

Coolmax CN-590 Network Storage Solution

| | | |
|-----------------------|------------------------|---------------------------------------------------------------------------------------|
| Model Name | | CN-590 |
| Controller hip | | |
| CPU | | S2892 150MHz |
| OS | | RTOS |
| Memory | | 8MB SDRAM / 1MB NOR Flash |
| Interface | | |
| LAN | Standard | 10/100Base-TX Auto MDI/MDI-X |
| | Connector | Type RJ-45 |
| | Number | 1 |
| | Speed | Half-duplex and Full-duplex operation |
| | Protocol | TCP/IP |
| | Network File System | Samba, FTP |
| | Throughput | Read \pm 6.0MB/s, Write \pm 7.0MB/s |
| | Recommended User Login | FTP 4 User/Samba 4 User |
| HDD | Type | SATA III |
| Software | | |
| Configuration | | Web base |
| Network | | Auto IP(DHCP Server or DHCP Client)/Fixed IP |
| FTP Server | | Maximum create 16 user accounts, 16 folders shared by one account |
| Samba Server | | User Level Access (maximum create 16 user accounts, 16 folders shared by one account) |
| System Tools | | Disk Utility, Web Firmware Upgrade, Reboot, Factory Defaults |
| Support | | |
| OS | | Win98SE/ME/2000, XP, Vista / MAC OS X / Linux |
| HDD | File System Format | FAT32 |
| | Max Capacity | 1TB |

Overview

The CN-590 enclosure adds the convenience of network-attached storage to homes and in small businesses, providing you a central storage location for your data and letting you share data across your local network/remote.

What's in the Package

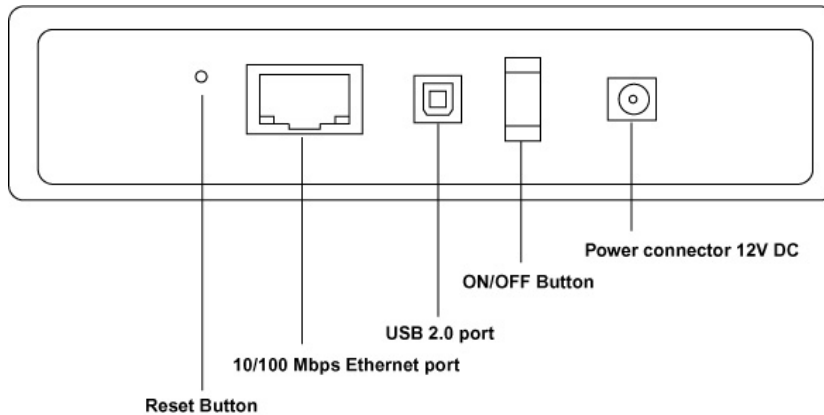
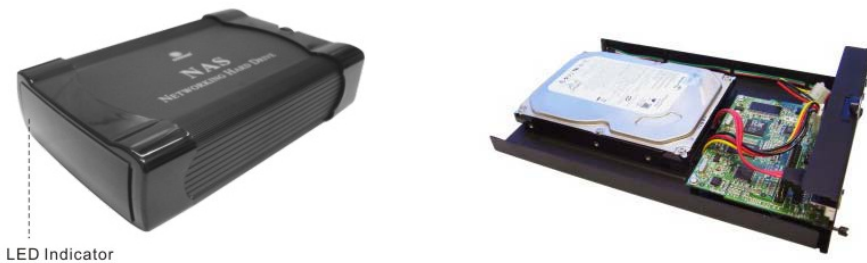
- CN-590 main unit
- CN-590 vertical stand
- Securing screws
- Network cable (category 5)
- USB cable
- Power Adapter
- User Guide

Minimum System Requirements

- Apple Safari; Linux Mozilla; Internet Explorer 5.x; Netscape 6.2.x & up
- Windows XP/2000/Me/98se, Mac OS 10.3.x or above, Linux, Vista
- 3.5" SATA I/II Hard drive (formatted to FAT32 format thru web disk utility)

2.2 Install one SATA HDD in this enclosure

1. Unscrew the thumbscrews at the back
2. Slide the aluminum cover out carefully
3. Plug the SATA cable and SATA power cable into the appropriate ports on the rear of the HDD
4. Place the HDD in bottom tray carefully
5. Fix the HDD with screws from bottom mounting hole
6. Slide the tray back
7. Fix the screws tightly from back mounting hole
8. Plug the LAN cable or USB cable in RJ45 port of USB port
9. Plug the adapter jack in enclosure and the other plug connect to power source



Connecting the CN-590 to your Computer

The CN-590 is a multifunctional hard drive enclosure. In addition to being a network storage device, you can also use it as a standalone external hard drive via the USB interface.

Max OS X

Driver installation is not required for systems using Mac 10.1.2 or above. Simply connect the CN-590 using the included USB cable and access the data by clicking the "Untitled" HDD icon located on your Desktop.

Windows XP & Windows ME

Driver installation is not required for Windows XP and Windows Me. Simply connect the CN-590 using the included USB cable and access the data via " My Computer".

Windows 98 (Download Drivers)

To utilize the USB connectivity, please visit the following URL to download the driver:

<http://coolmaxusa.com/solutionCenter.asp? solution= download>

Please ensure that you install the device driver before connecting the USB port. When you complete the driver installation, reboot your computer, connect the CN-590 to your computer and access the data via " My Computer".

You can also access data in the CN-590 by connecting it directly using the Ethernet cable with your computer. The CN-590 will have a default IP address of 169.254.0.1 when connected directly.

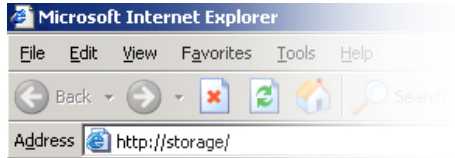
Connecting to your Network

Connect the power adapter to the back panel of the CN-590 and plug the other end to a wall outlet or power strip. Connect the network cable to the LAN port on the back of the CN-590 and the other end of the network cable to a port on your hub, switch or router.

The Ethernet port on the CN-590 is Auto-MD I/MD IX, which means you can connect it using either a crossover or a direct network cable.

Configuring the CN-590

The CN-590 features a web-based control interface to manage your settings. If you are using an operating system other than Windows, please refer to the next section labeled "Other Operating Systems".



Open your web browser and enter `http://Storage` or `http://Storage-XXXX` in the URL address field. You can also enter the IP address of the CN-590.

Enter the default login information:

Username: admin

Password: admin

For security purposes, your login information can be changed via the web control interface.



When two new CN-590s are simultaneously connected to your network, you need to distinguish between the two by typing "http:// Storage-XXXX" with their unique MAC address. Please refer to the sticker on the rear panel for the address and replace XXXX with the last four digits of the MAC address.

For example if your CN-590's MAC Address is 00-14-3F-AA-01-68, you will need to enter "http://Storage-0168" in the URL address bar.

Configuring the CN-590 (Other Operating Systems)

When you are planning to perform administrative tasks from a different operating system, you will need to input the IP address of the CN-590 in the browser URL address bar.

If you do not know the IP address of the CN-590, you will need to connect the CN-590 directly to your computer and input the default IP address 169.254.0.1 in the browser URL address bar to access the web control panel.

Upon a successful login, you will see the following screen:

COOLMAX NetworkStorage series

Status
IP Config
Maintenance
SMB Server
FTP Server
XBOX360 Media
Disk Utility

| System Information | | |
|--------------------|---------------------------|--------|
| Host Name | STORAGE | Change |
| Group Name | WORKGROUP | |
| Administrator | admin | Change |
| Date/Time | 2008/06/13 11:34:10 GMT-5 | Change |
| Firmware Version | S2892-1.02 LOADER 3.3 | |

| Network Information | | |
|---------------------|---------------------------------------------------------------------------|-------|
| IP Address | 192.168.0.119 | |
| MAC Address | 00:40:f7:83:33:8b | |
| DHCP Server | OFF <input type="radio"/> ENABLE <input checked="" type="radio"/> DISABLE | Apply |

| Service Information | | |
|---------------------|-----------------------------------------------------------------------|-------|
| SMB Service | <input checked="" type="radio"/> ENABLE <input type="radio"/> DISABLE | Apply |
| FTP Service | <input checked="" type="radio"/> ENABLE <input type="radio"/> DISABLE | Apply |

| Disk Information | |
|------------------|---------------------|
| Disk ID | Seagate ST380815 AS |
| Free Size | 76257 MB free |
| Total Size | 76319 MB |

An overview description of the functions on the left menu bar:

| | |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Status | Shows the data related to your CN-590 such as networking status and hard drive information. You may also edit administration and file language settings here. |
| IP Config | Allows you to manually configure the IP address of the CN-590 |
| Maintenance | Perform firmware upgrade, reboot or reset the CN-590 |
| SMB Server | Configure the Samba feature of CN-590 for the home/office network file sharing capabilities. You can also create/remove folders and their share permissions. |
| FTP Server | Configure the FTP features of the CN-590. You may add/remove users and their permissions. |
| Disk Utility | Perform hard drive maintenance routines such as Scandisk and Format. |

Status – System Information

The welcome screen displays the IP address, firmware version and the hard drive information such as the hard drive type and storage space available.

The screenshot shows the 'System Information' section of the NetworkStorage series web control panel. It includes a sidebar menu with options like 'Status', 'IP Config', and 'Maintenance'. The main content area is divided into four sections: System Information, Network Information, Service Information, and Disk Information. Each section contains various settings and their current values, with 'Change' or 'Apply' buttons for modification.

| System Information | | |
|--------------------|---------------------------|--------|
| Host Name | STORAGE | Change |
| Group Name | WORKGROUP | |
| Administrator | admin | Change |
| Date/Time | 2008/06/13 11:34:10 GMT-5 | Change |
| Firmware Version | S2892-1.02 LOADER 3.3 | |

| Network Information | | |
|---------------------|-----------------|-----------------------------------------------------------------------------------|
| IP Address | 192.168.0.119 | |
| MAC Address | 00:40:E7:83:38: | |
| DHCP Server | OFF | <input type="checkbox"/> ENABLE <input checked="" type="checkbox"/> DISABLE Apply |

| Service Information | | |
|---------------------|-----------------------------------------------------------------------------|-------|
| SMB Service | <input checked="" type="checkbox"/> ENABLE <input type="checkbox"/> DISABLE | Apply |
| FTP Service | <input checked="" type="checkbox"/> ENABLE <input type="checkbox"/> DISABLE | Apply |

| Disk Information | |
|------------------|---------------------|
| Disk ID | Seagate ST380815 AS |
| Free Size | 76257348 Btes |
| Total Size | 76319 MB |

The administrator may change the web control panel login information here.

You may also change the default

hostname of your CN-590 here. Keep in mind that after you change the hostname, you will need to use it to access your CN-590. For example, if you changed your hostname to "FileServer", please type "http://FileServer" to access the Web Control Panel after you submitted your changes.

The Language setting is used to recognize files with characters other than English. If you have trouble reading your files on the CN-590, please select the appropriate language.

When you reset the CN-590, either by the hardware switch or through the web control panel, all the settings will return to the default setting including the hostname. The default hostname will remain as Storage-XXXX (where XXXX is the last four digits of the MAC address).

IP Configuration

The administrator may use this option to manually define the IP address of the CN-590. If the hub/router/switch in your network has a DHCP server, then the CN-590 will automatically be assigned an IP address.

The screenshot shows the 'IP Configuration' section of the web control panel. It has two radio button options: 'Automatic IP' (selected) and 'Static IP as below'. Below the 'Static IP as below' option, there are five input fields for IP, SubnetMask, Gateway, Primary DNS, and Secondary DNS. An 'Apply' button is located at the bottom left of the configuration area.

| IP Configuration | |
|-----------------------------------------------|---------------|
| <input checked="" type="radio"/> Automatic IP | |
| <input type="radio"/> Static IP as below | |
| IP | 192.168.0.103 |
| SubnetMask | 255.255.255.0 |
| Gateway | 192.168.0.1 |
| Primary DNS | 168.95.1.1 |
| Secondary DNS | 0.0.0.0 |

Apply

The CN-590 can also act as a DHCP server when one is not present in your network. The default IP of the CN-590 in DHCP server mode is "169.254.0.1" and any device that is linked to the network containing will be assigned an IP of "169.254.0.1.x" automatically.

Maintenance

The administrator can perform maintenance tasks on the CN-590 here.

Update the firmware only if you are experiencing problems with your LanDrive. New firmware files are available to download from our website:

The screenshot shows a web interface titled "Maintenance". It has three main sections: "Firmware Upload" with a "Select new firmware to upload." label, a text input field, and "Browse..." and "Upload" buttons; "System Reboot" with a paragraph of instructions and a "Reboot" button; and "Factory Defaults" with a paragraph of instructions and a "Reset" button.

<http://coolmaxusa.com/solutionCenter.asp?solution=download>

After updating the firmware or resetting to factory defaults, please make sure that you restart the CN-590 and refresh your browser.

SMB Administration

SMB enables the core function of the CN-590 which is network file sharing.

SMB 1

This option allows the administrator to create accounts and grant Read/Write access rights for each account created.

| SMB Server | | | | |
|--------------|------------|----------|--------------|--------|
| Account List | | | | |
| | New | Modify | En/Disable | Delete |
| [User Name] | [Password] | [Access] | [En/Disable] | |
| guest | ***** | RU | ENABLED | |
| testunit3 | ***** | RU | ENABLED | |
| nyguest | ***** | RO | ENABLED | |

SMB 2 Modify Account

This option allows the administrator to determine the folders/directories to be shared.

The screenshot shows the "Modify SMB Account" page. It includes a "Modify" button, a "Password" field with a "(Max 12 Bytes)" label, and an "Access" section with radio buttons for "Read Only" and "Read/Write". Below are two lists: "Folder List" with buttons "Create", "Rename", and "Delete", and "Sharing List" with a "Back" button. Both lists show "PUBLIC", "guest", "testunit3", and "nyguest".

In here, you can also create, rename and delete folders/directories in your CN-590. All the folders/directories in the root directory that were previously in your hard drive before it was installed in the CN-590 will also be shown in the "Folder List".

The arrow keys in the middle are used to determine if the selected folder/directory is to be shared. Password protection for each shared folder can also be implemented.

When creating folders/directories through the web control panel, please use only English alphabets.

FTP Configuration

Abbreviated from File Transfer Protocol, FTP, enables file exchange between computers on the Internet. The CN-590 can work as a stand-alone FTP server when it is assigned a static IP.

Anonymous FTP is disabled by default. The administrator can determine if the users have read or write permission, and the "Home Directory" will be the folder/directory the anonymous user can access upon logging in.

The Account List displays the current FTP user accounts, the administrator can add new users, modify their permissions, temporarily disable users and delete users.

FTP 1

| [User Name] | [Password] | [Access] | [En/Disable] |
|-------------|------------|----------|--------------|
| anonymous | ***** | RO | DISABLED |
| testunit3 | ***** | RW | ENABLED |
| myguest | ***** | RO | ENABLED |
| guest | ***** | RW | ENABLED |

FTP 2

Modify FTP user account share folder for user

| Folder List | Sharing List |
|-------------|--------------|
| PUBLIC | testunit3 |
| guest | |
| testunit3 | |
| myguest | |

Remote FTP

Please check port forwarding and virtual server configuration on your router.

Disk Utility

If you have installed a new hard drive in the CN-590 that is not formatted, this will be the place to format it to FAT32 format.

Format Disk [Format] | Sleep Time 15 [Set] (min) | Scan Disk [Start]

[Delete Error Msg] [Refresh]

Since the CN-590 supports power management, you can also determine the sleep time the hard drive have to be inactive in order for the CN-590 to enter sleep mode.

The Scan Disk function can be used to detect potential problems with the hard drive. Click on the refresh button to display the scandisk result.

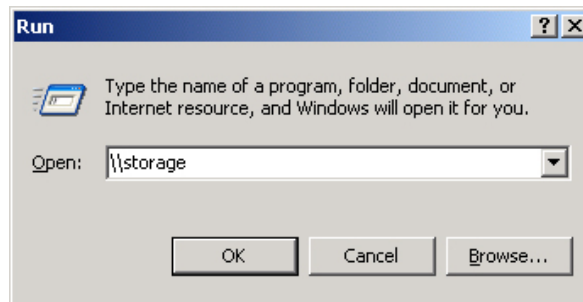
Access File from the CN-590 - Windows

In Windows, the data can be accessed by searching for the CN-590 in the "Network Neighborhood" (as a computer with the name "Storage"). Or you can access the data in the CN-590 with the following instructions.

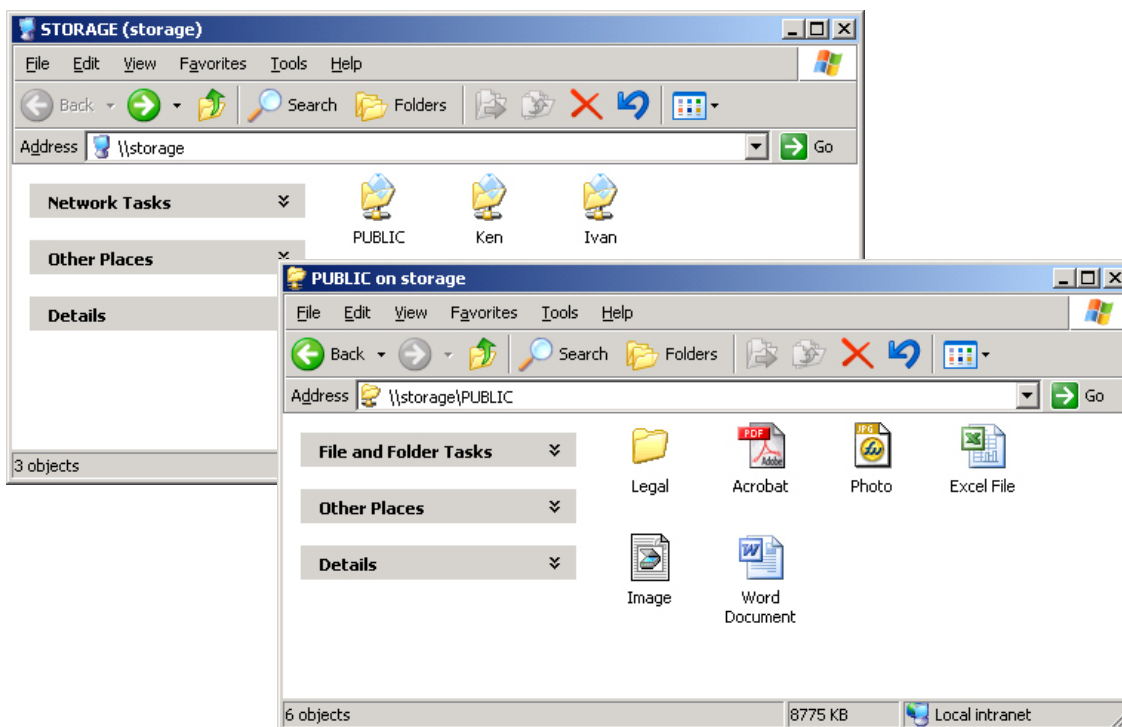
The following screenshots are taken from a PC running Windows XP SP2 and may vary slightly from your computer screen.

Click on the Windows Start button, select "Run" from the menu and a dialogue box as shown will appear.

Type "\\storage" in the field and click "OK".



If you change the CN-590 hostname, you will need to replace the word "storage" with it. For example, if you changed your hostname to "FileServer", please type "\\FileServer" instead.



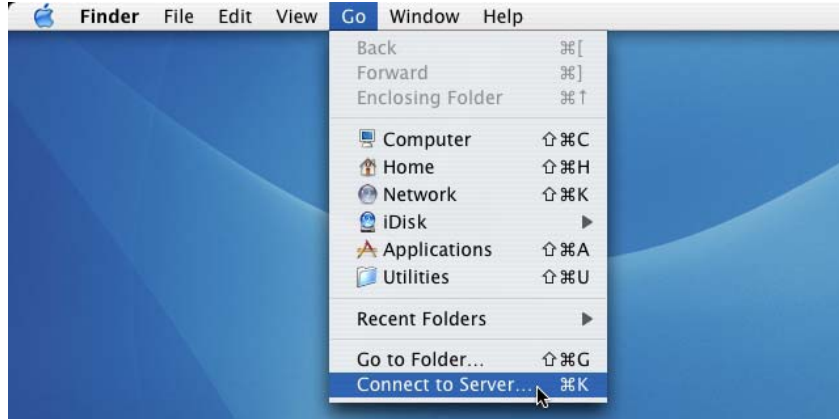
The Windows Explorer will appear and you should be able to see all the folders that were previously selected to be shared under "SMB Server" in the control panel. Clicking on the corresponding folder will reveal the files in that folder.

Access Files from the CN-590 – Mac OS

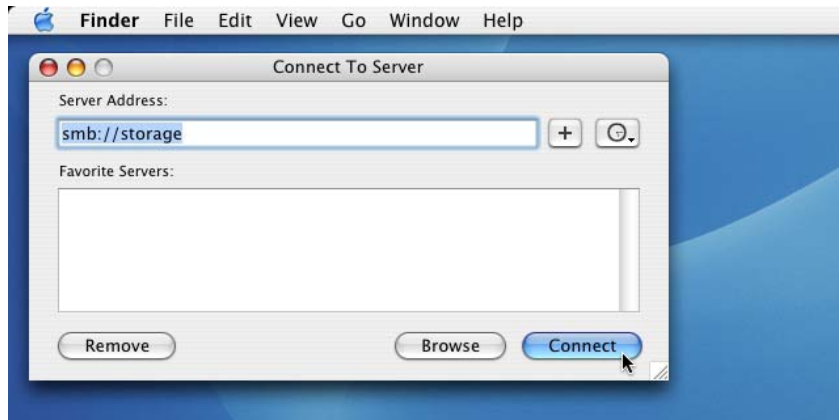
If the client computer is an Apple Macintosh running Mac OS, they will have to follow the procedure below to mount each shared folder as an SMB share to access the data.

The following screenshots are taken from an iMac running OS 10.3.x and may vary slightly from your computer screen.

Under Finder, select
Go >> Connect to
Server
or use the hotkey
<Command +K>



The dialogue box
"Connect to
Server" will appear.
Type
"smb://storage"
and click the
Connect button.



If you change the CN-590 hostname, you will need to replace the word "storage" with it. For example, if you changed your hostname to "FileServer", please type "smb://FileServer" instead.

The next dialogue
screen will
prompt you for
the folder that
you would like to
access. Select it
and click the OK
button.



You might be prompted to enter a password, unless a password was previously assigned in the control panel, you can leave it blank. After a successful mount, a network folder icon will be created based on the folder you selected as shown.



Frequently Asked Questions

1. The CN-590 displays error messages / crashes during the file transmission.

Please ensure that you update patches for your operating system frequently. The latest firmware for the CN-590 is also available to download from our website at:
<http://coolmaxusa.com/solutionCenter.asp?solution=download>

2. Does the CN-590 support power management?

Yes, when there isn't any hard drive activity within fifteen minutes, the CN-590 will power down to reduce power consumption. The sleep time can be configured via the web control panel.

3. How does the CN-590 achieve its data sharing capabilities?

Utilizing the SMB (Server Message Block) protocol, the CN-590 allows any computer client that supports TCP/IP, NetBuei or IPX/SPX to share files. The built-in FTP server also allows any clients with Internet connectivity to access the CN-590.

4. What is the size limitation for the CN-590?

The CN-590 support LBA (48-bit Logical Block Addressing) which in theory includes all hard drives from 32 gigabytes to 1 terabytes.

5. Why does CN-590 only support FAT32 format?

As a cross platform file server, FAT32 format is compatible with all major operating systems (Windows/Mac OS/Linux). The only drawback of a FAT32 format is the single file size limitation of 4 gigabytes.

6. How does the CN-590 DHCP service work?

The CN-590 functions as a DHCP(Dynamic Host Configuration Protocol) server when it does not detect the presence of other DHCP servers in its network. DHCP is an Internet protocol for automating the configuration of computers that use TCP/IP by automatically assigning IP addresses.

7. What are the naming limitations of the files located in the CN-590?

The maximum length of a folder/directory/file name is 12 characters. Invalid characters such as "*" \ : " < > . ? /" may not be used.

8. What kind of hard drive is compatible with the CN-590?

The CN-590 supports 3.5" SATA I/II hard drives which are mostly manufactured after 1998. Below is a list of manufacturer websites you can refer to for more information on the hard drive you own.

- Western Digital <http://www.westerndigital.com>
- IBM/Hitachi <http://www.hitachigst.com>
- Samsung <http://www.samsung.com>
- Seagate <http://www.seagate.com>
- Maxtor <http://www.maxtor.com>