

SMS (StorageManager) Storage Management System

User Manual

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Thank You

Before operating the system, please read this User Manual thoroughly and retain it for future reference.

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1. Introduction

SMS can record live video and audio data over network and manage recorded data with full flexibility. Under effective combination with CMS, user can build up perfect total management system like no others in the security industry.

1.1 Key Features

1) Simultaneous Recording up to 200 Channels

SMS can simultaneously record up to 200 channels over network. Moreover, it provides pre & post event recording by sensor-activation.

2) Perfect Compatibility with CMS

SMS is perfectly compatible to CMS since both are operated under a unique STL network platform. SMS provides its data when requested by CMS, and thus user can remotely search and playback the data on the SMS master storage server just on CMS platform.

3) Live Monitoring of Recording Status

If user wants to make it sure to view recording status to avoid any data loss, pop-up screen (image player) can be shown by just one mouse click.

4) Quick Search Function

SMS supports Quick Search function to enable user to instantly search and playback the desired data.

5) Up to 23 Pieces of Multi-HDDs Management

Multi-HDDs management is one of the strong features of SMS. By using this capability, SMS can effectively handle massive volume of video & audio data and achieve long-term data storage.

1.2 System requirement

[Recommended Specs]

Category	Content
OS	Windows XP / Vista
CPU	Pentium Dual core 1.8GHz or Higher
RAM	1GB
VGA	1024 × 768, 24bit color, DirectX support Min. 256MB (No shared memory)
HDD	20MB free space for installation Min. 10GB free space for Remote Backup

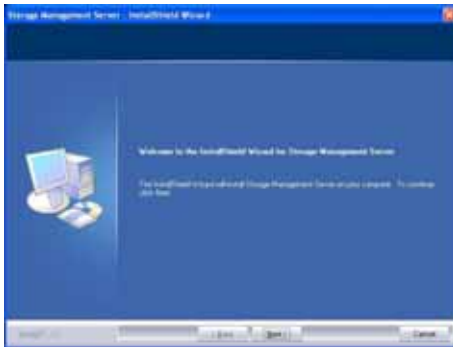
[Minimum Specs]

Category	Content
OS	Windows XP / Vista
CPU	Pentium 2GHz or Higher
RAM	512MB
VGA	1024 × 768, 24bit color Min. 64MB video memory
HDD	20MB free space

2. Initial Setting

2.1 Software Installation

User can find “SMSSetup.exe” file in CD and click it to start the installation of SMS software. User can easily set up this program by InstallShield Wizard as below, which is for user to simply click “next” buttons.



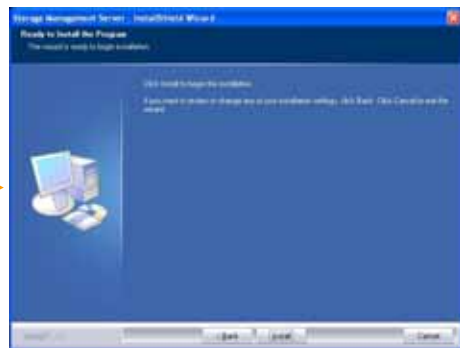
* Press the [Next] button to move to the next screen.




* Press [Change] button if you want to install the program in another folder.



* Select program folder.



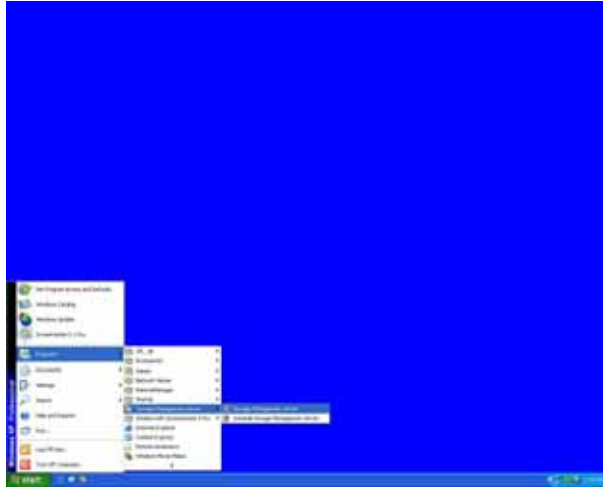
* Click [Install] to begin installation.

Upon clicking “Finish” button, user can find the icon of “SMS”  created on desktop window. After initial installation, user can click this icon to execute SMS software.

Note SMS program is located in “C:\Program Files\SMS” as default unless user changes its folder during program installation.

2.2 System Startup

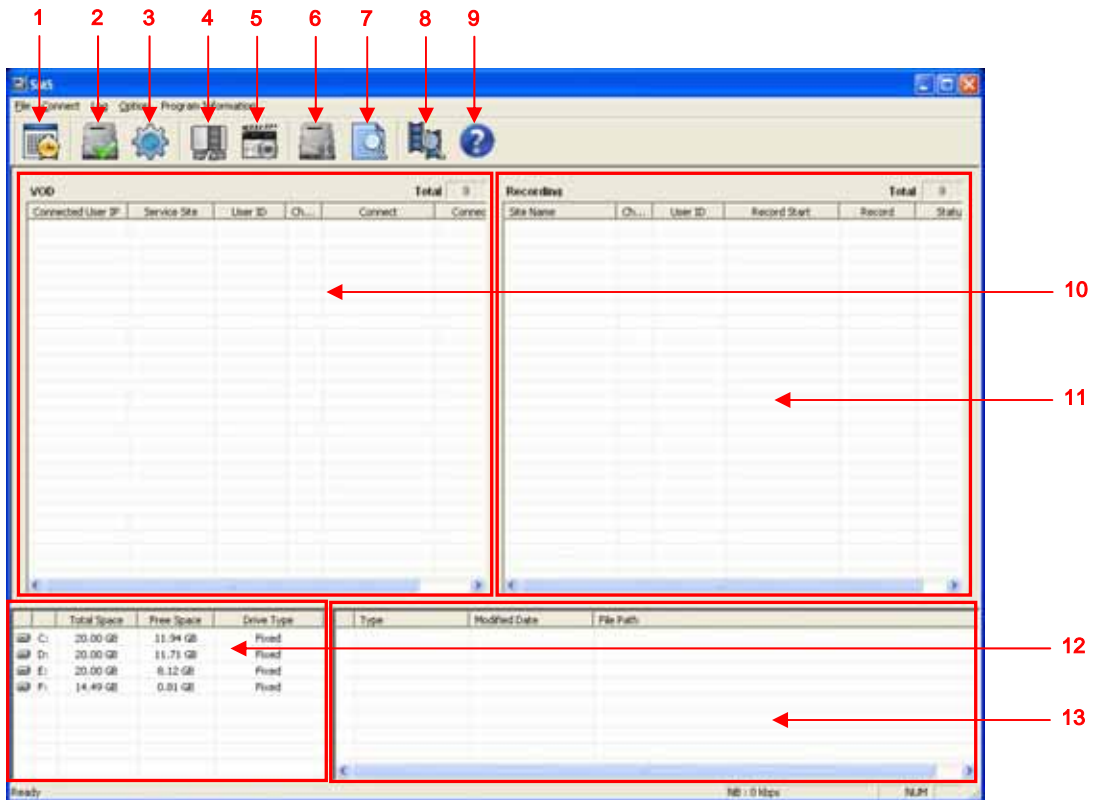
Click the SMS icon on desktop window or “Storage Management Server” of MS Windows’ “Start” menu to get the SMS login window as below.



Input the correct “User ID” and “Password” in the login box, then, SMS software will be executed. The default password for “Administrator” is **none**, leaving it empty in password. If you want, create new password for “Administrator” when the first login.




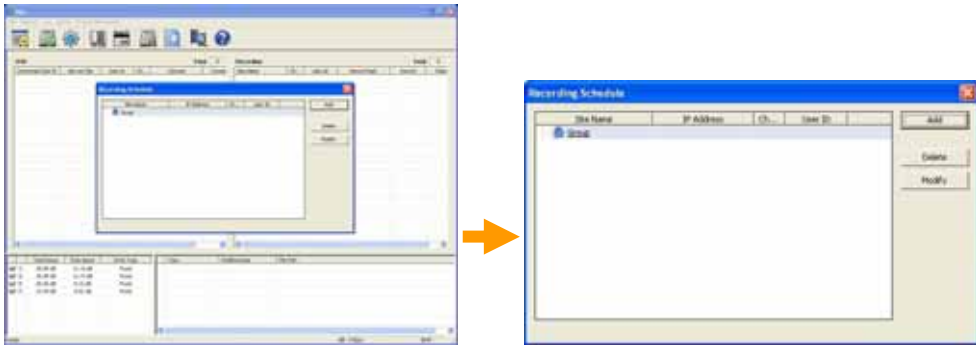
2.3 Screen Layout



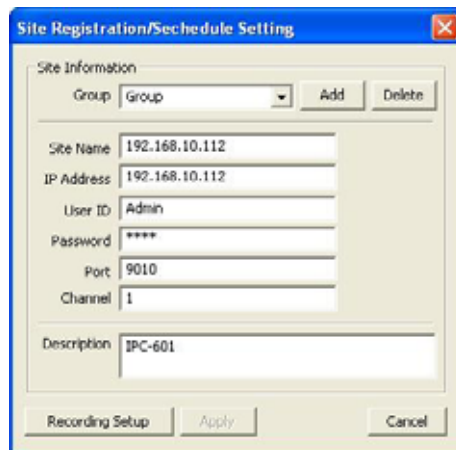
1. Recording Schedule Management : Site Registration & Recording Schedule Setting
2. Disk Setup : HDD/RAID Setting
3. Option Setup : Network Setting and Log Save Path Setting
4. Disconnection of File Service : Disconnection of all VOD Services to CMS
* Disconnection of each VOD Service can be done by clicking the right button of the mouse,
5. Stop Recording : Stop Recording of all Recording Channels
* Stop recording of each channel can be done by clicking the right button of the mouse.
6. View Server Condition : Return to Main Screen from Log Viewer Screen
7. Log Search : Go to Log Viewer Screen
8. File Search : Open File Search Screen
9. Information : Show SMS Version Information
10. VOD Status Screen : Show VOD service Status
11. Recording Status Screen : Show Recording Status of Each Site & Channel
12. HDD/RAID Status Screen : Show HDD/RAID Status
13. File Creating & Deleting Status Screen : Show Current File Creating & Deleting Status

2.4 Site registration (Recording Schedule Setup)

- 1) Select Recording Schedule Management icon  to open Recording Schedule Screen.



- 2) In Recording Schedule screen, click [Add] to open Site Registration/Schedule Setting screen as below picture. And input Site Name, IP Address, User ID, Password, Port, Channel and Description.



Site Registration/Schedule Setting

Site Information

Group: Group [Add] [Delete]

Site Name: 192.168.10.112

IP Address: 192.168.10.112

User ID: Admin

Password: ****

Port: 9010

Channel: 1

Description: IPC-601

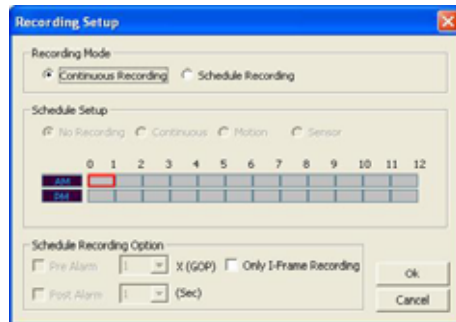
[Recording Setup] [Apply] [Cancel]

In case of DDNS connection, input URL as per following format.
[mac address].[ddns link] : ex.) 001c84010021.cctv-link.net

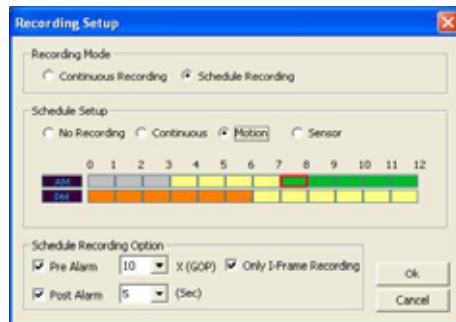
In order to register multi-channels for a single device such as DVR,
 input **"X – Y" format** in Channel : ex.) 1 - 16

Note Maximum 200 channels can be registered for recording.

3) Click [Recording Setup] button. Then, Recording Setup screen will pop up as shown below.



In case of Continuous Recording mode, no other items are required to select except “Only I-Frame Recording”



In case of Schedule Recording, user can select various recording options.

(1) Schedule Setup

Select Recording method and time period by mouse click.

- No Recording : Gray
- Continuous Recording : Yellow
- Motion Recording : Green
- Sensor Recording : Orange

(2) Schedule Recording Option

- Pre Alarm : Setup Pre Alarm recording in connection with Motion or Sensor recording.
- Post Alarm : Setup Post Alarm recording in connection with Motion or Sensor recording.

Note Motion and Sensor recording requires proper setup at the correspondent device.

Note Pre Alarm Recording is set based on the no. of GOP.
GOP means the frame group from an I-Frame to the frame just before the next I-Frame and it contains an I-Frame and a few P-Frames.

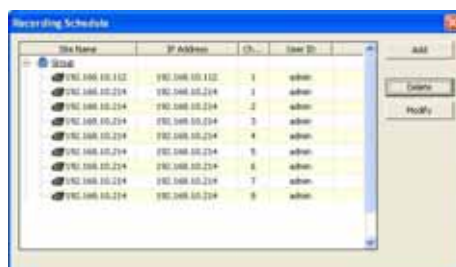
* I-Frame (Intra Frame)

It is the Key Frame with a whole picture which is compressed directly from the source like JPEG type. It has a good quality but requires a large file size.

* P-Frame (Previous or Predicted Frame)

It is made based on the previous I-Frame and has a small file.

- 4) After finishing all required setup, click [OK] at Recording Setup and [Apply] at Site Registration/Schedule Setting. Then, the site will be registered and shown on the list as follows.



Note SMS starts recording right after finishing site registration and schedule setting. And it keeps recording as per schedule as far as the program runs.

3. Recording

3.1 Recording Status

This screen shows current recording status of each site and channel.

Recording					Total	9
Site Name	Ch...	User ID	Record Start	Record	Status	
192.168.10.214	8	admin	2009/04/08 11:02:35	0 %		
192.168.10.214	7	admin	2009/04/08 11:02:35	9 %		578.83
192.168.10.214	6	admin	2009/04/08 11:02:35	9 %		599.29
192.168.10.214	5	admin	2009/04/08 11:02:35	0 %		
192.168.10.214	4	admin	2009/04/08 11:02:35	9 %		409.92
192.168.10.214	3	admin	2009/04/08 11:02:35	9 %		213.90
192.168.10.214	2	admin	2009/04/08 11:02:35	9 %		275.67
192.168.10.214	1	admin	2009/04/08 11:02:35	9 %		741.02
192.168.10.112	1	admin	2009/04/08 10:36:25	78 %		58.61

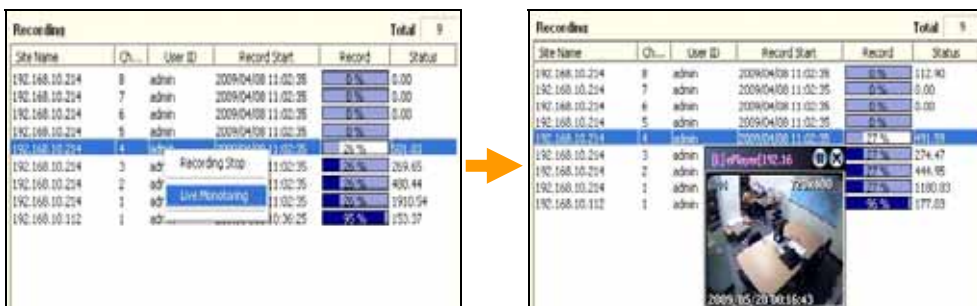
- Site Name
- Channel
- User ID
- Record Start : The first recording start time of the channel since the program starts running.
- Record : The progress of creating file.
- Status : Network bit rate.

Note Record (Percentage)

Each recording file is created on 1 hour base. Therefore, the percentage will be renewed every 1 hour.

3.2 Live Monitoring

To display current recording image of a channel, select a channel and open menu with the right button click of the mouse. When [Live Monitoring] is clicked, monitoring screen will pop up as following picture.



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- Note**
- 1) With the same procedure, multiple channels can be played with multiple pop-up screens.
 - 2) Pop-up screen can be enlarged by double clicking of the mouse on the screen.
- 3 different sizes are available.
-

3.3 File Creating and Deleting Status

This screen shows file creating and deleting status with file path.

Type	Modified Date	File Path
Create File	2009/04/08 13:13:34	C:\SMS\192.168.10.214\20090528\01304707.ssf
Create File	2009/04/08 13:09:14	C:\SMS\192.168.10.214\20090528\01262707.ssf
Create File	2009/04/08 13:03:07	C:\SMS\192.168.10.214\20090528\01202007.ssf
Create File	2009/04/08 13:01:36	C:\SMS\192.168.10.112\19991231\10002200.ssf
Create File	2009/04/08 12:59:37	C:\SMS\192.168.10.214\20090528\01165007.ssf
Create File	2009/04/08 12:54:33	C:\SMS\192.168.10.214\20090528\01114707.ssf
Create File	2009/04/08 12:49:31	C:\SMS\192.168.10.214\20090528\01064407.ssf
Create File	2009/04/08 12:44:27	C:\SMS\192.168.10.214\20090528\01014107.ssf

- File path : Drive :\ SMS \ IP Address \ Date(Year+Month+Day) \
- File name : hhmssxx.ssf (xx+1 is channel number)
ex.) Ch 3 at 11:45:32AM => 11453202.ssf

4. VOD Service

Recorded data in SMS can be requested to search and playback from CMS.

When the SMS is requested to send data with correct information, it provides its data to CMS.

4.1 VOD Status

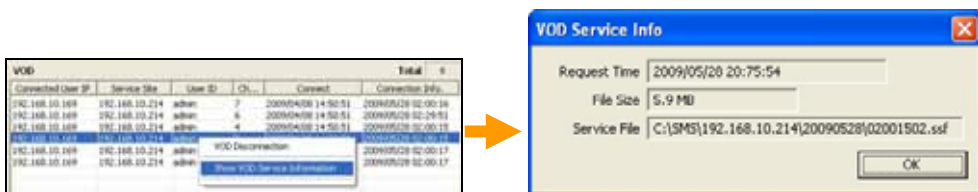
This screen shows current VOD service status of each site and channel.

VOD						Total	7
Connected User IP	Service Site	User ID	Ch...	Connect	Connection Info.		
192.168.10.169	192.168.10.214	admin	8	2009/04/08 14:28:52	2009/05/28 01:01:41		
192.168.10.169	192.168.10.214	admin	7	2009/04/08 14:28:52	2009/05/28 01:48:46		
192.168.10.169	192.168.10.214	admin	6	2009/04/08 14:28:52	2009/05/28 01:48:46		
192.168.10.169	192.168.10.214	admin	4	2009/04/08 14:28:52	2009/05/28 01:00:15		
192.168.10.169	192.168.10.214	admin	3	2009/04/08 14:28:51	2009/05/28 01:00:15		
192.168.10.169	192.168.10.214	admin	2	2009/04/08 14:28:51	2009/05/28 01:00:16		
192.168.10.169	192.168.10.214	admin	1	2009/04/08 14:28:51	2009/05/28 01:00:16		

- Connected User IP : IP address of CMS which is connecting to SMS for VOD service
- Service Site : Site name of the recorded data
- User ID : Connected User ID
- Channel
- Connect : Connected time.
- Connection Info. : Time of recorded data which is being played at CMS.

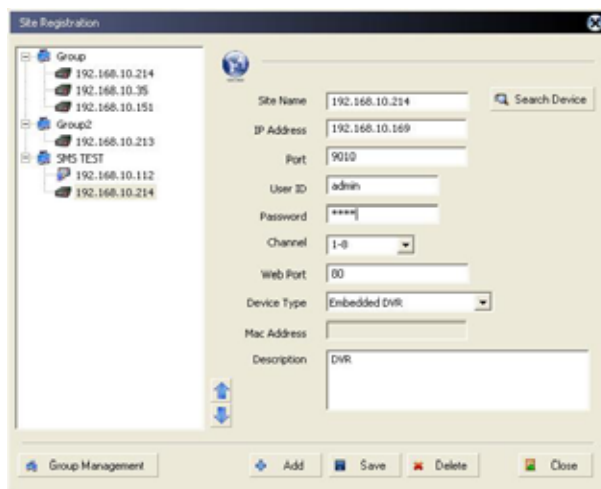
4.2 VOD Service Information

To view Information of each VOD service, select a channel and open menu with the right button click of the mouse. When [Show VOD Service Information] is clicked, information screen will pop up as following picture.



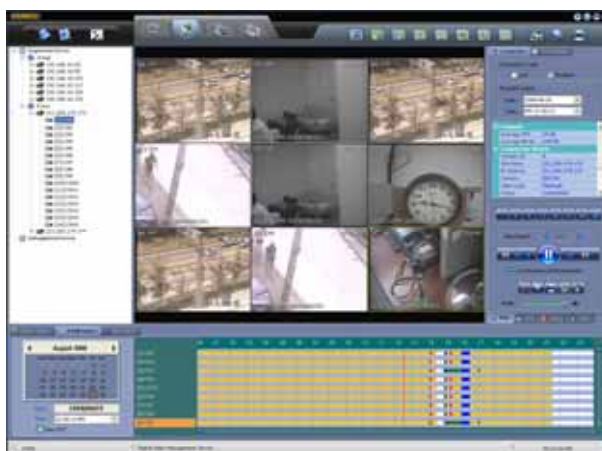
4.3 VOD Monitoring at CMS Platform

- 1) In Site Registration screen of CMS, input information to connect to SMS.



-
- Note**
- 1) Site Name & Channel are for the site (device) of the recorded data to search and playback.
 - 2) IP Address, Port, User ID and Password are for those of SMS.
-

- 2) In Monitoring screen of CMS, go to "Playback" mode and select date and time with calendar and/or Intelli-Search bar to find desired recorded data. And then, select site or channel and drag/drop it to monitoring screen.



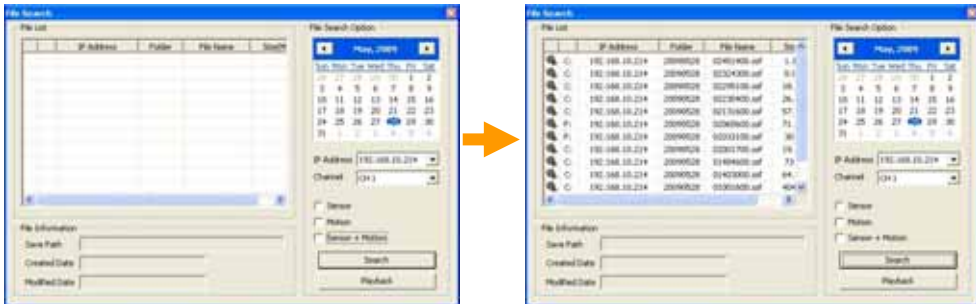
-
- Note** For the detail information of using CMS, please refer to CMS User Manual.
-

6. File Search

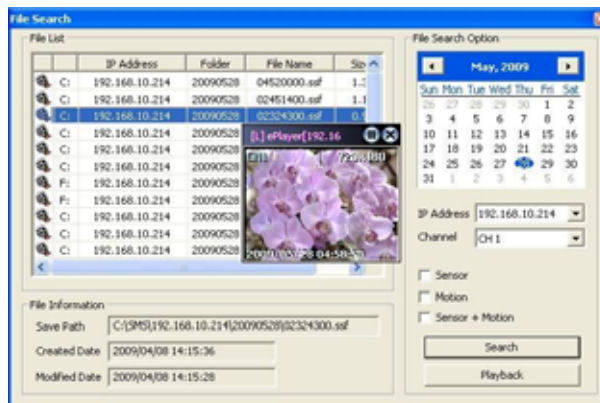


Select File Search icon to open File Search screen.

Select desired date and IP Address and Channel number to search. And click [Search] button to see the file list.




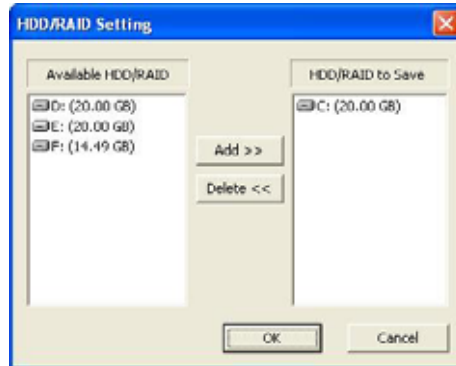
To display recorded image of a channel, select a channel and click [Playback] button. Then, monitoring screen will pop up as following picture.



- Note**
- 1) With the same procedure, multiple channels can be played with multiple pop-up screens.
 - 2) Pop-up screen can be enlarged by double clicking of the mouse on the screen.
 - 3 different sizes are available.

7. HDD/RAID Setting

Select Disk Setup icon  to open HDD/RAID Setting screen



Add HDD/RAID to save file from the available disk which is shown on the right side.

Note Data will be saved in alphabetical order of drives.
 When a drive is full,
 1) In case that there is another drive to save, data will be saved to the next drives.
 2) In case that there is no other drive to save or all the drives are full,
 new data overwrites on the oldest data.

8. Option

Select Option Setup icon  to setup Network Option and Log Save Option.

[Network Option]

The domain name of DDNS server is fixed as "cctv-link.net". Port number is fixed as 10000, too. VOD Port is for helping classification of system when there are multiple systems in a same network circumstances and it is connected from the outer network circumstances. Max. No. of Connection is 100 and it can be reduced according to user's need.

[Log Save Option]

Select folder to save Log.

