

# LevelOne User Manual

FNS-1020

1-Bay Simple Network Storage

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### **Default Settings**

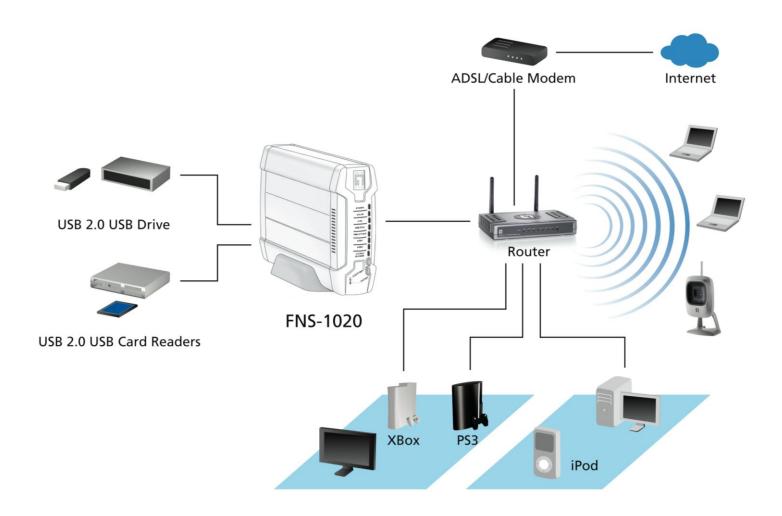
IP Address	192.168.0.254
Password	admin

### 1. Introduction

Congratulations on your purchase of LevelOne FNS-1020 1-Bay Simple Network Storage. This product is specifically designed for Small Office and Home Office needs. It provides a complete SOHO solution for Internet surfing, and is easy to configure and operate even for non-technical users.

Instructions for installing and configuring this product can be found in this manual. Before you install and use this product, please read the manual carefully for fully exploiting the functions of this product.

The LevelOne FNS-1020 is designed for 3.5" IDE and Serial-ATA (SATA) hard disk drive use. This storage server is a value-adding equipment that allows you to control file-sharing within a small office/home/office (SOHO) environment. It can also be used in multi-media applications, allowing to stream music or videos to networked media players. Additionally, the download function can be used independently to perform download tasks from FTP, HTTP and BitTorrent sources.



# 2. Unpacking and Setup

This chapter provides the package contents and setup information for the 1-Bay Simple Network Storage.

#### **Features**

- 1x 10/100Mbps Auto-MDIX RJ-45 Port
- Single 3.5 inch SATA or IDE Hard Disk Bay
- 2x High Speed USB2.0 Ports for extra storage
- One-Button USB to Hard Disk File Transfer
- Download Files without PC Supports HTTP, FTP and BitTorrent
- Share Files using FTP Server or Windows File Sharing / Samba
- Supports FAT, FAT32, EXT2 and NTFS (Read Only)
- Built-in UPnP and iTunes Media Servers
- Browser-based Interface Configuration and Management
- Supports Windows 2000/XP/Vista

### **Package Contents**

Open the box of the FNS-1020 and carefully unpack it. The box should contain the following items:

- FNS-1020 1-Bay Simple Network Storage
- Power Adapter and Power Cord
- RJ45 Ethernet LAN Cable
- Desktop Stand and Rubber Feet
- Installation Screws
- CD with Manual / Configuration Utility
- Quick Installation Guide

If any of the above items are missing, please contact your retailer or distributor.

## 3. Hardware Installation

### **Front View**



### 1) Power LED

Indicates power off or on

### 2) LAN

A solid light indicates the LAN link is achieved
Off indicates no LAN link
LED blinks during LAN data transmission

### 3) HDD R/W

Lights when reading or writing to the hard disk drive

#### 4) HDD Status

On - Error with HDD

Off - No HDD detected

Blinking – 1 per second, device is working normally

Fast Blinking - HDD is running low on disk space

### 5) USB 1 and 2

A solid light indicated USB device is in use

### 6) Shutdown Button

Press for 4 seconds to prepare unit for shutdown. Do this before powering off the unit.

### 7) Backup Button

Press for 4 seconds to copy data from attached USB device to HDD

### 8) Reset

Press Shutdown and Backup buttons together for 6 seconds to reset system to factory defaults.

### **Rear View**



### 1) LAN Port

Connect Ethernet devices such as computers, switches or hubs.

### 2) USB 1 and 2

Connect USB storage devices such as Pen Drives, Card Readers, Portable Music Players

### 3) Power On/Off Button

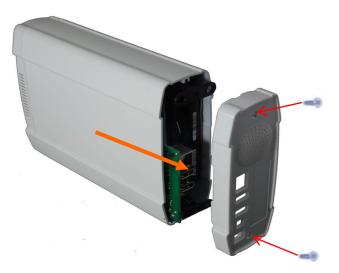
Used to turn unit on and off.

### 4) Power Jack

Receptor for the supplied power adapter

# 4. Hardware Installation

**1.** Unfasten the two screws from the rear and remove the back panel.



**2.** Pull out front panel and inner tray.



**3.** Make sure the jumper on your hard drive is set to **Master** 



\* Consult the instructions on your hard drive as it differs from each manufacturer.

**4.** Install your 3.5-inch IDE or SATA hard drive and connect the data and power cables.

Then use the screws provided to fasten the hard drive.



5. Put on the front panel.The arrow on the casing indicates <u>bottom front</u>.



6. Reassemble the back cover and fasten the two screws.



# 5. Connecting the Cables

1. Now connect the power adapter and network cable.



2. Connect the FNS-1020 to an Internet ready router.



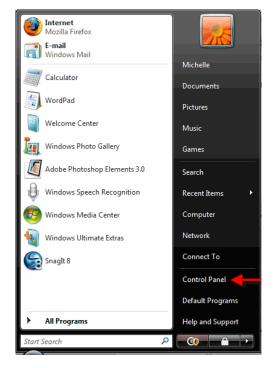
3. Installation is now complete. You can now power on the device and begin to configure the settings.

# 6. Check Your Network Settings (Windows XP / Vista)

1. Click Start button and open Control Panel.



**Windows XP** 



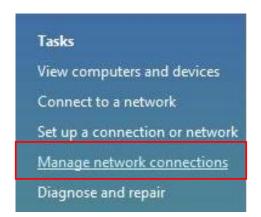
**Windows Vista** 

### 2. Windows XP, click [Network Connection]

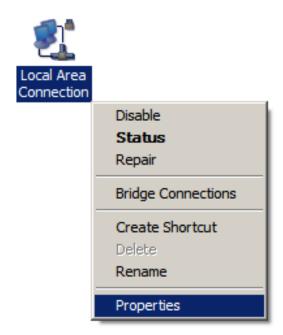
Windows Vista, click
[View Network Status and Tasks]
then [Manage Network Connections]



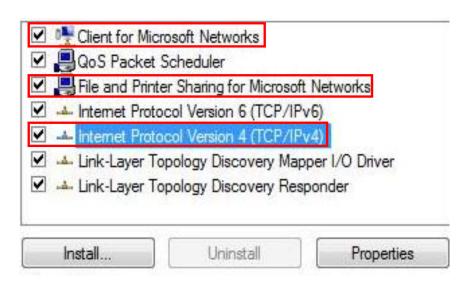




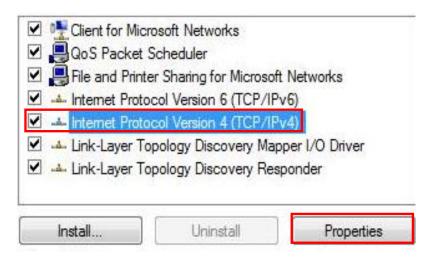
3. Right click on [Local Area Connection] and choose [Properties].



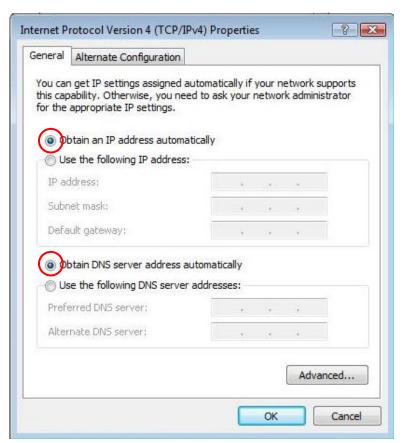
4. Check the "Client for Microsoft Networks", "File and Printer Sharing", and "Internet Protocol (TCP/IP) is ticked. If not, please install them.



### Select "Internet Protocol (TCP/IP)" and click [Properties]



### **6.** Select these two options and click [**OK**].



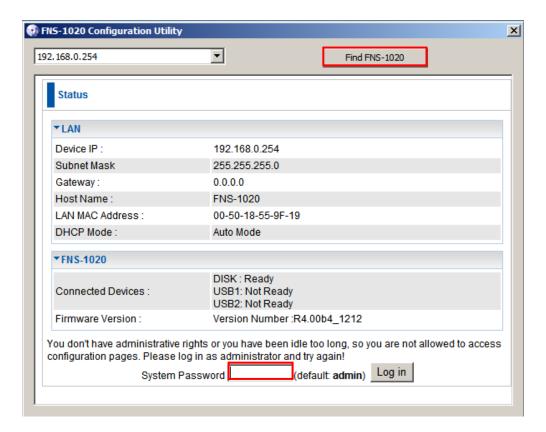
# 7. Configuration Interface

Once all the wires are properly connected power on the FNS-1020. There are two methods to access the configuration and management interface.

### **Utility Method**

- 1. Insert the included CD and install the Utility.
- 2. Use the Utility to find your FNS-1020.

**Note:** The included utility only works in Windows XP and Vista 32-bit. If you use other operating systems, please use the Web Browser Method.

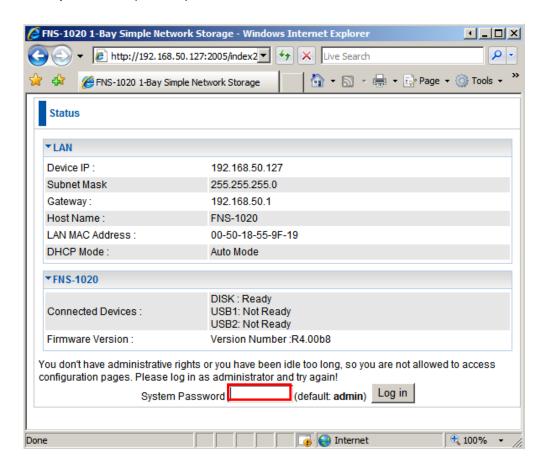


#### Web Browser Method

1. Open a web browser (Internet Explorer/Firefox/Safari) and type in the address bar **FNS-1020** and press "Enter."

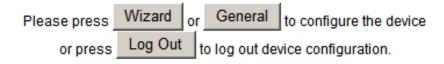


2. Please enter the password (admin)



### **Configuration Modes**

After login, you will be presented with the following options.



Wizard: Simple step-by-step configuration to help you configure the FNS-1020.

**General:** Contains more submenus to configure more advanced functions.

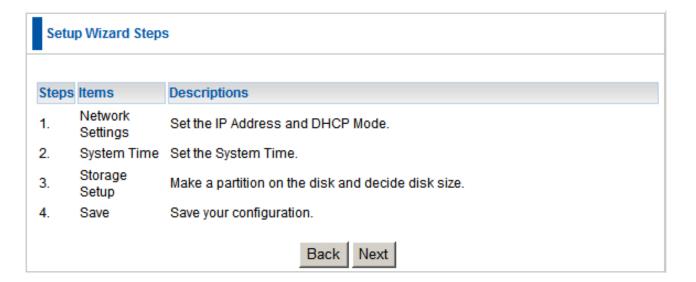
Log Out: Exit the Configuration Interface.

# 8. Configuration Wizard

The Wizard allows you to quickly and easily set up and configure the FNS-1020 1-Bay Simple Network Storage. The items that will be set up includes:

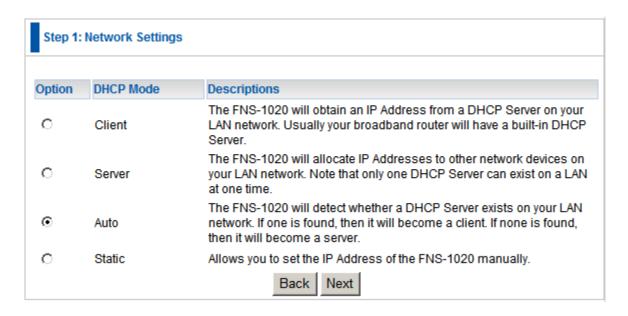
- IP Address
- DHCP Mode
- Device Time
- Hard Disk

Press the "Next" button to start configuration.

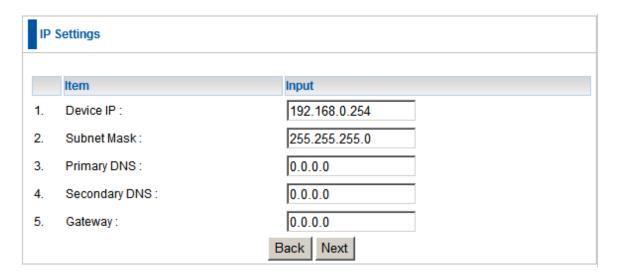


### Step 1:

If you are unsure which option to choose, just keep it as [Auto].



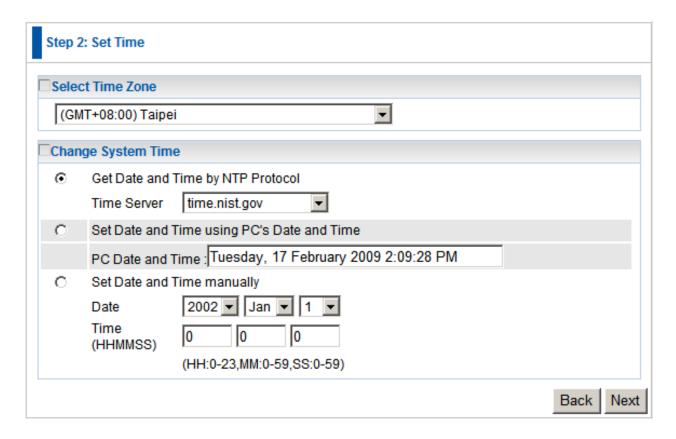
If you choose Server/Auto/Static modes, you will need to set further TCP/IP settings. Usually there is no need to change these settings, however if you encounter difficulty, please ask your network administrator.



### Step 2:

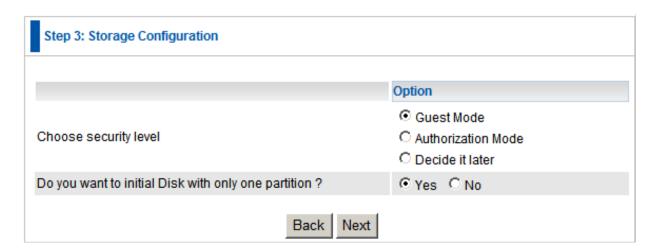
Here there are three ways to set the system time for your FNS-1020.

- 1. Sync with a Network Time Server
- 2. Use your computer's time
- **3.** Set the time manually.



### Step 3:

There are two security levels.



Guest Mode: Anyone can access your storage.

If Guest Mode is chosen, the system will ask if you want to initialize your disk with only one partition. If you are using a new hard disk, it is recommended you choose [Yes], as this option will format your hard disk later. If you already have data on your hard disk, you may select [No]



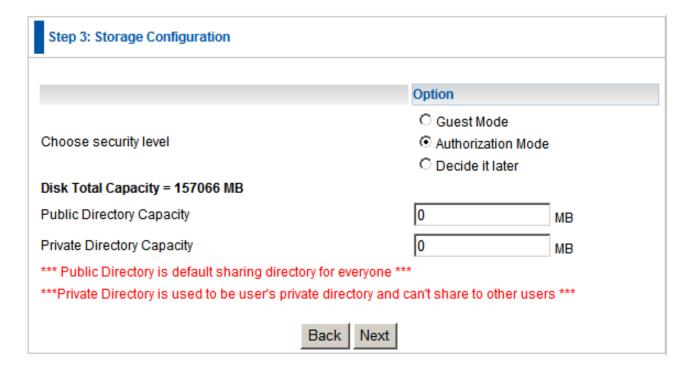
Authorization Mode: Only authorized users can access data in the password-protected folders.

If authorization mode is chosen, it is necessary to reallocate and format your hard disk drive. Please indicate your desired capacities for public and private directories.

When the capacity of one directory is assigned, the system will automatically assign the rest to the other directory.

**Note:** The [Backup] button on the front panel will copy folders/files from USB devices to the public directory once you activate authorization mode.

Or you can decide the level of security later if you cannot decide now.



### Step 4

This is a summary of the settings you have chosen.

If you would like to start over without saving changes, click "Discard Settings."

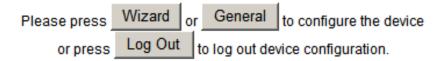
Otherwise, once all the information is confirmed, please click "Save" to continue.

**Note:** If the disk is initializing and formatting, please wait until the progress bar shows 100%. Do not press any button or power off the device.

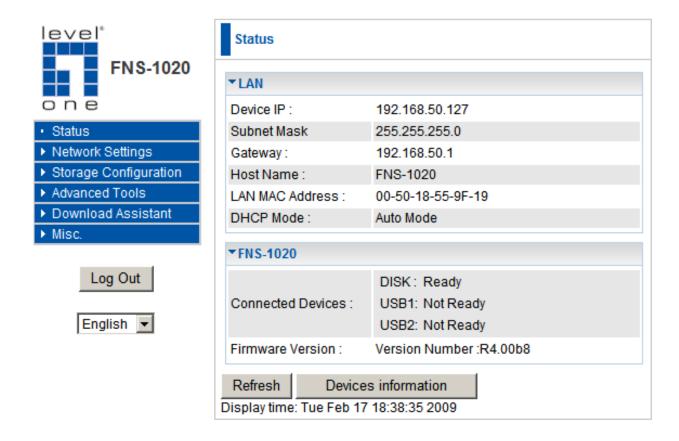
Once formatting is done, the system will reboot automatically. Please wait 30 seconds for the system to restart.

### 9. Advanced Functions

To access the Advanced Setup, click on General at the main login page.



Once in the Advanced Setup, you will be presented with the following screen.



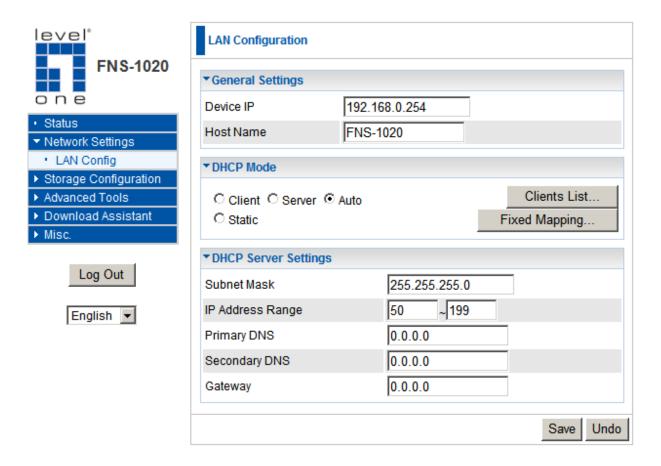
In this mode, you can change the language of the User Interface.

The supported languages are English, German, Danish, Greek and Traditional Chinese.

### **Network Settings**

#### **LAN Configurations**

These are the various network settings for the FNS-1020.



<b>General Settings</b>	
Device IP	The default IP address of FNS-1020. However if the device obtained an IP address from a DHCP server, then the IP address will be different
Host Name	The identification name of the FNS-1020 when you browse for it on your network.
DHCP Mode	
Client	The FNS-1020 will receive an automatic IP address from a DHCP server on your network.
Server	FNS-1020 will become a DHCP server on the network and allocate IP addresses to other devices.
Static	Manually Configure the IP address and subnet mask of the FNS-1020
Auto	Let the FNS-1020 determine whether to use Client or Server mode.

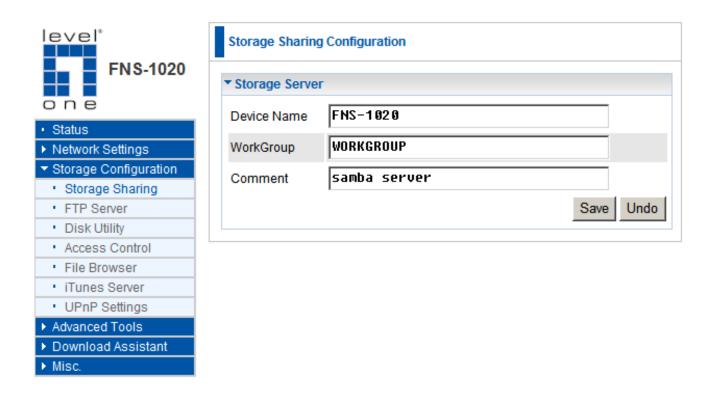
DHCP Server Settings	
Subnet Mask	The subnet mask of your network
IP Address Range	Decide the IP address range that the FNS-1020's DHCP Server will provide.
Primary / Secondary DNS	This feature allows you to assign DNS Servers.
Gateway	The gateway IP address would be the IP address of your gateway or router.

### **Storage Configuration**

In this section, you will learn how to use the different storage functions such as file sharing, assign user access rule and enabling media servers.

#### Storage Sharing

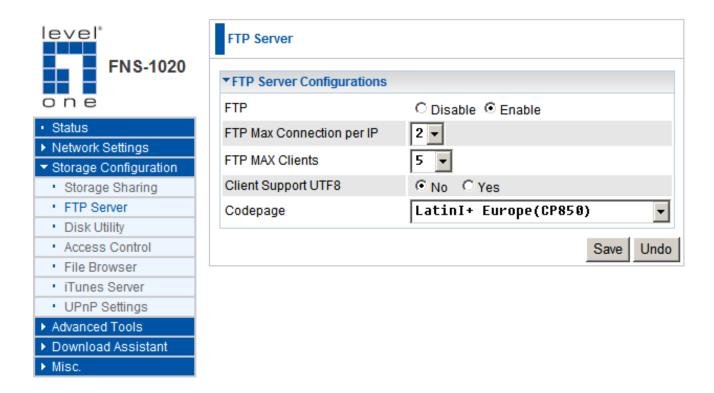
These settings decide how your FNS-1020 will appear in the "My Network Places" in Windows operating systems.



Storage Server	
Device Name	The identification name you can give to the FNS-1020 as it will appear in Microsoft My Network Places.
WorkGroup	Indicates the workgroup name under Microsoft My Network places.
Comment	The comment will be shown when you see if in Microsoft My Network places.

#### **FTP Server**

FTP is another method of accessing your files. By default, the FTP server is enabled so you can use any FTP client utility. An advantage to FTP service is that you can set the maximum concurrent connections (max 20).



FTP Server	
FTP	Choose to enable or disable the FTP service
Max Connection per IP	Set the number of connections allowed from each IP address
Max Clients	Set the maximum number of clients allowed on the FTP server
Client Support UTF8	Select whether you FTP client utility can support UTF8 coding for file names.
Codepage	Select which language will be used for folder / file names on the hard disk. Incorrect language settings may cause folder / file names to be unreadable.

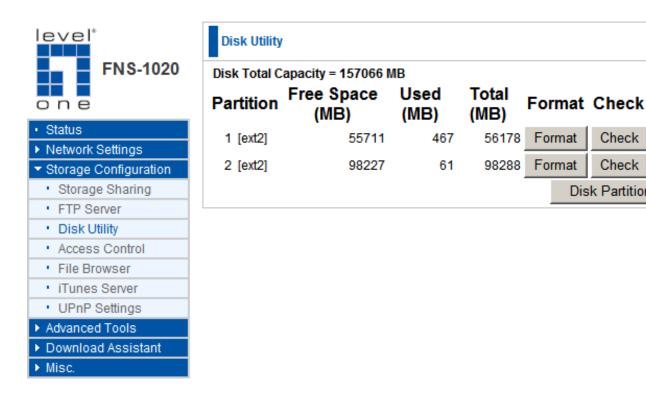
#### **Disk Utility**

If you did not initialize and format the hard disk using the wizard, then you can manually do it here.

Check

Check

Disk Partition



Disk Utility	
Format	Format the hard disk drive
Check	Checks the integrity of the disk partition.

You can also use the Disk Utility to change the hard disk to one partition by clicking the **Disk Partition** button. If you press "Format" button, the FNS-1020 will make only one partition with the total capacity of the internal hard disk, and then format that partition.



**Note:** All data on the hard disk will be ERASED after pressing the format button. The drive will be formatted to Ext2 file system, so it cannot be connected directly to a Microsoft Windows system without reformatting to another file system that Windows systems can recognize.

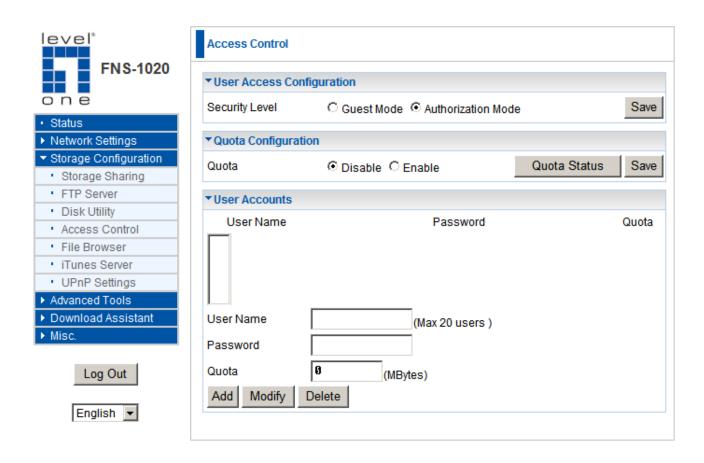
#### **Access Control**

These settings allow you to set the User Access security controls for your shared files and folders under Microsoft Network Places and FTP services. There are two levels of access control.

**Guest Mode:** Anyone can access any data stored on the FNS-1020. There is no need to set any user access controls under this mode.

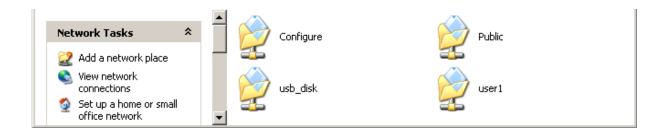
**Authorization Mode:** Only authorized people can access certain folders on the hard disk. In this mode, you will need to edit user configurations to assign access rights to privileged users. You can also assign quota limits for every user.

**Note:** The hard disk needs to be initialized when you activate authorization mode for the first time. Also, the initialization of the hard disk will ERASE all data on the hard disk drive.



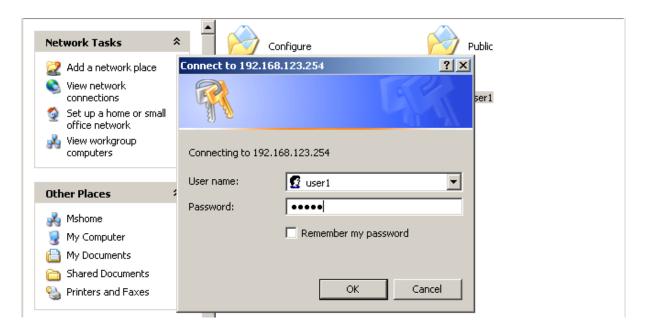
To configure user accounts, just type in the desired username, password and/or quota limits and press the "Add" button.

To access folders in Authorization mode, find the FNS-1020 in Microsoft My Network Places.



For example, we have created a User Account called user1.

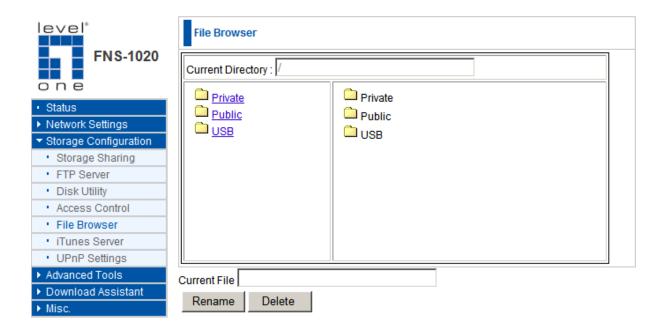
Anyone can access data stored in the **Public** and **usb\_disk** folders. However only **user1** can access data which is stored in the **user1** folder. When someone wants to access the **user1** folder, an authentication window will pop-up and ask for the username and password.



#### File Browser

The FNS-1020 provides a file browser to let users rename and delete folders / files easily. This is especially useful when users cannot rename or delete folders or files via FTP or Microsoft My Network Places successfully.

For example, users may download from the Internet an "unrecognized" file, and may appear as random characters, such as \$#\$@.avi. Sometimes these files cannot be renamed so the user can correct the file name with this file browser.



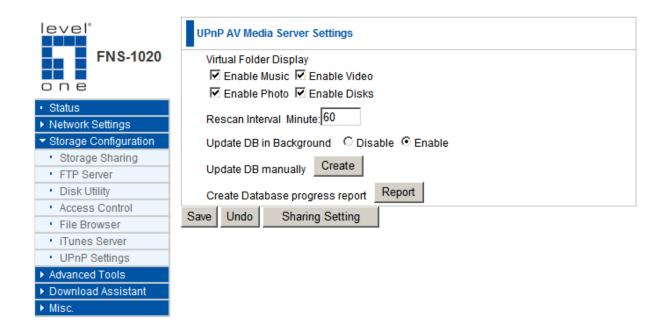
#### iTunes Server

The iTunes server allows computers with iTunes installed to find the music files stored on the FNS-1020. This allows you to centralize your music collection. Simply choose to **Enable** or **Disable** this function in the user interface.



### **UPnP AV Media Server Settings**

An UPnP Media Server allows other multimedia devices on your network to find and access media files on the FNS-1020. Using this method, a virtual folder will be created to show only the media file types decided by the user. This filtering process is done using a database of media files which is automatically updated in the background by the FNS-1020.



UPnP Server	
Virtual Folder Display	Tick the type of files you want to appear in this virtual folder.
Rescan Interval	How often the FNS-1020 will scan your folders and update the list of media files.
Update DB in Background	Whether the FNS-1020 will automatically update the database of media files in the background.
Update DB manually	Force an update of the media files database.
Sharing Settings	You can choose up to 3 different folders to share in your UPnP Media Virtual Folder. The FNS-1020 will scan these folders to build the media file database.

### **Advanced Tools**

These tools enable you to configure the various system settings.

### **Configuration Backup**

This allows you to back up the current settings of the FNS-1020.

#### **Reset to Default**

This will reset the FNS-1020 to its default factory settings.

#### Reboot

Will reboot the FNS-1020

#### Firmware Upgrade

This enables you to upgrade to newer firmware (available to download on <a href="www.level1.com">www.level1.com</a>), or to restore a backup configuration.

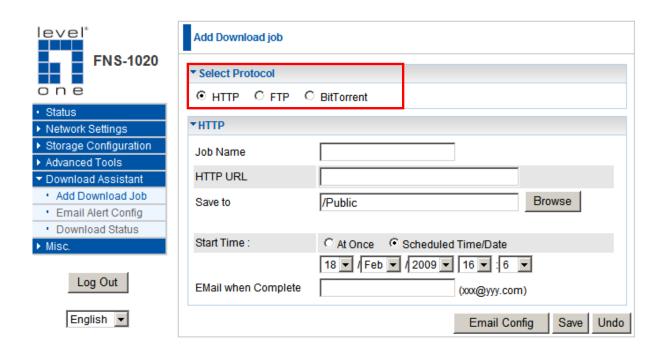
Choose the location of the file to install on the FNS-1020 and then click the "Upgrade" button.

### **Download Assistant**

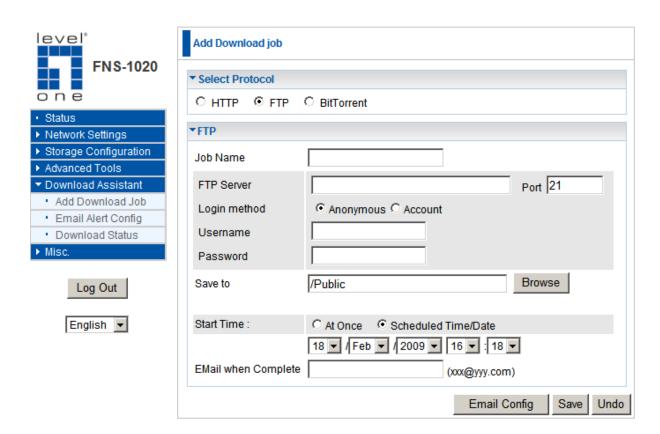
This function allows you to download files from the Internet without using a computer. You can queue or schedule download jobs so you can easily let the FNS-1020 do the work for you without needing any additional input. Additionally, the FNS-1020 can even send an e-mail to you to inform you that the file has finished downloading.

#### **Add Download Job**

There are three types of protocols you can use to download files, HTTP, FTP or BitTorrent. The first step in adding a download job is to choose the protocol to use.



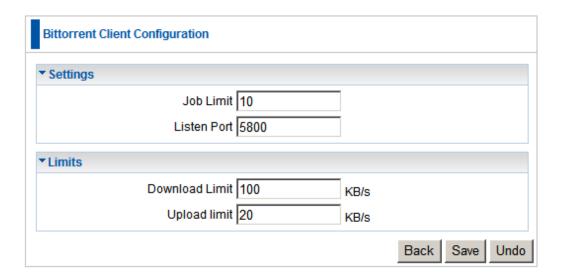
НТТР	
Job Name	Name of the Download Job
HTTP URL	IP address or URL of the file to download Eg: software.level1.com/file1.avi
Save to	Indicate which folder to save the file on the FNS-1020 hard disk drive. You can use the "Browse" button, or type in the path manually.
Start Time	The download job can be set to start immediately (At Once), or scheduled to start at a later time and date.
Email when Complete	When the file has finished downloading, a notice will be sent to the indicated e-mail address. Click on the "Email Config" button to set up the e-mail settings.



FTP	
Job Name	Name of the Download Job
FTP Server	IP address or URL of the file to download Eg: ftp.level1.com/file1.avi
Port	Port number that the source FTP server uses.
Save to	Indicate which folder to save the file on the FNS-1020 hard disk drive. You can use the "Browse" button, or type in the path manually.
Start Time	The download job can be set to start immediately (At Once), or scheduled to start at a later time and date.
Email when Complete	When the file has finished downloading, a notice will be sent to the indicated e-mail address. Click on the "Email Config" button to set up the e-mail settings.

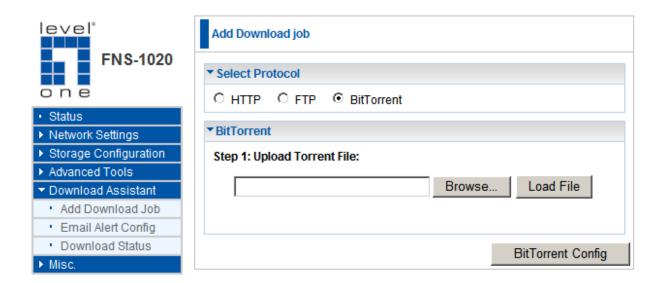
#### **BitTorrent**

Before using the BitTorrent downloading function, please click on the **BitTorrent Config** button to configure the settings.



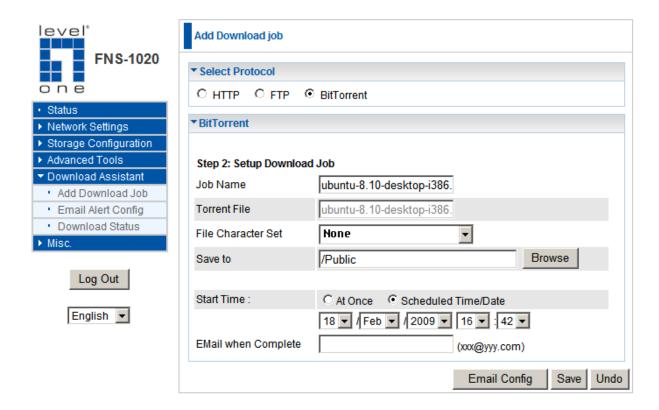
BitTorrent	
Job Limit	Number of BitTorrent jobs that can be running at one time.
Listen Port	The port number that the FNS-1020 will run the BitTorrent Client. You will need to set up on your broadband router, port forwarding or a virtual server to the FNS-1020 IP address for this port number.
Download Limit	Combined maximum download speed that the FNS-1020 will run using BitTorrent. This value must be under 100KB/s, or use -1 to set no limits.
Upload Limit	Set the limit for the combine upload speed that the FNS-1020 will run using BitTorrent.

### Step 1:



You will need to first upload the Torrent file to the FNS-1020. Use the "Browse" button to select the .torrent file.

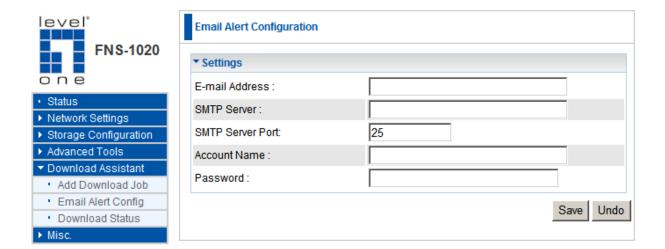
### Step 2:



BitTorrent	
Job Name	Name of the Download Job
File Character Set	The language of the filename. If unsure, use <b>none</b> .
Save to	Indicate which folder to save the file on the FNS-1020 hard disk drive. You can use the "Browse" button, or type in the path manually.
Start Time	The download job can be set to start immediately (At Once), or scheduled to start at a later time and date.
Email when Complete	When the file has finished downloading, a notice will be sent to the indicated e-mail address. Click on the "Email Config" button to set up the e-mail settings.

## **Email Alert Configuration**

Email Alert can send you a notification email when a download job has completed.



Email Settings	
E-mail Address	Enter the email that will be used as the <b>sender</b> of the email alert feature.
	<b>Note:</b> Some mail servers will refuse to process an email if there sender isn't an account on the mail server.
SMTP Server	Enter the IP address or domain name of the mail server you want to use.
SMTP Server Port	Enter the Port number of the SMTP Server you want to use. This is usually 25.
Account Name	Please enter the username of your account on the mail server.
Password	Please enter the password of your account on the mail server.

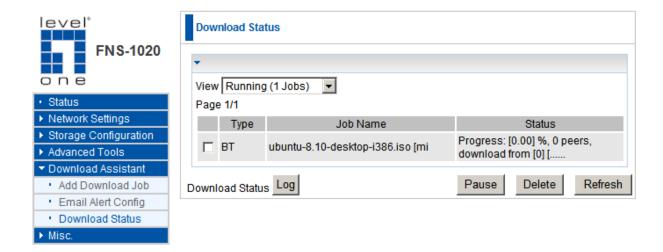
## **Download Status**

This page displays the status of the download jobs being processed by the FNS-1020.

Running: Shows all the download jobs that are currently running.

Waiting: Shows download jobs in queue and waiting to run

**Scheduled:** Shows the download jobs that have been scheduled to run at a later time and date.



# **Miscellaneous Settings**

This section allows you to change some system settings.

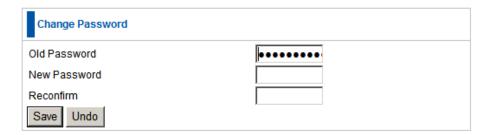
## **Administrator Timeout**

Set how long a user can be idle when logged into the FNS-1020 User Interface. If the user remains idle for too long, then they will be automatically logged out, and they will need to enter the password again.



### **Change Password**

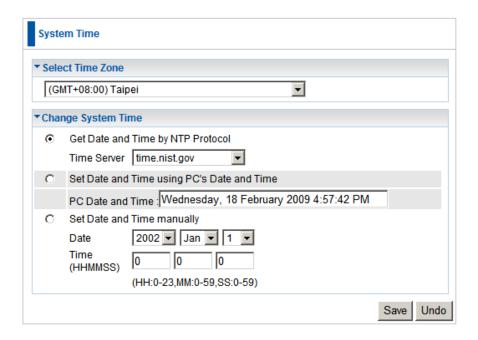
Change the system password



## **System Time**

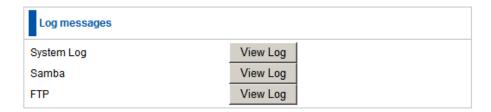
Here there are three ways to set the system time for your FNS-1020.

- 1. Sync with a Network Time Server
- 2. Use your computer's time
- 3. Set the time manually.



#### **System Logs**

Logs are useful for troubleshooting, and you can review the whole system logs here. There are four categories of logs: **System Log**, **Samba**, and **FTP**.



# 10. FAQ

#### 1. How to "Reset settings to default"?

**A:** Press the buttons of "Shutdown" and "Backup" simultaneously over 6 seconds to reset the system to the factory default setting.

## 2. What can I do if I forget login password?

**A:** Please refer to question 1 above to reset setting to default. The default login password is **admin**.

# 3. When I log in to the storage directory of the FNS-1020 via My Network Places, I cannot find any files of folders even though I have installed a Hard Disk Drive in the FNS-1020.

**A:** First, check your HDD status LED. If the hard disk is correctly connected, the HDD status LED will flash. If the LED doesn't flash, maybe you forget to format the new hard disk before using it, or the hard disk is not connected correctly, or the hard disk is damaged or corrupted.

**Note.** This FNS-1020 supports FAT/FAT32/Ext2 file systems. If the file system of hard disk drive is NTFS, the device just can only read files but cannot write to the hard disk drive.

#### 4. I cannot save a file which is large than 2GB in size.

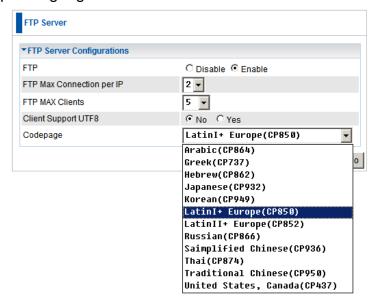
**A:** Please check the file system of your hard disk. This problem will occur if the file system is FAT or FAT32. Converting file system to Ext2 can solve this problem. The format utility of FNS-1020 will format HDD to ext2.

#### 5. I can't access the shared folder with Microsoft Windows 98/Me.

**A:** If you use Microsoft Windows 98/Me, and want to access the authorized folder, you **MUST** have the same account and password in the FNS-1020 and your computer.

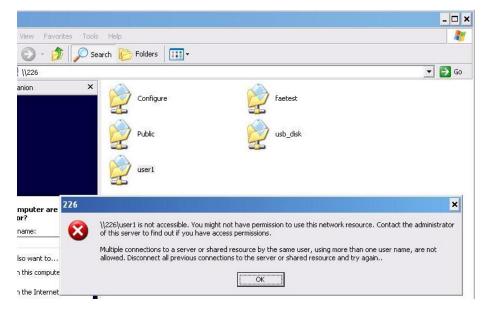
## 6. Why do I see the wrong folder/file name in My Network Places?

**A:** Please select the proper language.

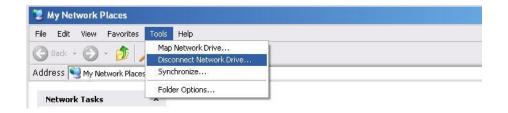


## 7. Why can't I access the file from My Network Places after enabling Authorization mode?

**A:** Sometimes I can't access folders via My Network Places by using correct user name and password, such as shown below:



This is because a Windows system caches the previous login records, so that user cannot use another account to login this device. To solve this problem, please disconnect previous network drive first. This can be done under My Network Places, select from the menu [**Tools**] and select "**Disconnect Network Drive**."



After deleting the previous record, please try to login again.

# 11. Specifications

LAN - Interface	1x 10/100 Mbps Auto-MDIX RJ-45 Port
USB-Interface	2x USB2.0 High-Speed Ports
HDD Bay	1x Internal 3.5" IDE/SATA Hard Disk Bay Supports UltraDMA 133 and SATA1.0a
Buttons	Backup – Back up files from external USB drive to internal HDD  Shutdown – Shuts down the internal HDD safely, before powering off device
File Systems	FAT16 / FAT32 / EXT2 / NTFS (Read Only)
Disk Tools	Disk Partition / Disk Format / Disk Scan
Storage	FTP / Samba / Windows File Sharing Server
Download Tools	Schedule HTTP, FTP and BitTorrent files to download.
Multimedia	UPnP Server – Works with Networked Media Players and Gaming Consoles  iTunes Server – Share Music to Computers
Other Network Features	DHCP Client and Server Fixed IP Mapping User Account Managements System Logs for FTP and Samba
Supported Operating Systems	Windows 2000 / XP / Vista / Mac OSX / Linux
Power Adapter	DC12V / 4A
Operating Temperature	0°C ~ 40°C / 85% Humidity
Storage Temperature	-20°C ~ 70°C / 85% Humidity
Dimensions	215mm(L) * 150mm(W) * 48mm(H)
Certifications	CE, FCC
Standard Compliance	IEEE 802.3, IEEE802.3x, IEEE 802.3u

# 12. Safety

#### **FCC WARNING**

This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

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 and commercial installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, 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, then the user will be required to correct the interference at their own expense.

#### **CE Declaration of conformity**

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

## **CE Marking Warning**

Hereby, Digital Data Communications, declares that this (Model-no. FNS-1020) is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

The CE-Declaration of Conformity can be downloaded at:

http://www.levelone.eu/support.php



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