ACUMEN AIM Software HD 2.6 User Manual

Table of Contents

How to Register AIM Software HD 2.6 5
General Notations 6
Before Using AIM Software HD 2.6 6
On-line User Manual 6
Uninstall AIM HD 2.6 6
Using AIM Software HD 2.6 on Windows Vista and Windows 7 platforms 6
CPU Usage 7
Streaming Information 7
Technical Support Information 7
Chapter 1. Using AIM Software HD 2.6 8
Chapter 1-1. System Settings 8
Chapter 1-2. Add a New Device 9
Chapter 1-3. Device Type 11
Chapter 1-4. ONVIF Setting 11
Chapter 1-5. IPScan Utility 12
Chapter 1-6. Dual Monitor Outputs 12
Chapter 2. Recording Settings 12
Chapter 2-1. Schedule Recording Settings 13
Chapter 2-2. Motion Detection Recording 13
Chapter 2-3. Recording at System Startup 15
Chapter 2-4. Estimated Recording Days 15
Chapter 2-5. Network Storage 15
Chapter 3. Grouping Settings 18
Chapter 3-1. Grouping Name 18
Chapter 3-2. Grouping's Devices 19
Chapter 3-3. Grouping Authentication 19
Chapter 3-4. Recall a Grouping 20
Chapter 3-5. Grouping Sequence 20
Chapter 3-6. Main Grouping 20
Chapter 3-7. Window-divisions 20
Chapter 3-8. Dynamic Video Channel Editing 21
Chapter 3-9. Digital Zoom 21
Chapter 4. Video Playback 23
Chapter 4-1. Playback 23
Chapter 4-2. Playback for an IP Camera within the Main Grouping 23
Chapter 4-3. Multiple Channels Playback 24
Chapter 4-4. Remote AIM Multiple Channels Playback 24
Chapter 4-5. Remote DVR/NVR Playback 25
Chapter 4-6. Remote DVR/NVR File Download 25
Chapter 4-7. AVI File Exporting & Play From a File 26
Chapter 4-8. Snapshot 27
Chapter 4-9. Alarm Event Playback 27
Chapter 5. Audio 28
Chapter 5-1. Two-way Audio 28
Chapter 5-2. Two-way Audio 28
Chapter 5-3. Audio Recording 28
Chapter 6. Archiving Manager 29
Chapter 6-1. Archiving Source 29

Chapter 6-2. Archiving Destination 30
Chapter 7. User Settings 31
Chapter 7-1. Add a User 31
Chapter 7-2. Modify an Existing User 31
Chapter 7-3. Delete a User 31
Chapter 7-4. User Authorization 31
Chapter 7-5. Alarm Email Notifications 32
Chapter 8. Multiple Monitors, PTZ & Keyboard 33
Chapter 8-1. Preset Point Settings 33
Chapter 8-2. AIM Software HD 2.6 Status Panel 34
Chapter 8-3. Control PTZ via Keyboard 34
Chapter 8-3-1. DVR/NVR Control Mode 34
Chapter 8-3-2. Window-division 35
Chapter 8-3-3. Recall a Camera 35
Chapter 8-4. IP Camera ePTZ or ROI Feature 35
Chapter 8-5. Multiple Monitors Virtual Matrix Output 36
Chapter 8-6. Switching in Between AIMs and Virtual Matrix Monitors 37
Chapter 8-7. Keyboard Playback 38
Chapter 9. eMap Manager 39
Chapter 9-1. Before Accessing eMap Manager 39
Chapter 9-2. Tool Bar 40
Chapter 9-3. eMap Alarm Options 41
Chapter 9-3-1. Setup a Map 41
Chapter 9-4. Setup a Device on a Map 42
Chapter 9-4-1. Delete a Device on a Map 42
Chapter 9-4-2. Arrange a Device 42
Chapter 9-4-3. Device Property 43
Chapter 9-5. Find a Device on eMap 43
Chapter 9-6. Camera View Control 43
Chapter 10. Web Server 44
Chapter 11. Database Manager 45
Chapter 11-1. User Operational Report 45
Chapter 11-2. Event Report 45
Chapter 11-3. Database Maintenance 45
Chapter 11-4. Import Database 45
Chapter 11-5. Export Database 45
Chapter 12. Alarm Management 46
Chapter 12-1. Enable Alarm Input 46
Chapter 12-2. AIM Motion Detection & Remote Motion Detection 46
Chapter 12-3. Alarm Output Management 46
Chapter 12-4. Remote Alarm Input (DI) & Digital Alarm Output (DO) 47
Chapter 13. Retail and Distribution Business Solutions 48
Chapter 13-1. POS Connection Basis for Retail Business 48
Chapter 13-2. Test POS Communication with a PC 48
Chapter 13-3. Link POS with a Channel 49
Chapter 13-4. Playback for POS Transactions 50
Chapter 13-5. Search POS Transactions 51
Chapter 13-6. Scanner Connection Basis for Transportation Business 51
Chapter 14. Smartphone Support ..... 錯誤! 尚未定義書籤。
Chapter 14-1. iPhone and iPad support ..... 錯誤! 尚未定義書籤。
Chapter 14-2. Android Support ..... 錯誤! 尚未定義書籤。
Chapter 15. Trouble Shooting 52
Chapter 15-1. What should I do if I experience video flickering in AIM 52

Chapter 15-2. What should I do for verifying RS-485 keyboard that is properly installed?.53
APPENDIX.....54
Minimum System Requirement.....54
Username and password.....54
Benchmark Environment:.....54
Graphics Card for Supporting 6 Monitors:.....54
H.264 benchmark table.....55
AIM 1080P dual-streaming H.264 benchmark table.....55
AIM 2.6 HD Software Specification.....57

AIM Software HD 2.6 User Manual

Central Management Software (AIM Software HD 2.6) is a total solution for managing Acumen's network products including IP cameras and DVRs/NVRs. AIM Software HD 2.6 contains (1) network video recording software, (2) eMap Manager, (3) Database Manager, (4) Web Server, (5) AIM remote playback, (6) video archiving, and (7) remote AIM/DVR/NVR playback and file download.

Major features including managing 72 H.264/JPEG IP cameras and DVR's/NVRs cameras recording, remote DVR/NVR video playback and file download, and camera groupings with user authentication are integrated within one system application. Two monitors for displaying up to 72 channels 1080P H.264 IP cameras are available for TV wall application.

One important feature of eMap is the central management system for live monitoring, alarm snapshot management, and map management. IP devices installed at different locations can be represented and managed by using maps. Face detection, motion detection, audio detection, and tampering detection provided by an IP camera can trigger various alarm outputs including PTZ preset recall, snapshot email, alarm popping up in full screen, PC siren warning, and pre- and post-alarm recording.

Circular recording, schedule recording, limited recording time, individual HDD recording size configurable, and individual camera recording frame rate configurable provide the flexibilities in managing recording storages. For large video storage, video archiving into a NAS for backup purpose and video recording from AIM to eSATA RAID and internal RAID, and network RAID are also supported. POS, network cash drawer, and text overlay recording into a database are available for quick video search.

AIM Software HD 2.6 is designated for hybrid solution for IP camera, video server, IP Fast Dome, and DVRs/NVRs. It provides total solutions for IP Video digital surveillance. Major features are:

AIM Software HD 2.6 Main Features

1. Record and manage up to 72 channels of H.264/JPEG HD IP cameras or DVR/NVR's cameras.
2. Up to 72 channels 1080P IP cameras on two monitors for TV wall application
3. Scheduling, continuous, and motion detection recording supported
4. eMap live video with alarm snapshots
5. RAID, network RAID, and video archiving
6. Multiple channels playback for remote network AIM
7. Integrated alarm management for various alarm outputs
8. Web server for live video
9. iPhone and Android phones support
10. Retail and transportation business solutions
11. Device grouping and recall
12. IP Fast Dome control
13. Export recorded video to AVI file format
14. Easy-to-use calendar and time selections for video playback
15. User access levels configurable for groupings and features
16. Complete operational event logs
17. Two-way audio and audio recording
18. Digital zoom, device ePTZ and ROI supported
19. Dynamically video channels swapping with mouse drag-and-drop

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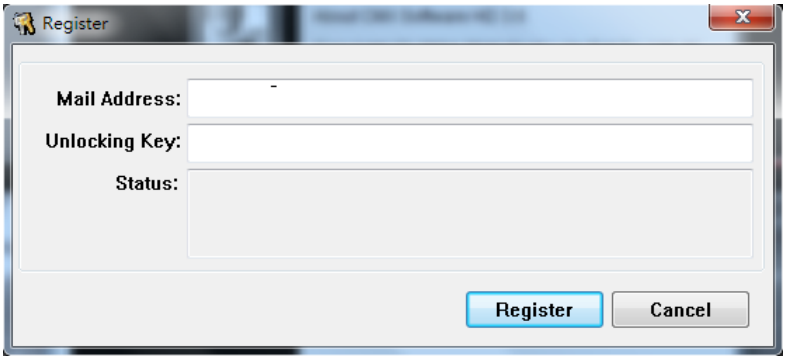
How to Register AIM Software HD 2.6

To register AIM Software HD 2.6, please click on Register button from Login dialog box or About button to register the software. To get unlocking key, please visit http://www.acumenin.com. Please type all the necessary information. The unlocking will be sent to your email account.

After receiving the unlocking key email, please click on Register button. Enter mail address and unlocking key to get full access of AIM Software HD 2.6.



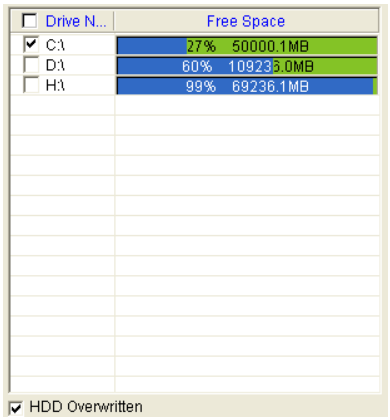
General Notations

The terms of IP-based devices or products used in this document refer to H.264 HD/JPEG IP Fast Domes, Video Servers, or IP Cameras. The terms of DVR/NVR devices/products refer to DVR 3, DVR5 series, and NVR Touch Series.

Before Using AIM Software HD 2.6

AIM Software HD 2.6 contains video recording. AIM Software HD 2.6 supports multiple hard disk drives recording. If overwritten setting is enabled, the oldest recorded video clips get deleted first. If you want logical partitions in your hard disk drive, please setup at least 20 GB for each drive. To setup hard disk setting, please click on “System Setting” button.

Select recording hard drives for AIM Software HD 2.6 recording. To enable HDD overwritten option, please check this option.



Furthermore, each logical HDD drive should contain at least 10% empty space for storing video data. AIM Software HD 2.6 deletes the oldest files first until it reaches 90% of the logical drive, and it proceeds to the next logical hard disk drive for recording.

On-line User Manual

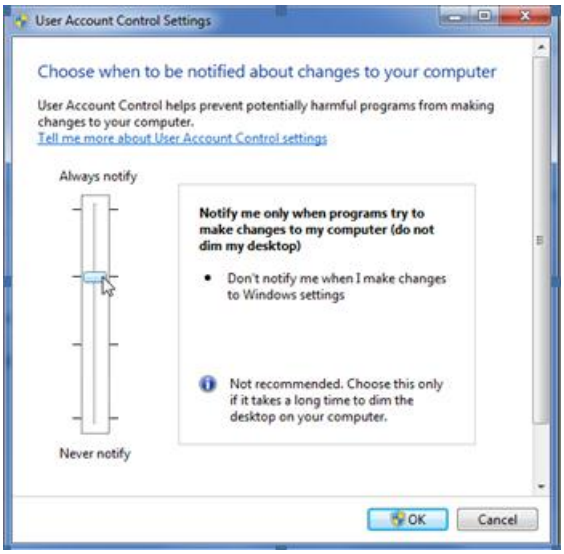
AIM Software HD 2.6 adopts Acrobat Reader for its on-line manual by clicking on “Windows-> ACUMEN AIM HD 2.6->User Manual”. You must install Acrobat Reader before opening the on-line manual.

Uninstall AIM HD 2.6

To uninstall AIM HD 2.6, please select Start->Program Files-> ACUMEN AIM HD 2.6->Uninstall. A user might want to export the database. Re-import the database after new installation. Please see Database Manager for detail.

Using AIM Software HD 2.6 on Windows Vista and Windows 7 platforms

When you install AIM Software HD 2.6 on Windows Vista and Windows 7 platforms, please go to control panel->User Account Control Setting and low the setting to Default. This can make sure that AIM can login automatically when AIM watchdog performs system reboot.

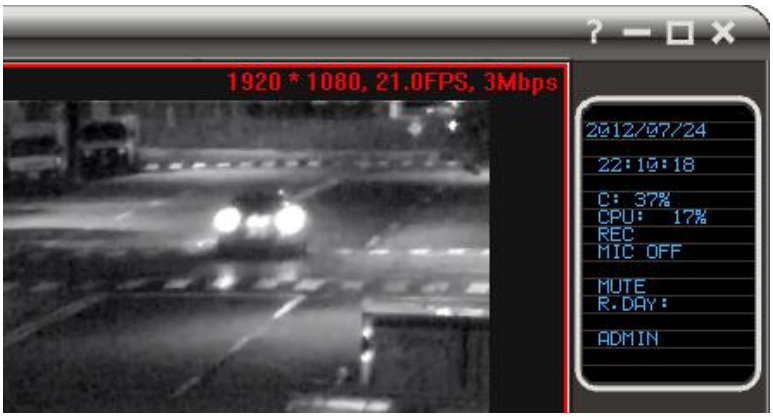


CPU Usage

To limited AIM Software HD 2.6 CPU usage, a user can click on CPU usage button to limit CPU usage at certain percentage.

Streaming Information

To get live video streaming information, click "F2" function key on the keyboard.



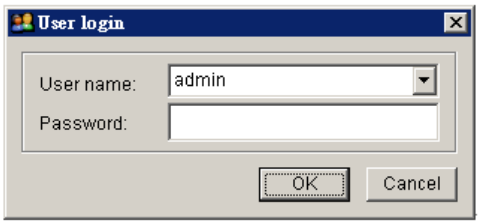
Chapter 1. Using AIM Software HD 2.6

To access AIM Software HD 2.6, follow these steps:

1) Click on AIM Software HD 2.6 via Start->Program Files->ACUMEN AIM Software HD 2.6->AIM Software HD 2.6.
2) Click on AIM Software HD 2.6 on desktop.

To login AIM Software HD 2.6, please follow these steps:

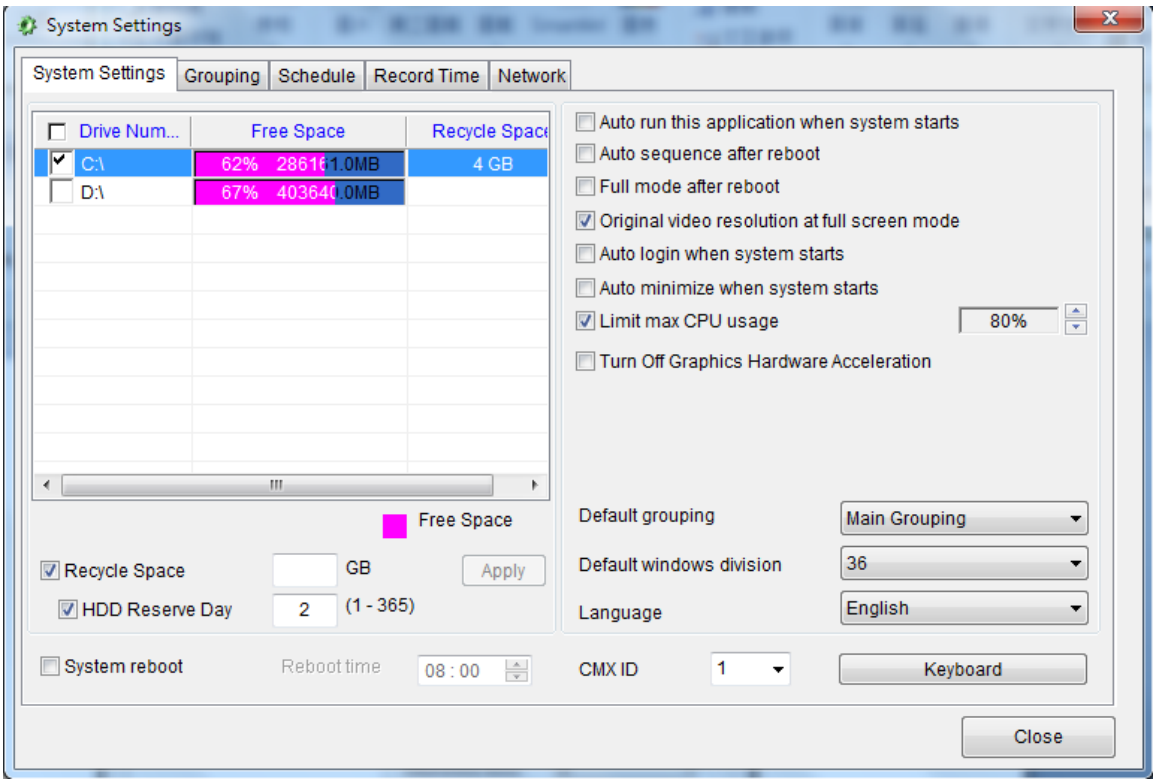
Step 1. Select a user from User name dropdown list.
Step 2. Type the password or leave it blank if you are first time to use this software.
Step 3. Click on OK button.



Note: The default passwords for all users are empty.

Chapter 1-1. System Settings

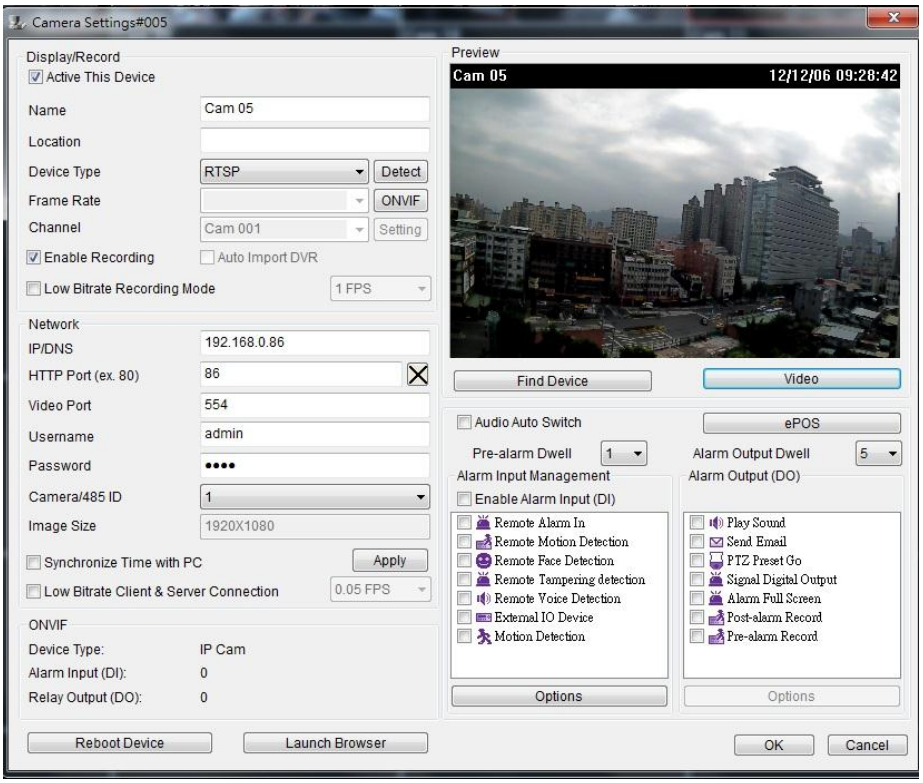
System settings contain HDD settings, device settings, and grouping settings. Please finish System Setting before operating AIM Software HD 2.6.



- **Auto run this application when system starts:**
  AIM Software HD 2.6 auto-run when Windows starts
- **Auto sequence after reboot:**
  Perform grouping sequence after system reboot.
- **Full mode after reboot:**
  Perform full screen mode after system reboot.
- **Original video resolution at full screen mode:**
  Use original resolution at single channel view mode. Do not scale original video.
- **Auto login when system starts:**
  Bypass login when system starts.
- **Default grouping:**
  Set default grouping at start-up.
- **Auto minimized when system starts:**
  AIM runs in the background when system starts.
- **Limit max CPU usage:**
  Limit the CPU usage at certain rate.
- **Default grouping:**
  Set default grouping.
- **Default window division:**
  Set default window division at start-up.
- To enable circular recording, please check HDD Overwritten option. To select HDDs for recording, please select HDD(s) for recording in HDD Information list box.
- **System reboot:**
  enable the system to reboot every day at certain time.
- **Recycle space:**
  Reserved recycling HDD space for other applications or OS using.
- **HDD reserved day:**
  Limit video recording within certain days.
- Turn off hardware acceleration
  By default, AIM utilizes Direct3D on a graphics card quick video rendering. It the PC does not have such device, turn off this option.
- **AIM ID:**
  The AIM ID controlled by keyboard
- **Language:**
  To choose language setting, please select your language from Language combo box.

Chapter 1-2. Add a New Device

To add a particular device, please first select the channel and click on “Property” button for adding a new device. The “Camera Settings” dialog box shows up. Please type at least, IP/DNS address, port number, username, and password for connecting the live video of the device. You can also click on “Find Device” and selection one device from the IPScan tool. Click on “Detect” button for detecting the device type.



To edit Camera Setting dialog box, please right mouse click on a channel and select Camera Properties menu item.

- Name—Camera name which is displayed on top of live video channel
- Location—Indicating the location of the camera installed.
- Frame Rate—Frame rate for the device
- ONVIF—Frame rate and video quality settings based on ONVIF protocol.
- Device Type—Device type selection box, RTSP is for H.264 D1 or H.264 HD IP cameras.
- Enable Recording—Enable or disable recording for the device
- Auto Import DVR--Automatically import DVR/NVR cameras into AIM automatically.
- Low bitrate recording mode—Record one frame per second.
- IP/DNS (required)—The IP address of the device
- HTTP Port Number—The HTTP port number of the device
- Video Port Number—DVR/NVR's video port number/IP camera's RTSP port number
- Username—The username which is allowed to login the device
- Password—The password for the username
- Image Size—The source video size of the device
- Camera/485 ID—IP Fast Dome RS-485 ID.
- Low Bitrate Client and Server Connection—Connect in between AIM in low bitrate mode.
- Synchronize Time with PC—Synchronize time with the remote PC.
- Find device—Search IP cameras and configure the IP camera.
- Auto Audio Switch—For automated two-way audio connection

Note: 1. RS-485 camera ID (1 to 128) must match the ID setting of the IP Fast Dome. The software may not control PTZ movement if the ID setting is incorrect.

If the above settings are done, you can click on Connect button to test if the device is properly For default username and password information, please see appendix for detail.

Chapter 1-3. Device Type

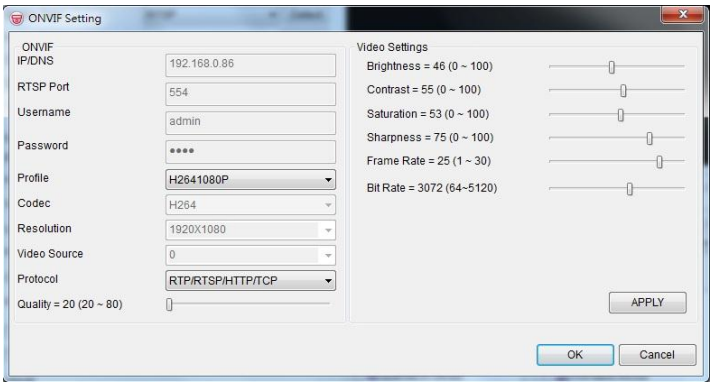
There are few device type drivers for connecting streaming:

- RTSP—Connect an IP camera with RTSP streaming protocol.
- DVR/NVR-JPEG--Connect a DVR/NVR by MJPEG protocol.
- DVR/NVR-H264—Connect a DVR/NVR by H.264 protocol.
- AIM-JPEG—Connect a AIM by MJPG protocol.
- Low Bitrate IP Camera—Connect an IP camera by low bitrate protocol.
- Low Bitrate DVR Camera--Connect an IP camera by low bitrate protocol.
- Looping Camera—For demonstration purpose, you can choose Looping Camera at Device Type selection box for duplicate video channel without physically connecting to an IP camera or a DVR's camera. It can reduce bandwidth for the network video.

Chapter 1-4. ONVIF Setting

To use RTSP streaming, please first setup ONVIF protocol. The detail setting of ONVIF is described as below:

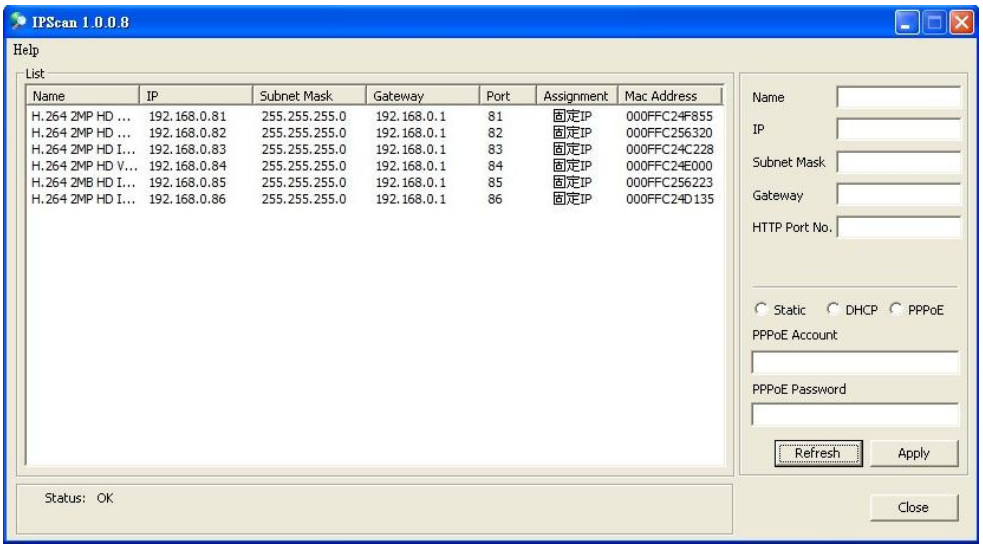
- Profile—A user can select different streaming profile such as H.264 720P or JPEG 720P.
- Protocol—Streaming protocol such as RTP/UDP, RTP/TCP, or RTP/TCP/HTTP.
- Quality—Compression quality
- Brightness: Brightness setting of the video
- Saturation—Saturation setting of the video
- Contrast—Contrast setting of the video
- Sharpness—Sharpness setting of the video
- Frame rate—Change frame rate setting of the IP camera.
- Bit Rate—Bit rate setting of the video



Note: ONVIF setting can only support Acumen's ONVIF cameras.

Chapter 1-5. IPScan Utility

To find out the network devices, IPScan utility can scan through all IP address within LAN.



A user can select a device item in IPScan and click on Close button to setup the device. All the device information such as IP address and port number get automatically carried over AIM Software HD 2.6. Click on Connect button in the device dialog box which can test the connection between the PC and the device.

Note: IPScan can only work under LAN environment, not Internet environment.

Chapter 1-6. Dual Monitor Outputs

AIM Software HD 2.6 supports dual-screen outputs. There are up to 72-channel H.264 decoding at same time To do so, please have two monitors' PC first. AIM detects each screen's resolution automatically and display video on its monitor..

Chapter 2. Recording Settings

AIM Software HD 2.6 is configured as continuous recording after an IP camera is connected.

To change recording configuration, please follow the following selections.

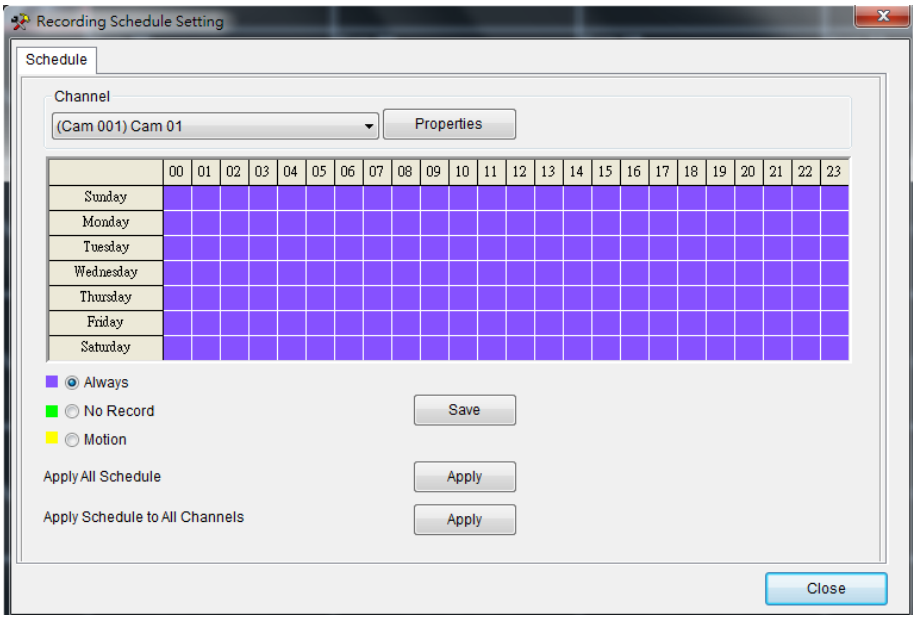
Chapter 2-1. Schedule Recording Settings

AIM Software HD 2.6 can schedule recording based on “Always”, “No Record”, and “Motion recording for a particular hour.

To enable recording for a particular hour, please click on the week control and set the recording option for the hour. Please also specify the recording type by selecting one of the recording types.

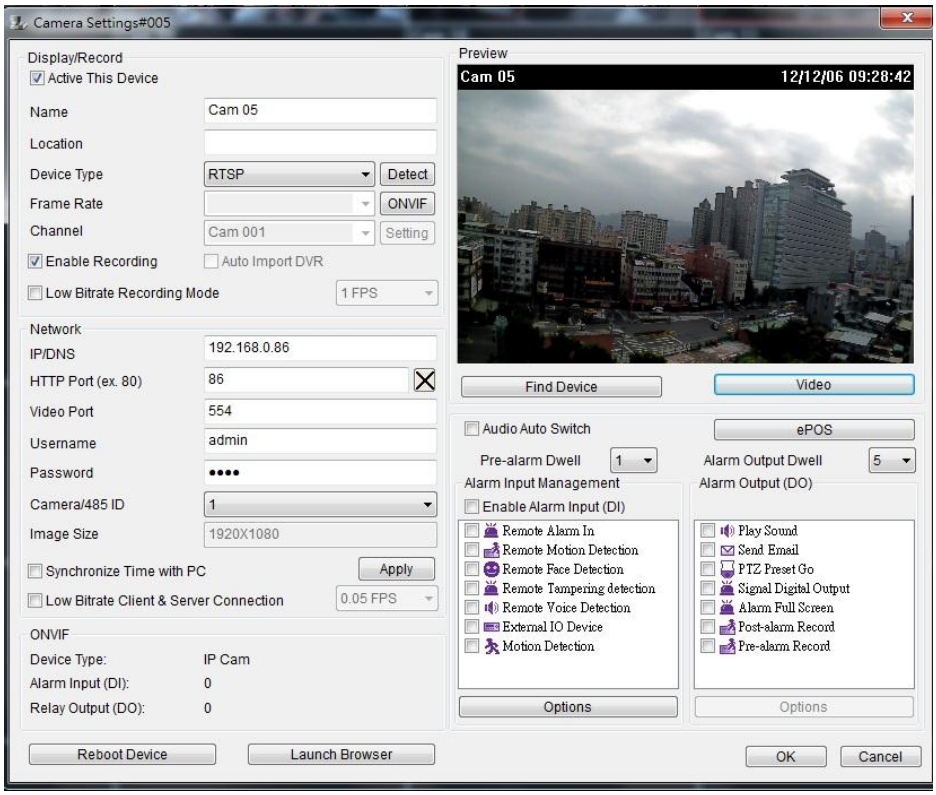
To enable recording schedule for all hours, please click on Apply button for “Apply All Schedule”.

To apply the recording settings for all cameras, please click on Apply button for “Apply Schedule to All Channels”

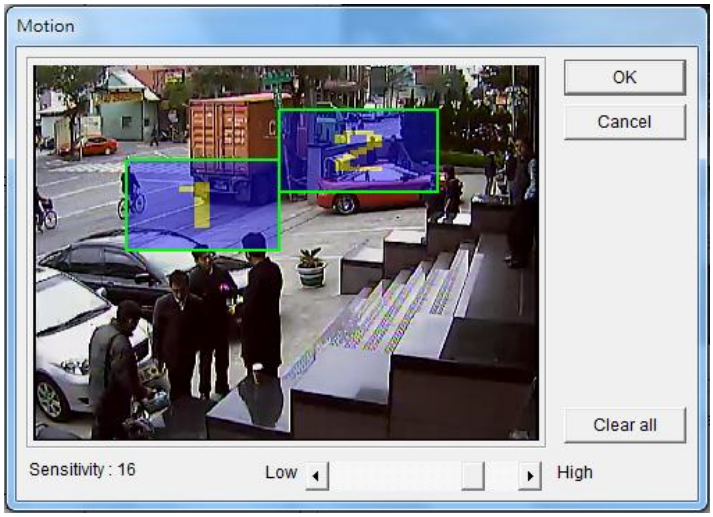


Chapter 2-2. Motion Detection Recording

To enable motion detection recording, please click on camera “Property” button to enable “Camera Settings” dialog box. Once the IP camera is configured properly, please click on “Video” button to test the video streaming.



Please enable on “Motion Detection” option and click on "Optiona" to setup motion detection. There are up to four motion areas available for a user to configure. Perform mouse-dragging on the video area to define a motion area. Perform right-mouse click can clear a area or clear all areas. To change motion detection sensitivity, please click on the scroll bar for adjust.



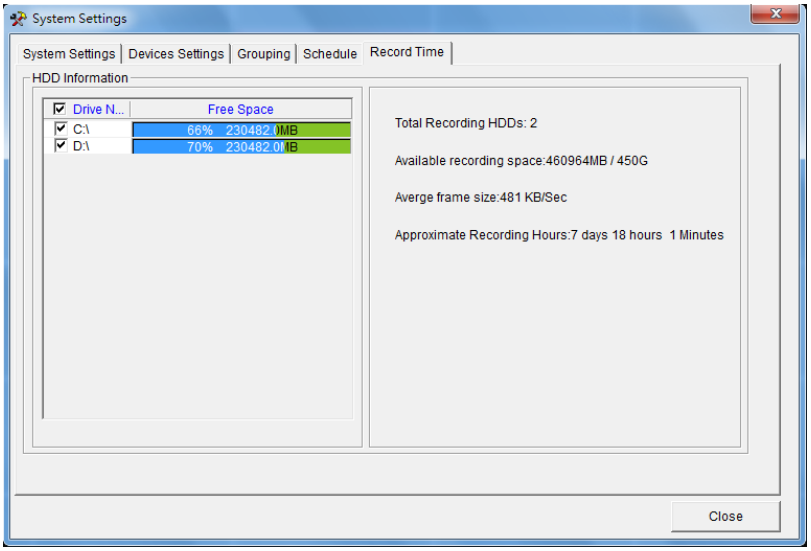
At live monitoring mode, if a motion detection is triggered, the camera window shows “little man” to indicate a motion detection event.

Chapter 2-3. Recording at System Startup

After the restart of AIM Software HD 2.6, AIM Software HD 2.6 starts recording automatically. There is no need to restart recording service. If a schedule is set, AIM Software HD 2.6 records video based on the schedule at startup.

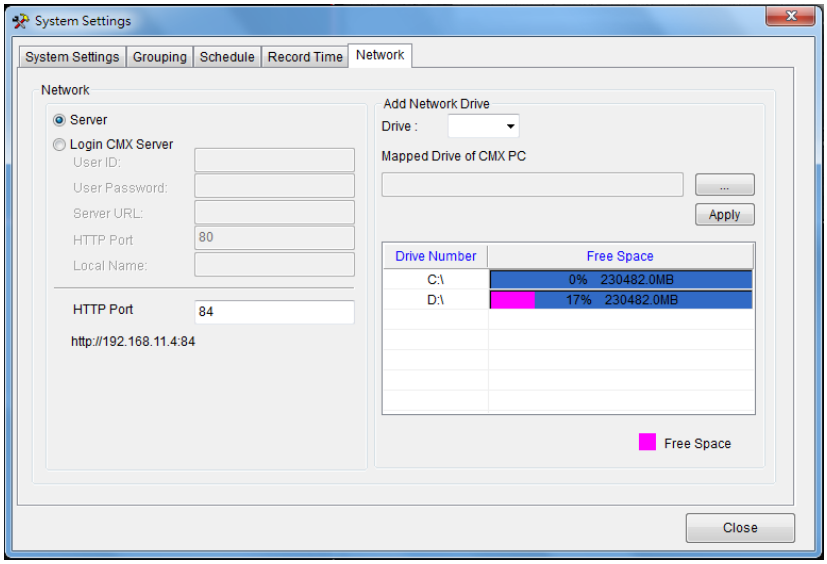
Chapter 2-4. Estimated Recording Days

After system installation, to estimate approximate recording days, a user can click on System setting button to enable system dialog box. Click on “Record time” tab. Estimated recording day and time information gets shown on the dialog box.

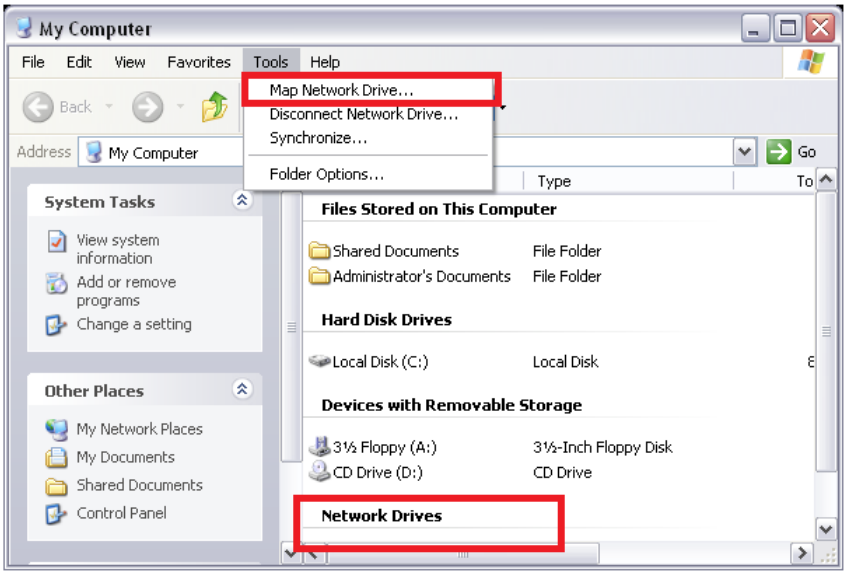


Chapter 2-5. Network Storage

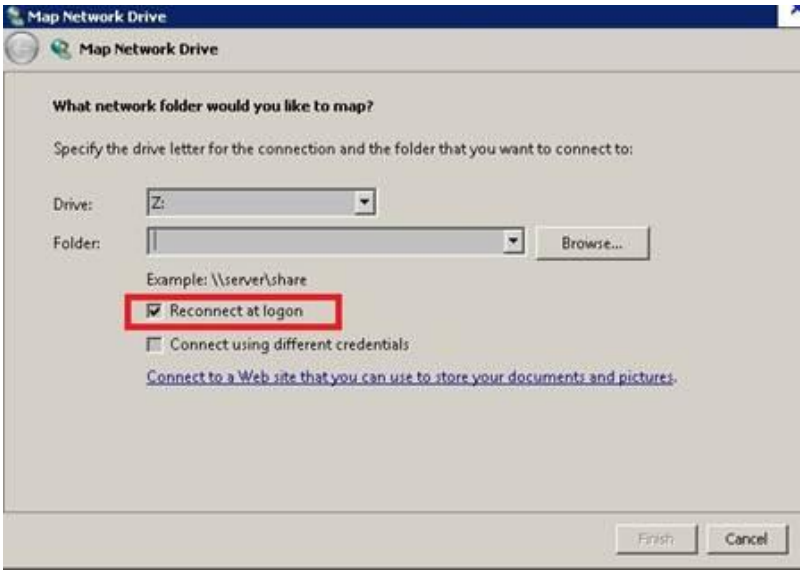
For recording over network storage such as iSCSI or NAS RAID storage, a user can configure AIM Software HD 2.6 to record the video to the network storage, if the network storage supports “Network Neighborhood” or Samba protocols.



To do so, please first select a drive at “Add Network Drive” list. Select network storage by click on “Mapped Drive of AIM PC” button. Once the network storage is selected, click on Apply button. At the last, please check the newly added network storage from Drive Number for enabling the storage. AIM records based on the selected drivers at circular recording basis.



For "Map Network Drive", please make sure that "Reconnect at logon" option is checked. This can avoid losing connectivity from AIM due to network driver rebooting.

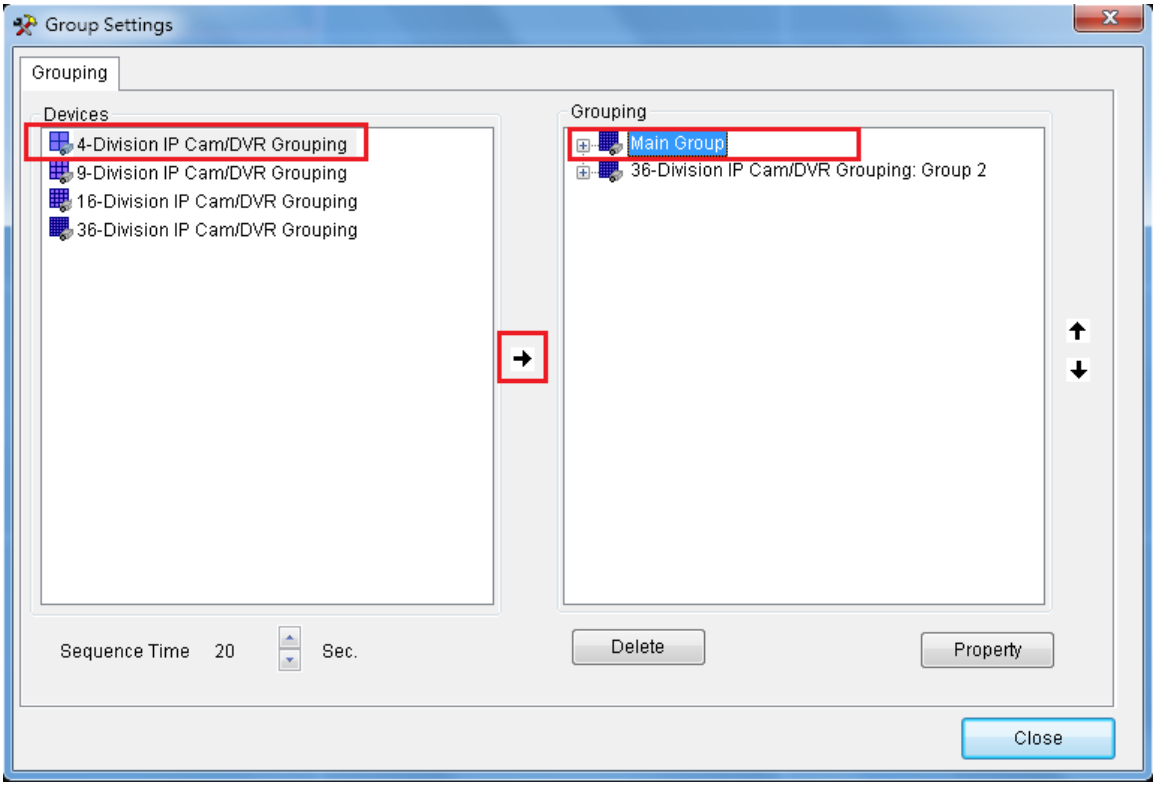


For adding a network driver for AIM, please select one of the PC HDD or network HDD. Perform right mouse click on the HDD. Click on "Map Network Drive.." menu item. "Map Network Drive" dialog box shows up.

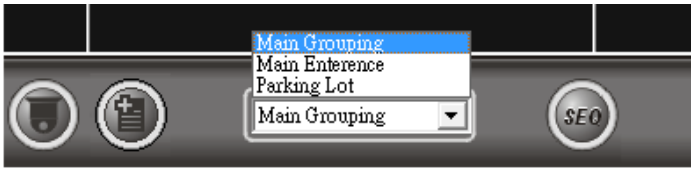
Chapter 3. Grouping Settings

A user may want to manage camera or DVR/NVR groupings based on their geographic locations or their functions. The video of the grouping devices can be recalled easily later on. To setup groupings, please click on the Grouping button and follow the followings steps.

- Select left IP Cam/DVR/NVR grouping and select right grouping item. Click on Right button to create a grouping.
- Click on Up or Down button to change the sequence in Grouping tree view.
- Click on Apply button for the grouping settings.



Once the groupings are set, a user can switch to different grouping view quickly.



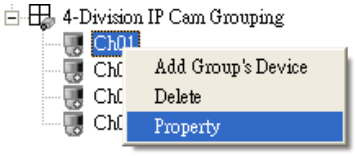
Chapter 3-1. Grouping Name

A user can assign a name for a grouping. To assign grouping name, please right click on a

grouping, or select on a grouping and click on Property button for its name. Type the grouping name in Grouping dialog box.

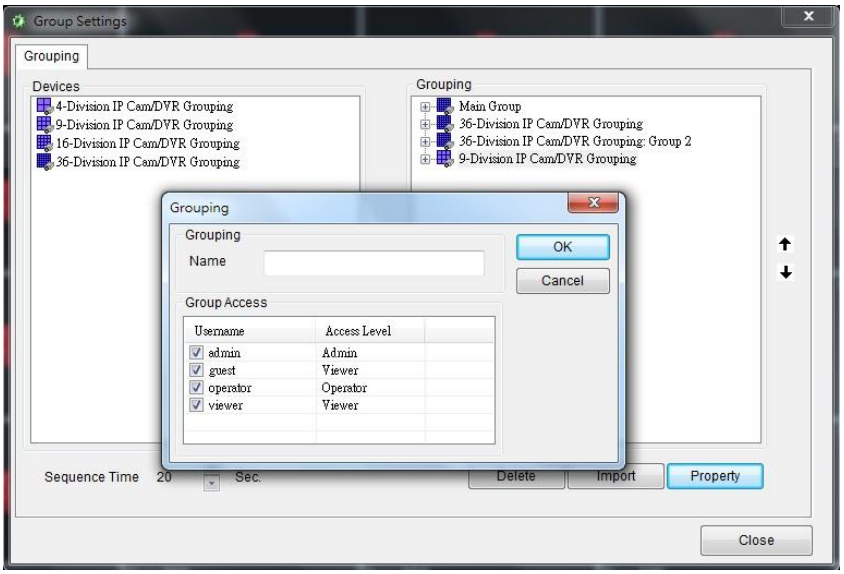
Chapter 3-2. Grouping's Devices

Once a grouping is set, please select the device of the grouping. Right click on the pre-assigned grouping device item. Select on the device item and perform right mouse click for assigning Property.



Chapter 3-3. Grouping Authentication

To assign a grouping access right, please right click on a grouping and select Property menu item. It shows a Grouping Access dialog box. The default setting of a grouping allows every user to access. To disable access right, please uncheck a user access right. Grouping access right also applies to web server. Only groupings assigned to a user can be seen by the user after login to the web server.



Chapter 3-4. Recall a Grouping

To recall a grouping, click on grouping drop down list.

Chapter 3-5. Grouping Sequence

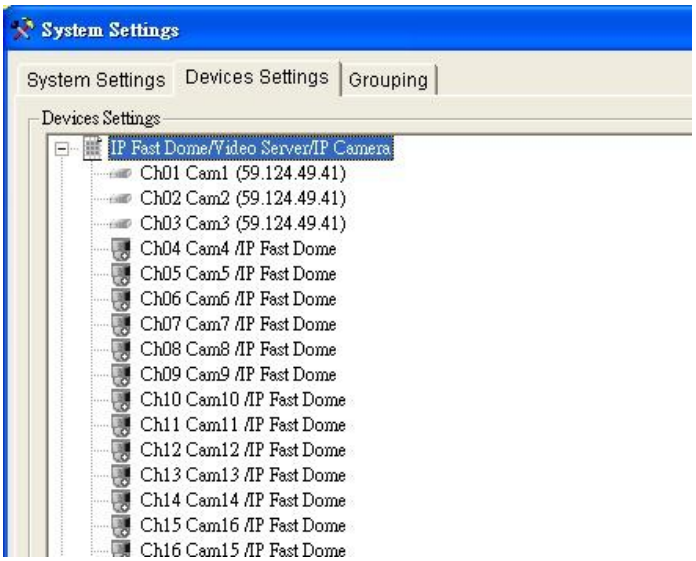
In grouping tab, please specify Sequence Time. In live monitoring mode, please click on SEQ button to perform Sequence Display feature.

Chapter 3-6. Main Grouping

Main Grouping refers to AIM Software HD 2.6's main screen which contains 36 windows-division screen. To add a device for the main grouping, please follow the steps:

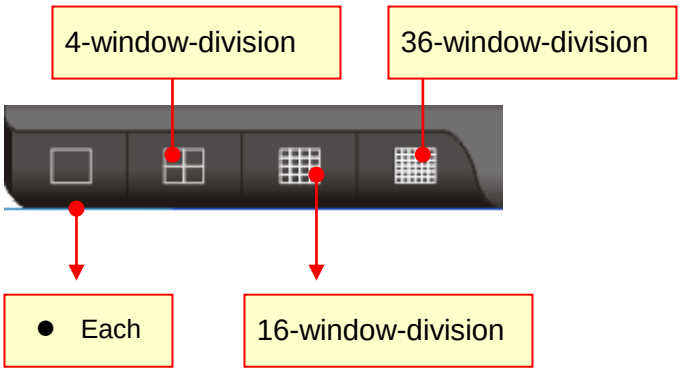
(1) Select Main Grouping in grouping dropdown list.
(2) Right mouse click on one of the cameras.
(3) Select Camera Properties to assign the camera properties.

Alternatively, a user can add devices into Main Grouping at System Settings->Device Settings. Device Settings allows a user to manage up to 36 channels of IP cameras, video servers, and H.264 HD IP' cameras.



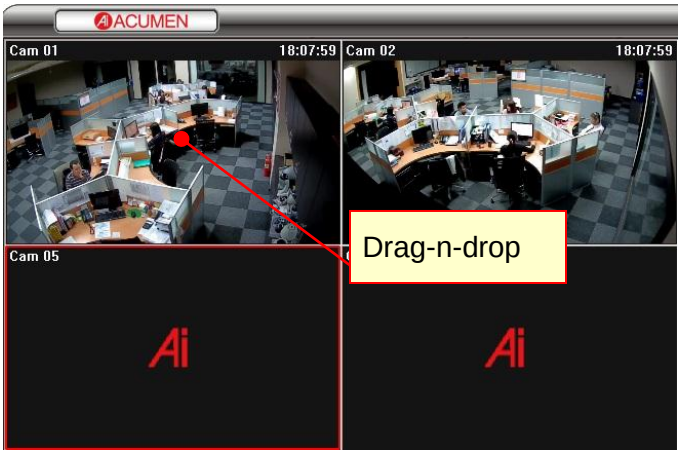
Chapter 3-7. Window-divisions

Currently, AIM Software HD 2.6 supports four types of window-division including maximized window (each view), 4-window-division, 16-window-division, and 36- window-division. To see the maximized camera window, you can select particular camera window and click on Each View button. You can also double-click on the live video for the maximized window. To see 4-, 16-, and 36-window-division, click on the window-division buttons.



Chapter 3-8. Dynamic Video Channel Editing

If a user wants to change the arrangement of a camera channel, the user can drag a camera and drop to another video channel. This operation swaps these two cameras' positions dynamically in software. There is no need to re-assign all the IP settings, if the user later changes his/her mind for the camera's display position after installation.



Chapter 3-9. Digital Zoom

To perform digital zoom, please first drag on the window for digital. Once the channel is in digital zoom mode, please select the green area for other region.

To perform digital zoom in playback, please follow above procedure.

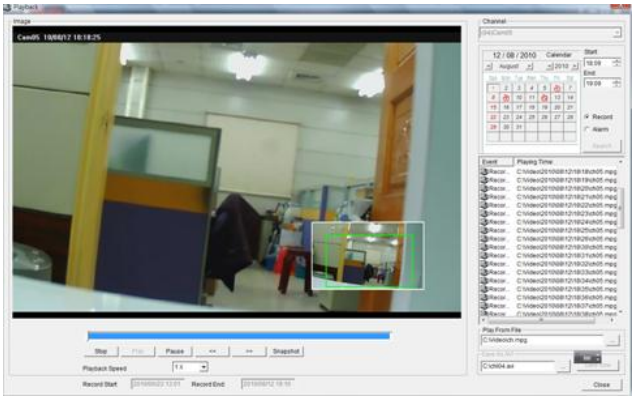


Image
Channel
Stop
Pause
Snapshot
Playback Speed
Record Start
Record End
Close

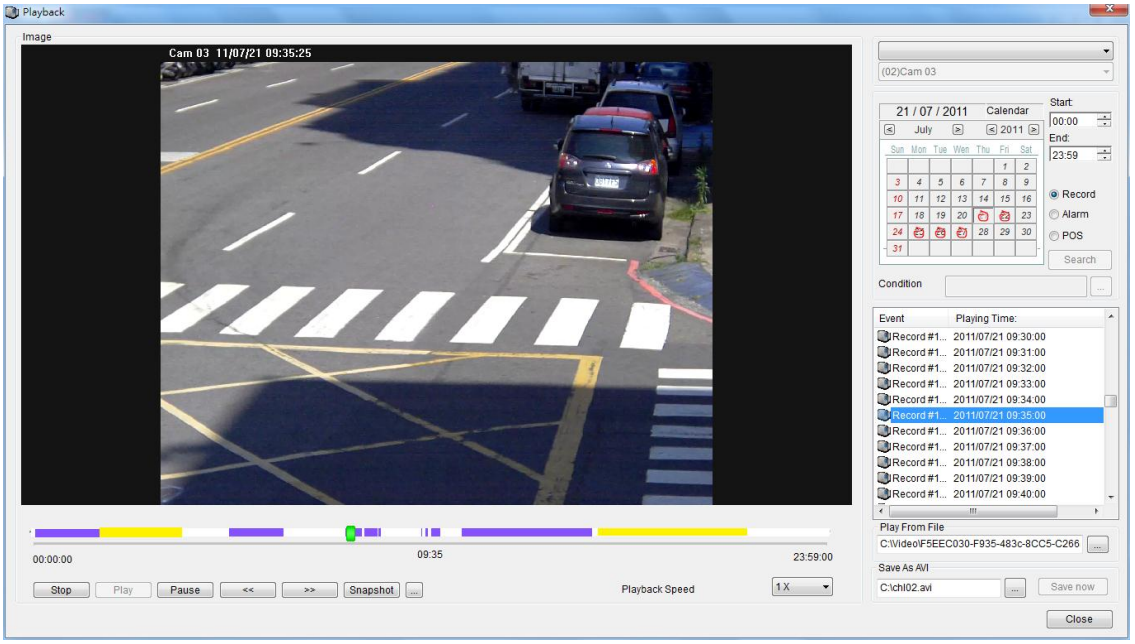
Chapter 4. Video Playback

AIM Software HD 2.6 can perform video playback task for all IP-based products including H.264 HD IP Cameras, full D1 IP Cameras, IP Fast Domes, Video Servers, LAN Cameras, and DVR/NVRs. To perform video playback on various IP devices, follow the following sections:

Chapter 4-1. Playback

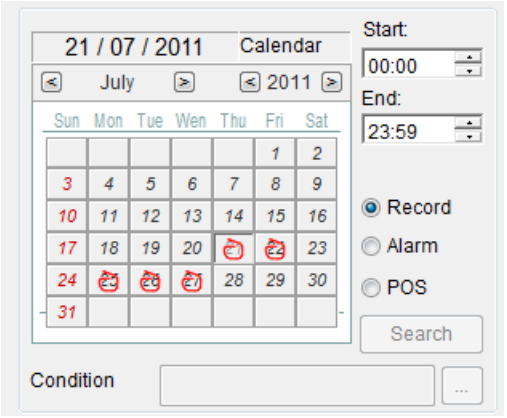
To perform playback operation, you have to select a camera channel or a DVR/NVR. By clicking on playback button, the playback dialog box shows up.

Based on a DVR/NVR device or an IP camera device, each device of the playback operation is described in the following sections:



Chapter 4-2. Playback for an IP Camera within the Main Grouping

For the main grouping, the video can be recorded at a local PC. To retrieve stored video clips, playback operation can be performed based on date and time specified. Please follow the following steps to play video clips on the PC:



Step 1. Click on the date on the calendar control.

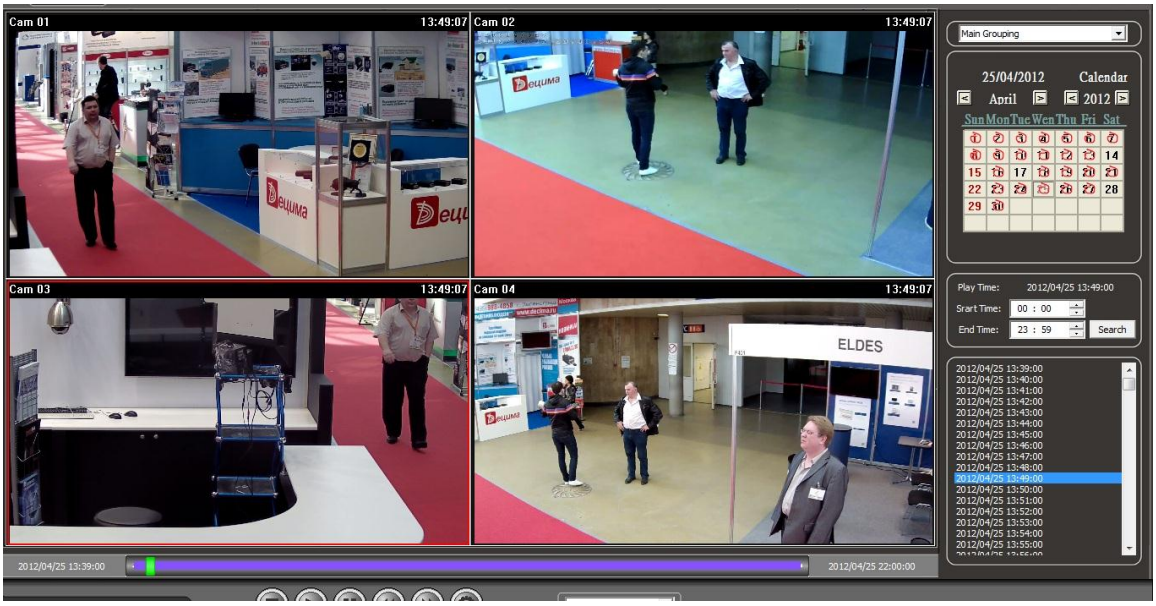
Step 2. Specify starting time and ending time.

Step 3. Click Search button to search the video clips.

Once a video clip is playing, click on Stop, Play, Pause, <<, >>, and snapshot buttons for the video clip. A user can also click on the time-bar for video playback.

Chapter 4-3. Multiple Channels Playback

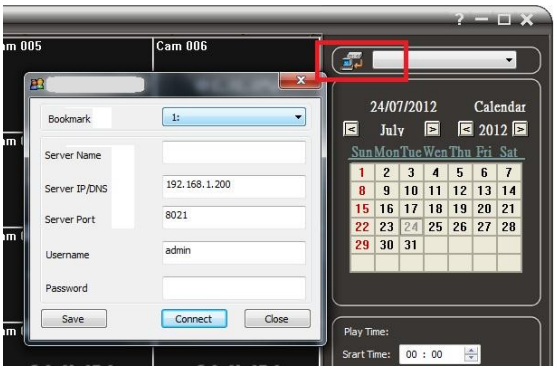
A user can select a grouping for multiple channels playback. To do so, please click on multiple channel playback button. A playback button shows up as below:



There are up to 36-channel that is available in the system. Please specify date and time. Perform Search button for playback task.

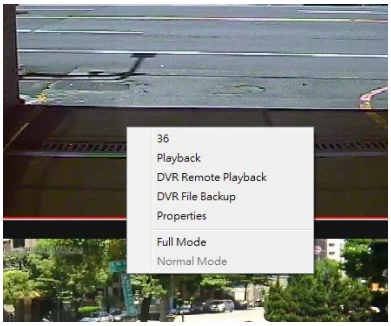
Chapter 4-4. Remote AIM Multiple Channels Playback

A user can perform playback on a remote AIM for its video recording. To do so, click on "Remote Playback" button. Click on "Connect" button and enter IP/DNS address, port number, username, and password for accessing the AIM. Select a grouping for multiple channels playback.



Chapter 4-5. Remote DVR/NVR Playback

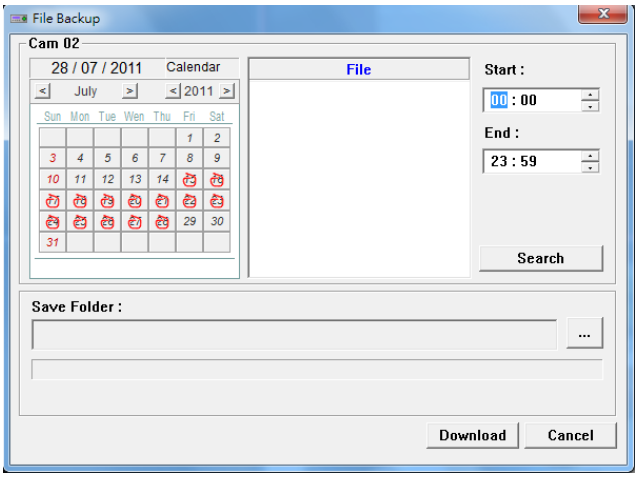
For playback on a remote DVR/NVR, please first perform right-mouse click on a DVR/NVR channel. Select “DVR/NVR Remote Playback” menu item for DVR/NVR video playback.



The DVR/NVR Playback dialog box shows up. Specify date and time information in the dialog box for remote DVR/NVR playback.

Chapter 4-6. Remote DVR/NVR File Download

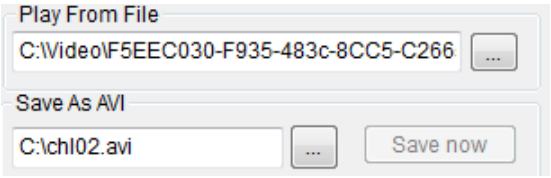
To download remote DVR/NVR’s files, please first perform right-mouse click on a DVR/NVR’s channel. Select “DVR/NVR File Backup” menu item. A DVR/NVR File Backup dialog box shows up. Specify date, time information, and click on Search button. It can list all the files of the DVR/NVR. For downloading the files, please click on Save Folder button and click on Download button for downloading the files into a specific folder.



Chapter 4-7. AVI File Exporting & Play From a File

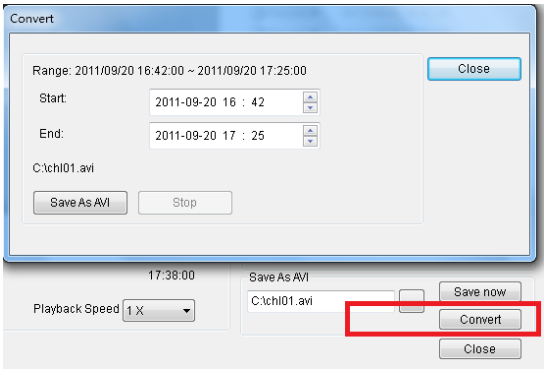
Exporting AVI with OSD

To export an AVI file for main grouping device, please perform playback operation for the device. Once the video clips have been located, specify the file name and click on Save Now button for the AVI file.

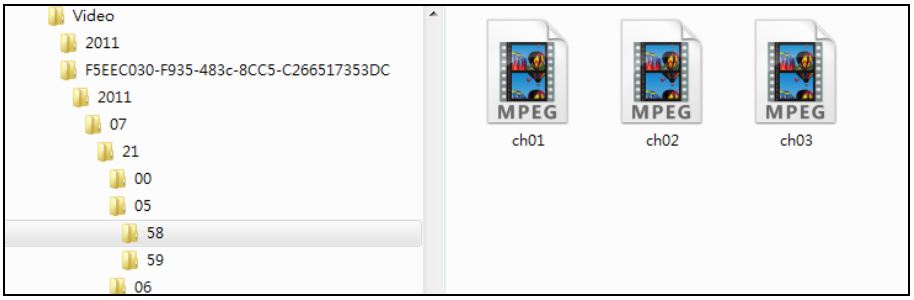


Exporting AVI without OSD

For direct exporting H.264 AVI file without OSD time stamp, this operation performs fast than rendering OSD.



AIM Software HD 2.6 video clips are stored in a hard drive's Video folder followed by a GUID folder. The GUID folder is a 32-digit hex folder. AIM Software HD 2.6's video clips are stored as in the folder under year, month, day, hour, and minute. To retrieve a particular a file, please locate the file by the button of "Play from a File".

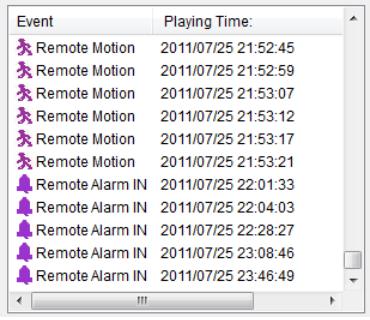


Chapter 4-8. Snapshot

For IP-based devices, you may want to capture a particular video into a picture. You can click on the Snapshot button. The picture is exported to a JPEG file format. For DVR/NVR devices, please perform right-mouse-click and select “Save As JPEG” menu item.

Chapter 4-9. Alarm Event Playback

To playback based on motion detection events, please click on the alarm radio button at the Playback dialog box. Click on Search button to list all the motion detection events. Click on a motion event can play associated video.



Chapter 5. Audio

Chapter 5-1. Two-way Audio

To perform two-way audio, please first select a particular channel for listening to the audio of the channel. Click on Speaker icon to enable audio feature. To change volume, please change volume bar.

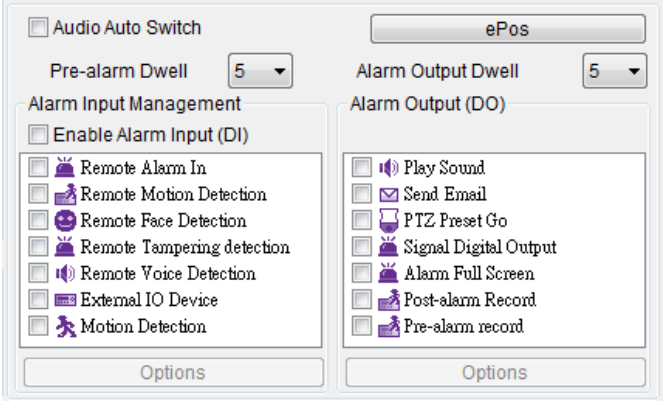
To speak to remote site, please click MIC On button.

To enable audio monitoring, please double click on a channel in full screen mode for audio monitoring.

Chapter 5-2. Two-way Audio

AIM Software HD 2.6 supports two-way audio for IP cameras with two-way audio supported. For automatic speak and listen to audio while the camera is triggered by the remote IP camera, enable "Audio Auto Switch" button.

You can also enable various audio input triggering by "Enable Alarm Input (DI)" and activate various alarm output.

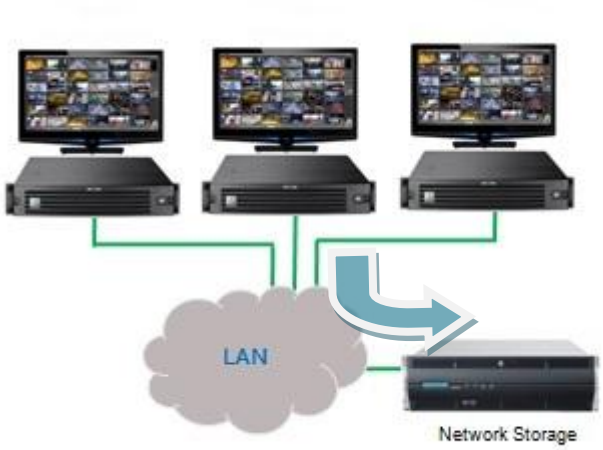


Chapter 5-3. Audio Recording

For IP cameras with audio input models, AIM Software HD 2.6 can record audio with it video. To listen the audio recording, playback feature can play the audio.

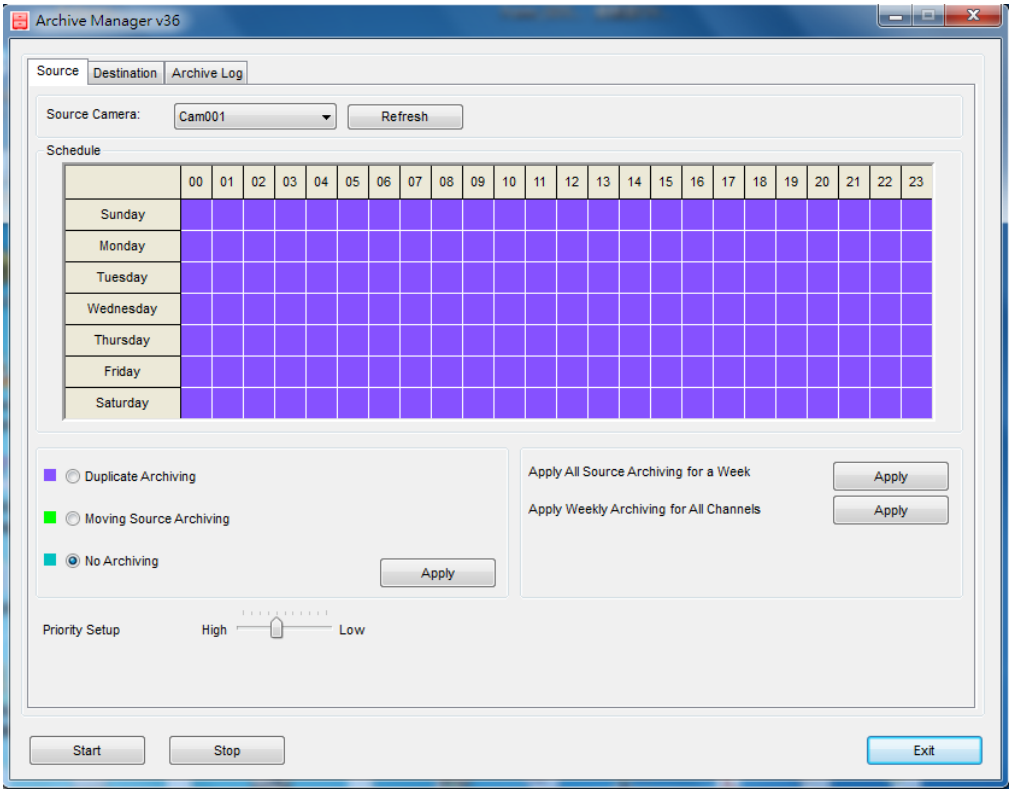
Chapter 6. Archiving Manager

AIM Software HD 2.6 Archive Manager can archive video to a central storage. Archive Manger is located in each AIM PC. It can perform video clips archiving to the central storage automatically.



Chapter 6-1. Archiving Source

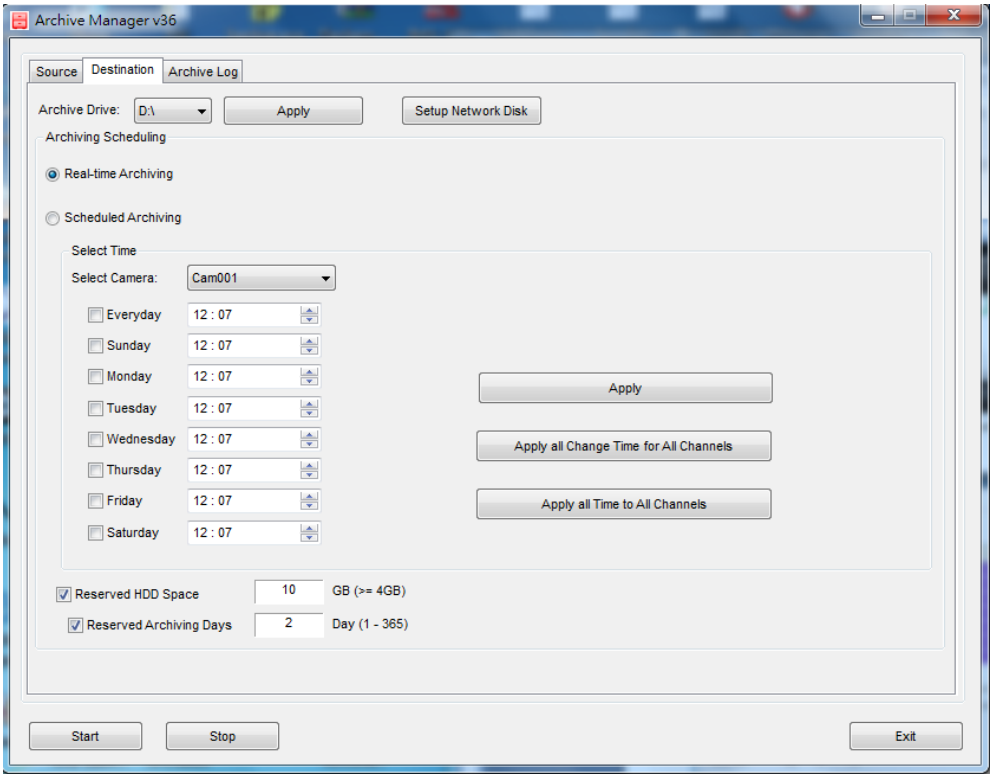
To perform video archiving, select the cameras for video archiving. You can keep the video clips from the AIM PC (Duplicate Archiving), remove the video clips from the AIM PC, or choose the time not for archiving. After configuring above, you can apply the archiving hour for the week of the camera or apply the schedule to other cameras.



Chapter 6-2. Archiving Destination

A user can choose the Archive Driver for archiving the video clips from a AIM. The Archive Drive could be a network RAID drive or internal SATA RAID for large among data. For a network RAID (NAS), click on "Setup Network Disk" button to attach the drive to the AIM.

After setup the archiving drive. Please select Real-Time Archiving or Scheduled Archiving. For Read-Time archiving, the archiving task is activated in next minute. After all the configurations, a user can click Start button for archiving task.

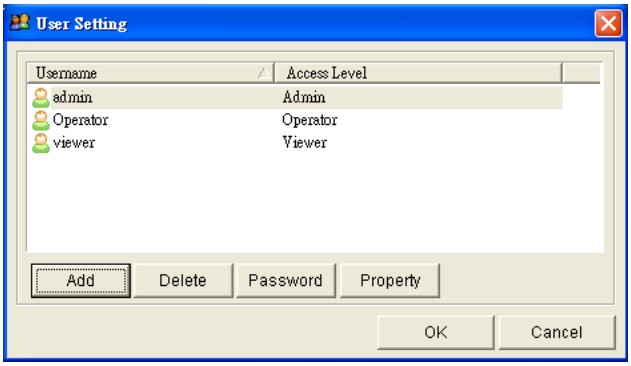


Chapter 7. User Settings

User setting allows add a user, delete a user, change password for a user, and assign feature accessed by a user.

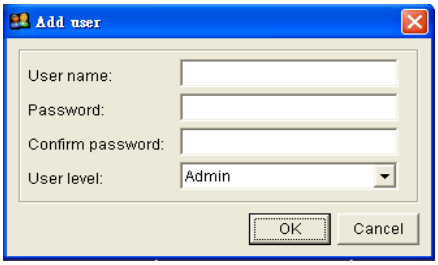
To add, delete, and modify a particular user, click on User button in NVR tool box.

The User Setting dialog box shows up.



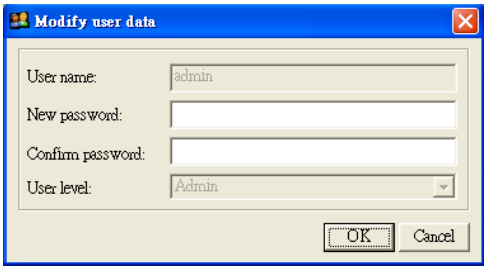
Chapter 7-1. Add a User

To add a user, click on a particular user in the user list and click Add button. Add User window shows up. To add user, specify user name, password, and confirm password. Please also specify the user level and click on OK button.



Chapter 7-2. Modify an Existing User

To modify an existing user, click on a particular user in the user list and click Property button. To modify the user, specify user name, password, and confirm password.



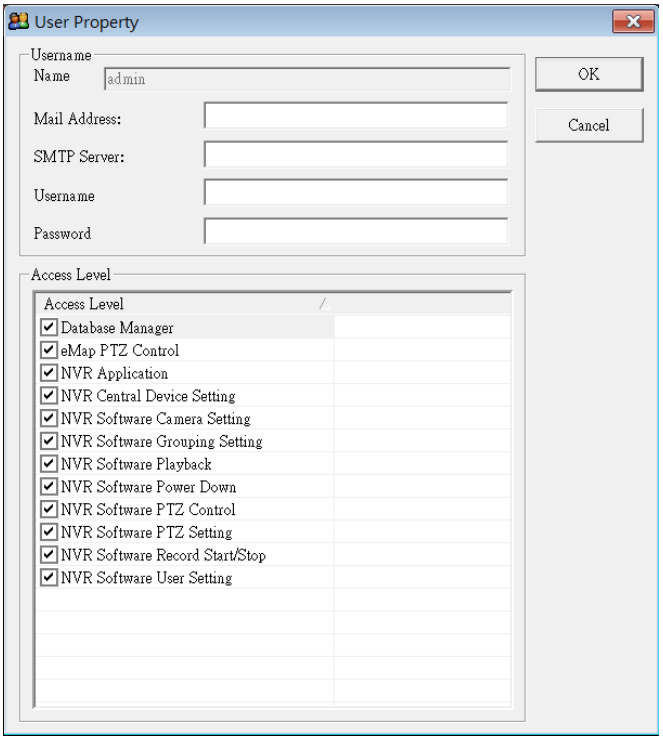
Chapter 7-3. Delete a User

To delete a user, please select the user in user setting window and click on OK button.

Chapter 7-4. User Authorization

Features of AIM Software can be assigned for a user. To enable a feature for the user, please

first click on Property button. The User Property dialog box shows up. Click on the check box for the user in Access Level list item.

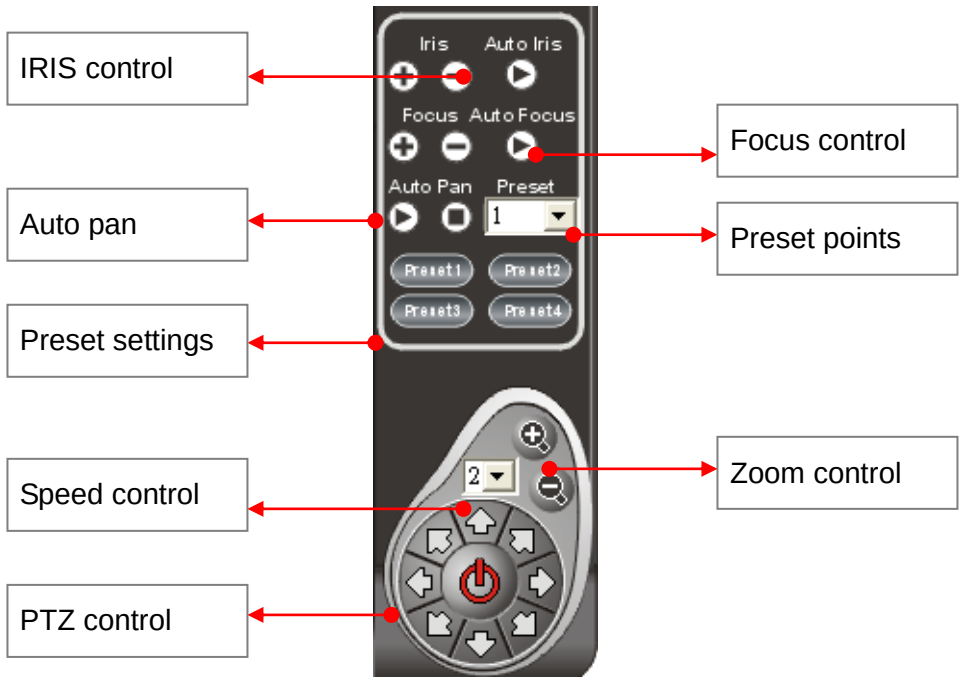


Chapter 7-5. Alarm Email Notifications

For sending alarm email notifications, please configure the email setting in the user. After finishing email setting, please configure Alarm Output Management at Camera Settings.

Chapter 8. Multiple Monitors, PTZ & Keyboard

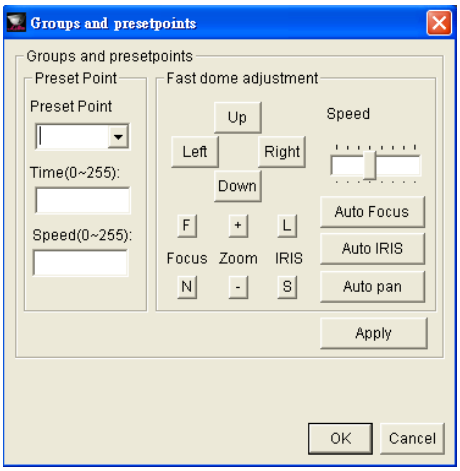
In order to perform PTZ movements, you have to select a particular live channel which contains an IP Fast Dome. Once an IP Fast dome is selected, you can control the movements using PC keyboard and/or PTZ control Panel.



Chapter 8-1. Preset Point Settings

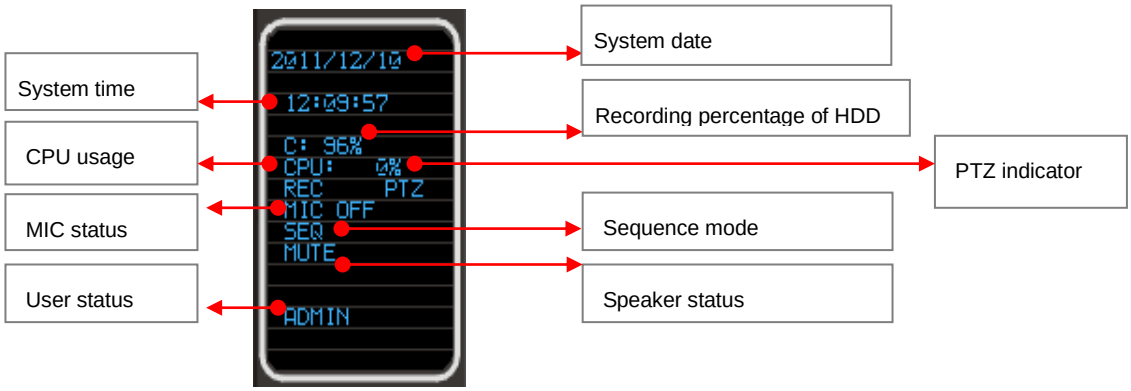
To setup preset points, please invoke Presets dialog box. Follow the following steps:

Step 1. Select preset point dropdown list.
Step 2. Type the time field.
Step 3. Type the speed field.
Step 4. Click up, down, left, or right to move the IP Fast Dome to specific position.
Step 5. Click Apply button to set the position.



Chapter 8-2. AIM Software HD 2.6 Status Panel

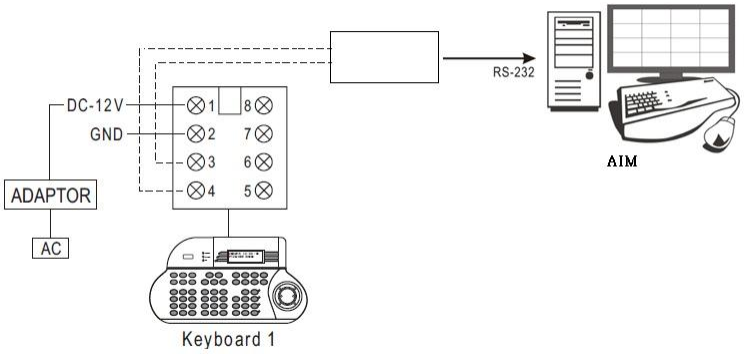
AIM Software HD 2.6 status panel is described as following chart.



Chapter 8-3. Control PTZ via Keyboard

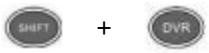
To use PIH-931D keyboard for AIM, please follow the following steps. First, please add a RS-232<->RS-485 convertor for connecting keyboard and a AIM PC.

RS-232<->RS-485 Convertor



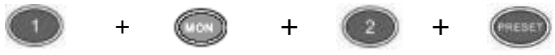
Chapter 8-3-1. DVR/NVR Control Mode

Press the SHIFT button and the DVR/NVR button to set the keyboard to DVR/NVR control mode.

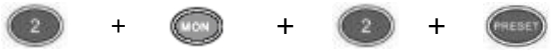


To control a AIM, please first enter the DVR/NVR ID (AIM ID) follow by the ENT button.

To recall a grouping, please type 1 + MON and following by grouping ID and the PRESET button.



To recall a grouping on second monitor, please call a DVR/NVR ID (AIM ID) following the ENT button. After that, please type 2 + + MON and following by grouping ID and the PRESET.



Chapter 8-3-2. Window-division

To change window-division, please first control a AIM and type the following buttons.

	16-division		8-division	36-division	AIM ID + DVR/NVR + ENT
	9-division		4-division		

To recall 36-window-division, please type AIM ID followed by DVR/NVR and ENT buttons. The operation is same controlling a AIM.

Chapter 8-3-3. Recall a Camera

For recalling a camera, please select camera number and follow by CAM button.

Example: Call camera #8

	Zoom in		Zoom out
	Tilt up		Tilt down
	Pan left		Pan right
	Zoom in		Zoom out
	Focus near		Focus far
	IRIS small		IRIS large
	Auto Pan		

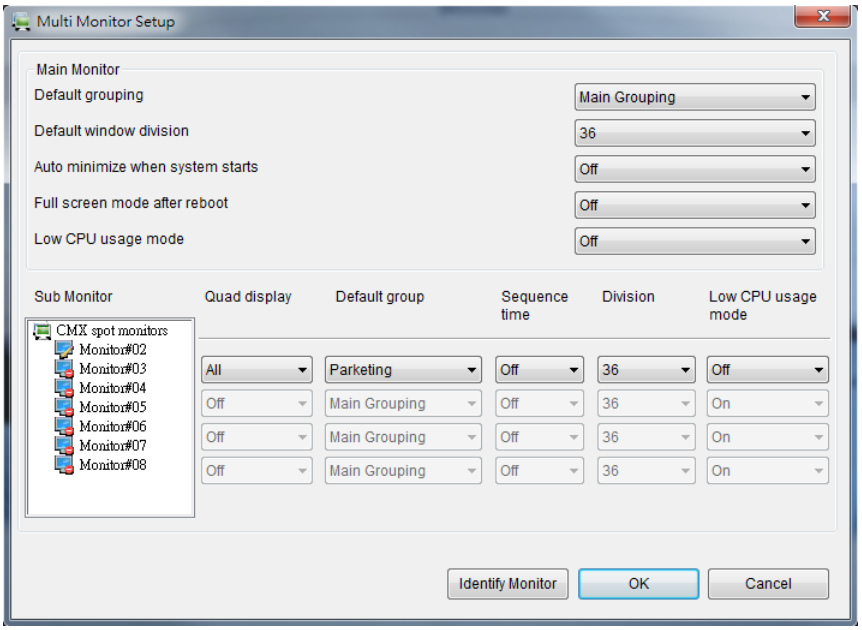
Chapter 8-4. IP Camera ePTZ or ROI Feature

For some IP cameras, they provide ePTZ or ROI feature. A user can still use the keyboard controller for ePTZ or ROI feature via AIM Software HD 2.6.

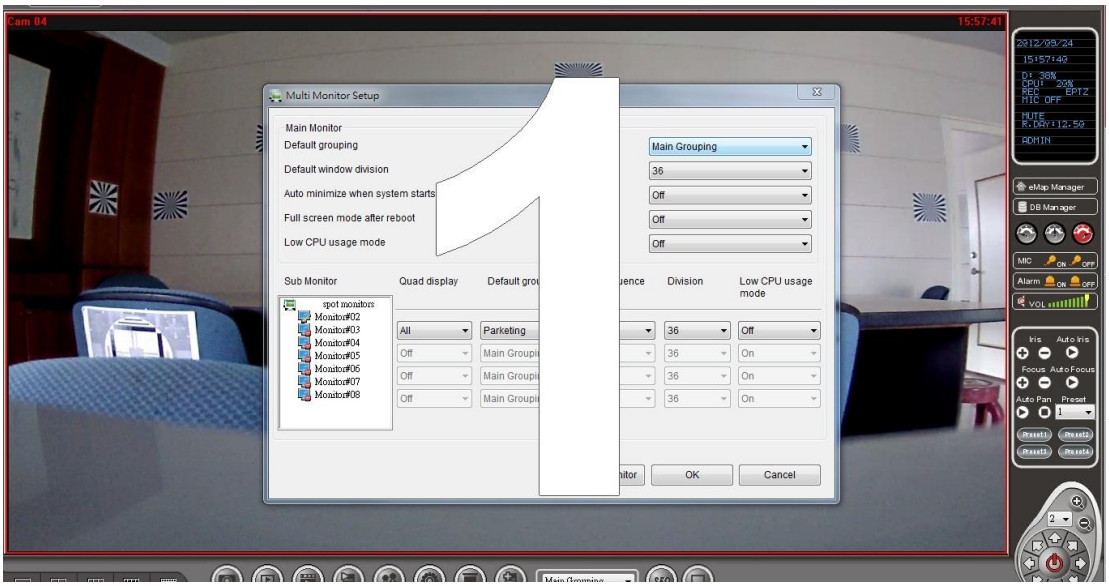
Chapter 8-5. Multiple Monitors Virtual Matrix Output

AIM can up to support 6 monitors, one main monitor + 5 additional monitors. AIM TV wall virtual matrix can be connected as the system described below: To support 6 monitor outputs, please use ASUS 7970-DC2-3GD5 graphics card.

After installing the graphics card, click on Monitor button. It shows all the detected monitors shown below:



Once all the monitors are properly installed, click on "Identify Monitor". All monitors are shown IDs as below:

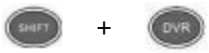


Few functions for controlling AIM monitors are described below:

- Quad display: for large LCD panel, AIM can be configured to show 4 AIM monitors on one big LCD monitor.
- Default grouping: the default grouping to be shown on the monitor.
- Sequence time: the monitor can be programmed for sequence display.
- Division: the default camera division of the grouping.
- Low CPU usage mode: this mode can only display I frame for reducing CPU time.

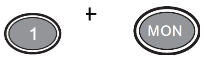
Chapter 8-6. Switching in Between AIM and Virtual Matrix Monitors

Please first gain AIM access by press SHIFT button and DVR button.



To control the AIM, please type AIM ID, DVR button and ENT button.

After a AIM gets controlled, a user can address the monitors of the AIM.



To control #5 monitor, please click 5 button + MON for controlling #5 AIM monitor.
To recall a grouping, please type the monitor ID + MON and following by grouping ID and the PRESET button.

Chapter 8-7. Keyboard Playback

Please press SHIFT and DVR buttons for playback a AIM and press one of the follow buttons for playback.

To control multiple channel playback feature, please click on Stepping Forward button. This invokes multiple channel playback features.

To control single channel playback feature, please click on Play button.

A date and time dialog box shows up. Please use for entering date and time. Press ENT button for searching the video. Please ESC to exit the dialog box and press ESC again to exit playback dialog box.

For operating playback features, please follow the following:

Pause: Press PAUSE button during playing video can pause the video in pause mode.

Play: Replay the video after Pause, Fast Forward, or Fast Rewind.

Fast Forward: Fast Forward the playback video.

Fast rewind: Fast Rewind the playback video.

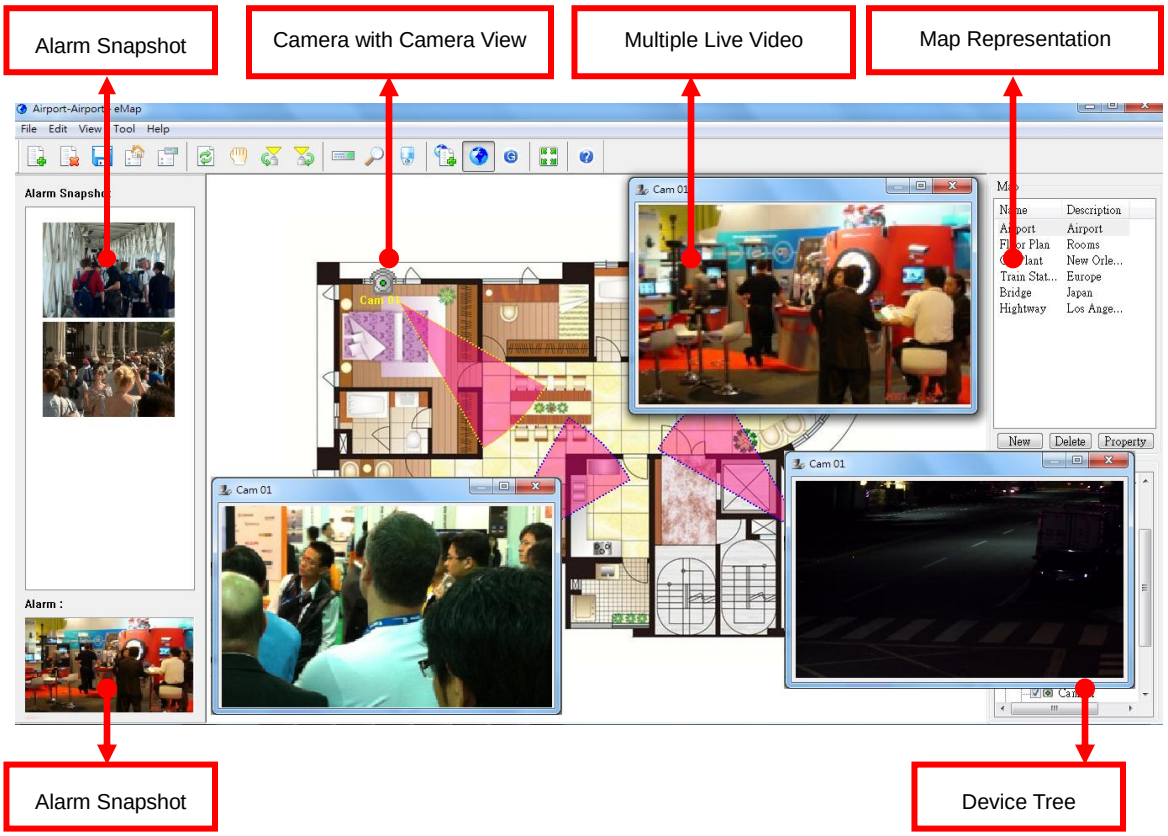
Stop: Stop the playback video and return to playback menu.

Chapter 9. eMap Manager

eMap is an application which can manage devices such as IP camera, IP Fast Dome, and DVR/NVRs on multiple maps. With eMap Manager, user can easily locate a particular device on a map.

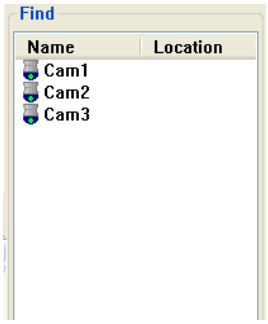
Chapter 9-1. Before Accessing eMap Manager

Before accessing eMap, terms and screen layout are described in the following section:



Find Device Panel

To find a device, please click on Find Device Panel button or View->Device menu. Click on the device in Find Device Panel.



PTZ Control Panel

To control PTZ device, please double click on a PTZ device. Perform PTZ feature on the PTZ control panel.

Chapter 9-2. Tool Bar

The buttons from left to right are described as follows:

New map: Create a new map.

Delete map: Delete an existing map.

Export map as: Export existing for later use.

Map properties: Set map properties.

Device properties: Set device properties

Refresh: Refresh eMap map list and device information.

Drag device mode: Drag a device on a map for its position.

Camera view control: Clockwise and counter-clockwise rotate a camera view.

Device list panel: Switch to Device panel.

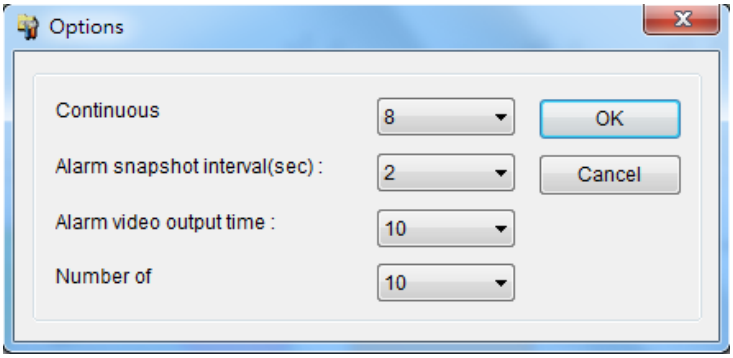
Find device panel: Switch to Find Device panel

PTZ control panel: Switch to PTZ control panel.

eMap edit mode: for editing a map, deleting a map, and setup a device on map.

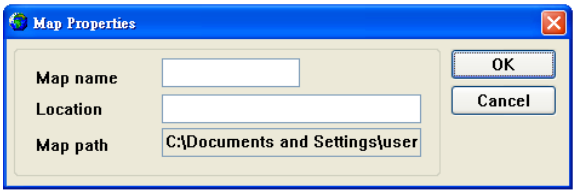
eMap control mode: for PTZ control and live monitoring mode

Chapter 9-3. eMap Alarm Options



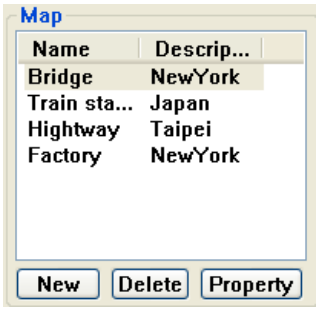
Chapter 9-3-1. Setup a Map

To setup a device map, click on File->New Map or New button at Map list. A file opening dialog box gets displayed. Please select the JPEG map file representing the installation site. Type both map name and location information.



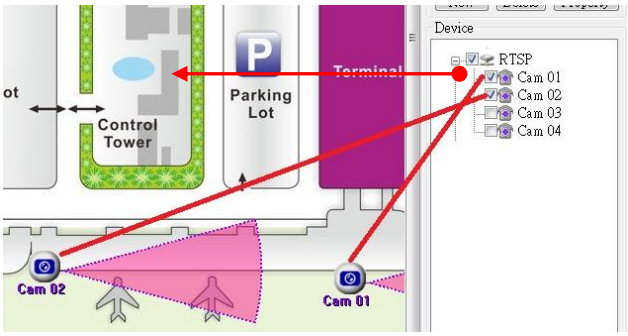
To delete a map, please first select the map in Map List and click on File->Delete Map or click on Delete button.

To access property of the page, click on Property button.



Chapter 9-4. Setup a Device on a Map

To setup devices on a map, drag-and-drop a device from Device List to its associated map. The device item shows checked if the device is setup on the map.



Chapter 9-4-1. Delete a Device on a Map

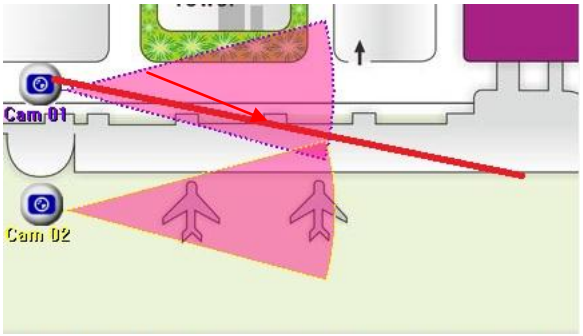
To delete the device on the map, follow the following steps:

1. Select on the device.
2. Right click on the device.
3. Select “Device Delete” menu item.

Or, uncheck the check box of the device item.

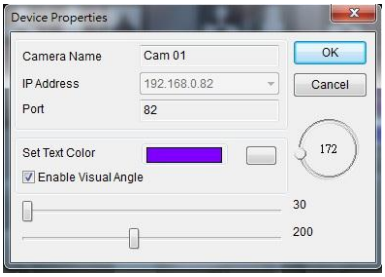
Chapter 9-4-2. Arrange a Device

To arrange the device position on the map, click on Drag Mode tool or menu item to enable device drag mode. Use mouse point drag the device to the destination area.



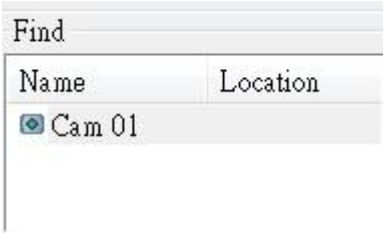
Chapter 9-4-3. Device Property

To show a Device Property, select “Device Property” menu item on the menu. A Device Property dialog box shows up. Device name and device text color can be changed for distinguishing its background image.



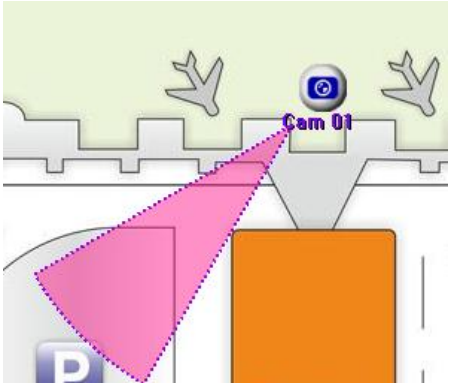
Chapter 9-5. Find a Device on eMap

DVR, DVR/NVR’s camera, or IP-based devices can be setup on different maps. It is very difficult for a user to find the live video of a particular device. To find a device on eMap instantly, a user can click on Find Device Panel button/View->Find menu item. List of all devices in Find Device Panel can be found on a map instantly. The user can click on the device that eMap can automatically switch to the map and show the device and its live video.



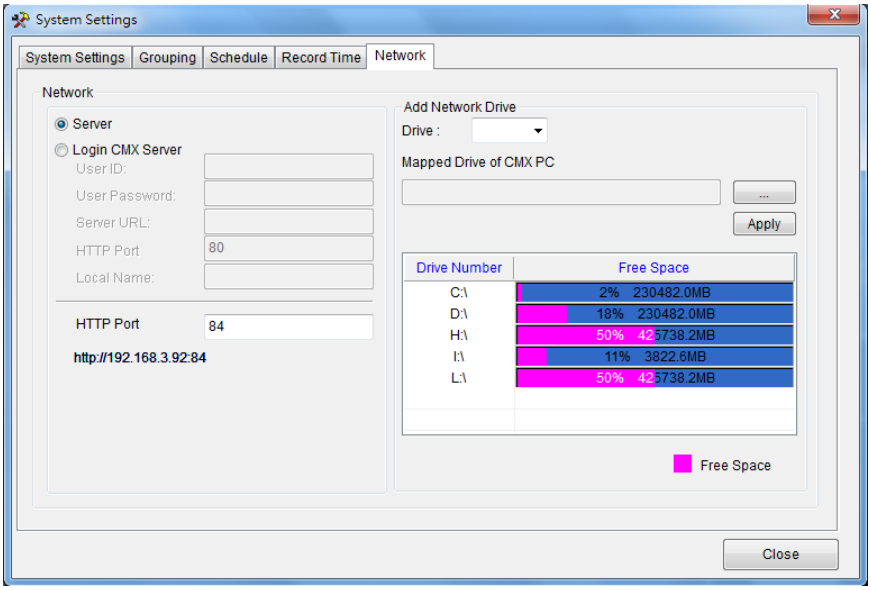
Chapter 9-6. Camera View Control

A camera view control can indicate a camera’s viewing angle. To setup camera view control, please click on the clockwise/counter-clockwise camera view control to rotate camera viewing angle.



Chapter 10. Web Server

Each AIM has one web server for displaying live video. To enable the service, please specify the port number of the PC's IP address.



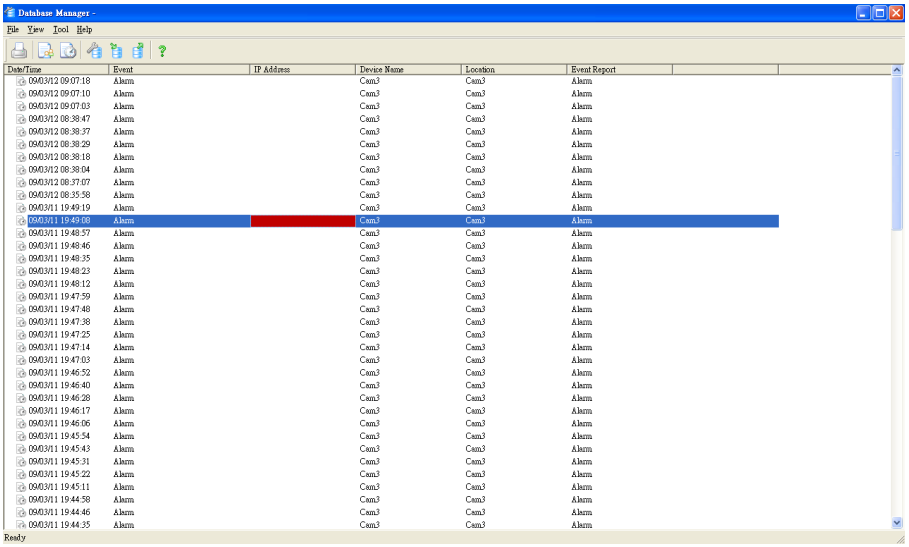
Once this is done, the user can click on the HTTP Link and launch Internet browser to see the video.

Chapter 10-1. Login Web Server

To login AIM web server, please provide the username and password for the service. The live video is grouped based on grouping as in AIM Software HD 2.6. Once a grouping is managed, the grouping can be assigned for its access right of a user. Please see grouping section for detail.

Chapter 11. Database Manager

Database Manager allows a user to perform operational report printing, event report printing, database importing, database exporting, and database repairing. To perform above features, please see the following:



Chapter 11-1. User Operational Report

For showing all logon logs, please click on “User Log Report” menu item. To print out the report, please click on “Print/Print Preview” menu item.

Chapter 11-2. Event Report

For showing all alarm event logs, please click on “Event Report” menu item. To print out the report, please click on “Print/Print Preview” menu item.

●

Chapter 11-3. Database Maintenance

Database maintenance is constantly required. To perform database maintenance, please click on Tool->Compact DB or click on Compact DB tool button.

Chapter 11-4. Import Database

Database configuration can be imported from a XML configuration file. To import database, please click on Import Database button.

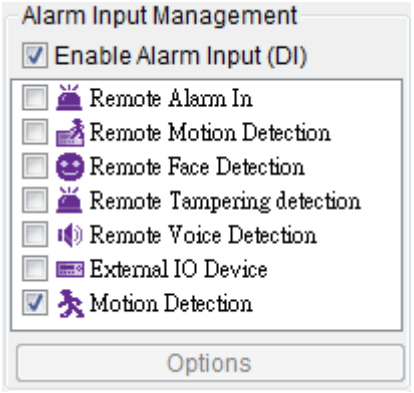
Chapter 11-5. Export Database

Database configuration can be export to a XML file for later use. To perform exporting, please click on Export Database button.

Chapter 12. Alarm Management

Chapter 12-1. Enable Alarm Input

AIM Software HD 2.6 can be managed to receive remote IP camera motion detection signal and AIM motion detection signal. Depend on IP camera models, AIM Software HD 2.6 can also receive alarm signals including face detection alarm, tampering detection alarm, audio alarm, and dry-contact digital input alarm. These alarm signals can be received by AIM and eMap manager. Please enable "Enable Alarm Input (DI)" option for receiving alarms.



Chapter 12-2. AIM Motion Detection & Remote Motion Detection

Many IP cameras have motion detector built-in. If a camera do not have a motion detector, a user can use AIM motion detector for detecting camera motion alarm. Software motion detector in AIM is a heavy CPU oriented task. It is highly recommend to use IP camera's remote motion detector.

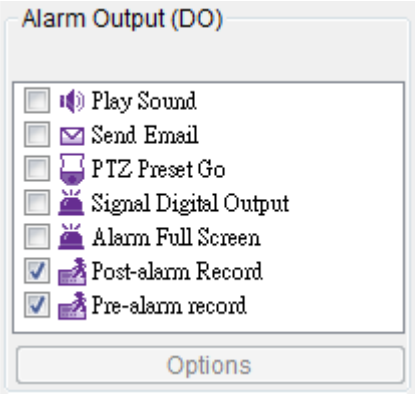
Note: It is highly recommend to use IP camera's remote motion detector.

Chapter 12-3. Alarm Output Management

For motion and remote motion alarm detection management, the alarm output feature allows various reactions after receiving an alarm. The alarm output includes:

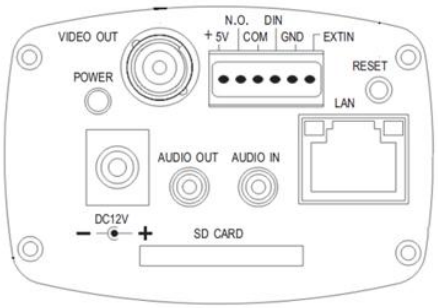
- Play Sound--Trigger PC alarm sound after receiving an alarm.
- Send Email--Send an JPEG email snapshot after receiving an alarm.
- PTZ Preset Go--Recall a PTZ preset after receiving an alarm.
- Signal Digital Output--Triggering a DO output of an IP camera after receiving an alarm.
- Alarm Full Screen--Triggering full screen mode after receiving an alarm.
- Pre-alarm Record--Record before the alarm event.
- Post-alarm Record--Record after the alarm event.

Please select the alarm output from the selection list to enable the option.



Chapter 12-4. Remote Alarm Input (DI) & Digital Alarm Output (DO)

If a camera is equipped with a digital input and an digital output, a user can configure the digital input (DI) triggered by an access control or an digital relay input. AIM Software HD 2.6 is capable of receiving the digital signal from a camera via network. After receiving the alarm signal, AIM Software HD 2.6 can trigger various alarm outputs including the digital output. The digital output signal is sent to the IP camera via network for external alarm devices such as a siren light or a door lock built-in with a relay input. The following diagram shows digital input marked as DIN and a relay output with triggering state N.O. (normal open).

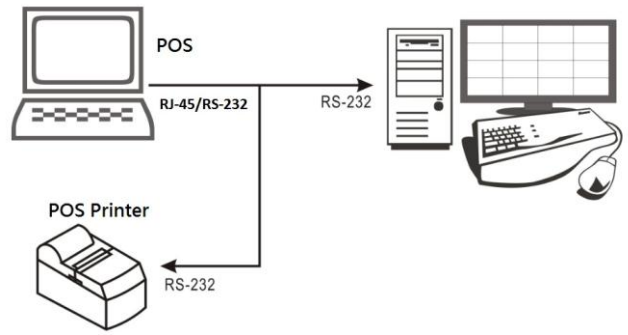


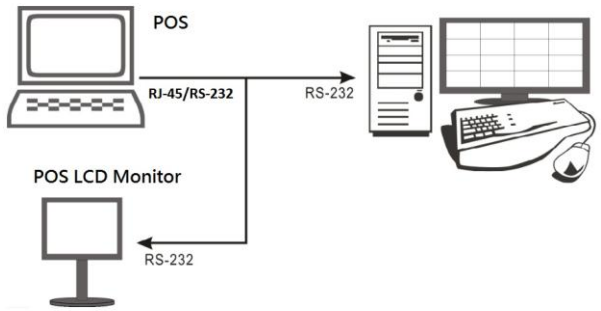
Chapter 13. Retail and Distribution Business Solutions

AIM Software HD 2.6 is able to connect to Point of Sale (POS) terminals. POS transaction data can be captured by AIM Software HD 2.6. POS transaction data can be displayed on live video and playback video. AIM Software HD 2.6 also provides smart transaction search for associated video clips. To perform these features, please follow the steps below:

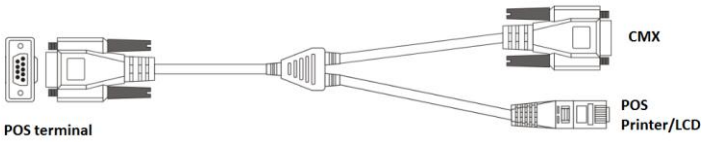
Chapter 13-1. POS Connection Basis for Retail Business

AIM Software HD 2.6 basically listens to the ASCII/COM output of a POS system via RS-232. Please check POS's display output or printer output for ASCII data of your POS system. Please consult your POS provider for more detail.





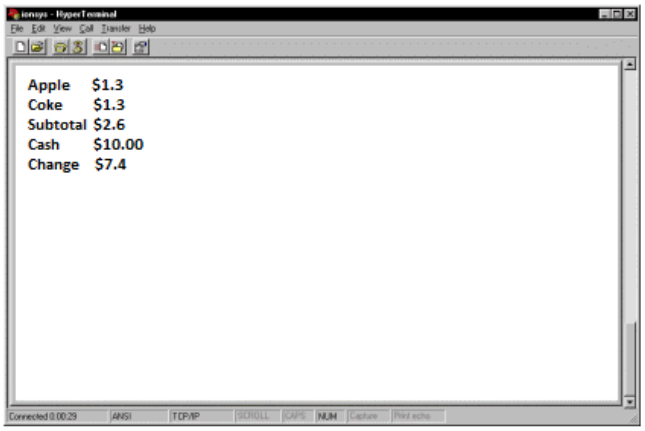
Basically, please connect RX/TX of the RS-232 of a POS register/terminal to AIM PC. Please see wiring diagram below:



To connect more than one POS terminals, add more RS-232/COM port into the AIM PC.

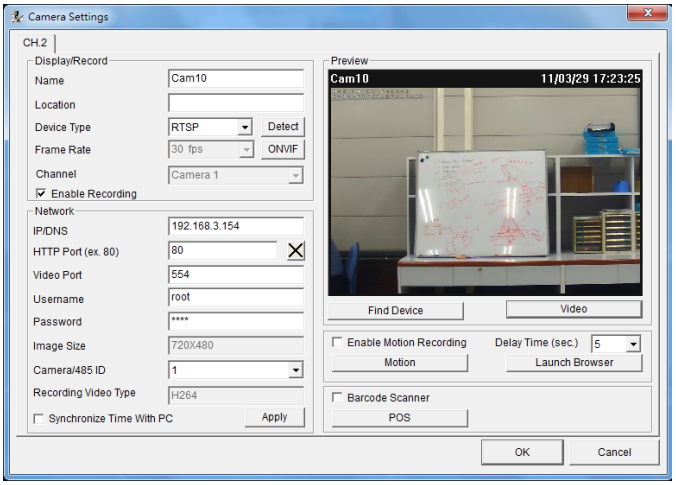
Chapter 13-2. Test POS Communication with a PC

After the POS connects to the AIM PC, please use Hyper Terminal or other RS-232 capturing application to test and to verify POS data that can be captured in the AIM PC.



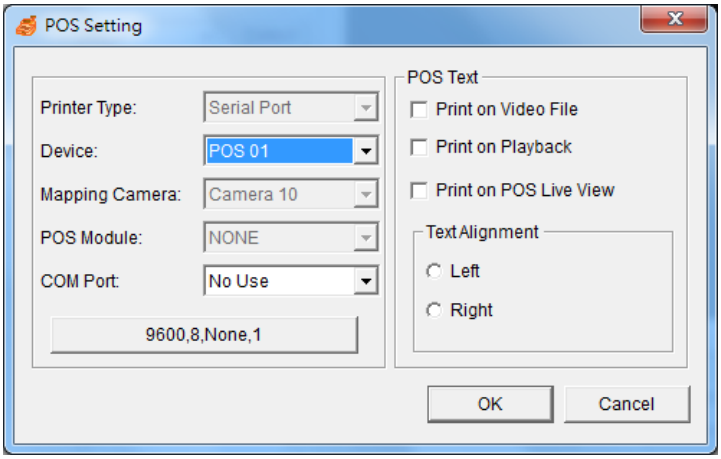
Chapter 13-3. Link POS with a Channel

To link a POS to a camera, please click on “Property” button and “POS” button. The POS Setting dialog box shows up.



In POS Setting dialog box, please specify the following information for capturing POS transactions.

- Device: POS register number.
- COM Port: The mapped COM port number for the POS terminal.
- Print on Video File: Record POS transaction into video file.
- Print on Playback: Display POS transaction during playback.
- Print on POS Live: Display POS transaction at live video.
- Text Alignment: Alignment of POS transaction.

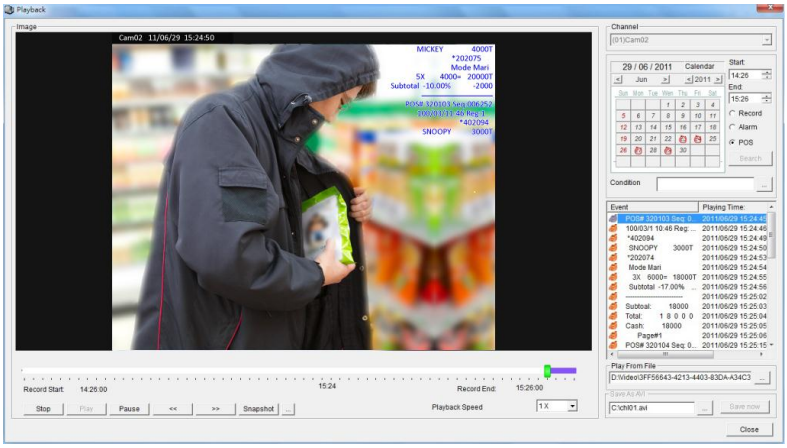


Once above information is setup correctly, AIM Software HD 2.6 starts to capture and to display POS transactions on live video.

Note: For demo purpose, please press F3 to show simulated POS transitions.

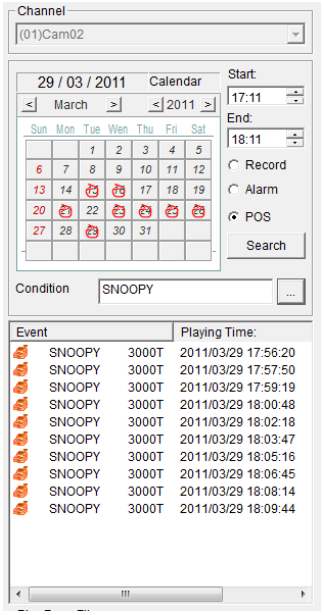
Chapter 13-4. Playback for POS Transactions

During playback, the recorded POS transactions get shown on the video and displayed on the list box. Click on a POS transaction. The video clip is played associated with the time of the POS transaction.



Chapter 13-5. Search POS Transactions

Too search a particular search conditions such as an amount, a product item, subtotal, and total, a user can set the search condition for associated time stamp. Click on the item in the listbox. It can play the video of the transaction.



Chapter 13-6. Scanner Connection Basis for Transportation Business

For transportation business, a barcode scanner and a keyboard are widely used. The barcode scanner for scanning barcode is connected to a PC via the PS/2 connector of the AIM PC. The barcode scanner acts as a keyboard. In AIM Software HD 2.6, the scanner connection only accepts 0 to 9 for keyboard scanner or the barcode scanner.

To use barcode scanner as transaction device, connect barcode scanner into PS/2 connector. In “Camera Settings” dialog box, enable “barcode scanner” option. For one PC, there is only one video channel that can be set for the barcode scanner.

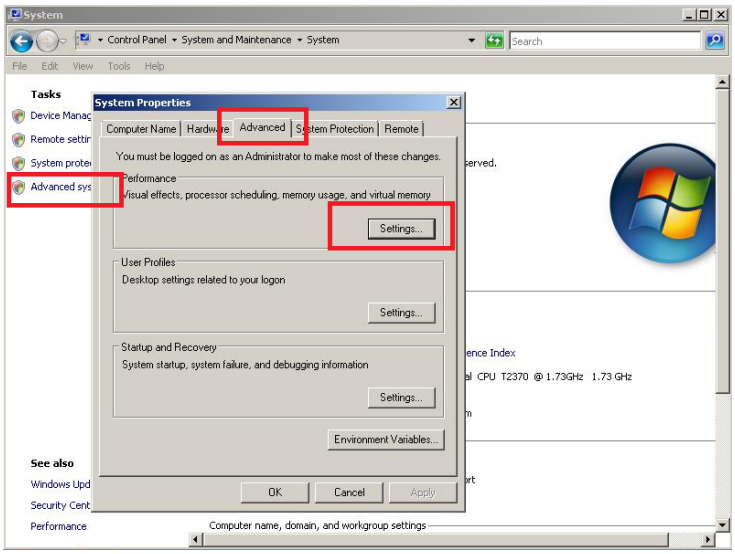
For search barcode transactions and playback on the barcode transaction, please see “Playback with POS Transactions” and “Search POS Transactions” for detail.

Chapter 14. Trouble Shooting

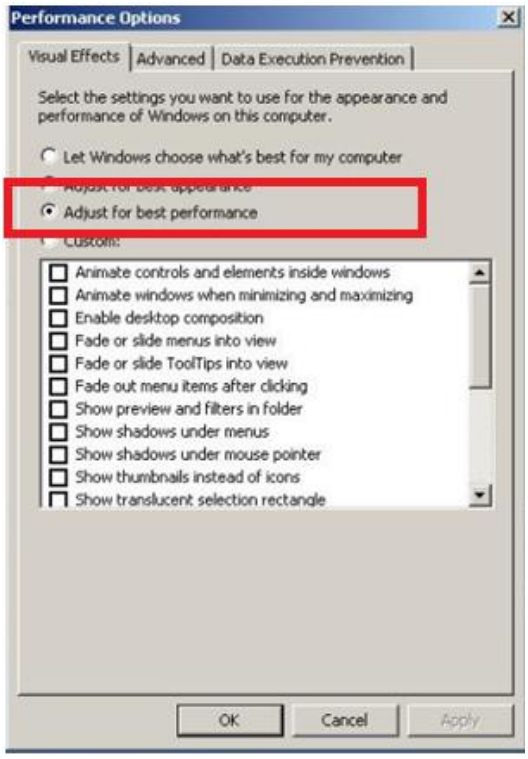
Chapter 14-1. What should I do if I experience video flickering in AIM

If you experience video flickering at AIM of the PC's graphic card, please follow the instruction for solving the problem.

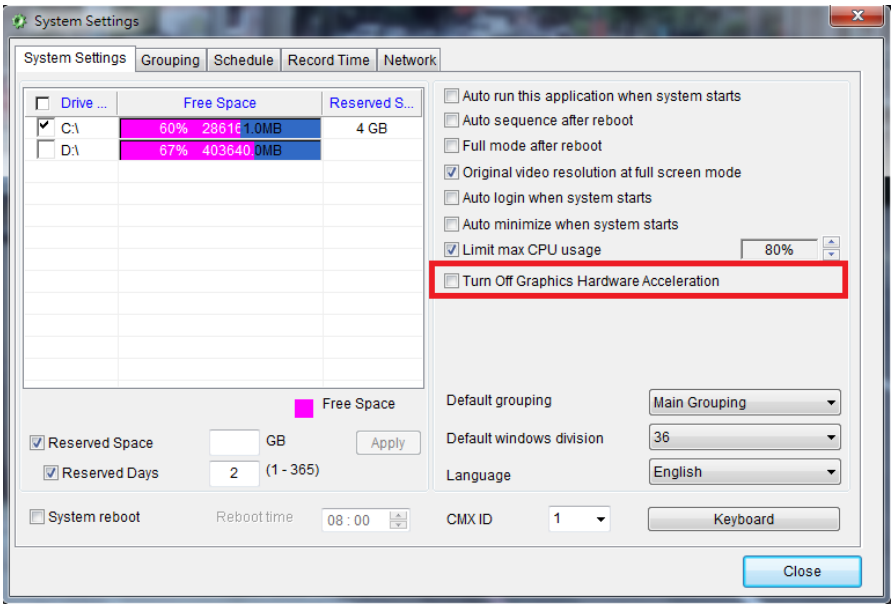
Step 1: Please go to "Control Panel->System and Maintenance->System Properties" at Windows 7.



Step 2: Click on "Performance Setting" button and select "Adjust for best performance" option. It can solve the flickering problem.

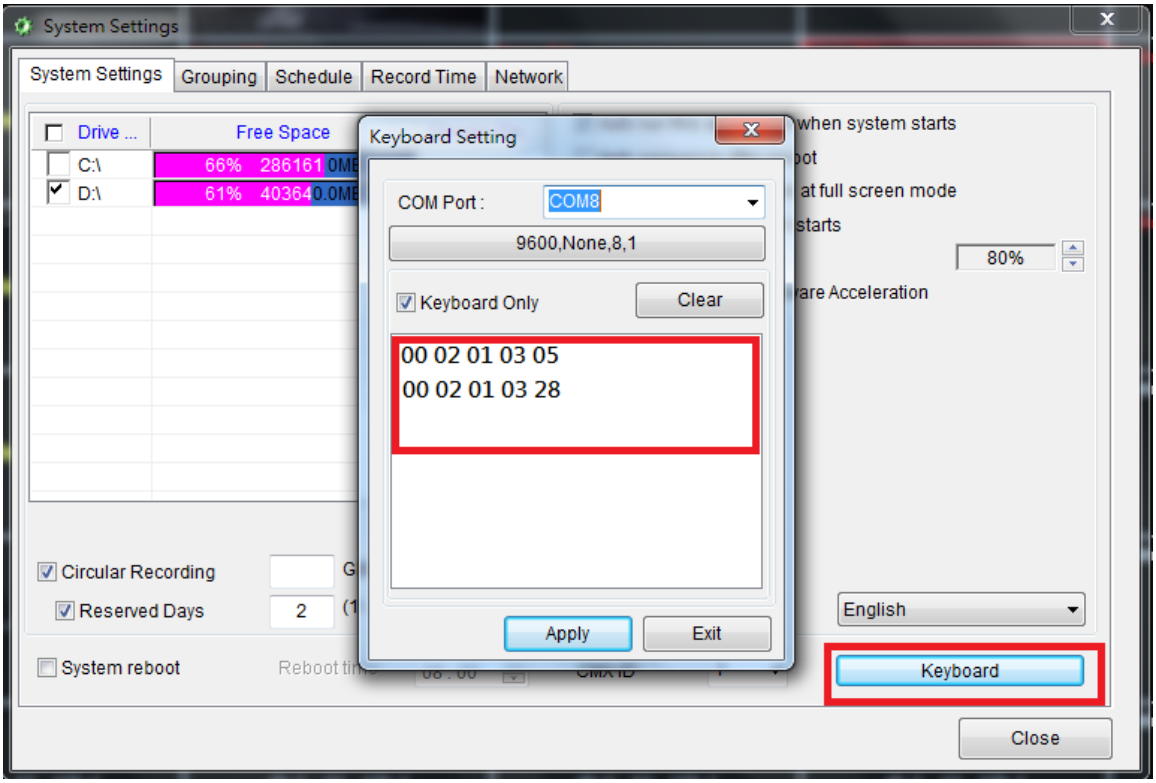


Step 3: Turn off the graphics hardware acceleration from AIM at System Settings, if the graphic card of your PC might not support Direct3D technology.



Chapter 14-2. What should I do for verifying RS-485 keyboard that is properly installed?

Click on System button and Keyboard button in AIM. Please select proper COM port. Start to move the joystick of the keyboard. The keyboard starts to send keyboard protocol to AIM that can be trapped and shown on the Keyboard Setting box.



APPENDIX

Minimum System Requirement

OS:	Windows XP Home, Windows Vista Home, SP3 required, Windows 7 Home
CPU:	Minimum Intel Duo CPU 2.0 GHz or above
RAM:	4 GB DRAM or above
HDD Size:	At least 250 GB for recording storage
Network:	Gigabit network

Product Supported

- Full HD IP Camera Series: AiP-M24K, AiP-L24N, AiP-B24N, AiP-R24K, AiP-V24K AiP-O53N, AiP-P24N, AiP-U24K, AiP-U53K, AiP-Z24N
- H.264 HD IP Camera: AiP-Y14D, AiP-I14D
- H.264 D1 IP Camera: AiP-W04T, AiP-X04T
- Video Server: AiP-E4H, AiP-D4
- DVR/NVR: AiP-N6R, AiP-N6D, AiP-F9U, AiP-F4U, AiP-Q4U

Username and password

Default username and password for various devices are described as in the table:

Device	Admin	Admin pass.	Oper	Oper pass.	Guest	Guest pass.
IP Cameras	admin	pass	None	None	guest	guest
DVR/NVR	admin	1111	None	None	guest	2222
AIM Software	admin	EMPTY	operator	EMPTY	guest	EMPTY

Benchmark Environment:

PC network card—Gigabit network card
Gigabit hub * 1

Graphics Card for Supporting 6 Monitors:

ASUS 7970-DC2-3GD5 is tested and verified for support 6 monitors virtual matrix output.

H.264 benchmark table

	Intel Core i7-2630QM 2.00GHz RAM: 8 GB DDR III	CPU model: Intel i7 Quad-Core 2.93GHZ RAM: 2 GB DDR III		CPU model: Intel T5750, 2GHZ DuoCore RAM: 3 GB DDR II 677	
	OS: Windows 7, 64 bit	OS: Windows 7, 64 bit, SP1		OS: Windows XP SP1	
	H.264 at 1080P, 30 FPS	H.264 at D1 30 FPS	H.264 at 1280X768 15 FPS	H.264 at D1 30 FPS	H.264 at 1280X768, 15FPS
Ch.	CPU Usage	CPU Usage	CPU Usage	CPU Usage	CPU Usage
2	25%	1%	3%	22%	15%
4	30%	2%	3%	41%	34%
6	40%	3%	9%	55%	37%
8	50%	5%	19%	63%	55%
10	65%	9%	21%	80%	64%
12	75%	9%	26%	87%	84%
14	Overloading	9%	28%	94%	100%
16	Overloading	9%	35%	100%	Overloading
18	Overloading	9%	50%	Overloading	Overloading
20	Overloading	11%	77%	Overloading	Overloading
24	Overloading	17%	85%	Overloading	Overloading
26	Overloading	20%	85%	Overloading	Overloading
28	Overloading	24%	100%	Overloading	Overloading
30	Overloading	25%	Overloading	Overloading	Overloading
34	Overloading	40%	Overloading	Overloading	Overloading
36	Overloading	48%	Overloading	Overloading	Overloading

AIM 1080P dual-streaming H.264 benchmark table

	CPU model: Intel i7 Quad-Core 2.93GHZ RAM: 8 GB DDR III	
	OS: Windows 7, 64 bit, SP1	
	Multi-division: H.264 at D1, 20 FPS Full screen: H.264 at full HD, 20 FPS Full HD recording at 20 FPS	Multi-division: H.264 at D1, 30 FPS Full screen: H.264 at full HD, 30 FPS Full HD recording at 30 FPS
Ch.	CPU Usage	CPU Usage
42	40%	44%
44	47%	49%
46	49%	56%
48	49%	62%
50	51%	72%

52	51%	74%
54	52%	75%
60	54%	75%
64	56%	81%
66	57%	82%
68	57%	83%
70	60%	85%
72	68%	85%

AIM 2.6 HD Software Specification

Recording	Schedule / Motion detection / Manual recording
Live	Display up to 72 channels via two monitors
Speed	Up to 1080P 30 FPS and ROI recording supported
Resolution	Full HD: 1920 * 1080 / HD: 1280 * 768 / D1: 720 * 480 / VGA: 640 * 384 / CIF 320 * 240
Schedule	7 days * 24 hrs time table, recording mode configurable
Alarm recording	Face detection, audio detection, tampering, motion, DI alarm detection
Audio recording	Yes
Limited recording	Configurable for 1~180 days
RAID recording	Samba RAID, eSATA RAID, and Network Neighborhood supported
Playback	Time search, event search, date search, POS smart search
Speed	FR: 2x, 4x, 8x, 16X 32X / FF: 2x, 4x, 8x, 16X, 32X
Compression	H.264 / JPEG
Multi-channel playback	Up to 36 channels
Remote AIM playback	Up to 36 channels
Remote DVR playback	Yes
Video input	Managing up to 72 ACUMEN IP cameras / DVR / NVR connections
Camera name	20 characters
Channel editing	Mouse drag-n-drop
Digital zoom	Yes, ePTZ supported
Grouping	User grouping authentication assignable for eMap, and AIM Software HD 2.6
Dual-screen	Up to 72-channel display
Live display	Sequence
Split screen	4, 9, 16, 36
Dual stream technology	Multi-channel displays D1 and full screen displays 1080P resolution
TV wall	Dual monitors support up to 1080P 72 channels decoding
Video archiving	Video archiving to RAID
Archiving	Individual camera configurable, scheduling and instant archiving
Alarm	
Alarm management	Alarm popup for full screen, PC sound, redirect IP camera DO, eMail snapshots, redirect a PTZ preset recall
Event	Various alarm log, video loss, stop recording, schedule, logon, operation log
Digital output	Controllable via IP cameras
Alarm recording	Pre-alarm:1~5 seconds and post-alarm: 5~50 seconds
Accessories	
P/T/Z protocol	ACUMEN PTZ controllable via HTTP
Audio	PCM/G.711, two-way audio, audio recording
POS/barcode scanner	RS-232/PS/2
Keyboard	keyboard controllable via RS-485 for PTZ, ePTZ, and ROI features
Digital map	
eMap live monitoring	One channel for IP camera/multi-channel for DVR/NVR
eMap snapshot	Yes
PTZ control	Yes
DB Manager	
Database	Database configuration import, export, report, and maintenance
Backup	
	DVR/NVR remote backup, AVI conversion and JPEG snapshots
Management	
Access log	Complete access log in database manager
User management	User authentication: three level: admin, operator, and guest, features configurable
Recording calculator	Yes, dynamically calculating available recording days

Network	
Web interface	Live video web interface
Mobile support	iPhone and Android
Protocols	ARP / TCP/IP / HTTP / SMTP / DNS / PPPoE
IPScan	Supported, easy-to-setup for IP address
Other	
DST	Daylight saving time by Windows OS
OS	Windows 7 Home, Windows Vista Home, and Windows XP Home
Language	English, Chinese, Spanish, French, Italian, Japanese, Russian, Portuguese, Simplified Chinese, Czech, Slovenia, Chinese, and German
CPU requirement	Minimum Intel Duo CPU 2.0 GHz or above
RAM requirement	4GB memory