Author: Mao Cai

HORUS IP Video Surveillance
User Documentation

Abstract

This document guides user to operate Horus NVR within an Internet Protocol Video Surveillance system.

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Chapter 1 – Overview

1.1. Introduction

This document guides user to operate Horus NVR in an Internet Protocol Video Surveillance (IPVS) system. The environment used in this guide is built as following:

Camera(s): We use a H264 Mega Indoor IP camera as input device to capture the moving pictures and produce footage. An example of camera used in this system is AVIPCM973A.

Recorder: Recorder is PC based. Horus NVR software runs on a PC with following specifications:

- Intel Core2 Duo Processor 2.2G Hz with 3Gb DDR2 memory
- GeForce 8600M GT Graphic Card (256Mb memory)
- Intel PRO/Wireless 3945ABG Network Connection
- Windows 7 64-bit operation system
- Horus NVR software build version: 2.1.3741.20497

Connection: The connection between camera(s) and recorder is managed by a 4-port standard switch.

1.2. What is Horus NVR and Internet Protocol Video Surveillance

Horus NVR:

Horus© is a NVR software name which registered and owned by UDM Group.
NVR means Network Video Recorder, is an internet protocol based device sits on the network to record and access live video streams from IP cameras. It could be a software or Stand-Alone NVR.
Here, Horus NVR stands for the NVR software created by UDM's engineers.

Internet Protocol Video Surveillance (IPVS):

IPVS is a modern version of Closed-Circuit Television (CCTV). It is a video surveillance solution that uses IP elements such as IP cameras, NVR instead of analogue elements used in CCTV. IPVS includes two important parts: recorder (NVR) and IP cameras.

1.3. What does it do

The IPVS system is used for monitoring a particular place to keep it safe and under monitored. Horus NVR software has provided a lot of powerful and good designed functions to improve the functionality, flexibility and performance of IPVS system.

Horus provides a powerful monitoring function supports up to 64 cameras real time monitoring and synchronized recording. User can view four live camera footage at the same time by the split screen sand has more than ten modes for multi-channel display to help user gets a overview of the entire surveillance system. Horus also supports to display the current status of each camera on each split screen, such as camera connecting status, date and time, user login status, event alarm. There are multiple ways to operate the main functions of NVR for purpose of better user experience – Windows MCE remote, screen keypad, navigation button etc. Also, user can easily control the camera PTZ by clicking the four direction buttons on PTZ control panel on the main console.

Horus NVR is intelligent. With real-time monitoring, event detection function is integrated. There are several built-in events: General Motion, Focal Loss, Missing Object, Foreign Object, Obstruction, Camera Tampering and Camera Signal Loss. By default, if one of them has been detected, the system would begin an action, for example, a warning message or pre-event and post-event snapshoot. These functions have a great integration with monitoring and recording. Programmable video recording and adjustable pre-alarm and post-alarm recording would make sure the performance and degree of accuracy is high.

Playback and system management is very easy. User view any recorded videos and images by only click several buttons if time is known or user can use smart search functions to search particular videos. Smart search is an intelligent function that will practice user's command of video search within specific areas under its event type. User can backup all of recorded videos (or selected videos by date and time) by connect an external storage device to the system with authorised user permission. Accessing conditions and privileges can be set in the system setting by administrator.

Chapter 2 – Installation and operation

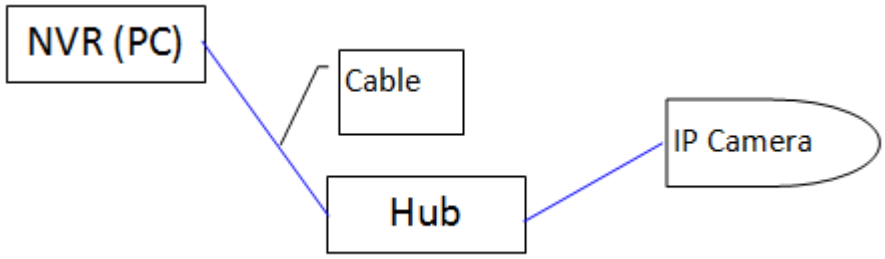
2.1. System Requirement

	Minimum requirement	Recommended (16 Channels)	Recommended (64 Channels)
CPU	Intel® Pentium 4 2.4GHz with Hyper-threading	Intel® Core™2 Duo 2.4GHz	Intel® Core™2 Quad 2.4GHz
RAM	512 MB	2GB	3GB
Display Chip	Direct 3D Support	nVIDIA GeForce 8600	nVIDIA GeForce 8800
Video RAM	32 MB	256 MB	1 GB
Display Resolution	1024*768 24bits	1024*768 24bits	1024*768 24bits
DirectX	9.0c	9.0c	9.0c
Space for installation	100 MB	100 MB	100 MB
HDD free space	160 GB	160 GB	500 GB
Ethernet	100 BaseT	100 BaseT	Gigabit Lan
Operation System**	Windows 2000 SP4 / Windows XP Pro SP3 / Windows 2003 / Vista SP2 / Windows 7	Windows 2000 SP4 / Windows XP Pro SP3 / Windows 2003 / Vista SP2 / Windows 7	Windows 2000 SP4 / Windows XP Pro SP3 / Windows 2003 / Vista SP2 / Windows 7

** Operation System:
Some of Virtual Machine such as VirtualBox has low performance on Direct 3D, thus Horus might be failed to run in some virtual machine.

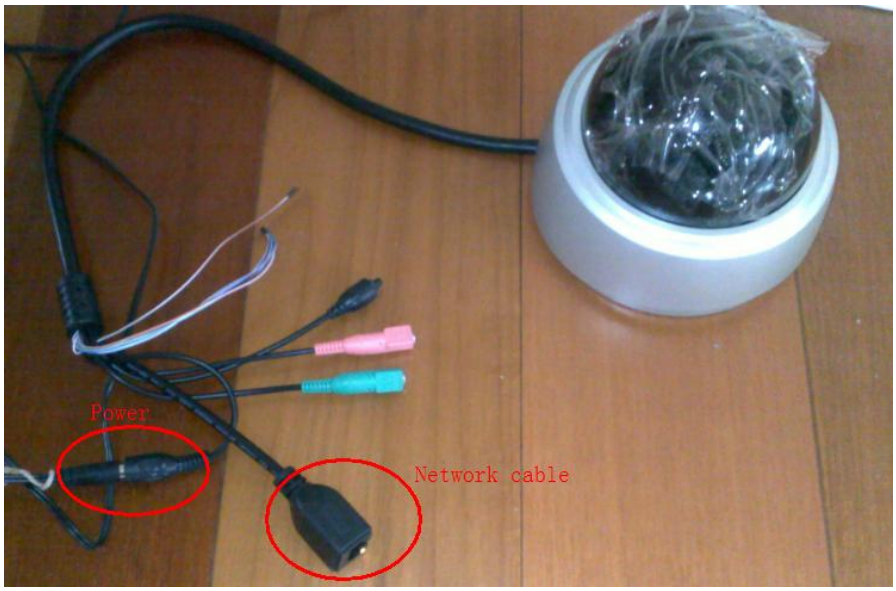
2.2. Installation

The video surveillance system requires at least one NVR (e.g. HORUS NVR software), one camera, one Hub (or switch / router) to run. The hardware configuration as following:



a) Camera connection

Firstly connect camera power cable



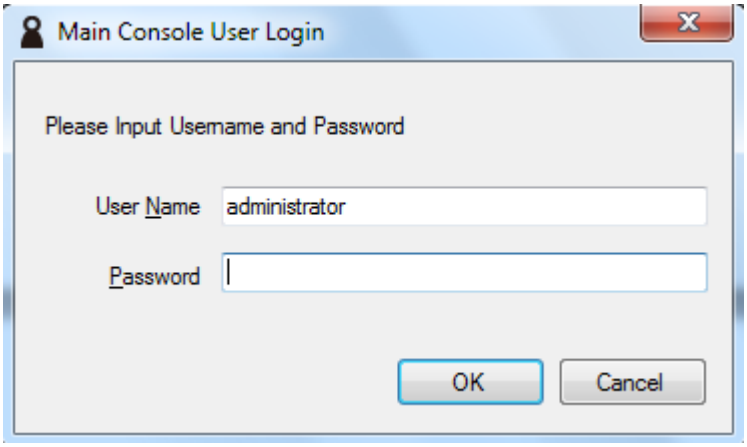
then connect camera to Hub via 100-baseT(or other compatible) cable
You can see the Green LED is on after your sucessful connection

b) NVR setting
NVR must be installed on a Microsoft Windows based PC. You have to connect your NVR PC to the Hub.
For NVR installation, please refer to HORUS User Manual, 3.Getting Started

2.3. Quick Start

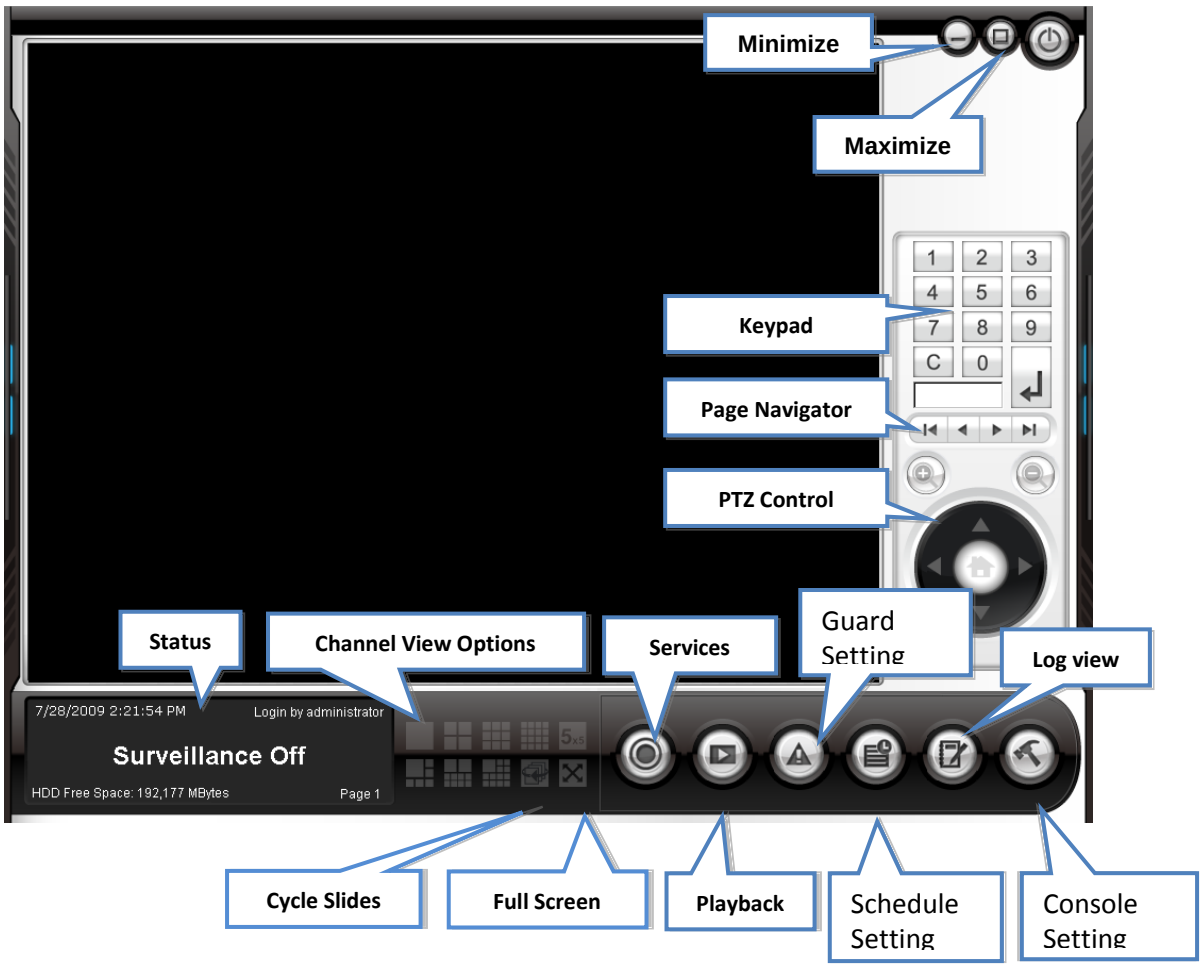
How to enter NVR

1. Run HORUS – Main Console as Administrator
2. A window will be poped up (it may ask set password if it is the first time run)



3. Enter the user name and password
4. Successfully entered Horus

An Overview of Main Console



Keypad

This allows you to enter the channel number for the current view.

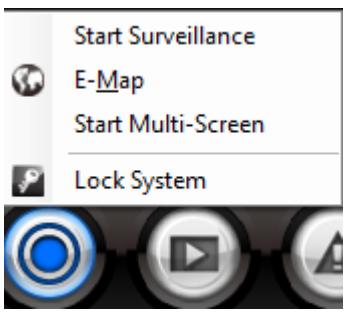
Page Navigator

If there is more than one page active, this allows you to navigate in page mode.

PTZ Control

You may control the camera's panning, tilting and zooming from here.
(If the selected channel does not support PTZ, these buttons will not be enabled)

Service



Start Surveillance - all the preset functions from "Guard Setting" and "Schedule Setting" will be activated.
E-Map - it will open E-Map dialog to allow you control the map.
Start Multi-Screen Display - open up to 4 monitor windows

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Lock System - lock the system

Playback

Open the playback window.

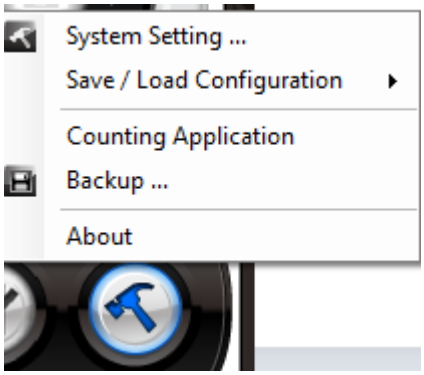
Guard Setting

Sets individual channels for various functions including: channel Events, system event, on screen display, sound alarm, alert email, vibrate window, pop-up message.

Log view

View logs of individual channels and the console system itself. It allows export the logs into .CSV based files.

Console Setting

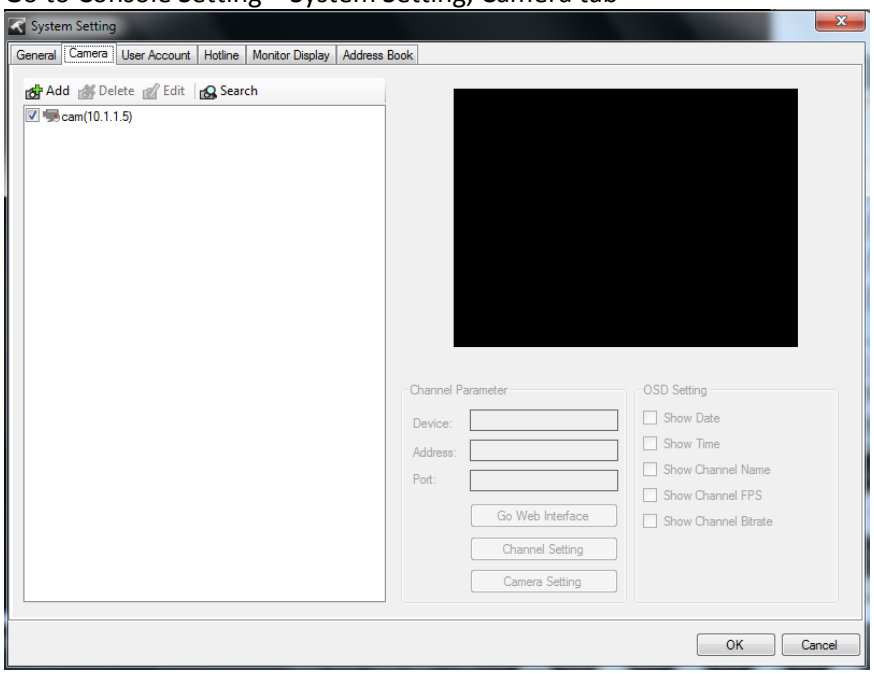


System Setting including configuration of storage, display, cameras, user accounts etc.
Backup: in backup windows, user can search, play and backup videos.

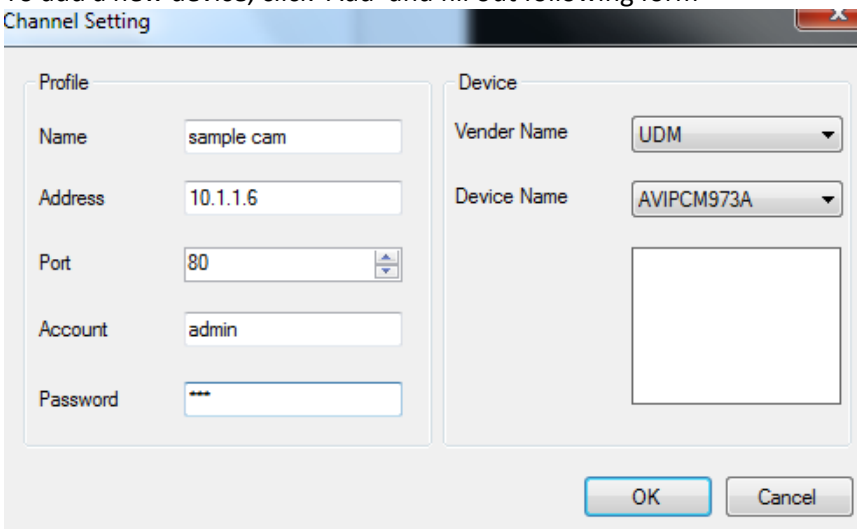
How to connect a camera to the NVR

1. Camera must physically connect to the switch / router that the NVR has connected to.
2. Camera's IP address and login password can be set by application "IP Wizard II" or get the password from user manual.

3. Go to Console Setting – System Setting, Camera tab



4. Channel list: all available devices will listed in the channel list.
5. To add a new device, click 'Add' and fill out following form



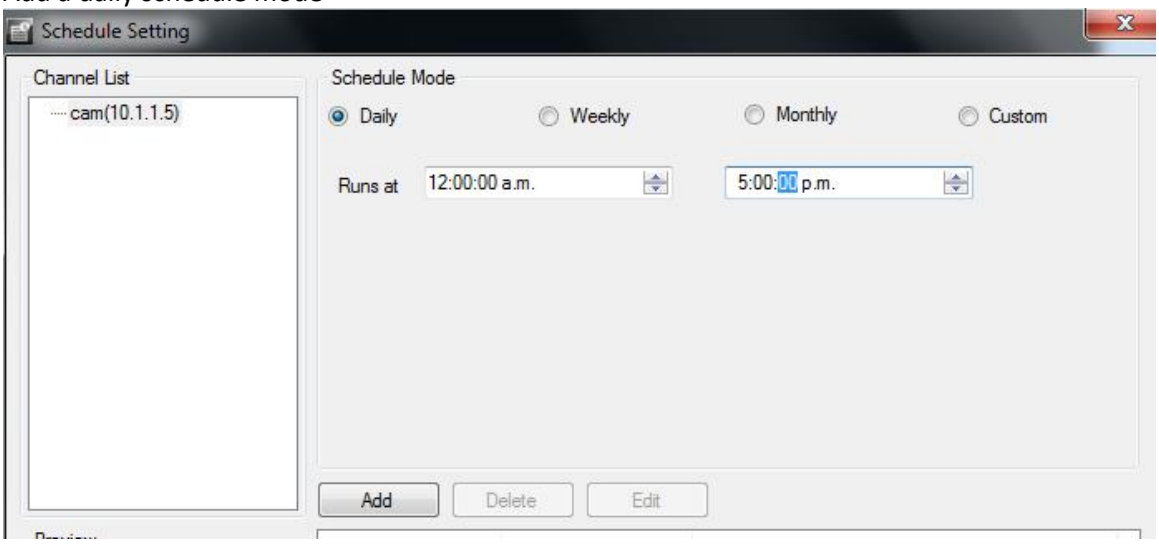
Name: The name of the channel that you would like to create. Example: "sample cam".
IP Address: The camera's IP address
Port: The port the camera is using
Account: The administrative account that the camera uses (Default value is "admin")
Password: The administrative password that the camera uses (Default value is "password")
Vender Name: The name of camera/device vendor
Device Name: The type of camera device

6. Click OK
7. More camera setting can be set by web interface, simply just click Go Web Interface button.
8. [more options] Camera Search:
   to search for cameras within the network, click on 'Refresh' to re-search. Check they cameras that you want to add to channel list.
9. [more options] Channel Setting:
   Set video profile and resolution.
10. [more options] OSD setting:
    the information displayed on individual channel as well as recording

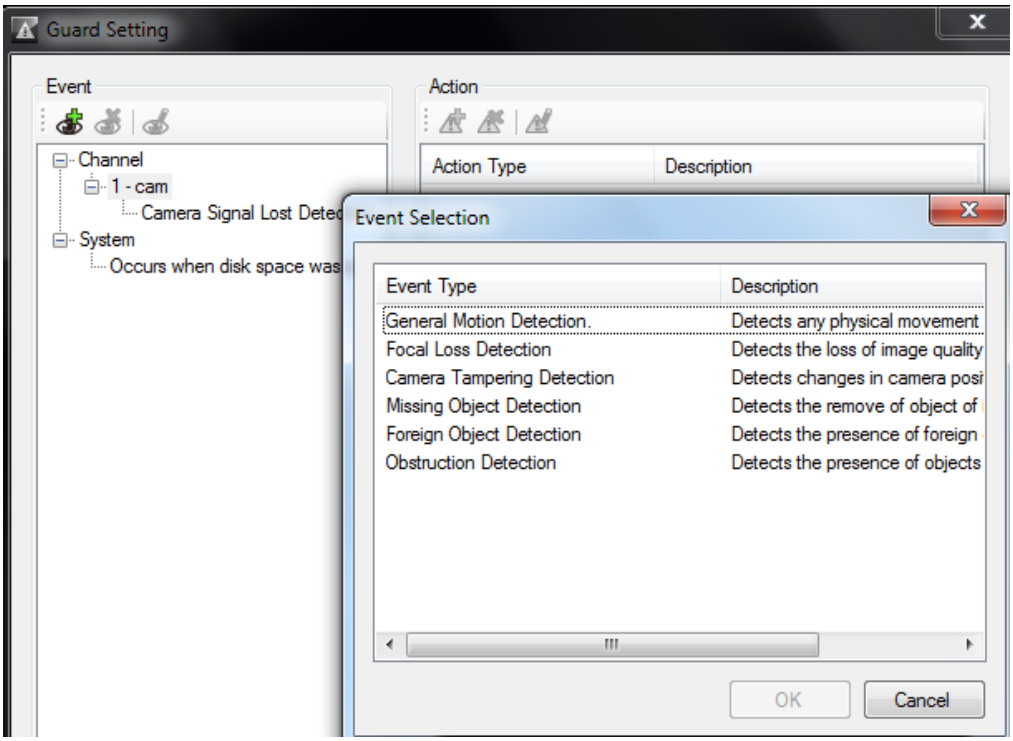
Show Translucent: Allows translucent effect
Show Date: Displays or hides the current date
Show Time: Displays or hides the current time
Show Channel Name: Displays or hides the channel name
Show Channel FPS: Displays or hides the channel's frame per second
Show Channel Bit Rate: Displays or hides the channel's current bitrates

Start first recording

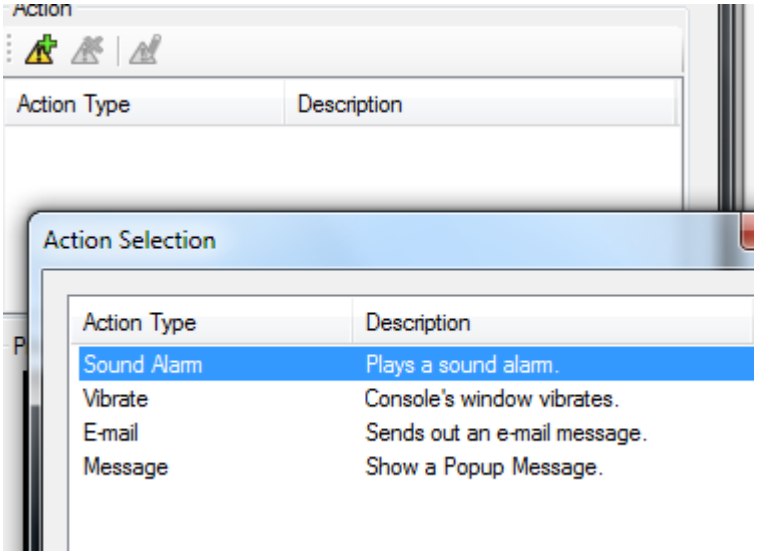
1. Schedule setting
   Main console – Schedule setting
2. Add a daily schedule mode



3. Then add an event, in Guard settings
4. Select one camera and click add event



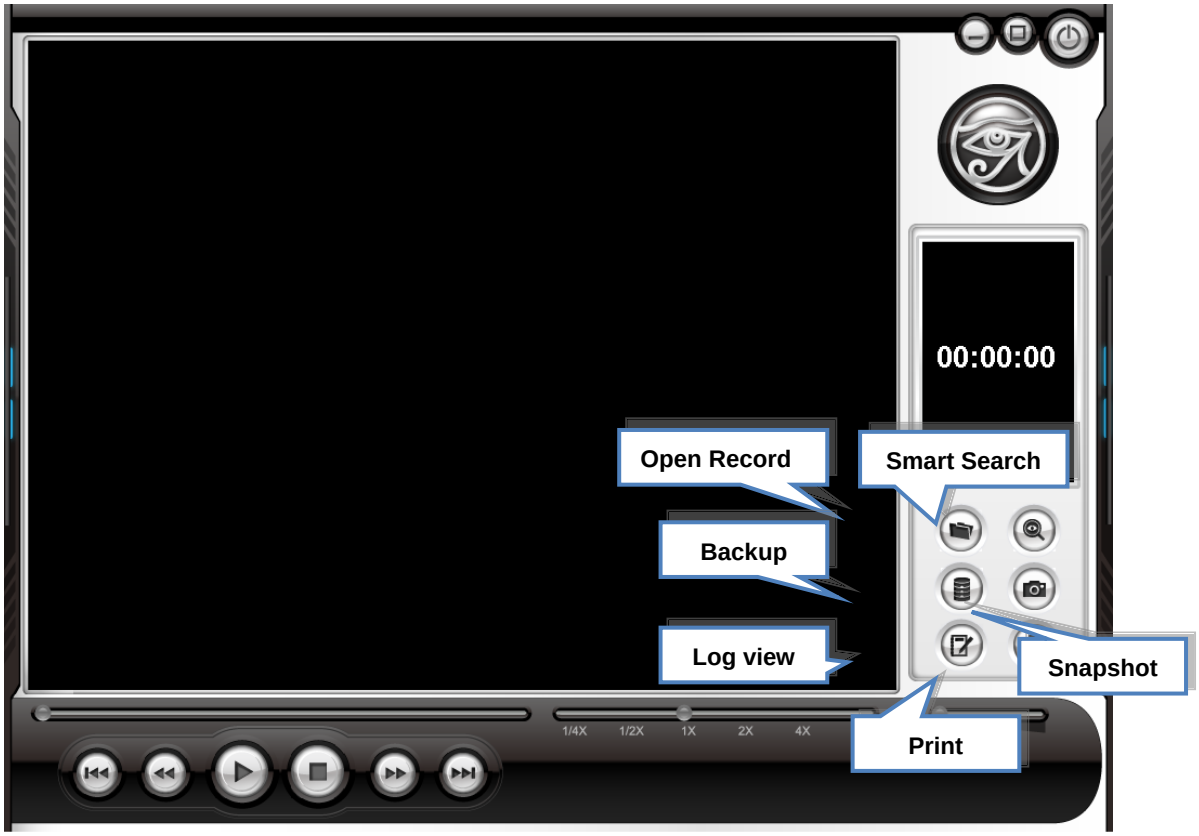
5. Add an event, for example general motion detection.
6. Add an action to the selected event.



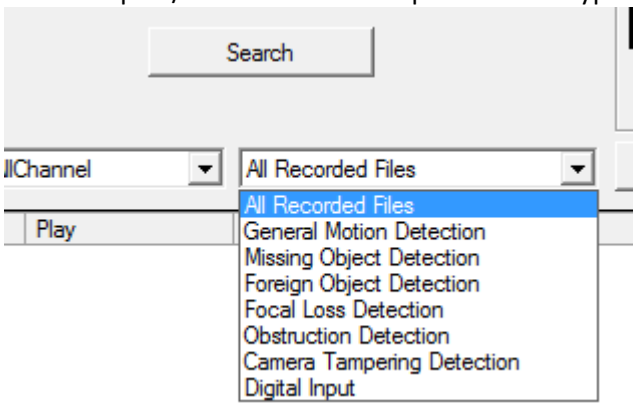
7. If the surveillance service is activated, “Surveillance On” will be shown on the status area and indicators will be shown on channel video.
8. Red Light on: Scheduling recording is activated
   Yellow Light on: This indicates that the Guard Setting is activated.

Start first playback

1. Main console – Playback

2. 

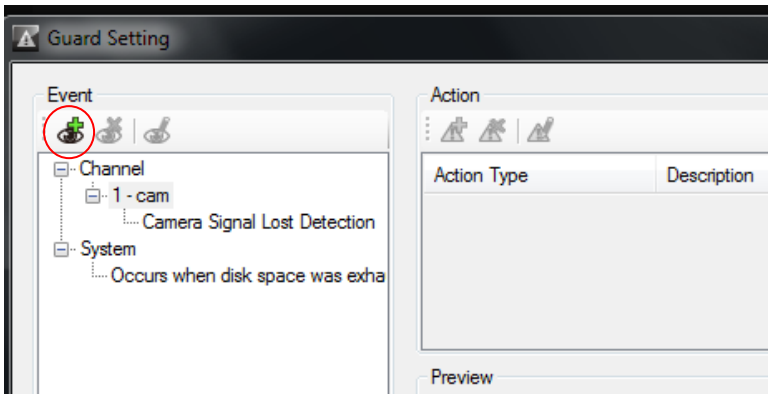
3. You can open / search videos for specific event type



4. And use smart search for the opened video records for specific actions.

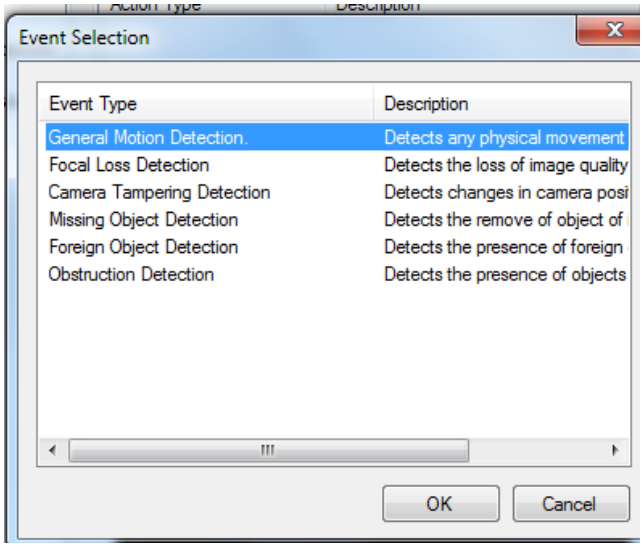
2.4. Event detections and actions

To add an event in to NVR, we firstly need go to Guard Setting:

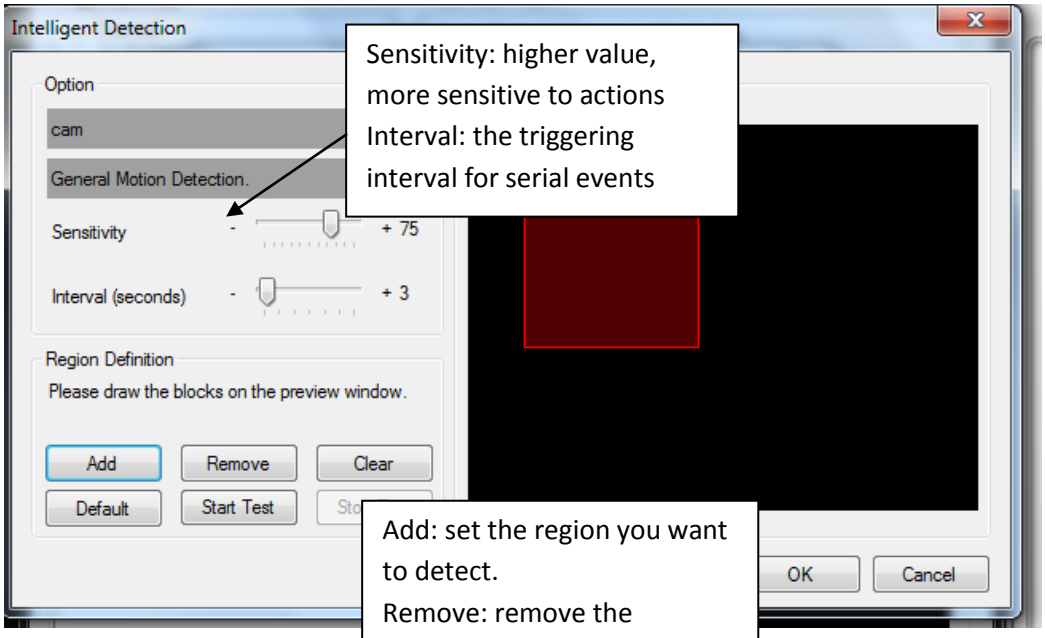


Select one camera and click add mark.

Then select an event:

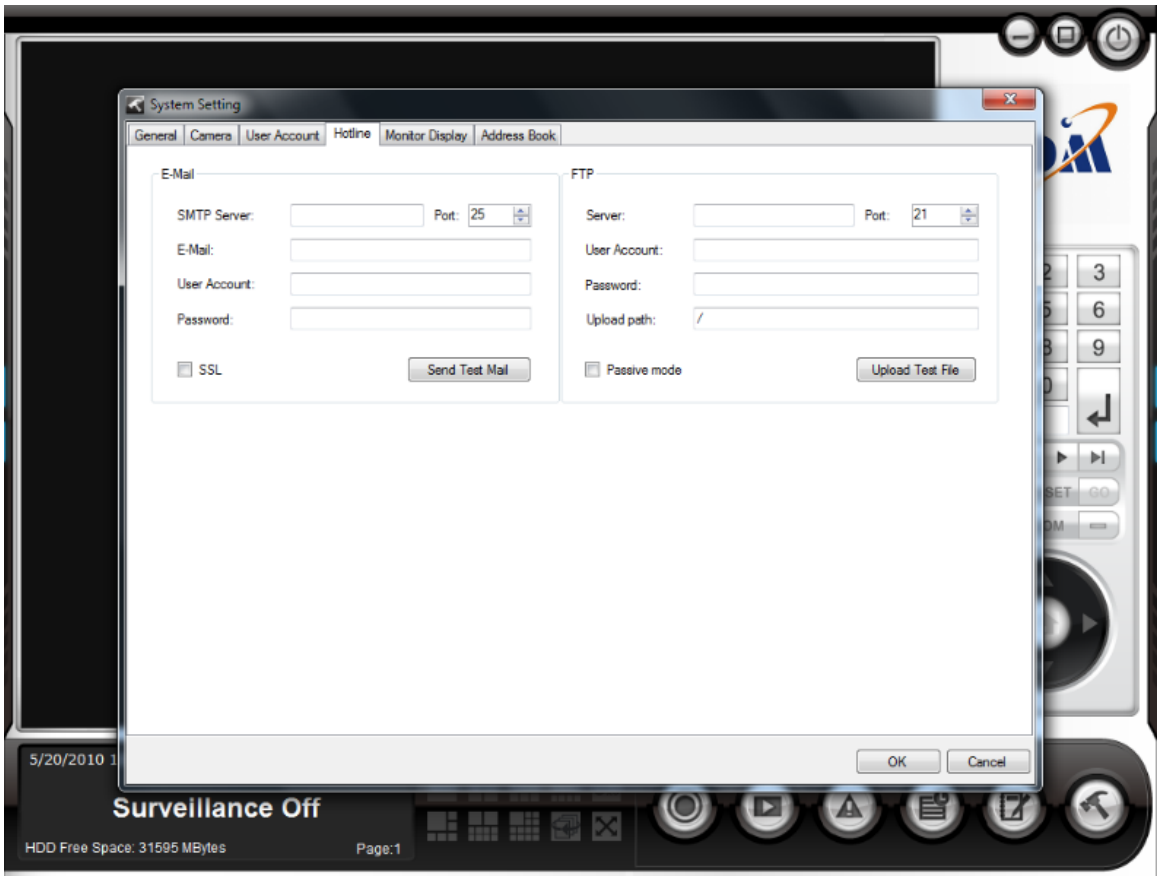


For security monitoring, we should select General motion Detection.



2.5. Advanced operation

Advanced communication setting - Hotline



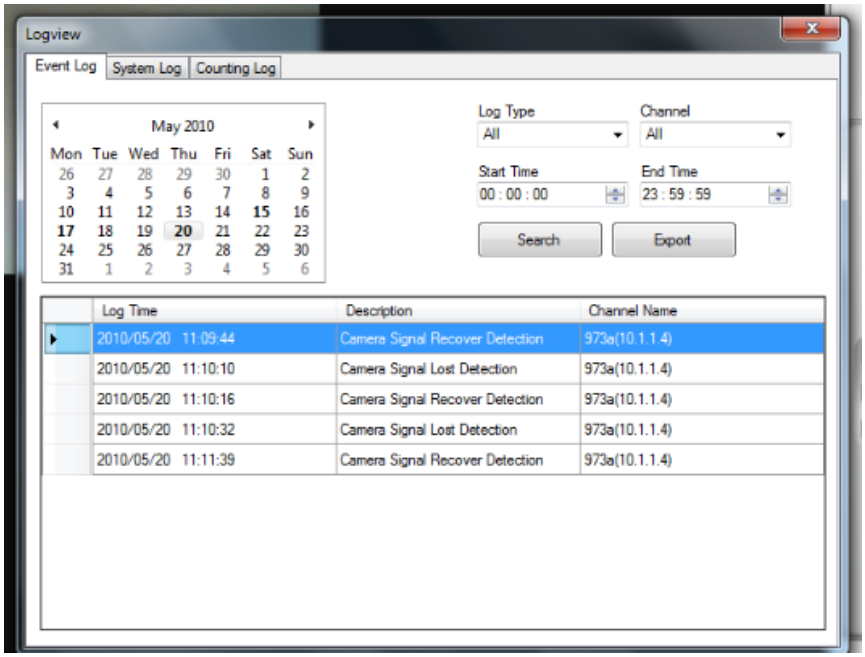
E-Mail – NVR will send email to the receiver if pre-defined event happened.

FTP – you can update a snapshot to server.

E-Mail & FTP settings please refer to HORUS User Manual 4.6 Hotline setting

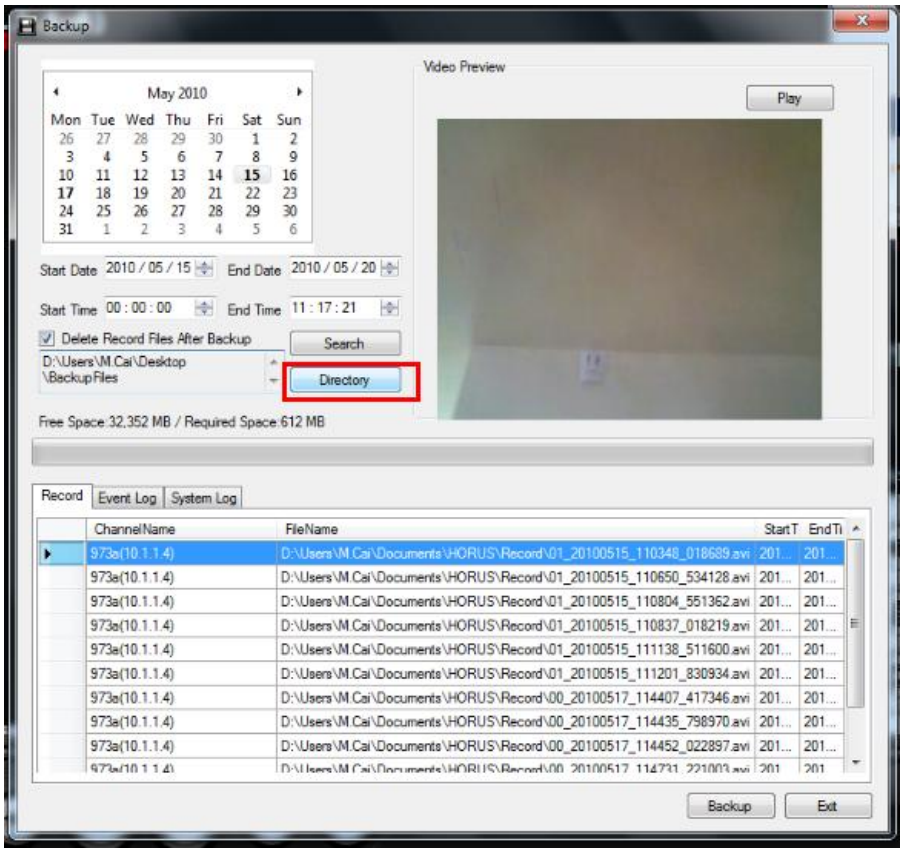
Logview

You can have a general view of Event log and System log.



The log will record everything happened to the NVR system.

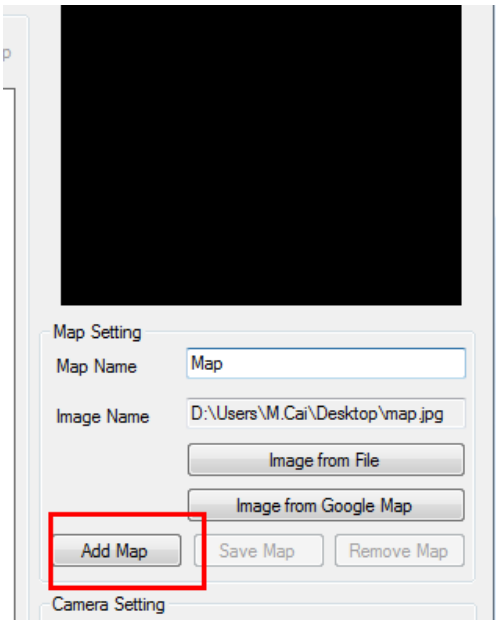
Backup



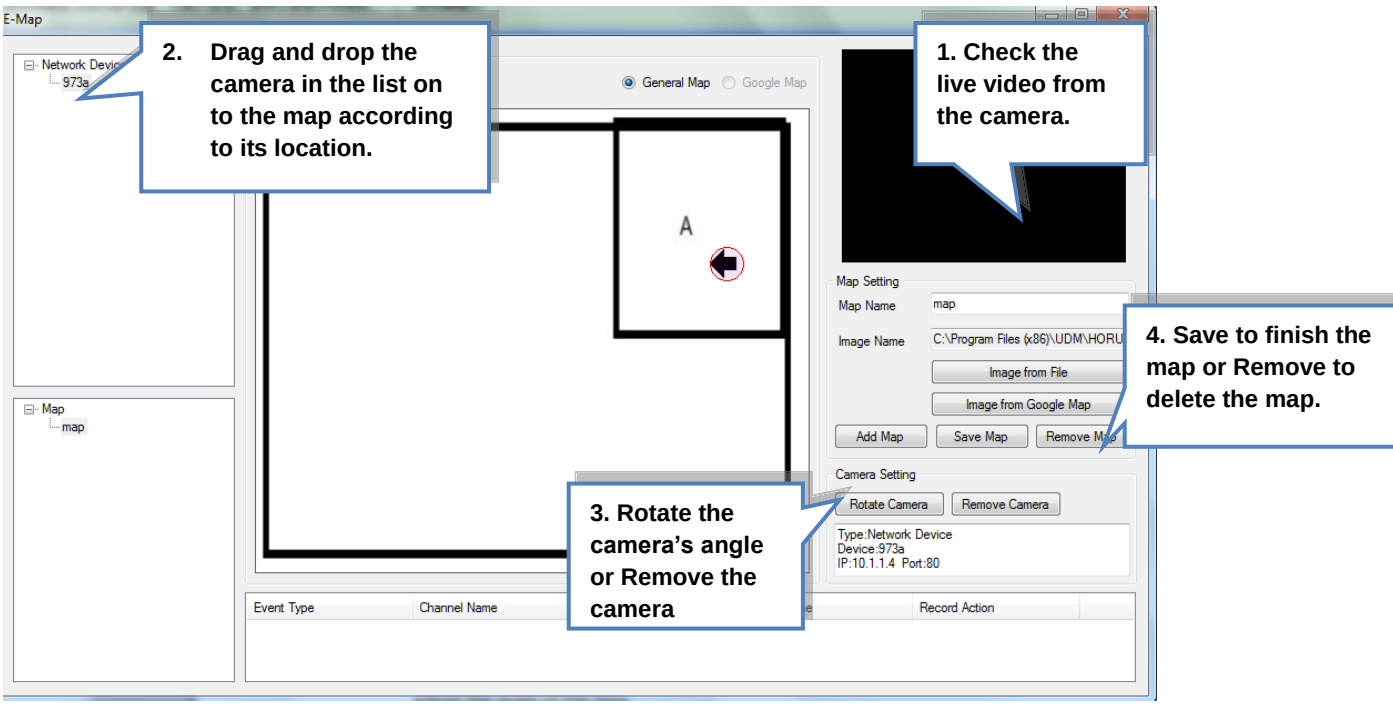
Backup specified recorded video files, event logs and system logs by set date and time intervals.
Warning: You have to click Directory button first to select backup path.

Camera management – E-Map

Load Map:



- Firstly click Image from file button, and then select a map file. [Map image could be either a jpg file or bmp file]
- File Map Name textbox
- Lastly click Add Map button



Chapter3 – Issues & Notes

3.1. Camera' IP address has been changed after Hub/Switch reboot

This problem will always occur if there are some device request IP address and the Hub/Switch/Router uses Dynamic Host Configuration Protocol (DHCP) for IP address assignment.

Solution 1: turn off router's DHCP function, set every single device's IP manually.

Solution 2: If your network is complex, then turn off DHCP is impracticable. You can build another subnet for cameras and NVR only with a DHCP off switch. And then connect the switch to your company's router for IP routing.

Solution 3 (not always available): You can bind your camera's IP address and MAC address together in switch/router. (e.g. set every camera a static IP address in router) This solution depends on your router.

3.2. Application stop responding

If your 'recorded video' folder contains more than 50 videos, the responding speed will sharply decrease for video searching.

Solution: defrag hard disk or clear folder every month.

3.3. Motion detection stop working

If you have set motion detection in the camera, then the detection zoom may be reset after a suddenly power-down.

Solution: Firstly, you have to make sure your video surveillance has a stable power system. Re-setting is needed if camera's setting has been reset.