## NUUO NDVR Specification

<table>
<thead>
<tr>
<th>NUUO DVR Card</th>
<th>SCB 8000 series</th>
<th>SCB 7100 series</th>
<th>SCB 7000S series</th>
<th>SCB 6000S series</th>
<th>SCB 3000 series</th>
<th>SCB 1000 series</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td>8004HD</td>
<td>7108</td>
<td>7116</td>
<td>7004S</td>
<td>7008S</td>
<td>7016S</td>
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<tr>
<td><strong>Video Input</strong></td>
<td>4</td>
<td>8</td>
<td>16</td>
<td>4</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td><strong>Audio Input</strong></td>
<td>0</td>
<td>8</td>
<td>16</td>
<td>4</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td><strong>Maximum Cards</strong></td>
<td>2 Cards</td>
<td>1 Card</td>
<td>1 Card</td>
<td>4 Cards</td>
<td>4 Cards</td>
<td>4 Cards</td>
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<tr>
<td><strong>Maximum analog input per system</strong></td>
<td>8***</td>
<td>16***</td>
<td>64</td>
<td>64</td>
<td>32</td>
<td>32</td>
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<tr>
<td><strong>Display Rate (FPS)</strong></td>
<td>120/100</td>
<td>240/200</td>
<td>480/400</td>
<td>120/100</td>
<td>240/200</td>
<td>480/400</td>
</tr>
<tr>
<td><strong>Recording Rate @CIF (FPS)</strong></td>
<td>720p@120</td>
<td>240/200</td>
<td>480/400</td>
<td>120/100</td>
<td>240/200</td>
<td>480/400</td>
</tr>
<tr>
<td><strong>Recording Rate @D1 (FPS)</strong></td>
<td>1080p@120</td>
<td>240/200</td>
<td>480/400</td>
<td>120/100</td>
<td>240/200</td>
<td>480/400</td>
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<tr>
<td><strong>Video Resolution</strong></td>
<td>1080p, 720p</td>
<td>704x480; 352x240; 176x120</td>
<td>704x576; 352x288; 176x144</td>
<td>704x480; 352x240; 176x120</td>
<td>704x480; 352x240; 176x120</td>
<td>704x480; 640x480; 352x240</td>
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<tr>
<td><strong>NTSC PAL</strong></td>
<td>N/A</td>
<td>RCA and DP: 10fps</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
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<tr>
<td><strong>w/ DP</strong>*</td>
<td>N/A</td>
<td>RCA: 25fps</td>
<td>N/A</td>
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<tr>
<td><strong>w/o DP</strong>*</td>
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<td>DP: 14fps</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td><strong>Only DP</strong>*</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<td><strong>Compression Format</strong></td>
<td>HW H.264</td>
<td>H/W H.264</td>
<td>H/W H.264</td>
<td>S/W H.264</td>
<td>S/W H.264</td>
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<tr>
<td><strong>Interface</strong></td>
<td>PCI-E x1</td>
<td>PCI-E x1</td>
<td>PCI-E x1</td>
<td>PCI-E x1</td>
<td>PCI</td>
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<tr>
<td><strong>Maximum I/O Card</strong></td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>4</td>
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<tr>
<td><strong>Available I/O Box</strong></td>
<td>Support</td>
<td>Support</td>
<td>Support</td>
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<tr>
<td><strong>Hardware Watchdog</strong></td>
<td>Support</td>
<td>Support</td>
<td>Support</td>
<td>Support</td>
<td>Support</td>
<td></td>
</tr>
<tr>
<td><strong>Dimension (W x H, mm)</strong></td>
<td>178 x 126</td>
<td>216x126</td>
<td>216x126</td>
<td>188 x 121</td>
<td>188 x 121</td>
<td>188 x 121</td>
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<tr>
<td><strong>Warranty</strong></td>
<td>2-year*</td>
<td>2-year*</td>
<td>2-year*</td>
<td>2-year*</td>
<td>2-year*</td>
<td>2-year*</td>
</tr>
</tbody>
</table>

### System Minimum Requirements (per card)

| OS Supported | Windows XP (32-bit) / Windows 7 (32 and 64-bit) / Windows 2008 R2 (64-bit) |
| CPU | Intel Core 2 DuoE5300 |
| RAM | 2 GB |
| HDD | 250 GB |
| Mother-board | Intel P55, H55, X58, P45, P43 chip, MB vendor ASUS, Gigabyte, or MSI with Intel Chipset recommended |
| Display | ATI Radeon 4350, nVIDIA GeForce GF-9600 or above (ATI Driver V11.5 recommended, ATI Driver V10 not support) |

### Note

- The warranty in US area is 3-year.
- **When installed two 3000 series cards on one desktop, the system can only support 352x240 (NTSC) 352x288 resolutions for each.
- ***DP stands for digital output.
- 7100 and 8004HD cards can be installed with 6000S/7000S to have more analog inputs per system.

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NUUO NDVR Specification

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System Diagram

- IP camera
- Analog Camera
- Video Server
- NUUO Hybrid NDVR
- Network
- Web Browser Client
- Live View & Playback
- Remote Client Live view & Playback
- Mobile Clients PDA Viewer
- HD-SDI Capture Card
- Analog Camera
- Capture Card
- POS
- LPR
- Access Control
- I/O Device
- POS, I/O device, LPR and access control integration
- Windows Active Directory
- Privacy Mask
- Boosting Recording
- On the edge motion integration
- E-map
- Instant Playback
- Two-way audio
- Unique GUI recording schedule
- Digital PTZ and multi-view
- Smart detection of 6 events with 10 instant responses
- Counting application
- Intelligent playback system with 5 video analytics searches
- Up to 128 **CH remote live view
- Supports transcoding and multiple stream profiles
- Supports digital watermark
- Remote playback, remote backup, remote I/O control and remote desktop configuration
- Supported by NUUO Central Management System
- Supports 53 brands of IP cameras and over 1140 models
- Supports 27 languages
- Supports Windows mobile, iPhone, iPad, Android and Blackberry clients
The maximum number of camera connections depends on the server's hardware configuration and the total bit rate of the IP cameras. Please check NUUO Calculator on [http://support.nuuo.com/calculator/](http://support.nuuo.com/calculator/)

* *The maximum number of camera connections depends on the server’s and client’s hardware configuration.

### Specifications

#### System, setting, management and integration:

- **Open Platform**: Supports over 1140 models of IP cameras, megapixel cameras and video servers from 53 brands of network camera manufacturers; supports H.264, MPEG-4, MJPEG, MxPEG video formats; integrates various systems including point of sale (POS) and I/O devices, license plate recognition and access control system. SDK for access control integration available upon request.

- **Multi-site/Multi-server**: Each NVR server supports up to 64* channels, from IP cameras and video encoders with analog cameras, and can be managed by NUUO CMS or remote live view client for centralized management in multi-site projects.
  * The maximum number of camera connections depends on the server's hardware configuration and the total bit rate of the IP cameras. Please check NUUO Calculator on [http://support.nuuo.com/calculator/](http://support.nuuo.com/calculator/)

- **Disk Load Balance**: NUUO NVR improves recording performance to utilize several disks and dynamically distributes the video loads among the disks to improve throughput.

- **Multiple Video Clients**: NUUO NVR server can stream video to multiple Remote Live Viewers, web clients and mobile clients simultaneously.

- **Intelligent Video Analytics**: NUUO IVS supports 6 types of video analytics including general motion, missing object, camera occlusion, foreign object, focus lost and signal lost. Each IVS alarm can trigger up to 10 unique instant notifications.

- **Intelligent PTZ**: Joystick support on PTZ cameras and software enabled digital PTZ function are both available in NUUO NVR. Preset points and patrol functions are also available on many camera models.

- **GUI Recording Schedule**: Intuitive GUI recording schedule featuring continuous recording, motion recording and the 6 unique event recording modes. Users can define the recording schedule for each camera on a day by day basis.

- **Triple Monitor**: Up to 64* channels of live view video can be displayed per monitor. Monitor 1 and monitor 2 can both display live view video or act as alarm monitor while the 3rd monitor can be used for playback.
  * The maximum number of camera connections depends on the server's hardware configuration and the total bit rate of the IP cameras. Please check NUUO Calculator on [http://support.nuuo.com/calculator/](http://support.nuuo.com/calculator/)

- **Transcoding**: Record and display live video at different frame rate and resolution.

- **Boosting Recording**: Dynamically boost recording quality on motion and other events to optimize recording storage.

- **Advanced E-Map**: Capability to import custom image file, place the cameras and I/O on the map to indicate where events are being triggered with a convenient video preview window.

- **User-Friendly Interface**: GUI recording schedule, camera drag and drop, I/O control menu and PTZ control menu.

- **Automatic Camera Model Detection**: automatically search for all available IP cameras within the network (camera must support UPnP protocol). For cameras that don’t support UPnP, users can manually insert the IP camera. The auto detection function will help the user to find the brand and model of the camera after specifying its IP address.
Counting Application: intelligent 2-way (in and out) counting of object, people and traffic.

User Authority Management: Support unlimited number of users with detailed and fully customizable user privilege on each user.

Windows® Active Directory: Synchronized with Windows® Active Directory server to manage user privilege and control of camera action.

Network Flow Monitor: Data streaming bandwidth of each remote client connection to the NVR server can be monitored and blocked if flow rate is too high.

Auto Recycle: Automatically recycle recording files when the storage is full. Separate recycle schedule between recordings and varies log files.

SDK Integration Support: Open SDK for integration with third-party systems such as access control, automation, burglar alarm, video analytics and others.

Upgrade notification: Automatically obtain upgrade notification from NUUO website to download the latest version.

Live Display:

Multi-view: NUUO NVR can duplicate the same live view video onto multiple channels and digitally zone in to see the details of different spots on cloned channels without losing the original live view video.

Intelligent PTZ: Joystick support on PTZ cameras and software enabled digital PTZ function are both available in NUUO NVR. Preset points and patrol functions are also available on many camera models.

Monitor Resolution: Supports 1024x768, 1200x900, 1280x1024, 1440x900, 1600x1200, 1680x1050, 1920x1080, 1920x1200 screen resolutions

Advanced E-Map: Freedom to import custom image file, place the cameras and I/O on the map to indicate where events are getting triggered with a convenient video preview window.

Bandwidth Monitor: Monitor and display the bandwidth usage of individual cameras and remote viewing clients.

Two-way Audio: Monitor and display the bandwidth usage of individual cameras and remote viewing clients.

Instant Playback: Allow to play the last few minutes of any live video channel on MainConsole and Remote Live View

Privacy Mask: Protect privacy of the sensitive image by blocking out sensitive areas from view and covering the areas with black boxes in live, playback and exported video.

Playback, Search, Export and Secure data:

Post-Recording Processing: Search for 5 types of different analytics events, digital PTZ and video enhancement tool are all available in playback.

Multi-Channel Playback: Play up to 16 channels of recorded video simultaneously both locally and remotely. Forward playback at 1/16x, 1/8x, 1/4x, 1/2x, 1x, 2x, 4x, 8x, 16x, 32x, 64x.

Video Enhancement: Fine tune the image’s visibility, sharpen, brightness, contrast or even grey scale.
### Intelligent 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.

### Video Export
Take a snapshot of the recording in JPEG/BMP format or export a section of the video in "AVI" and "ASF" format.

### Auto and Manual Backup
Schedule or manual backup the recording for archiving purposes or backup the recording with an embedded player to watch at a separate location. NVR supports both local and remote backup to local HD, CD, and DVD.

### Log data
Unusual event, system log, counting application, POS log and export and backup can export to "xls" or "txt" file.

### Watermark
Protect for original recording from alternation with our watermark verification tool.

### DBTool
Reconstruct, repair or relocate the recordings in local drive, or external drive.

### Remote operations:

- **Multiple Live View Display**: Streaming live video from multiple NUUO servers (NVR, DVR, and NDVR) simultaneously. Dual monitors support with up to 128 channels per monitor (64* channels per monitor).
  *The maximum number of camera connections depends on the server's hardware configuration and the total bit rate of the IP cameras. Please check NUUO Calculator on [http://support.nuuo.com/calculator/](http://support.nuuo.com/calculator/)

- **Multi Playback Channels Display**: Remote playback of 16 channels recording from any one of the NUUO servers (NVR, DVR, and NDVR).

- **Intelligent PTZ**: Joystick support on PTZ cameras and software enabled digital PTZ function are both available in NUUO NVR. Preset points and patrol functions are also available on many camera models.

- **I/O Event Control**: Easy to use input and output control panel to remotely trigger digital outputs and monitor input status.

- **E-Map**: A map view of where each camera and I/O devices are located with a convenient preview window.

- **Two-way Audio**: Listen and record audio from camera's microphone. Talk to IP camera's speaker.

- **Remote Backup**: Backup the video into .DAT format with a NUUO player attached for easy achieve and viewing purposes.

- **Web-browser (client)**: Display up to 64 channels of live video stream or 16 channels of playback in I.E. from any single NUUO server. Support direct login information (user/pass) in a URL address

- **PDA Viewer**: Up to 16 channels snapshot or 1 channel live display; PTZ and I/O control.

- **Mobile Client**: Support iPhone, iPad, Android and Blackberry application client to live view video and control PTZ functions.

### Extension Service

- **Central Management System**: Ultimate central monitoring solution for grand scale projects and projects with
multiple sites. Fully compatible with all NUUO servers (NVR, DVR, NDVR and NVRmini).

- **Remote Desktop Service:** Embedded remote desktop server that will host for any NUUO remote desktop clients to remotely configure the NVR software (remote desktop client is installed separately).

- **3GPP Service:** NUUO NVR supports mobile devices through 3G network to stream live view video.

**External Device**

- **Point of Sale (POS):** NUUO Point of Sales system works on NUUO NVR by overlaying the transaction text from cash register onto live video channels. All POS recordings are searchable.

- **External I/O Capacity:** Please refer to our I/O box section: C24/C26/C28 for more details.

- **Panomorph PTZ Camera (360°):** Integrates ImmerVision Lens (IMV1-1/3 Lens supported) to view Live, record and playback the complete 360x180 FOV. Users can easy to detect, track and analyze throughout the entire area.

- **3rd Party Integration:** Metadata Plugin technology support 3rd party software including license plate recognition, access control and so on. Though Metadata Plugin, users can manage metadata by recording real time information in databases which can describe events that link to video and audio. The system provides smart search tool to retrieve information and recorded video.
  
  *V3.5 will support Visec (LPR) and Tyco (access control).

**Smart Guard:**

- **Smart detection** of 6 camera events, 14 different user-defined POS events, digital input events and 4 system events. The combination of our smart guard events is a powerful tool to combat vandalism and provide a platform for operators to monitor and respond to live events immediately.
  
  - **Camera Events:**
    - General Motion (Multiple sensitivity)
    - Edge Motion
    - Missing Object
    - Foreign Object
    - Focus Lost
    - Camera Occlusion
    - Signal Lost
  
  - **Signal Digital Input Event**
  
  - **System Event:**
    - System alarm on Disk Space Exhausted
    - System alarm on System Health Unusual (CPU temperature)
    - System alarm on Resource Depleted (CPU loading)
    - System alarm on Network Congestion

- **Instant alarm notification** is the fastest and most cost efficient way to automatically respond to any smart detection event.
  
  - 10 automatic instant alarm responses:
    - On Screen Display
    - Play Sound
    - Send E-mail
    - Phone Call
    - PTZ Preset Go
    - Signal Digital Output
    - Send a SMS message
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- Send to Central Server
- Send Snapshot to FTP
- Popup E-Map on Event

**Schedule-based:** Users can define the smart guard schedule for each event on a day by day basis

<table>
<thead>
<tr>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
</tr>
<tr>
<td><strong>IP Camera Input(s)</strong></td>
</tr>
<tr>
<td><strong>Version</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IP Camera Brand(s) Supported (with device pack v1.14.0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTi</td>
</tr>
<tr>
<td>BASLER</td>
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<tr>
<td>CNB</td>
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<tr>
<td>Digimerge</td>
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<tr>
<td>EYEVIEW</td>
</tr>
<tr>
<td>HIKVISION</td>
</tr>
<tr>
<td>Levelone</td>
</tr>
<tr>
<td>MESSOA</td>
</tr>
<tr>
<td>Pelco</td>
</tr>
<tr>
<td>SAMSUNG</td>
</tr>
<tr>
<td>StarDot</td>
</tr>
<tr>
<td>Videosec</td>
</tr>
</tbody>
</table>

**Digital PTZ**
- Supported in Live view and Playback

**Multiple Show**
- Supported in Live view

**Triple Monitor**
- Enable maximum 64 channels with two screens to show live video and viewer recording video on third monitor.

**Screen Resolution**
- 1024x768, 1200x900, 1280x1024, 1440x900
- 1600x1200, 1680x1050, 1920x1080, 1920x1200

**Audio & Video Recording**
- Synchronized audio & video recording.

**Screen Division**
- 1/4/6/9/10/13/16/25/36/49/64 divided screen.

**Compression Format**
- H.264;MPEG-4;M-JPEG;MxPEG

**Recording Type**
- Continuous record, record by digital input, motion record, event recording, boosting recording, record by schedule, manual record

**Playback Channels**
- Playback Maximum 16 channels under several modes & full screen.

**Playback Control**
- Playback, backward playback, fast forward/backward playback.

**Auto Recyling Recording**
- Auto recycling when storage disk is full.

**Available I/O Function**
- Supporting I/O Box

**Available POS Device**
- SCB-C31 RS232 to Ethernet Convertor

**Hardware Watchdog**
- N/A

**System Minimum Requirements**

<table>
<thead>
<tr>
<th>OS Supported</th>
<th>32bits: MS Windows XP pro SP3 / Vista SP1 / Win 7 SP1</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Intel Core 2 Duo E5300</td>
</tr>
<tr>
<td>RAM</td>
<td>2 GB</td>
</tr>
<tr>
<td>HDD</td>
<td>250 GB or above</td>
</tr>
<tr>
<td>Motherboard</td>
<td>Intel P55, H55, X58, P45, P43 chip, MB vendor ASUS Gigabyte or MSI with Intel Chipset recommended</td>
</tr>
<tr>
<td>Display</td>
<td>ATI Radeon 4650 or above (ATI Driver V11-2 recommended,)</td>
</tr>
</tbody>
</table>

**Note**
- The maximum number of camera connections depends on the server's hardware configuration and the total bit rate of the IP cameras. Please check NUUO Calculator on [http://support.nuuo.com/calculator/](http://support.nuuo.com/calculator/)

**Support Language**

<table>
<thead>
<tr>
<th>Bulgarian</th>
<th>Chinese (Simplified)</th>
<th>Chinese (Traditional)</th>
<th>Czech</th>
</tr>
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<tbody>
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