen, select the folder you want to mount, and then click Mount under Folder Management.

OR

Right-click the folder you want to mount, and then select **Mount** from the pop-up menu.

2. The Map Network Drive screen displays.



- 3. Select a drive letter from the drop-down list.
- 4. Check the **Reconnect at login** option to mount this network drive automatically each time you log in to your computer.
- 5. Click Finish. The selected folder is mounted to the network.

To unmount a folder from the network.

 Select the folder you want to cancel the mapping, then click Unmount under Folder Management.

OR

• Right-click the folder you want to cancel the mapping, and then select **Unmount** from the pop-up menu.

Refreshing the folder listings

To refresh the **NAS Share Folder** screen, click **Refresh** under Folder Management or right-click anywhere in the **NAS Share Folder** main screen, and then select **Add Folder** from the pop-up menu.

Changing the folder style

The NAS Share Folder provides two styles for you to view a list of folders: Icon Style and Report Style. Right-click anywhere in the NAS Share Folder main screen, then select Style from the pop-up menu.

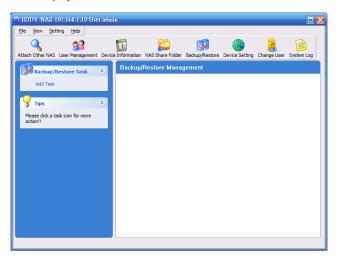
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Backup/Restore



To open the Backup/Restore screen, select View > Backup/Restore from the menu

bar, OR click **Backup/Restore** () from the quick access tool bar. The **Backup/Restore** screen displays.



The NAS Utility provides these icons to indicate the status of each backup task.



A scheduled backup task



An unscheduled backup task



Backup task in progress

Adding a backup task

To create a new folder, do the following:

- From the Backup/Restore screen, click Add Task under Backup/Restore Task.
 OR
 - Right-click anywhere in the **Backup/Restore** main screen, and then select **Add Task** from the pop-up menu.
- 2. The following window appears. Click **Select** to browse for the source folder you want to back up to the TS-S402 Network Storage Enclosure.

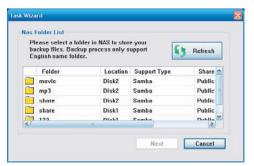


3. The select source folder appears in the list as shown. Click **Next** to continue.



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Select the target folder of the TS-S402 Network Storage Enclosure for the files to be backed up to. Click Next.





The backup/restore feature only supports share folders in English characters.

5. Enter the task name, and click Apply.



- A message pops up to ask if you want to set the task schedule at this moment. Click Yes if you want to set the schedule, or No to set it later.
- 7. A backup task is created.

Deleting a backup task

To remove a backup task, do the following:

 From the Backup/Restore screen, select the backup task you want to delete, then click Delete Task under Backup/Restore Task.

OF

Right-click the backup task you want to delete, and then select **Delete Task** from the pop-up menu.

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- 2. A confirmation message appears. Click Yes.
- 3. The selected backup task is deleted.

Editing a backup task

Use this function to change the source and target folders for a backup task. To edit a backup task, do the following:

 From the Backup/Restore screen, select the backup task you want to modify, then click Edit Task under Backup/Restore Task.

OR

Right-click the backup task you want to modify, and then select **Edit Task** from the popup menu.

2. Follow the on-screens instructions to make changes to the backup task.

Starting a backup task

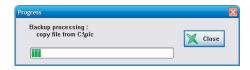
If you want to perform the backup task immediately, do the following:

 From the Backup/Restore screen, select the backup task you want to start, then click Backup Now under Backup/Restore Task.

OR

Right-click the backup task you want to start, and then select **Backup Now** from the pop-up menu.

A confirmation message appears. Click Yes to start the selected backup task immediately.



- 3. The selected backup task starts.
- 4. When the backup task is complete, click **Close** to close the progress window.

Setting a backup schedule

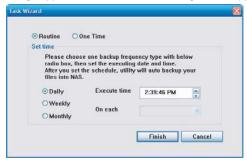
To schedule a backup task, do the following:

 From the Backup/Restore screen, select the backup task you want to schedule, then click Schedule Setting under Backup/Restore Task.

OR

Right-click the backup task you want to schedule, and then select $\mbox{\bf Schedule Setting}$ from the pop-up menu.

2. A confirmation message appears. Click Yes. The following screen appears.



- 3. Specify for a Routine or One Time schedule.
- If Routine is selected, specify a daily, weekly, or monthly backup task, and configure the start time.

If **One Time** is selected, specify a specific date and time to start the backup task.

- 5. Click Finish to complete the setting.
- 6. The pop-up window displays the task setting information. Click Yes to confirm.

Removing a backup schedule

To cancel a backup task schedule, do the following:

 From the Backup/Restore screen, select the backup task you want to cancel its schedule, then click Remove Schedule under Backup/Restore Task.

OR

Right-click the backup task you want to cancel the schedule, and then select **Remove Schedule** from the pop-up menu.

- 2. A confirmation message appears. Click Yes.
- 3. The selected backup task schedule is removed.

Viewing task properties

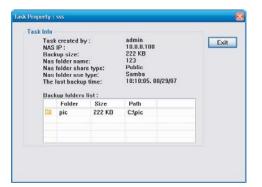
To view task information, do the following:

 From the Backup/Restore screen, select the backup task you want to view its details, then click Show Property under Backup/Restore Task.

OR

Right-click the backup task you want to view the details, and then select **Show Property** from the pop-up menu.

The following details of the backup task are displayed in this screen. Click OK to exit this screen.



Device Setting



Use this feature to launch the Web-based Configuration Tool, which allows you to configure more settings for your TS-S402 Network Storage Enclosure.

To open the Web-based Configuration Tool, select **Setting > Device Setting** from the

menu bar, OR click Device Setting (



) from the quick access tool bar.

For more information on the Web-based Configuration Tool, refer to the next chapter "Using the Web-based Configuration Tool".

Change User



To login in different user account:

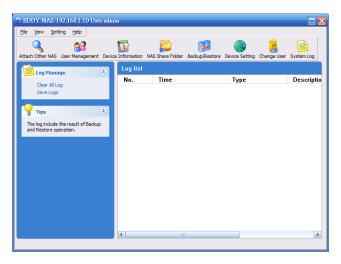
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System Log



To open the System Log screen, select View > System Log from the menu bar,

OR click **System Log** () from the quick access tool bar. The **System Log** screen displays.



Clearing all the logs

To clear all the log messages generated from the TS-S402 Network Storage Enclosure, do the following:

From the System Log screen, click Clear All Log under Log Message.
 OR

Right-click anywhere in the **System Log** main screen, and then select **Clear All log** from the pop-up menu.

- 2. A confirmation message appears. Click Yes.
- 3. Click Yes if you are sure to clear all logs.
- 4. All the system logs are cleared.

Saving logs to a file

You can save all the log messages to a txt file. Click **Save Logs** under Log Message from the **System Log** screen. A "Save As" window appears. Type a file name, and click **Save** to save all the log messages to a file.

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USING THE WEB-BASED CONFIGURATION TOOL

Launching the Web-based Configuration Tool

You can configure more settings for your TS-S402 Network Storage Enclosure through the web browser. Enter the IP address of your TS-S402 Network Storage Enclosure (the default IP address is http://192.168.10.10) to access the configuration settings. You can also use the Device Setting feature in the NAS Utility (see "Device Setting") to open the Web-based configuration tool.



If you are not in a private IP address range (192.168. xxx.xxx), you must use the NAS Utility to change the network configurations of your TS-S402 Network Storage Enclosure.

The login screen appears as shown. Enter the username and password. (The default is *admin* as the username and password.)



Web-based Configuration Tool Overview

The following illustrates the layout of the Web-based Configuration Tool main screen.



From the left panel of the Web-based Configuration Tool, click each heading to open its respective settings page. The following sections give more detailed information on each settings page.

System Status

This page allows you to view the system information, disk status, and connected USB device information.



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Configuration

Networking

This page allows you to configure the network connection settings of your Multimedia NAS.



Networking

DHCP Client Select to acquire an IP address from the DNS server

automatically.

Static IP Enter the IP address, subnet mask, and gateway for the

TS-S402 Network Storage Enclosure to use on the network.

DNS Server

Auto-detect Select to use the Dynamic DNS. When this option is

selected, the DNS server automatically assigns an IP address to the TS-S402 Network Storage Enclosure.

Manual Enter the name and IP address of the DNS server you

want to use.

Apply Click to save the changes.

Basic

This page allows you to configure the basic settings of your TS-S402 Network Storage Enclosure.



Enter the name of the TS-S402 Network Storage Enclosure. Machine name Enter the name of the group to which the current Group TS-S402 Network Storage Enclosure belongs. current TS-S402 Network Storage Enclosure. The default is 80. Language Select the character encoding to display the Web UI Time Zone Select an appropriate time zone for the current Multimedia NAS. Set System time Type the date and time in this field with the given format (Month/Date/Year Hour: Min). Or click the button to select the date from a pop-up calendar.

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Enable NTP

Check this checkbox if you want to use an NTP server for the system time synchronization.



Remember to set up at least one DNS server if you enter a host name here.

Apply Click to save the changes.

Server Preference

This page allows you to enable or disable the file sharing protocols, including Samba, FTP, NTF, UPnP A/V, and iTunes. Click **Apply** to save the changes.



Admin Password

This page allows you to reset the administrator password of your TS-S402 Network Storage Enclosure.



New Password Type the new password in this field.

Confirm Password Type the new password again in this field.

Change Password Click to save the changes.

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Firmware Upgrade

This page allows you to update the firmware of your TS-S402 Network Storage Enclosure.



Click the **Browse** button to locate the firmware file you want to update. Then click the **Upgrade** button to begin the upgrade process.

Backup/Restore

This page allows you to backup and restore the system configuration file for your TS-S402 Network Storage Enclosure.



Backup configuration Click the Download configuration button to save the

current system configuration of your TS-S402 Network

Storage Enclosure

to a file.

Configuration File Restore page opens.

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■ Configuration File Restore



Click the **Browse** button to locate the configuration file you want to restore. Click the **Restore** button to restore the file.

Factory Defaults

This page allows you to restore the factory default settings of your TS-S402 Network Storage Enclosure.



Click the **Yes** button and a confirmation pop-up message is displayed. Click **OK** to proceed, or **Cancel** to abort. The TS-S402 Network Storage Enclosure will reboot automatically.

The LAN IP address and the password will be reset to their defaults. You may be required to log in to the system again.



If the Web UI is not displayed after system reboot, check if the IP address of the TS-S402 Network Storage Enclosure belongs to the network domain you are using.

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Reboot/Shutdown

This page allows you to reboot and power off your TS-S402 Network Storage Enclosure without pressing the

Power button.



Click the **Yes** button to reboot or power off the TS-S402 Network Storage Enclosure immediately.

A confirmation pop-up message is displayed. Click **Yes** to proceed, or **No** to abort.



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The TS-S402 Network Storage Enclosure will reboot in 70 seconds. Do not

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close the browser during the reboot process.

Remote Package

This page allows you to install software packages from a remote TS-S402 Network Storage Enclosure.



Click the **Browse** button to locate the package you want to upload. Then click the **Install** button to begin the installation.

Share Management

Share Folder

This page lists the information of all sharing folders contained in your TS-S402 Network Storage Enclosure.



Disk Displays the disk the folder belongs to.

Folder Name Displays the name of folder.

User Name Displays the users having the right to access the folder.

Type Displays the protocol type can be used to open the folder.

Add ① Click to add a folder. The Add Share Folder page displays.

Delete (8) Click to delete a folder.

■ Add/ Edit Share Folder

To add or edit a folder, click the Add ① or Edit ② button from the Share Folder page. The Add/Edit Share Folder page displays.



Disk Name <u>When adding a folder</u>. Select a disk for the new folder

to be created.

When editing a folder. Displays the disk the folder

belongs to.

Folder Name Enter the name to display for the folder.

Protocol Type Select the protocol type to be used to open the folder.

Folder Type Select Anonymous to make the folder public, or

Private Folder for specific user access. When **Private Folder** is selected, you need to add at least a user to

the User List.

User List Select a user from the drop-down list, and click the

Add New User button to add the user to the Allow

List.

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Allow List Displays the users having the access right for the TS-

S402 Network Storage Enclosure. When the **Read** only checkbox is checked, the user cannot configure

any setting in the Web UI.

Delete Click to remove a user from the **Allow List**.

Apply Click to save the changes.

User Management

This page lists all users allowed to access your TS-S402 Network Storage Enclosure, and the private folders each user owns.



User Name Displays the users that can log in to the TS-S402 Network Storage Enclosure.

Private Folder Displays the private folders can be accessed by the user.

Edit

Click to edit a user. The Edit User page displays.

Delete (8)

Click to delete a user.



If the user you want to delete owns one or more private folders, a pop-up message prompts you to delete the private folder first.

■ Add/ Edit User

To add or edit a user, click the **Add** ① or **Edit** ② button from the **User Management** page. The **Add/Edit User** page displays.



User Name <u>When adding a user.</u> Enter the name of a new user.

When editing a user. Displays the name of the user.

Password Enter the new password in this field.

Confirm Password Enter the new password again in this field.

Apply Click to save the changes.

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Backup

Scheduling Backup

This page allows you to set up a schedule to backup the specified local folders of the TS-S402 Network Storage Enclosure.



Schedule Check the **Enable** checkbox to configure the settings in this page. Description Displays a short description associated with the Scheduling Backup feature. **Auto Delete** Check this checkbox to perform file synchronization between the target and source folders during backup process. **Setting Frequency** Select to backup the folder hourly, daily, weekly or monthly. Select the time to start the backup task every hour or **Setting Hours: Mins** every day.

Setting Day of Month

Select on which date of every month to start the backup task. This option is only available when Every Month is specified in the Setting Frequency field.

Setting Day of Week

Select on which day of every week to start the backup task. This option is only available when Every Week is specified in the Setting Frequency field.

Source Directory

Select the source folder you want to make a backup from the drop-down list.

Destination Directory Select the target folder where the backup copy of your folder will be stored.

Apply Click to save the changes.

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Disk Utility

Disk Information

This page lists the information of the system storage disks and connected USB devices.



Disk Mode

This page allows you to change the disk mode and file format for the storage disks on your TS-S402 Network Storage Enclosure.



 $\textbf{Mode Setting} \hspace{0.3cm} \textbf{Select the mode for the TS-S402 Network Storage Enclosure} \\$

system to partition and format disks.

File System Select the file system type you want to use for the disks.

Apply Click to save the changes.



When the settings are made, the TS-S402 Network Storage Enclosure system starts formatting the disks. This procedure will destroy all the data on the disks. Make sure you have backed up any important data on the disks before the format process.

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Format Disk

This page allows you to format the physical hard disks and USB storage devices from your TS-S402 Network Storage Enclosure.



Format Disk

Disk Select the hard disk you want to format.

File System Select the file system type you want to use for the

new storage.

Description Enter a brief description of the disk.

Format selected disk Click to start formatting the disk.

Format USB

USB Select the USB drive you want to format.

File System Select the file system type you want to use for the

new storage.

Format selected disk Click to start formatting the disk.

System Logs

Syslog Server

This page allows you to configure the remote server for sending out the system logs generated from your TS-S402 Network Storage Enclosure.



Server IP Enter the IP address of the remote server. This option is only available when **Syslog server** is

enabled.

Syslog server Enable this option to configure the server IP.

Mail Alert Enable this option to send out the system log

messages via SMTP server.

SMTP Enter the SMTP server address. This option is only

available when Mail Alert is enabled.

Storage Enclosure to send out the emails. This option is only available when Mail Alert is

enabled.

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SMTP Auth Enable Enable this option to use SMTP Authentication

when sending out emails.

SMTP Auth User Enter the username for SMTP authentication. This

option is only available when SMTP **Auth Enable** is

enabled.

SMTP Auth Password Enter the password for SMTP authentication. This

option is only available when SMTP Auth Enable is

enabled.

System Logs

This page allows you view and clear a list of system log messages from the Multimedia NAS



Click the Clean log button to clear the system log screen.

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Service Configuration

iTunes Server

This page allows you to configure an iTunes server in your TS-S402 Network Storage Enclosure. You can use this server to share your iTunes music files with other users on your local network.



Share folder Select the folder stored with your iTunes music files

as the shared folder.

Only one folder can be set for iTunes music sharing.

Refresh time Enter the desired time interval (in seconds) to (second) refresh the iTunes server automatically.

Enable Password Check this option to enable password-protected file

sharing.

Set Password Enter the password for iTunes server access. **Confirm Password** Enter the password again in this field.

Commin rassword Lines the password again in this held.

UPnP Server

This page allows you to configure a UPnP A/V (Universal Plug and Play) media server in your TS-S402 Network Storage Enclosure. Any user on your local network can browse your media (pictures/videos/audio/music) from this server and playback them on UPnP compatible media players or computers running an appropriate client software, such as WinDVD player.



UPnP A/V Server Name

Enter the name for the UPnP A/V server. Then select the folder stored with your media files as the shared folder. Click the Add New Share Folder button to add the folder to the Share List.

Share List

Displays the folders to be shared on the UPnP server.

Delete

Click to remove the sharing folder from the Share

Apply Click to save the changes.

List.

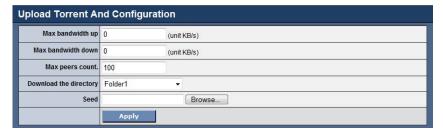
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BT Client

This page lists the download status of BT seeds (the data from torrent files). You can click the Add (③), Remove (③), start (①), and stop (⑥) buttons in this page to start and cancel the download. Click the Add (④) button to open the Upload Torrent And Configuration page.



■ Upload Torrent And Configuration



Max bandwidth up (unit KB/s)

Max bandwidth down

Enter the maximum upload rate for BT clients to use.

Max peers count

Enter the maximum download rate for BT clients to use.

Max peers count

Enter the maximum number of connected peers.

Select the folder which contains the torrent files you want to save as the download files.

Seed

Click the Browse button to locate the torrent file saved in the TS-S402 Network Storage Enclosure.



Users can only download two BT seeds at the same time.

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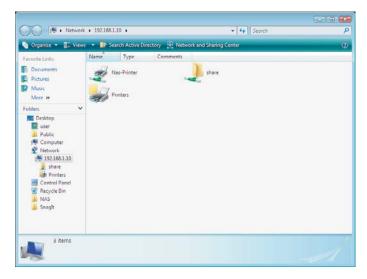
NAS Printer

Your TS-S402 Network Storage Enclosure has a built-in printer server. To enable NAS printer sharing,

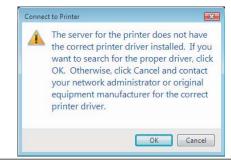
connect a USB printer to an available USB port on your TS-S402 Network Storage Enclosure. (See "Using External USB Devices" on page 20 for connections.) Users can print out anything on this printer.

To set up the NAS printer, do the following:

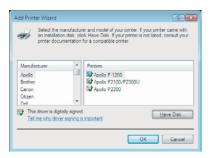
- 1. Click the NAS Printer from the left panel of the Web UI.
- 2. The following screen appears. Double click the **NAS-Printer** icon.



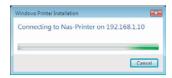
A pop up screen appears notifying you that the printer driver is not installed. Click OK to continue with the installation.



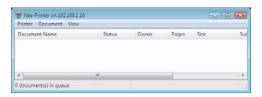
4. Select your printer manufacturer and model from the following screen and press the OK button. If your printer is not listed, click the Have Disk button to install the printer driver from the software CD that came supplied with your printer.



5. The installation progress screen appears.



6. When this following screen appears, the installation is finished.





- In order to use the shared printer, users must have the printer driver installed on their computers.
- You can connect the USB printer to either the front or rear USB port on your TS-S402 Network Storage Enclosure. Only the first connected USB printer will be enabled for use.

SPECIFICATIONS

Interface	Disk Management	
One 1000BASE-T Gigabit Ethernet	Standard (Individual hard drive)	
Two USB 2.0 Host	JBOD	
Power on/off button	RAID 0	
USB quick backup button	RAID 1	
File Sharing	File System	
CIFS/Samba	FAT32	
FTP	EXT2	
NFS	EXT3	
Supported Hard Drives	Memory	
Two removable 3.5" external HDD	Flash: 4M-Byte	
(SATA I/II) up to 1500GB	DDR SDRAM: 64M-Byte	
Hard Drive Interface	Data RAM Buffers	
Two hot swappable SATA II interfaces	128K Bytes	
Media Servers	Power	
UPnP AV Multimedia Server	12VDC, External Universal Switching	
iTunes Server for iTunes player	Power adapter	
Extensive Services	Emission	
Remote package installation	FCC Class B	
Bit-torrent client	CE mark Class B	
USB Print server	VCCI-B	
Dimensions (W x D x H)	Temperature	
204 x 120 x 120 mm	Operating: 0 ~ 40°C	
	Storage: -20 ~ 70°C	
Diagnostic LEDs	Humidity	
Power LED	Operating: 10% ~ 90% RH	
System LED	Storage: 5% ~ 95% RH	
HDD1 access LED		
HDD2 access LED		
LAN LED		

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Limited Warranty

TRENDnet warrants its products against defects in material and workmanship, under normal use and service, for the following lengths of time from the date of purchase.

TS-S402	2 years

If a product does not operate as warranted above during the applicable warranty period, TRENDnet shall, at its option and expense, repair the defective product or deliver to customer an equivalent product to replace the defective item. All products that are replaced will become the property of TRENDnet. Replacement products may be new or reconditioned.

TRENDnet shall not be responsible for any software, firmware, information, or memory data of customer contained in, stored on, or integrated with any products returned to TRENDnet pursuant to any warranty.

There are no user serviceable parts inside the product. Do not remove or attempt to service the product through any unauthorized service center. This warranty is voided if (i) the product has been modified or repaired by any unauthorized service center, (ii) the product was subject to accident, abuse, or improper use (iii) the product was subject to conditions more severe than those specified in the manual.

Warranty service may be obtained by contacting TRENDnet office within the applicable warranty period for a Return Material Authorization (RMA) number, accompanied by a copy of the dated proof of the purchase. Products returned to TRENDnet must be pre-authorized by TRENDnet with RMA number marked on the outside of the package, and sent prepaid, insured and packaged appropriately for safe shipment.

WARRANTIES EXCLUSIVE: IF THE TRENDNET PRODUCT DOES NOT OPERATE AS WARRANTED ABOVE, THE CUSTOMER'S SOLE REMEDY SHALL BE, AT TRENDNET'S OPTION, REPAIR OR REPLACEMENT. THE FOREGOING WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, EITHER IN FACT OR BY OPERATION OF LAW, STATUTORY OR OTHERWISE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. TRENDNET NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH THE SALE, INSTALLATION, MAINTENANCE OR USE OF TRENDNET'S PRODUCTS.

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LIMITATION OF LIABILITY: TO THE FULL EXTENT ALLOWED BY LAW TRENDNET ALSO EXCLUDES FOR ITSELF AND ITS SUPPLIERS ANY LIABILITY, WHETHER BASED IN CONTRACT OR TORT (INCLUDING NEGLIGENCE), FOR INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, OR PUNITIVE DAMAGES OF ANY KIND, OR FOR LOSS OF REVENUE OR PROFITS, LOSS OF BUSINESS, LOSS OF INFORMATION OR DATE, OR OTHER FINANCIAL LOSS ARISING OUT OF OR IN CONNECTION WITH THE SALE, INSTALLATION, MAINTENANCE, USE, PERFORMANCE, FAILURE, OR INTERRUPTION OF THE POSSIBILITY OF SUCH DAMAGES, AND LIMITS ITS LIABILITY TO REPAIR, REPLACEMENT, OR REFUND OF THE PURCHASE PRICE PAID, AT TRENDNET'S OPTION. THIS DISCLAIMER OF LIABILITY FOR DAMAGES WILL NOT BE AFFECTED IF ANY REMEDY PROVIDED HEREIN SHALL FAIL OF ITS ESSENTIAL PURPOSE.

Governing Law: This Limited Warranty shall be governed by the laws of the state of California. Note: AC/DC Power Adapter, Cooling Fan, cables and Power Supply carry 1-Year Warranty

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TRENDnet Technical Support

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Français/Deutsch - 11am-8pm, Monday - Friday MET

Product Warranty Registration

Please take a moment to register your product online. Go to TRENDnet's website at http://www.trendnet.com/register

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