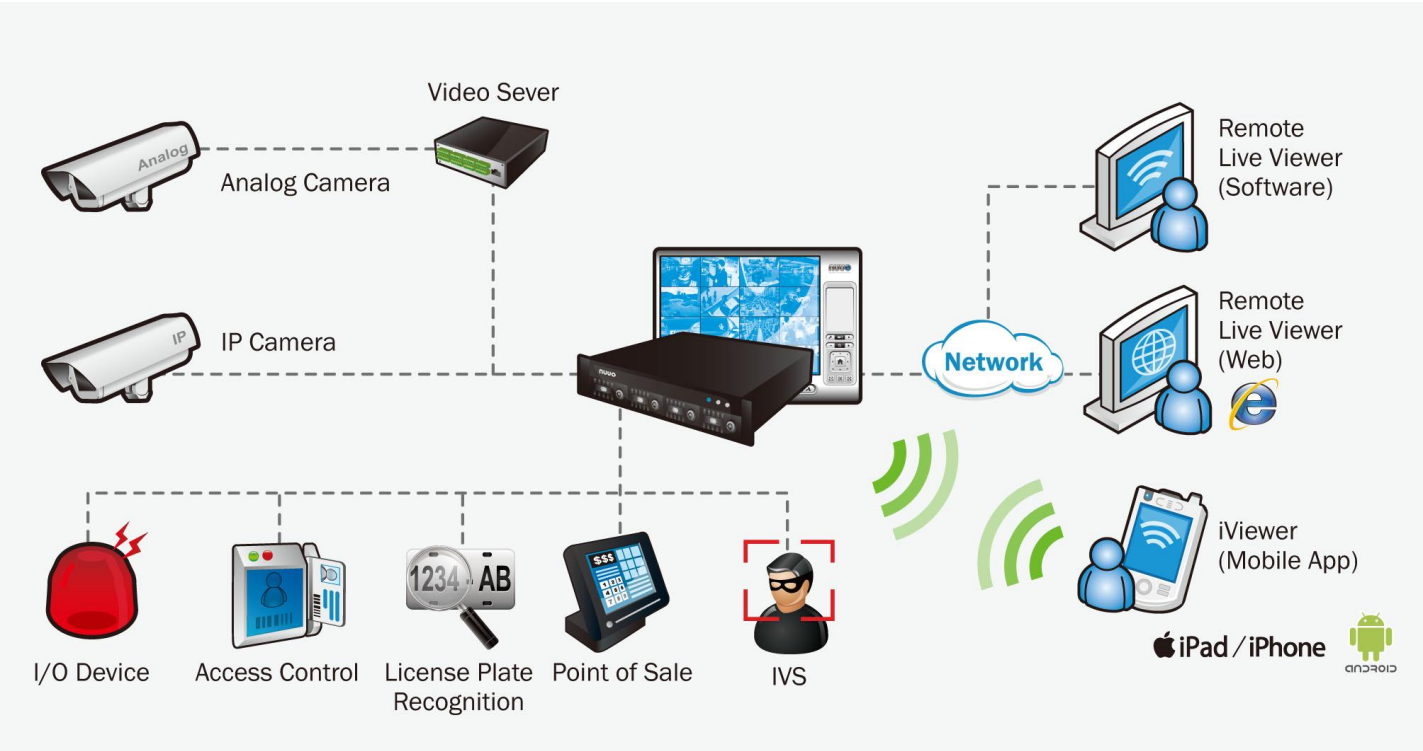
NUUO R3-1600IP-HR & R4-2400IP-HR

System Diagram



Main Features

- Supports up to 128 channels
- Support IP cameras and video encoders
- Supports SD and HD-SDI analog*3
- Supports H.265, H.264, MPEG-4, M-JPEG, MxPEG compression format

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- Support single monitor for local configuration only*3
- Supports video auto backup
- POS, I/O device, LPR and access control integration (*1IP lite does not support POS, LPR)
- Windows Active Directory*1
- Privacy Mask*2
- Boosting Recording*2
- Support Camera IVS Event: Edge Motion (Any Zone), Edge Motion (Individual Zone)
- New Web Client support Report Service for Counting Result and Heat Map
- RTSP Streaming for Easy Integration
- Essential IP Camera Configuration on Server
- Help Manager for feature description
- Diagnostic Service
- IVS Motion Scramble on Live View
- Backup / Export Video Encryption
- Run as Windows Service
- Triple monitor display
- Support camera Multi-stream
- Support edge record
- Support NUUO Fisheye Dewarp with calibration
- Support setup different recycle criteria for different recording
- Support all-in-one I/O box: A08
- Support auto report counting results*1
- Support dual password validation (4-eye-policy)
- Support run Mainconsole software on selected monitor
- OnGuard Software watchdog*2
- Failover Recording Server*2
- E-map
- Instant Playback*2
- Two-way audio
- Digital PTZ and multi-view
- Smart detection of 6 events with 11 instant responses*3
- Counting application*2
- Advanced Intelligent Video Surveillance with 4 types counting filter and 8 types surveillance suite*1
- Support 4 types of event from camera: motion, tampering, tripwire, perimeter detection
- Intelligent playback system with 5 video analytics searches
- Up to 192 channels remote live view depends on server and client hardware configuration.
- Supports transcode and multiple stream profiles

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- Supports digital watermark
- Remote playback, remote backup, remote I/O control and remote desktop configuration
- Supported by NUUO Central Management System*2
- Supports 70 brands of IP cameras
- Supports 31 languages
- Supports iPhone, iPad and Android mobile clients

*1To optimize the recording performance, it is recommended to keep the system CPU loading under 80% after complete all settings. Main factors of CPU consuming are video transcode, Advance IVS, local display and smart guard. Please refer to NUUO Calculator on http://support.nuuo.com/calculator/ for performance estimation.

*2Functions or spec limited on IP lite version.

*Smart detection of 6 events with 11 instant responses

*Counting application

*Advanced Intelligent Video Surveillance with 4 types counting filter and 8 types surveillance suite

*Supports transcode and multiple stream profiles

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Server		
Hardware Specifications		
Model	**R3-1600IP-HR**	**R4-2400IP-HR**
Product Image		
Type	Rack-mount 3U with Redundant Power Supply	Rack-mount 4U with Redundant Power Supply
CPU	Intel® Xeon	
RAM	DDR4 16 GB	
Number of Drives (Hot Swapping Supported)	16 X SATA III 2 X SATA Port (Backplane)	24 X SATA III 2 X SATA Port (Backplane)
Max Storage Per Drive**	20TB	
Max Internal Total Storage	320TB	480TB
RAID Level	RAID 0, 1, 5, 6, 10 (Hardware RAID Controller)	
I/O Interface	6 x USB3.0 2 x USB2.0 1 x VGA or 1 x DVI-D 1 x Display Port or 1 x HDMI	
LAN	2 x Gigabit Port, RJ45 (10 Gigabyte Network Card is optional)	
LAN Transmission Speed	10/100/1000 Mbps	
Voltage	100-240V	
Power Consumption	Redundant Power Supply (Max: 550W)	Redundant Power Supply (Max: 800W)
Device Dimension (H X W X D)	132 x 435 x 620 mm (5.19” x 17.13” x 24.41”)	176 x 438 x 620 mm (6.93” x 17.24” x 24.41")
Device Weight (Without HDD)	19 kg (41.9 lbs)	31 kg (68.3 lbs)

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Temperature	Operating: 0 ~ 40 °C (32 ~ 122 °F) Non-Operating: -40 ~ 70 °C (-40 ~ 156 °F)
Humidity	Operating: 5%-95%
Certification	CE, FCC, BIS, RoHS
Software Specification	
Model	SCB-IP+ Series
IP Camera Input(s)	Camera expansion license available
IP Camera Brand(s) Supported	3M 3SVision ACTi Ademco Adler ADT ARKS Airlive Alarm.com Alphatech American Dynamics ARM ATV Amtk Arecont Vision Aver Asoni Axis Basler Bolide Bosch BrainChild Bullwark Brickcom Canon Capture Centrix Champ Cisco CNB COP CORUM D-Link Dahua Digital Watchdog Dyna Color Eneo Ernitec Etrovision EverFocus FalconTech Fine Flir Fornix GE GNS Grandstream Grundig Guardeon Guardliner Hanwha Vision HDPRO HikVision Histream Honeywell Hunt iMega InnoTech InscapeData IP Power IPCam IQeye Jetstor JVC KedaCom LevelOne LG LiLin Linksys Lumenera MegaIP Messoa Milesight MIWI Urmet Mobotix Monacor Neovista Netgear NetworkCamera Norden NTIC NUUO OnCam OnElectronics Onvif Optec Panasonic Pelco Pixord Planet Prisma Bytes Probe ProVision ISR QAlumia QVS RedVision RIVA Rover Saerim Samsung SANTEC Burg Wächter Sanyo Secubest Shany Sony Spark StarDot Sunell Techson TelView Tiandy Toshiba TrendNet TriCorps Truen TVT UDP UniView Viakom Videosec Vision Hi-Tech Vista Vitek Vivotek ViZOiD WatchNet Wavekrom Yudor Zavio
Digital PTZ	Supported in Live view and Playback
Screen Resolution	1024x768, 1200x900, 1280x1024, 1366x768, 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; H.265
Recording Type	Continuous record, record by digital input, motion record, event recording, boosting recording, record by schedule, manual record
Remote Playback Channels	Remote Playback Maximum 16 channels under several modes & full screen
Playback Control	Playback, backward playback, fast forward/backward playback

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Auto Recycling Recording	Auto recycling when storage disk is full
Available I/O Function	Supporting I/O Box SCB-A08
Available POS Device	SCB-C31A RS232 to Ethernet Convertor
Software Watchdog	OnGuard

Support Language			
Albania	Bulgarian	Chinese (Simplified)	Chinese (Traditional)
Croatian	Czech	Danish	Dutch
English	Farsi	Finnish	French
German	Hebrew	Hungarian	Italian
Japanese	Korean	Norway	Polish
Portuguese (Brazil)	Portuguese (Portugal)	Romanian	Russian
Serbian	Slovak	Slovenian	Spanish
Swedish	Thai	Turkish	

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Detail Feature Specifications
System, setting, management and integration: ■ **Open Platform**: Supports 70 brands of IP cameras, megapixel cameras and video servers from 108 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 appliance 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/ ■ **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 appliance 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 11 unique instant notifications include push notification on mobile. ■ **Advanced Intelligent Video Surveillance:** NUUO support 3 types of counting filters including people counting, vehicle counting, stabilizer and tamper detect and 8 types of surveillance suite including presence, enter and exit, appear and disappear, dwell, tailgating, stopping, direction and tamper detect. ■ **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. ■ **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. ■ **OnGuard (Software Watchdog):** NUUO OnGuard brings NVR Server back from the unresponsive state such as a hang and neglects restore to normal operation. ■ **Failover Recording Server:** Failover server can be on standby for a single or a group of Recording Servers. Automatic switch to on standby server upon the failure or abnormal termination of the Recording Server ensure continuous system availability. ■ **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.

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- **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 appliance 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.
- **Fisheye Dewarp:** NUUO Fisheye Dewarp and ImmerVision IMV1-1/3.
- **Help Manager:** Quick link beside function buttons, to browse the detail descriptions in user manual
- **Diagnostic Service:** Collect system information via in one click, and provide the data for troubleshooting.
- **IVS Motion Scramble on Live View:** Pixelate (put mosaic on) the object when detected on live view.
- **Backup / Export Video Encryption:** Password control for backup or exported video data.
- **Run as Windows Service:** Run Mainconsole in background without need to login windows.

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.

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- **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 appliance server 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/
- **Multi Playback Channels Display:** Remote playback of 16 channels recording from any one of the appliance server.
- **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 appliance server. Support direct login information (user/pass) in a URL address
- **Mobile Client**: Support iPhone, iPad and Android application client to live view video and control PTZ functions.
- **Fisheye Dewarp:** NUUO Fisheye Dewarp and ImmerVision IMV1-1/3.

Extension Service

- **Central Management System:** Ultimate central monitoring solution for grand scale projects and projects with multiple sites. Fully compatible with appliance server.
- **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).

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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:** Support SCB-A08.
- **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.

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.
  - 11 automatic instant alarm responses:
    - On Screen Display
    - Play Sound
    - Send E-mail
    - Phone Call
    - PTZ Preset Go

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- Signal Digital Output
- Send a SMS message
- Send to Central Server
- Send Snapshot to FTP
- Popup E-Map on Event
- Push notification on mobile

- Supports compound event: To allow an alarm notification being triggered with combining events.

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

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