






NUUO Hybrid Appliance Comparison Table

	NH-4000 Professional	NH-4000 Enterprise	NH-4000 Extreme
CPU	Intel i3 540, 3.06GHz	Intel i7 870, 2.93GHz	Intel Xeon E5620 x2, 2.40GHz
Memory	DDR3-1333, 4GB	DDR3-1333, 4GB	DDR3-1333, 6GB
Recommended Combination*	3008 x1/ 3016 x1/ 3016 x2 + IP, 6008 x1/ 6016 x1/ 6016 x2 + IP, 7004 x1/ 7008 x1/ 7108x1 + IP, 7016 x1/ 7116 x1 + IP, Pure IP (up to 64ch)	6016 x 4, 7016 x2/ 7016 x2 + IP, 7016 x1+7116 x1 + IP, 7016 x1/ 7116 x1 + IP, Pure IP (up to 64ch)	7016 x2 + IP, 7016 x1+7116 x1 + IP, 7016 x1/ 7116 x1 + IP, Pure IP (up to 64ch)
OS	Windows 7 64 bit	Windows 7 64 bit	Windows 7 64 bit
System Drive	250 GB	250 GB	250 GB
Available Drive Bays	1,2,3,4,6,8 TB	1,2,3,4,6,8 TB	1,2,3,4,6,8 TB
NIC(s)	Standard: 1, Option: 2	Standard: 1, Option: 2	Standard: 2
Video Output	D-sub: 1, DVI: 1, HDMI: 1 (DVI and HDMI cannot be used simultaneously)	D-sub: 1, DVI: 1, HDMI: 1 (DVI and HDMI cannot be used simultaneously)	D-sub: 1, DVI: 1, HDMI: 1 (DVI and HDMI cannot be used simultaneously)
Throughput (w/o local display and smart guard)	80 Mbps (w/ 1 HDD) 130 Mbps (w/ 2 HDDs) 180 Mbps (w/ 3 HDDs) 230 Mbps (w/ 4 HDDs)	80 Mbps (w/ 1 HDD) 130 Mbps (w/ 2 HDDs) 180 Mbps (w/ 3 HDDs) 230 Mbps (w/ 4 HDDs)	80 Mbps (w/ 1 HDD) 130 Mbps (w/ 2 HDDs) 180 Mbps (w/ 3 HDDs) 230 Mbps (w/ 4 HDDs)
Throughput (with local display and smart guard)	70 Mbps	210 Mbps	320 Mbps**
Optical DVD-RW	24X Dual Layer DVD+/-RW	24X Dual Layer DVD+/-RW	24X Dual Layer DVD+/-RW
RS-485 (Optional)	1 (NUUO I/O card)	1 (NUUO I/O card)	1 (NUUO I/O card)
Alarm (Optional)	Inputs: 4 Outputs: 4 (NUUO I/O card)	Inputs: 4 Outputs: 4 (NUUO I/O card)	Inputs: 4 Outputs: 4 (NUUO I/O card)
Chassis (D x W x H)	510 x 485 x 133 mm (20.1" x 19.1" x 5.3")	510 x 485 x 133 mm (20.1" x 19.1" x 5.3")	546 x 483 x 178 mm (21.5" x 19.0" x 7.0")
Keyboard	Yes (USB)	Yes (USB)	Yes (USB)
Mouse	Yes (USB)	Yes (USB)	Yes (USB)
Warranty	3-year, 1 st year on-site	3-year, 1 st year on-site	3-year, 1 st year on-site

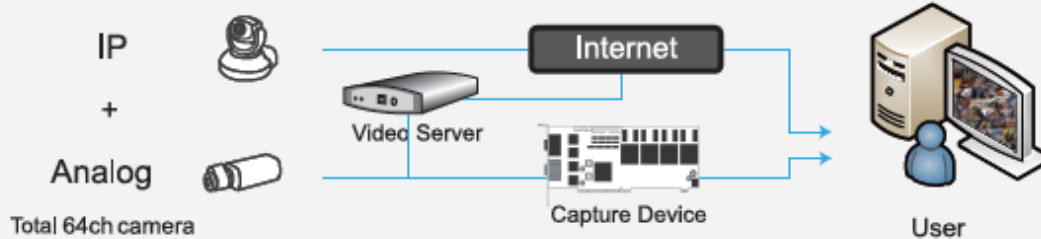
* The maximum number of camera connections depends on the software configuration and the total bit rate of the IP cameras. Please check NUUO Calculator on <http://support.nuuo.com/calculator/>

** With external storage.

NUUO DVR Card		7100 series		7000 series			6000 series			3000 series		
												
Model		SCB-7108	SCB-7116	SCB-7004	SCB-7008	SCB-7016	SCB-6004	SCB-6008	SCB-6016	SCB-3004	SCB-3008	SCB-3016
Video Input		8	16	4	8	16	4	8	16	4	8	16
Audio Input		8	16	4	8	16	4	8	16	4		
Maximum Cards Per Server		1 Card	1 Card	4 Cards	4 Cards	2 Cards	4 Cards	4 Cards	4 Cards	2 Cards*		
Maximum Channels		Refer to recommended combination table										
Display Rate	NTSC	240 fps	480 fps	120 fps	240 fps	480 fps	120 fps	240 fps	480 fps	120 fps		
	PAL	200 fps	400 fps	100 fps	200 fps	400 fps	100 fps	200 fps	400 fps	100 fps		
Recording Rate @CIF	NTSC	240 fps	480 fps	120 fps	240 fps	480 fps	120 fps	240 fps	480 fps	120 fps		
	PAL	200 fps	400 fps	100 fps	200 fps	400 fps	100 fps	200 fps	400 fps	100 fps		
Recording Rate @D1	NTSC	240 fps	480 fps	120 fps	240 fps	480 fps	30 fps	60 fps	120 fps	120 fps		
	PAL	200 fps	400 fps	100 fps	200 fps	400 fps	25 fps	50 fps	100 fps	100 fps		
Video Resolution	NTSC	704x480; 352x240; 176x120		704x480; 352x240; 176x120			704x480; 352x240; 176x120			704x480 ; 640 x 480; 352x240		
	PAL	704x576; 352x288; 176x144		704x576; 352x288; 176x144			704x576; 352x288; 176x144			704x576 ; 640 x 576; 352x288		
TV Output Rate	w/ HDMI	RCA and HDMI: 10fps		N/A			N/A			N/A		
	w/o HDMI	RCA: 25fps		N/A			N/A			N/A		
	Only HDMI	HDMI: 14fps		N/A			N/A			N/A		
Compression Format		Hardware Compression H.264		Hardware Compression H.264			Hardware Compression H.264			Software Compression H.264, MPEG4		
Interface		PCI-e x1		PCI-e x1			PCI-e x1			PCI		
Available I/O Card		Up to 1 card in Hybrid Appliance		Up to 1 card in Hybrid Appliance			Up to 1 card in Hybrid Appliance			Up to 1 card in Hybrid Appliance		
Available I/O Box		Support		Support			Support			Support		
Hardware Watchdog		Support		Support			Support			Support		
Dimension (mm)		216 (W) x 126 (H)	216 (W) x 126 (H)	167 (W) x 121 (H)	167 (W) x 121 (H)	216 (W) x 126 (H)	167 (W) x 121 (H)	167 (W) x 121 (H)	216 (W) x 126 (H)	200 (W) x 120 (H)		
Note												
Note		* When installing two 3000 series cards on one server, the system can only support 352x240 (NTSC) 352x288 resolutions for each.										

NUUO I/O Card		SCB-G3-I/O	
			
Input		Inputs: 4	
Output		Outputs: 4	
RS-485		RS-485: 1	
Dimension (mm)		105 (W) x 120 (H) mm	

System Diagram



NUUO Software v3.4.1

Main Features

- Supports up to 64* channels
- Supports megapixel IP cameras
- Supports H.264 compression format
- Triple monitor display
- Support for standard (4:3) and wide screen display (16:9, 16:10)
- Supports Joysticks
- 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
- POS and I/O device integration
- Panomorph PTZ (360°) Support – ImmerVision
- Up to 128**CH remote live view
- Supports transcode 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 1100 models
- Supports 28 languages
- Supports Windows mobile, iPhone, iPad, and Android clients

* The maximum number of camera connections depends on the recommended combination table and the resolution and frame rate of the IP cameras. Please check NUUO Calculator on <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 1100 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, SDK for access control integration available upon request.
- **Multi-site/Multi-server:** Each server supports up to 64* channels, from IP cameras, analog 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 recommended combination table and the resolution and frame 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.

- **Multiple Video Clients:** NUUO Hybrid Appliance 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 Hybrid Appliance. 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.
- **Dual 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, act as alarm monitor, or be used for playback
* The maximum number of camera connections depends on the recommended combination table and the resolution and frame rate of the IP cameras. Please check NUUO Calculator on <http://support.nuuo.com/calculator/>
- **Transcoding:** Record and display live video at different frame rate and resolution.
- **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.
- **Network Flow Monitor:** Data streaming bandwidth of each remote client connection to the 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.
- **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 Hybrid Appliance 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 Hybrid Appliance. 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:** Listen and record audio from camera's microphone. Talk to IP camera's speaker.
- **Instant Playback:** Allow to play the last few minutes of any live video channel on MainConsole and Remote Live View

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.
- **Backup:** Backup the recording for archiving purposes or backup the recording with the embedded player to watch at a separate location. Hybrid Appliance 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 (Hybrid Appliance, 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 recommended combination table and the resolution and frame 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 NUUO servers (Hybrid Appliance, NVR, DVR, and NDVR).
- **Intelligent PTZ:** Joystick support on PTZ cameras and software enabled digital PTZ function are both available in NUUO Hybrid Appliance. 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 and Android 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 (Hybrid Appliance, 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 Hybrid Appliance 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 Hybrid Appliance 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.
- **ImmerVision Lens:** IMV1-1/3 Lens supported.

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
 - 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
- Send to Central Server
- Send Snapshot to FTP
- Popup E-Map on Event

Support Language

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

IP Camera Brand(s) Supported

IP Camera Brand(s) Supported (with device pack v1.7.0)	ACTi	Arecont	ARM	Atlantis	Axis
	Basler	Bosch	Brickcom	Camtron	Cisco
	CNB	Digimerge	D-Link	Dynacolor	ENEO
	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	

