

NUUO Central Management System (NCS)

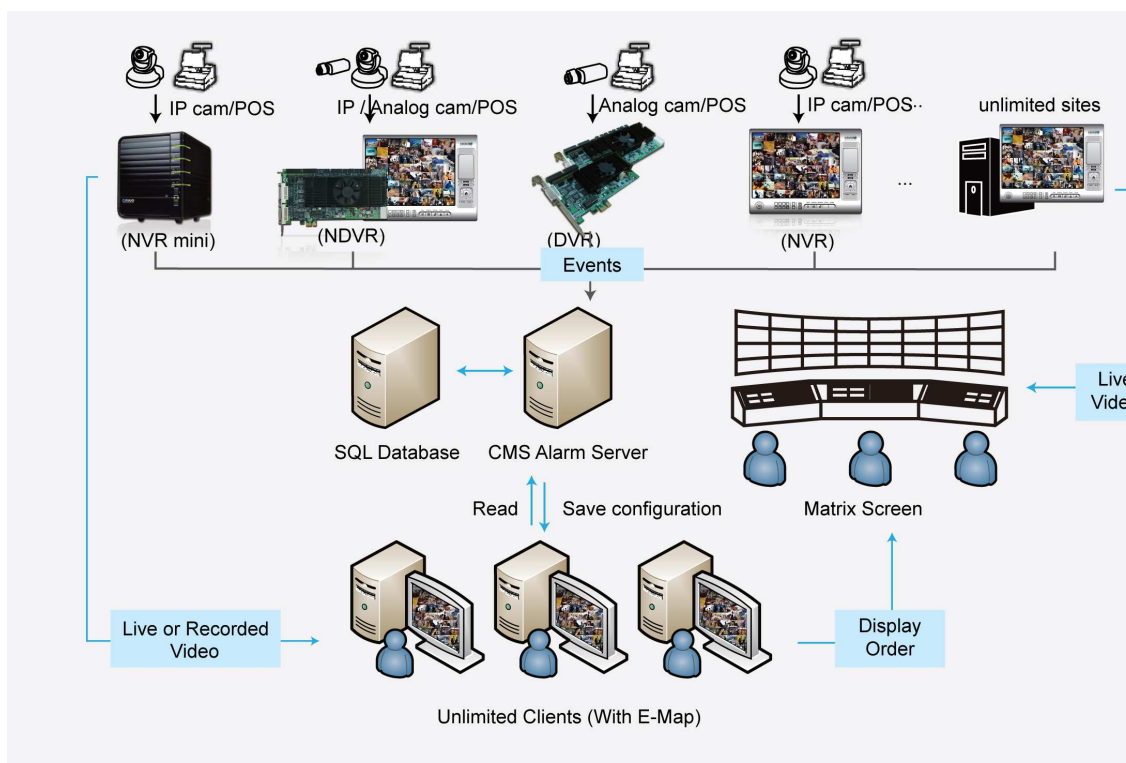
This seamless management of digital video, audio and data is a powerful solution for large scale installations

The NUUO NVR-based Central Management System (NCS) is a powerful system designed for large-scale and high level enterprise projects. CMS can manage all NUUO product lines including NDVR Hybrid, NVR, DVR and NVRmini. NUUO NCS supports unlimited numbers of cameras, I/O devices, POS, servers and users. The controls and operation of NUUO CMS is clear cut and map centric. It has the most powerful alarm management system among all NUUO product lines and can control unlimited matrices or viewing consoles in the centralized control room. NCS Matrix offers a video wall for users to get video and manage alarm efficiently and instantly.

Key Features

- ◆ Authentic client-server architecture
- ◆ Centralized management
- ◆ Supports all NUUO recording servers (NDVR, NVR, DVR and NVRmini)
- ◆ Supports unlimited cameras, I/O devices and POS
- ◆ Supports unlimited display matrices for remote live view with PTZ and joystick control
- ◆ Supports unlimited layers of E-map
- ◆ Supports H.264, MPEG4, MJPEG, and MxPeg video compressions
- ◆ Supports IP cameras, megapixel cameras and video servers
- ◆ Device groups
- ◆ Advanced GUI alarm management
- ◆ Alarm status, data mining and reporting function
- ◆ Instant playback
- ◆ Remote backup on alarms and video
- ◆ Embedded remote desktop access to any NUUO servers (NDVR, NVR, DVR and NVRmini)

System Architecture:



System Overview

Component	Description
Overview	Access and control unlimited cameras, I/O devices and POS from any NUUO recording server (NVR/DVR/NDVR Hybrid and NVRmini). Alarms records are kept in SQL Server 2005 Express Database.
Client –Server Architecture	Unlimited clients and multi-monitor support. Clients are supported with popup live window and instant playback, remote playback, embedded remote playback application and smart search in playback for special events.
E-Map	Tree structured map layout supporting unlimited map layers. Supports intuitive GUI indicators of cameras, I/O devices, POS and server locations.
Alarm management	Real-time alarm management supporting up to 45 alarm types, 6 video analytic events, alarm statuses, priorities and independent alarm coverage, data mining tools and much more.
Central Management & Remote Desktop	Assign different levels of privileges to manage access on servers, cameras, alarms, logs and much more according to each user account and user group. A Built-in “remote desktop configure” can remotely configure any NUUO NVR/DVR/NDVR.
Display Matrix	Unlimited video matrices supporting up to 64 channels of video display per monitor.

Technical Details

NCS Alarm Server:

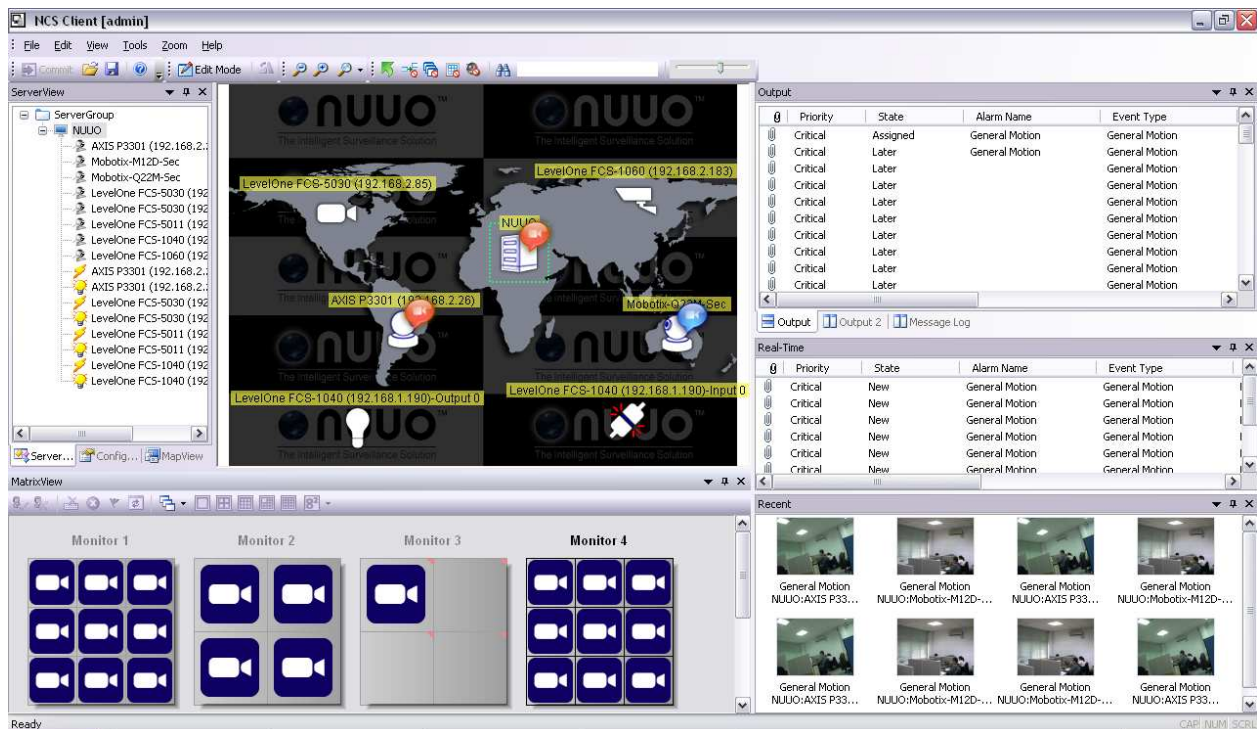
- **Ultimate recording servers:** Centralized management station supports unlimited number of NUUO recording servers (NDVR, NVR, DVR and NVRmini).
- **Client/Server architecture:** NCS client features popup live window and instant playback, remote playback, embedded remote playback application and smart search in playback for special events.
- **SQL database:** Uses SQL Server 2005 Express to store all alarm logs.
- **Instant alarm notification:** Real-time alarm management supporting up to 45 alarm types, 6 video analytic events, alarm priorities and independent alarm coverage, data mining tool and much more.
- **User management:** Assign different levels of privilege to access server, camera, I/O device, POS, alarm, log and much more to each user account and user group.
- **Smart time zones:** Central Server is designed to manage servers across different time zones. It features Coordinated Universal Time (CUT) and can translate local time at the recording server site into the time zone of the central management station.
- **License Management:** To register and validate your licenses, the system offers easy-to-use online activation via the Internet.

NCS Client

Operator Mode:

- **Multi-Monitor scenarios:**
 Monitor 1– E-Map/Navigation panel
 Monitor 2 – Alarm panel, event list, remote playback
 Monitor 3-N – Live video display matrix
- **Map centric Intuitive operation:** All NCS functions are accessible directly from the E-map.

- **Automatic restart and login:** NCS Alarm Server/Client/Matrix can restart and login automatically when abnormally shut down.
- **Automatic reconnection:** SQL Server, NCS Server / Client / Matrix will restore connection when disconnected.
- **Automatic device synchronization:** Automatically synchronize for all of the IP cameras, I/O device and POS in the servers.
- **System Log:** The log viewer tool enables users to search and export a list of system events.



E-Map:

- **Hierarchical map tree:** Tree structured map layout supporting unlimited map layers.
- **Custom Map Indicators:** Recording servers, cameras, I/O devices and POS each have unique indicators. Operator can place them anywhere on the E-map or import self-designed indicator icons.
- **Instant Alarm Notification:** Real-time alarm management supporting up to 45 alarm types, 6 video analytic events, alarm priorities and independent alarm coverage, data mining tools and much more.
- **Intuitive Map Operations:** All NCS functions are accessible directly from the E-map. The security operator can open live video windows, instant playback windows, do remote backup, query alarms, trigger digital output devices, check system status, search for POS transaction data and more.
- **User-friendly E-Map tool:** Users can edit maps and servers easily, as well as make use of the navigation tool to zoom in and out of the map view, drag and drop the cameras and much more.
- **Multiple image formats:** Import any image in BMP, GIF, JPEG, PNG, or TIFF formats.

Alarm Management:

- **Powerful Alarm Management:** Real-time alarm management supporting up to 45 alarm types, 6 video analytic events, alarm priorities and independent alarm coverage, data mining tools, alarm notes and much more.
- **Alarm Priority:** Assign alarm priorities (critical, high, normal, low) to each alarm to increase the efficiency in response and data mining.
- **Alarm Coverage:** Operators can configure each alarm to be active at specific times or time intervals.
- **Alarm Management Guide:** Attach an alarm management guide to each of the alarms so the operator knows how to respond to different alarms.
- **Alarm Notifications:** The NCS client can play sounds, popup live video windows, activate alarm matrices, send email alarms and SMS messages at the moment of an event trigger.

- **Print Alarm:** Clients can print out a detailed alarm report with snapshots, alarm guides and a timestamp included.
- **Powerful data mining:** Users can quickly search alarm history by alarm name, operator name, alarm status, alarm priority, time interval, source device, alarm type and keyword search of alarm note.
- **Export Alarm list:** Users can export alarm history to Excel tables
- **Alarm Backup:** Alarm info can be scheduled for automatic or manual backup.
- **Recording on client:** Alarm related video can be automatically recorded on client storage for later reference.



NCS Matrix:

- **Live Matrix:** NCS Matrix stream and display live video from any NUUO recording server (NVR/DVR/Hybrid/NVRmini) as commanded by NCS client.
- **Multi-channel live view:** Each matrix computer can display up to 64 channels of live video per monitor and supports multiple monitor display.
- **Display layout:** Supports 9 display layouts for standard screens (1/4/9/12+1/16/25/36/49/64) and 5 for 16:9 or 16:10 wide screens (1+3/2+4/1+8/12/48)
- **Camera sequencing (auto scan):** Matrix can loop through all the cameras automatically at a specified interval.
- **PTZ Control:** Full functional PTZ control panel on the NCS client can be used to pan, tile and zoom the cameras displaying on NCS matrix.
- **Alarm Matrix:** Matrix can popup alarmed cameras instantly upon an unusual event on any matrix monitor specified.
- **Matrix View Groups:** Each user/user group can be assigned to a different matrix view groups with specific camera viewing privilege.
- **Transcoding:** Live display at different frame rate and resolution
- **Audio/Talk:** Listen to audio from cameras' microphone or operate two-way audio through NCS Client.
- **ImmerVision Lens support:** Four unique viewing modes of ImmerVision lens supported under Matrix. (Lens not included)

Extension:

Remote Desktop

- **Build-in Remote Desktop:** Embedded remote desktop tool that can be used to configure any NUUO recording server (NVR/DVR/Hybrid) directly from the central management station.

Remote Playback System

- **Multi-channel Remote Playback:** Remote playback of 16 channels recording from any one of the NUUO servers (NVR, DVR, NDVR and NVRmini).
- **Layout:** Playback in full screen, single channel, 4, 9 and 16 channel simultaneously.

- **Export video:** Take a snapshot of the recording in JPEG format or export a section of the video in “AVI” and “ASF” format with digital watermark.
- **Smart Search:** Search for 5 different special events (general motion, missing object, foreign object, camera occlusion and signal lost) in recorded files with date, time and log file.

Note:

*Users should access to NUUO MainConsole to get recorded video if camera sequence of MainConsole is changed. NCS Client can't get recorded video from MainConsole directly if camera sequence is changed.

*Users should synchronize or reload configuration of recording servers (MainConsole or NAS NVRmini) after configuration of recording server is changed.

Function	Description
Key features	
Client Server Architecture	One CMS server could be connected by several CMS clients
Supported Devices	Support all NUUO based site, as well as all I/O devices, POS and IP camera brands supported by Main Console v3.4.0 and NAS NVRmini v2.4
Unlimited Server Solution	Unlimited access of cameras and DVR/NVR/NVRmini sites
Multiple Matrix System	Unlimited matrix consoles connectable through network
Live Viewing	Up to 64 concurrent camera viewing for each matrix console
Full Alarm Management	Acknowledge or manage alarm log in the most efficient way.
Triple Monitor Scenario	
Default Monitor #1	Navigation Panel / Map Section
Default Monitor #2	Live Matrix System
Default Monitor #3	Alarm List / Message List / Remote Playback
CMS Server	
Alarm Database	SQL Server 2005 Express as database to store all alarms
Central Server	Store the site map data by hierarchical structures
	Directly connect to surveillance server to get alarm notifications
	Provide TCP service for CMS client access through network
	Registers different time zones into UTC format
Supported Notification Type	Send E-mail / SMS message
E-Map	
Map Tree Hierarchy	Unlimited level of display site map
Maps Formats	Supported image format: BMP, GIF, JPEG, PNG, and TIFF
Define Surveillance Servers	New / Edit / Delete / Disable and Enable
Define Cameras	New / Edit / Delete / Disable and Enable
Navigation Tools	Use to use zoom in, zoom out and drag operation
Indicators on Maps	Indicators for maps, servers, cameras, I/O devices and POS Indicator icons support image format with alpha channel (TIFF) Display camera coverage Easy to find device on Map and Matrix View
Instant Status Notification	shows corresponding icon nearby device icons to automatically notify users of the events

Function	Description
Intuitive Operation on Maps	Open Last Alarm Open Live Video Window Open Instant Playback Window Backup Recorded Video View Server Status Report Search POS transaction data
Live Popup Window	Live popup window to use audio/talk functions and show live video with PTZ control panel Set stream profile to change video quality Snapshot and POS transaction overlay
Playback Popup Window	Remote playback popup window to replay recorded video and audio Export to AVI/ASF file and snapshot with digital watermark
Alarm Management	
Supported Alarm Type	Video Signal Abnormal Digital Input Trigger (Normal / Emergency) POS Alarm Trigger Network Abnormal DVR / NVR Abnormal Motion / Missing / Foreign / Focus / Blocked Low Disk Space CPU temperature High / Fan Speed Low
Action when Alarm	Instant notifications on map and event list Go to specific map layer Play sounds Automatically show live video on popup window Automatically show live video on live matrix system Send SMS Send Email
Alarm Viewing	Filter tools to survey existing alarm history
Alarm Detail Popup	Show / Print a specific alarm with image preview
Advanced Alarm Search	Access required alarm logs in the most efficient way
Matrix System	
Live Viewing	Up to 64 concurrent camera viewing
Grid Type	Standard: 1, 4, 9, 12+1, 16, 25, 36, 49, 64 Wide Screen: 1+3, 2+4, 3+8, 12, 48
View Type	Flexible auto scan mechanism and full screen viewing
Automatically Popup	Show the live video associated with alarms
PTZ Panel	Floating PTZ panel to manipulate cameras on the matrix system
Joystick Support	Control PTZ camera by Joystick via NCS Client
Remote Playback System	
Remote Playback	Up to 16 concurrent camera viewing
Grid Type	1, 4, 9, 16
Export Function	Save as image and video, as well as printing
Smart Search	Fast search based on the specific event Include General motion, Missing object, Foreign object, Lose focus and Camera occlusion

Function		Description			
Miscellaneous					
UserGroup Authority		Alarm Management View Alarm Image View Live Video View Recorded Video PTZ Control Control Digital Output Remote Desktop View and Search POS transaction Audio / Talk Access Devices			
User Authority		User/Password Phone Number Email / Phone number UserGroup Coverage Matrix View Groups			
Built-in Remote Desktop		CMS is capable of controlling NUUO servers through the remote desktop protocol.			
Supporting NVR/DVR Device					
NVR	SW v3.4.0	SCB-IP+ series			
DVR	SW v3.4.0	SCB-G3-1000 series, SCB-G3-2000 series, SCB-G3-3000 series, SCB-4016, SCB-5000R series, SCB-6000 series, SCB-7000 series			
NVR-mini	FW v2.4	NV-2040, NV-4080, NV-4160			
NVR Supporting Cameras					
IP Camera Brand(s)	ACTi	Arecont	ARM	Atlantis	Axis
	Basler	Bosch	Brickcom	Camtron	Cisco
	CNB	Digimerge	D-Link	Dynacolor	ENE0
	Etrovision	EverFocus	Eyeview	Fine	HIKVision
	Hitron	Honeywell	Icantek	IQinvision	JVC
	LevelOne	Linksys	Loxex	Lumenera	Mobotix
	Moxa	Onvif	Panasonic	Pelco	Pixord
	Planet	SAE	Samsung	Santec	Sanyo
	Seorim	Sony	StarDot	Toshiba	Truen
Videosec	Vivotek	Y-cam	Zavio		
Camera Format	H.264, MPEG4, MJPEG, MxPEG				
Supported Languages					
Chinese (Simplified)	Chinese (Traditional)	Danish	English	Finnish	French
Hebrew	Hungarian	Japanese	Korean	Portuguese (Brazil)	Russian
Serbian	Spanish	Thai			