

## Conceptronic CFULLHDMA - How to use Samba/CIFS and NFS

For firmware version 01.09.10.06 and later

### 1. Introduction

The Conceptronic CFULLHDMA is a streaming Full HD media player, based on the UPnP AV standard. To extend the features of the CFULLHDMA, we have added Samba and NFS support to the CFULLHDMA. Both Samba/CIFS and NFS have the same goal: share folders or files on a network, so other devices or computers can reach it.

Samba is mainly used for sharing data between Linux and Windows systems. Installing Samba on a Linux system allows Windows systems to reach the shared data and vice versa. When sharing data between two Windows systems, it is mainly called CIFS (Common Internet File System).

For more info on Samba, see: [http://en.wikipedia.org/wiki/Samba\\_software](http://en.wikipedia.org/wiki/Samba_software)

NFS is mainly used for sharing data between Linux systems. NFS is a good way for quickly accessing data on a 'local' device.

For more info on NFS, see: [http://en.wikipedia.org/wiki/Network\\_file\\_system](http://en.wikipedia.org/wiki/Network_file_system)

The advantage of adding Samba and NFS in the CFULLHDMA is that you do not need a special UPnP AV Server to play your media files: a simple network share is enough.

**Note :** In order to use the Samba and/or NFS feature of the Conceptronic CFULLHDMA, you need at least firmware version **01.09.10.06**, which can be installed automatically by the CFULLHDMA by selecting the option 'Firmware Upgrade' → 'Internet Upgrade' in the 'Setup' → 'Version' menu of the CFULLHDMA.

If your CFULLHDMA is not connected to the internet, you can use the USB upgrade procedure. The firmware and instructions can be downloaded from the 'Downloads' section on [www.conceptronic.net](http://www.conceptronic.net).

## 2. Using Samba/CIFS on CFULLHDMA

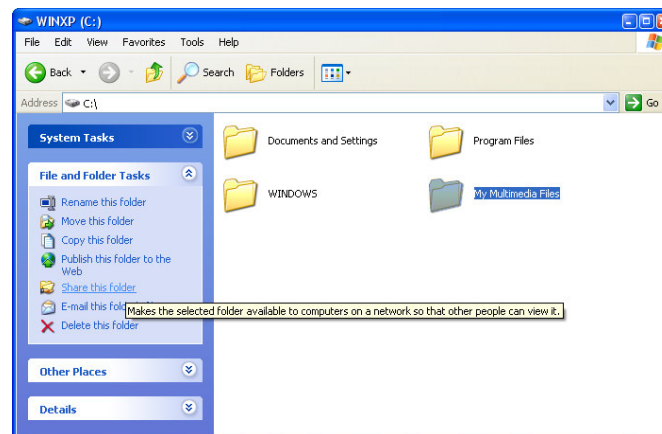
In order to browse Samba/Windows shares, you need to share your media files on your computer or NAS device. With the instructions below you can share your media files in Windows XP or Windows Vista.

**Note :** This how to only describes file and folder sharing in Windows XP and Windows Vista.

Please check the manual of your operating system or network storage device how you can share a folder with media files.

### 2.1 File sharing in Windows XP

- Open 'My Computer' from the start menu or your desktop and navigate to the folder with media files you want to share.
- Single click on the folder with media files and select the option 'Share this folder' in the left menu bar.

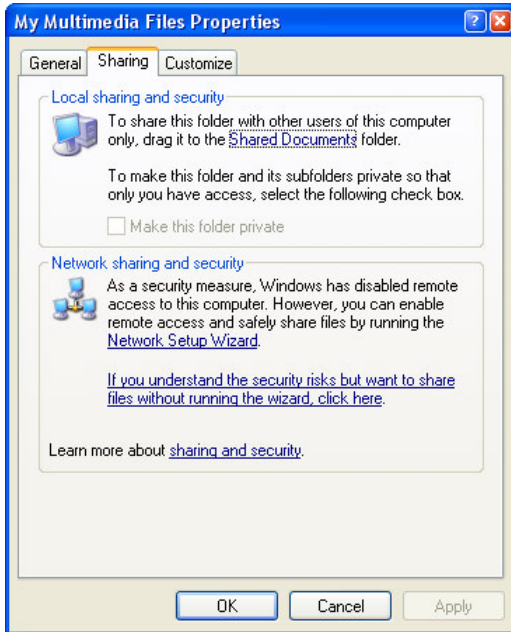


[ My Computer - Share Folder ]

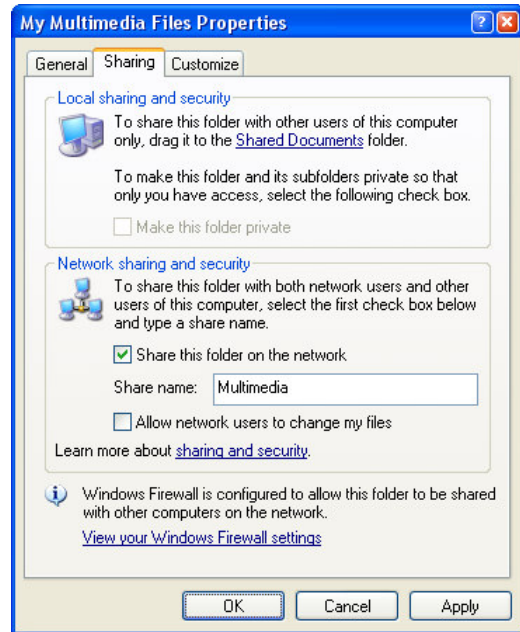
The properties of the folder are shown, with the 'Sharing' page displayed.

The section 'Network sharing and security' can be used to share the folder.

If you did not share any folders previously, you need to run the Network Setup Wizard by clicking the 'Network Setup Wizard' line in the window.



[ Properties - Sharing Page ]



[ Properties - Sharing Page ]

- When the Network Setup Wizard is already finished previously, you can share your folder by clicking ‘Share this folder on the network’.
- Enter a name for the share in the text field and click ‘Apply’.
- Click ‘OK’ to close the window.

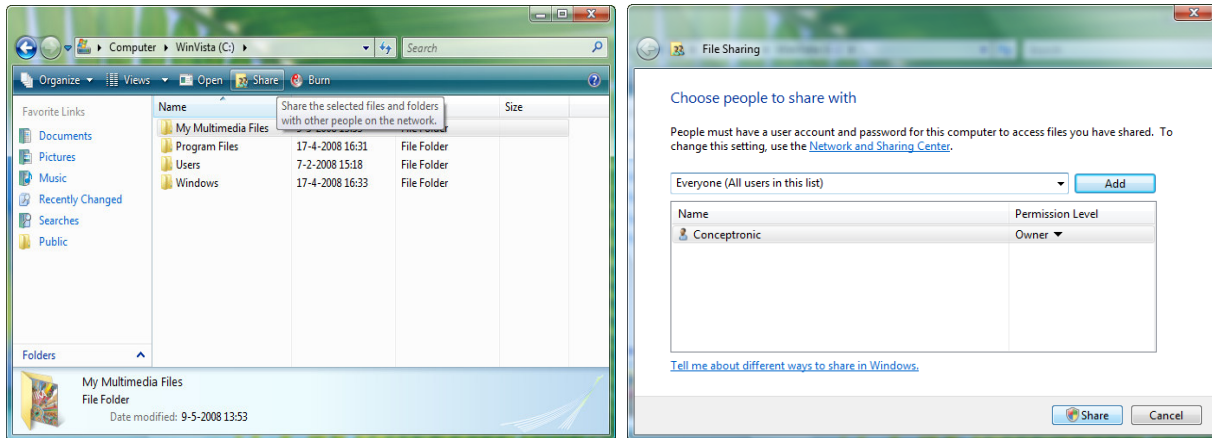
The folder is now listed with a hand beneath the folder icon, indicating that the folder is shared on your computer.



[ Shared Folder ]

## 2.2 File sharing in Windows Vista

- Open 'Computer' with the shortcut in the Start menu and navigate to the folder with media files you want to share.
- Single click on the folder with media files and select the option 'Share' in the top menu bar of the window.



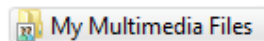
[ Computer - Share Folder ]

[ Sharing Properties ]

By default, your own user is in the share list as owner of the folder.

- You can add more users to the sharing list by selecting them from the drop-down list and press the 'Add' button.
- When the list with users is complete, click the 'Share' button to share the folder.

The folder is now listed with a small icon displaying 2 people, indicating that the folder is shared on your computer.



[ Shared Folder ]

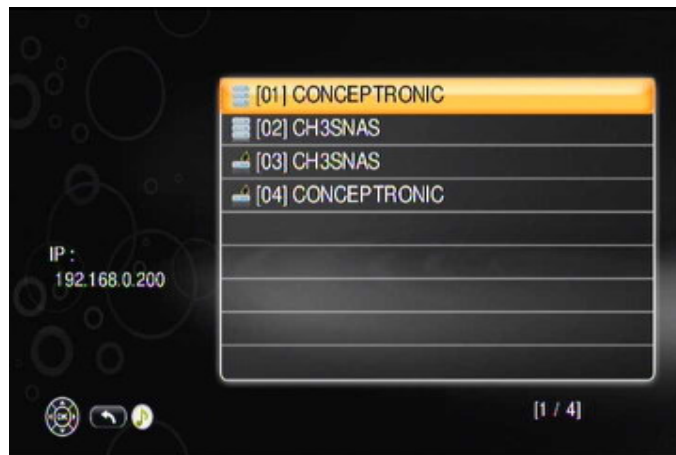
## 2.3 Browsing Samba shares on the CFULLHDMA

When your folder with media files is shared, you can browse them through the CFULLHDMA.

- Select the option 'My Media' in the Main Menu.



All UPnP AV servers and connected USB devices (when available) are listed on your screen. Within a few seconds, the available Samba shares will be listed below the UPnP AV servers, indicated with a different icon:



You can now browse and play your media files as described in the manual of the CFULLHDMA.

### 3. Using NFS on CFULLHDMA

In order to use NFS, you need to have a NFS capable device, like the Conceptronic CH3SNAS or a computer running Linux as operating system. In this howto, we explain how you can use NFS between the CH3SNAS and the CFULLHDMA.

**Note :** The Conceptronic CH3SNAS does not offer NFS shares by default. You need to install 'Fun\_Plug' software on your CH3SNAS, which requires basic Linux knowledge. In this howto, we used Fun\_Plug version 0.5.

#### 3.1 CH3SNAS Preparation: Firmware & Fun\_Plug

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- Download the latest available firmware for the CH3SNAS at: <http://www.conceptronic.net/>
- Install the firmware by following the included upgrade instructions.
  
- Download the latest Fun\_Plug for the CH3SNAS at : <http://www.inreto.de/dns323/fun-plug/>
- Install the Fun\_Plug by following the included 'Getting Started' instructions.

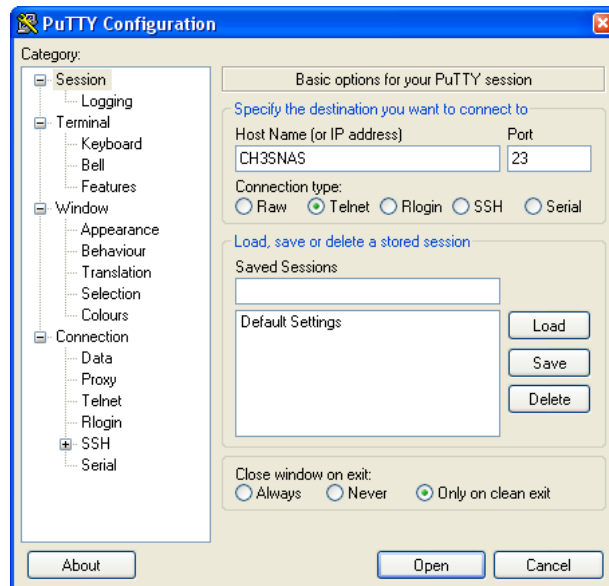
**Note :** Make sure you reboot the CH3SNAS after the installation of the Fun\_Plug

## 3.2 CH3SNAS Preparation: Enabling NFS

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In order to enable NFS on the CH3SNAS, you need to download Putty, a telnet client. This client allows you to connect to the CH3SNAS on system level, allowing you to execute commands for enabling NFS.

- Download the Putty client at at: <http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html> (or use [www.google.com](http://www.google.com) and search for 'Putty').
- Run the Putty client.



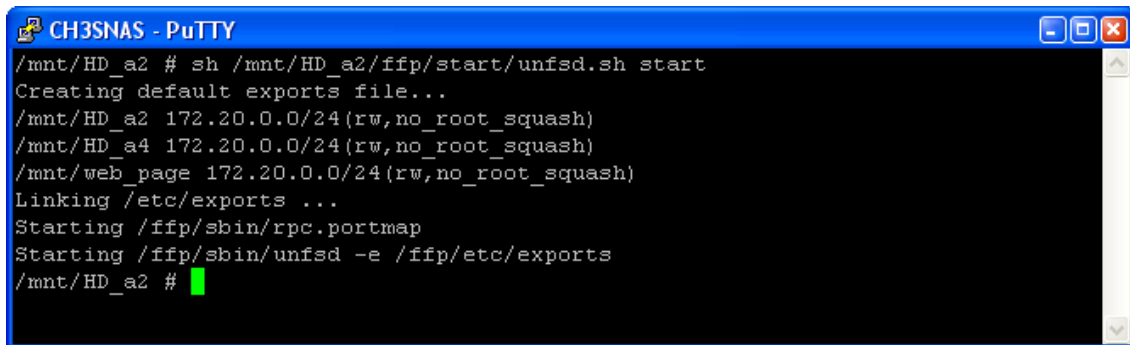
- Enter the host name (by default: CH3SNAS) or the IP address of your CH3SNAS in the 'Host Name' field.
- Set the connection option to Telnet.
- Click 'Connect'.

Putty will connect to the CH3SNAS and show the command '/mnt/HD\_a2 #' on your screen:



```
CH3SNAS - PuTTY
/mnt/HD_a2 #
```

- Enter the following command: **sh /mnt/HD\_a2/ffp/start/unfsd.sh start**



```
CH3SNAS - PuTTY
/mnt/HD_a2 # sh /mnt/HD_a2/ffp/start/unfsd.sh start
Creating default exports file...
/mnt/HD_a2 172.20.0.0/24(rw,no_root_squash)
/mnt/HD_a4 172.20.0.0/24(rw,no_root_squash)
/mnt/web_page 172.20.0.0/24(rw,no_root_squash)
Linking /etc/exports ...
Starting /ffp/sbin/rpc.portmap
Starting /ffp/sbin/unfsd -e /ffp/etc/exports
/mnt/HD_a2 #
```

The CH3SNAS will enable NFS.

**Note :** NFS is now available during this session of the CH3SNAS. If you turn off the CH3SNAS or reboot the CH3SNAS, the NFS feature is disabled again.

To auto-start the NFS feature when the CH3SNAS is turned on, edit the 'Fun\_Plug' file in the root of your CH3SNAS hard disk and add the following command:

**sh /mnt/HD\_a2/ffp/start/unfsd.sh start**

Please note that if you use Windows to edit the file, you should not use Notepad or any other built-in text editor. Doing so will result in an unusable Fun\_Plug file. In stead we advice you to use a text editor such as Notepad++, which can be downloaded here:

<http://notepad-plus.sourceforge.net/>

Now NFS is started, you can continue with adding the NFS link to your CFULLHDMA, as described in chapter 3.3

## 3.3 Adding the NFS share to your CFULLHDMA

The CFULLHDMA Main Menu shows the section 'iMedia', to connect to audio and video links in your network or on the internet. This iMedia section is also used to connect to NFS shares in your network.

The easiest way to add NFS shares to your CFULLHDMA is by your computer, through the embedded web interface of the CFULLHDMA.

- Turn on your CFULLHDMA unit and go to the 'iMedia' section. In the lower right corner, the IP address of your unit is shown.



- Open a web browser on your computer and enter the following URL:

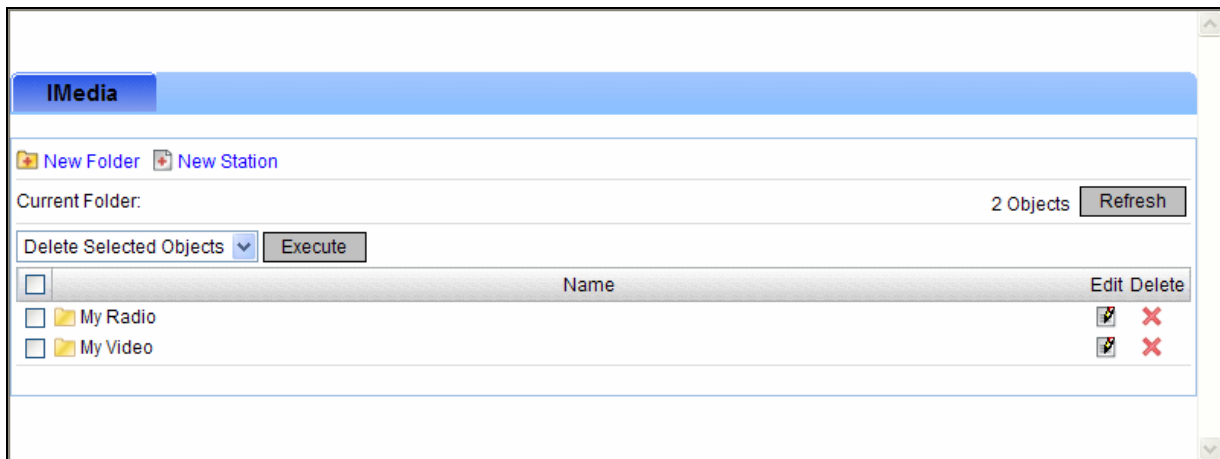
**`http://<IP-OF-CFULLHDMA>:49152/web/IMedia`**

(where <IP-OF-CFULLHDMA> should be replaced by the IP address shown in the iMedia section).

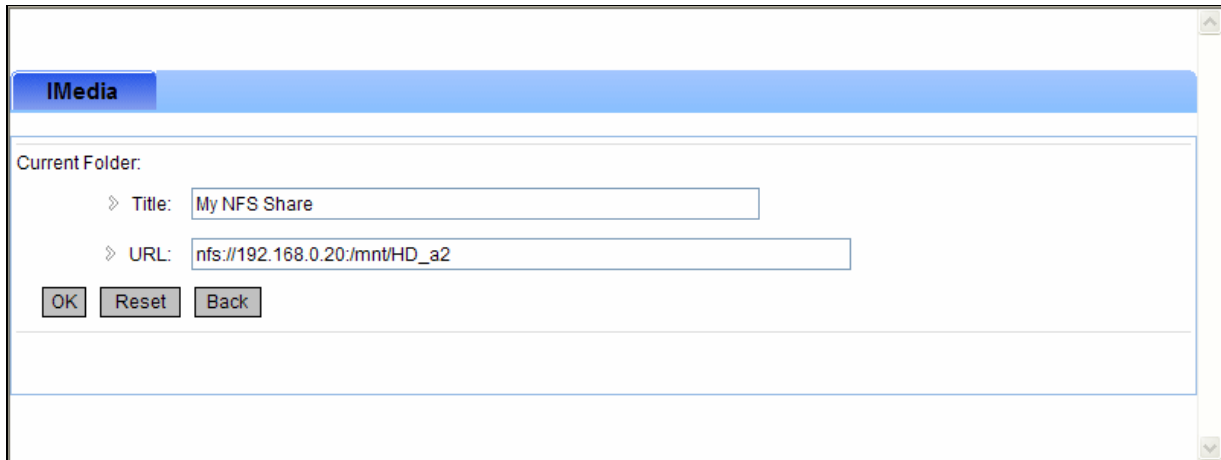
**For example :** If the iMedia section shows: 192.168.0.200, you should enter:

**`http://192.168.0.200:49152/web/IMedia`**

The iMedia configuration page of the CFULLHDMA will be shown on your screen.



- Click the button 'New Station'.



The screenshot shows a web-based configuration interface for IMedia. At the top, there is a blue header bar with the text "IMedia". Below the header, the interface is titled "Current Folder:". There are two input fields: "Title:" with the value "My NFS Share" and "URL:" with the value "nfs://192.168.0.20/mnt/HD\_a2". Below these fields are three buttons: "OK", "Reset", and "Back".

- Enter a name for the NFS share, for example: 'My NFS Share'.
- Enter the following URL: **nfs://<IP-OF-NFS-DEVICE>:/mnt/HD\_a2**  
(where <IP-OF-NFS-DEVICE> should be replaced by the IP address of your CH3SNAS).

**For example :** If the IP address of your CH3SNAS is: **192.168.0.20**, you should enter:

**nfs://192.168.0.20:/mnt/HD\_a2**

- Click the 'OK' button to save the NFS share to your CFULLHDMA configuration.

## 3.4 Browsing your NFS Share

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When the NFS share is added to your iMedia section, you can browse the share through the CFULLHDMA.



- Select 'iMedia' in the Main Menu.
- Select 'My Media' in the iMedia Menu.



- Select your NFS share from the list (for example: 'My NFS Share', created in chapter 3.3).

You can now browse your NFS share and play your media files.