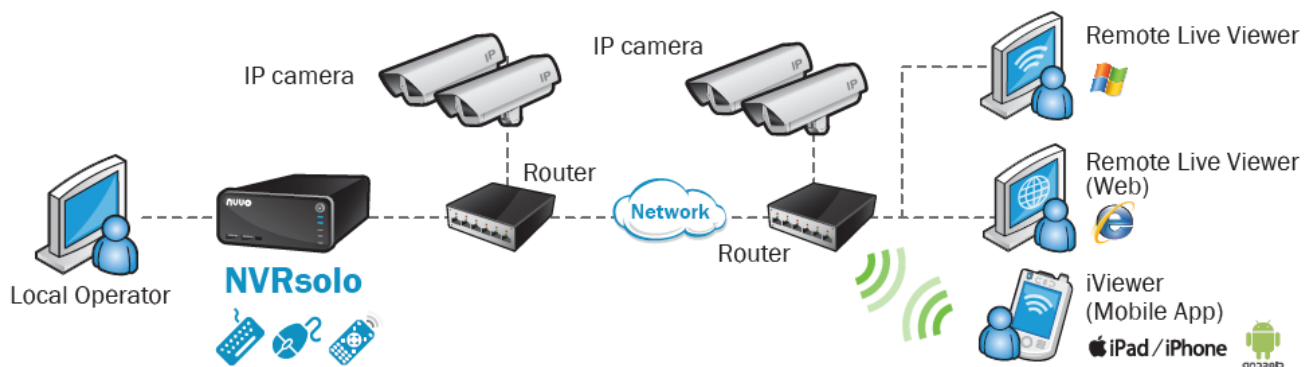


## NUUO NVRsolo Specification

### NUUO NVRsolo



### System Diagram



### Main Features

- Linux embedded – free from PC crash and virus attack
- **One-click setup for more than 70 brands of IP cameras**
- **4 CH real time @1080p live display**
- **ezNUUO – free from router settings for web/mobile viewing**
- **Point of Sale (POS)<sup>1</sup>**
- **Alarm source of NUUO Central Management System**
- RAID 0,1 for maximum capacity or data protection
- Support megapixel cameras and H.264 compression format
- Camera I/O integration
- Real-time digital output and Email alert
- Digital watermark
- NTP server synchronization
- Support 72 brands of IP cameras and over 1650 models<sup>2</sup> (with free monthly update)

<sup>1</sup> POS device configuration is only available in web.

<sup>2</sup> The data is updated for DP 2.8.

### Remote Client Application

- Support Stream Profile for remote live view bandwidth control (Original / 300 kbps / 100 kbps)
- Support mobile client for iPhone / iPad / Android<sup>3</sup>
- Up to 128 CH remote live view with multiple monitors

### Web

- Web-based configuration, live viewer, playback (Recommend on IE 8 and IE 9)
- Online GUI recording schedule
- Panorama 360° PTZ (ImmerVision and VIVOTEK fisheye)
- Digital PTZ and multi-view
- Support joystick for easier camera control
- Playback with 5 types of intelligent event search
- E-map with indicator
- Auto port-forwarding

### Specifications

Model	NS-1040				
Recording Cameras	4(8) <sup>4</sup>				
Playback Channels	4(8) <sup>5</sup>				
Video Output	HDMI, VGA				
Output Resolution	1920x1080, 1280x1024, 1280x720, 1024x768				
Decoding Capacity (H.264)	120fps @1080p or 240fps @720p (Up to 4M per channel)				
Decoding Capacity (MPEG4)	120fps @1080p or 240fps @720p (Up to 2M per channel)				
Decoding Capacity (MJPEG)	15fps @720p				
Throughput	60Mbps				
Number of Drives	1 x 3.5" SATA II / 2 x 2.5" SATA II				
External Storage	1 x eSATA				
Max Storage Per Drive	3TB				
RAID Level	RAID 0,1				
CPU	ARM Cortex A9 dual cores (930MHz x2)				
RAM	DDR3 2GB				
I/O Interface	5 x USB 2.0 (for keyboard, mouse, UPS, USB flash drive)				
LAN	2 x Gigabit Port, RJ45				
LAN Transmission Speed	10/100/1000 Mbps				
Voltage	DC 12V 4A				
Power Consumption	48W <sup>6</sup>				
Device Dimension (HxWxD)	262 x 137 x 300 mm				
Device Weight (Without Drive)	2.5 kg (5.51lbs)				
Temperature (Operating with HDD)	0°C-40°C				
Humidity (Operating)	5%-95%				
Supported IP Camera Brands: 72	ACTi	Alphatech	Airlive	Arecont	AMTK
	ARM	Asoni	AXIS	BASLER	BOSCH
	Brickcom	Bolide	Bullwark	Centrix	CISCO

<sup>3</sup> Please check the supported camera spec list on website. Besides, to use this feature, you have to enable 2<sup>nd</sup> stream function on setting page first.

<sup>4</sup> NS-1040 can support up to 8 cameras with license activation (license type: 1/2/4ch)

<sup>5</sup> NS-1040 can support up to 8 cameras with license activation (license type: 1/2/4ch)

<sup>6</sup> 48 W is the maximum power consumption

<b>brands in v1.0<sup>7</sup></b>	CNB	COP	CORUM	Dahua	Digital Watchdog
	D-Link	DYNACOLOR	Eneo	Ernitec	Everfocus
	Fine	Forenix	GE	Grandstream	Grundig
	Guardeon	Guardliner	HIKVision	Histream	Honeywell
	IQinVision	JVC	Jetstor	LevelOne	LG
	Lilin	Linksys	Lumenera	Mobotix	Messo
	NetworkCamera	Onvif	Panasonic	Pelco	PIXORD
	Probe	Rover	Samsung	SANTEC	SANYO
	Shany	Sony	StarDot	Sunell	Techson
	Tiandy	Telview	TOSHIBA	TRUEN	UDP
	Videosec	Vision Hi-Tech	Vista	VIVOTEK	Yudor
	Zavio	3Svision			
<b>Compression Format<sup>8</sup></b>	MPEG4, M-JPEG, H.264, MxPEG (remote client only)				
<b>Recording Type</b>	Emergency record, continuous record, record by schedule, event triggered record, digital input triggered record				
<b>Live View Control</b>	Live view, preset/go, PTZ, remote I/O, snapshot, digital PTZ				
<b>Remote Live View Control</b>	Live view, preset/go, PTZ, remote I/O, snapshot, multi-view, digital PTZ, advanced E-Map, bandwidth monitoring				
<b>Audio &amp; Video Recording<sup>9</sup></b>	Synchronized audio and video recording				
<b>POS<sup>10</sup></b>	Live view, record, playback, and search for every transaction (web only)				
<b>Auto Backup</b>	Automatically backup the recorded video of the date before to FTP server				
<b>Intelligent Search via Web/Remote</b>	General motion, missing object, foreign object, lose focus, camera occlusion				
<b>Remote Live View Connection</b>	Live view maximum 16 connections per server at the same time				
<b>Supported Languages: 16</b>	English, Croatian, Czech, Deutsch, Finnish, French, Italian, Japanese, Korean, Polish, Portuguese (Brazil), Russian, Simplified Chinese, Traditional Chinese, Spanish, Swedish				
<b>Remote Client System Minimum Requirement</b>					
<b>Model</b>	<b>NS-1040</b>				
<b>OS</b>	Windows XP (32-bit) / Win7 (32 and 64-bit)				
<b>CPU</b>	Intel Core 2 Duo, 2.6GHz				
<b>RAM</b>	1GB				
<b>LAN Transmission Speed</b>	10/100/1000 Mbps (RJ45)				
<b>UI</b>	<ol style="list-style-type: none"> <li>1. Web browser: Internet Explorer 8, 9</li> <li>2. NUUO client application program</li> <li>3. NUUO iPhone, iPad, Android mobile live viewer<sup>11</sup></li> </ol>				
<b>Technical Details</b>					
<ul style="list-style-type: none"> <li>• <b>System, Setting, Management and Integration</b> <ul style="list-style-type: none"> <li>■ <b>Server-Client Architecture:</b> Centralizes all video data transaction only via NVRsolo to local operators and remote clients. With this centralized structure, total camera loading remains at a stable level, thus ensuring good recording quality even when reaching maximum number of remote client access.</li> <li>■ <b>Open Platform:</b> Support over 1650 IP camera models and video servers (encoders) from 72 brands of major network camera manufacturers.<sup>12</sup></li> </ul> </li> </ul>					

<sup>7</sup> The data is updated for DP 2.8.

<sup>8</sup> Depends on IP cameras.

<sup>9</sup> Audio playing on local side will be supported in v1.1.

<sup>10</sup> POS device configuration and search function are available in web only.

<sup>11</sup> Please check the supported camera spec list on website. Besides, to use this feature, you have to enable 2<sup>nd</sup> stream function on setting page first.

<sup>12</sup> The data is updated for DP 2.8.

- **One-Click Setup:** NVRsolo can automatically search and add IP cameras on the same subnet (camera should support UPnP protocol or should be implemented its brand's search tool<sup>13</sup>). For those unsearchable cameras, user can manually insert it. The auto detection function will help the user to find the brand and model of the camera after specifying its IP address.
  - **Storage Optimization:** NVRsolo supports H.264 compression format which helps increasing the storage efficiency to nearly 600% higher than MJPEG and 150% higher than MPEG4.
  - **Friendly GUI Recording Scheduler:** Graphical user interface to setup recording schedule featuring unique day mode and week mode.
  - **Event & Action:** 4 camera events including motion detection (if supported by camera), connection lost and camera input; 5 system events and daily system report by E-mail; 4 instant alarm responses supporting output, Email, E-map popup on web/remote and NUUO CMS alarm system.
  - **RAID Level Selection:** Support RAID 0 and 1 for maximum capacity or data protection at the HDD level. To use RAID 1, you must insert two 2.5 inch HDDs.
  - **Point of Sale (POS):** POS transactions received through NUUO POS box or Ethernet (TCP/IP client). POS text overlay on live view video and recordings. All recorded POS transactions are searchable on web/remote playback system.
  - **I/O Event Control:** With the integration of camera I/O, system can start recording when input triggered, or trigger output as an event happened.
  - **Various Authorities of Different Kinds of Users:** Web Viewer logins to NVRsolo via 4 different user groups: administrator, power user, user, and guest. Each user group has its own distinctive privilege in system configuration, live view camera and playback records.
  - **Synchronization with NTP Server:** Synchronize time weekly/monthly to keep the accuracy of recording time.
  - **Log System:** Hardware log keeps track of system operation; NVR log for camera status and user access; NVR event Log for special events; Export and Backup Log for exporting video or video backup action.
  - **User Friendly:** Provide users with hints on local interface and HELP tab on the webpage for quick start tips and troubleshooting.
- **Local Operation**
    - **Multiple Live View Channel:** Up to 8 channels. The maximum resolution display per channels is up to 4 megapixels in H.264 codec, and 2 megapixels in MPEG4 codec.
    - **Multiple Playback Channel:** Up to 8 channels.
    - **Monitor Resolution:** 1024x768, 1280x720, 1280x1024, 1920x1080.
    - **Emergency Recording:** Click the Emergency Recording button on Live View to active all channels always recording instantly.
    - **Instant Playback:** Play the last few minutes of live videos instantly to investigate recent events.
  - **Remote Client Operation**
    - **Multiple Live View Channel:** Up to 16 channels of remote connections per unit. Remote Live Viewer client supports 64 channels from multiple servers, and could display up to 128 channels with multiple monitors. In addition, Remote Live Viewer client can access and display live video from any NUUO Mainconsole family servers simultaneously.

<sup>13</sup> Support camera search tools of ACTi, Arecont, and Sony.

- **Multiple Playback Channel:** Up to 8 channels in web playback client/NUUO Playback System.
- **Monitor Resolution:** 800x600, 1024x768, 1200x900, 1280x1024, 1440x900, 1600x1200, 1680x1050, 1920x1080, 1920x1200.
- **Multi-View:** NVRsolo can duplicate the same live view video onto multiple channels and digitally zoom in to see the details of different spots on cloned channels without losing the original live view video or using extra camera licenses.
- **E-Map:** Show device indicator on map for easy finding and tracking device location. Furthermore, pop up map to point out the device when an event occurred.
- **Stream Profile:** Live display multiple camera streams with lower bit rate, while still recording at highest possible quality.
- **Multiple Mobile Clients:** Support mobile live viewer for iPhone, iPad, and Android.<sup>14</sup>

## • Playback, Search, Export and Secure Data

- **Post-Recording Processing (remote):** Intelligent search, digital PTZ and video enhancement tool.
- **Intelligent Search (remote):** Search recorded video for 5 events including general motion, foreign object, missing object, loss focus and camera occlusion.
- **Video Enhancement (remote):** Fine tune the image's visibility, sharpen, brightness, contrast or even grey scale.
- **Evidence Export:** Snapshot and print video image in BMP/ JPEG; backup video in DAT; save video in ASF/AVI. The action exporting video or video backup will be recorded in NVRsolo's log system.
- **Alarm Notification:** Notify users on camera and system event by sound, digital output, E-mail and NUUO CMS alert.
- **Auto Backup:** Automatically backup the recorded video of previous dates to a designated FTP server.
- **Manual Backup:** Manually backup or delete the recordings from any NVRsolo.
- **Watermark:** Protect original recordings from alternation with NUUO watermark verification tool.

## • Extended Service

- **NUUO Central Management System (CMS):** Ultimate central monitoring solution for grand scale projects and projects with multiple sites. Fully compatible with all NUUO Mainconsole family servers.

## • External Device

- **POS Box (from serial port to Ethernet):** NUUO Point of Sales system works on NVRsolo by overlaying the transaction text from cash register or ATM machines onto live video and recordings. All recorded POS transactions are searchable on web/remote playback system.
- **Panorama 360° PTZ:** Several modes are supported on web/remote live view and playback system. ImmerVision<sup>15</sup>: Original mode, PTZ mode, Quad mode and Perimeter mode. Vivotek: Original mode, Rectilinear mode, Full-view panorama mode, and Dual-view panorama mode.

<sup>14</sup> Please check the supported camera spec list on website. Besides, to use this feature, you have to enable 2<sup>nd</sup> stream function on web setting page first.

<sup>15</sup> Please refer to ImmerVision's website for qualified cameras.

- **APC UPS:** Continues to feed the NVRsolo power in an event of power outage.
- **Joystick:** Joystick support on PTZ cameras and software enabled digital PTZ function are both available in web/remote liveview. Preset points and patrol functions are also available on many camera models.