NUUO NAS NVRmini 2 Specification

NUUO NAS NVRmini 2

System Diagram

Main Features

- Linux embedded – free from PC crash and virus attack
- Support 33 brands of IP cameras and 930 models
- Support Point of Sale (POS) through NUUO POS box or Ethernet (TCP/IP client)
- Support panomorph PTZ (360°)
- **Support multiple mobile client - iPhone, iPad, Android, BlackBerry**
- Alarm source of NUUO Central Management System

NVRmini 2 Specification

- **High throughput for megapixel camera recording**
- Support joystick for easier camera controlling
- Server-client architecture
- Web-based management (Recommend on IE7 and later)
- Online GUI recording schedule
- Support megapixel camera and H.264 compression format
- Up to 128 channels live display on multiple monitors
- Multiple camera streams for limited-bandwidth remote viewer
- Support E-map with device indicator
- Playback system with 5 intelligent search
- Remote I/O solution and camera I/O integration
- RAID 0,1,5,10, prevention of data loss

Specifications		
Model	**NE-2020/NE-2040**	**NE-4080/NE-4160**
Recording Cameras	1~2(4)[1] / 1~4	1~8 / 1~16
Playback Channels	2(4) / 4	8 / 16
Number of Drives	2xSATA II	4xSATA II
Max Storage Per Drive	3TB	3TB
RAID Level	RAID 0,1	RAID 0,1,5,10
I/O Interface	2xUSB 2.0 (for UPS)	2xUSB 2.0 (for UPS); 1xeSATA (no purpose in the current)
LAN Transmission Speed	10/100/1000 Mbps (RJ45 x1)	10/100/1000 Mbps (RJ45 x2)
Voltage	100-240V	100-240V
Power Consumption	40W[2]	90W[3]
Device Dimension (HxWxD)	140.0 x 109.8 x 219.0 mm	140.0 x 183.4 x 219.0 mm
Device Weight (Without Drive)	2.12 kg (4.67lbs)	2.97 kg (6.55lbs)
Temperature	Operating: 0°C-40°C	
Humidity	Operating: 5%-95%	
Supported IP Camera Brand(s): 33 brands in v1.0	AXIS COMMUNICATIONS, Panasonic ideas for life, SONY, VIVOTEK, ACTi Corporate Vision, Arecont Vision megapixel technology...beyond imagination, SANYO, ARM ELECTRONICS, BASLER, BOSCH, Brickcom, CISCO, CNB TECHNOLOGY Inc., D-Link Building Networks For People, DYNACOLOR always watching, eneo, FINE, HIKVISION, Honeywell, IQinVision, level one, LINKSYS A Division of Cisco Systems, Inc., Lumenera corporation, MOBOTIX, ONVIF, PiXORD, SAMSUNG, SANTEC, StarDot Technologies, TOSHIBA, TRUEN, Videosec, ZAVIO	

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[1] NV-2020 can possess up to 4ch capacity with license activation

[2] 40 W is the maximum power consumption

[3] 90 W is the maximum power consumption

Compression Format	MPEG4, M-JPEG, H.264, MxPEG (depends on IP camera)	
Recording Performance	Around 60/120fps at 1.3M Total bitrate: 40Mbps	Around 240fps at 1.3M Total bitate: 80Mbps
Recording Type	Continuous record, record by schedule, event trigger record, digital input trigger record	
Remote Live View Control	Live view, preset/go, PTZ, remote I/O, snapshot, multi-view, digital PTZ, advanced E-Map, bandwidth monitoring	
Audio & Video Recording	Audio and video recording in synchronization	
POS	Live view, record, playback, and search for every transaction	
Auto Backup	Automatically backup the recorded video of the date before to FTP server	
Intelligent Search	General motion, missing object, foreign object, lose focus, camera occlusion	
Remote Live View Connection	Live view maximum 64 connections per server at the same time	
Supported Language	English, Japanese, Traditional Chinese, Spanish, Deutsch, Finnish, French, Hungarian, Italian, Russian, Czech, Korean, Polish, Dutch, Serbian, Swedish, Portuguese (Brazil)	
Remote Client System Minimum Requirement		
Model	NE-2020/NE-2040	NE-4080/NE-4160
OS	Windows XP (32-bit) / Win7 (32 and 64-bit)	
CPU	Intel Core 2 Duo, 2.6GHz	
RAM	1GB	
LAN Transmission Speed	10/100/1000 Mbps (RJ45)	
UI	1. Web browser: Internet Explorer 7, 8, 9 2. NUUO client application program 3. NUUO iPhone, iPad, Android, BlackBerry viewer[4]	
Technical Details		

- ## System, Setting, Management and Integration

  - **Server-Client Architecture:** Centralizes all video data transaction only via NVRmini 2 to remote clients. With this centralized structure, total camera loading remain the same level, thus ensure good recording quality even with maximum of remote client access.

  - **Open Platform:** Supports 930 IP cameras and video servers (encoders) from 33 brands of major network camera manufacturers.

  - **Automatic Camera Model Detection:** NVRmini 2 can automatically search for IP cameras in the network (camera should support UPnP protocol or should be implemented its search tool[5]). 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:** NVRmini 2 supports H.264 compression format increasing the storage efficiency to nearly 600% of MJPEG and 150% of 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 the camera has it), connection lost and camera input; 1 input event from remote I/O box; 3 system events and daily system report through E-mail; 3 instant alarm responses supporting output, E-mail and NUUO CMS alarm system.

  - **Online RAID Capacity Expansion and Level Migration:** Support RAID 0, 1, 5, and 10 for maximum capacity or data protection at the HDD level.

  - **Point of Sale (POS):** POS transactions received through NUUO POS box or Ethernet (TPC/IP client). POS text overlay on live view video and recordings. All recorded POS transactions are searchable in the NVRmini 2

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[4] Supported IP camera brands on mobile clients: ACTi, Arecont, AXIS, Brickcom, Cisco, D-Link, Dynacolor, Eneo, Fine, Honeywell, Level One, Mobotix, Panasonic, SANTEC, Sanyo, Sony, StarDot, Toshiba, Truen, Videosec, Vivotek, Zavio
[5] Support camera search tools of ACTi, Arecont, D-link, and Sony in v1.0

database.

- **I/O Event Control**: With the integration of camera I/O and NUUO I/O Box, system can start recording when input triggered, or trigger output as an event happened.

- **Authorities of Different Kinds of Users:** Web Viewer logins to NVRmini 2 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.

- **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 HELP page, on the webpage, for quick start tips and troubleshooting.

· Remote Client Operation

- **Multiple Live View Channel:** Up to 16 channels in web live view client and 64 channels in Remote Live Viewer client (up to 128 channels with multiple monitors). In addition, Remote Live Viewer client can access and display live video from any NUUO servers (NVR, DVR, NDVR, NVRmini, and NVRmini 2) simultaneously.

- **Multiple Playback Channel:** Up to 16 channels in web playback client/NUUO Playback System.

- **Multi-View:** NVRmini 2 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.

- **E-Map:** Show device indicator on map for easily find and track device location. Furthermore, pop up map to point out the device when an event occurred.

- **Stream Profile:** Live display multiple camera streams with lower bitrate, while still having good quality recorded videos.

- **Multiple Mobile Clients:** Support iPhone, iPad, Android, and BlackBerry mobile live viewer.

· Playback, Search, Export and Secure Data

- **Post-Recording Processing:** Intelligent search, digital PTZ and video enhancement tool.

- **Intelligent Search:** Search recorded video for 5 events including general motion, foreign object, missing object, loss focus and camera occlusion.

- **Video Enhancement:** 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 NVRmini 2's log system.

- **Alarm Notification:** Notify users on camera and system event through sound, digital output, E-mail and NUUO CMS alert.

- **Auto Backup:** Automatically backup the recorded video of the date before to a designated FTP server.

- **Manual Backup:** Manual backup or delete the recordings from any NVRmini 2.

- **Watermark:** Protect for original recording from alternation with NUUO watermark verification tool.

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· **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 servers (NVR, DVR, NDVR, NVRmini, and NVRmini 2).

· **External Device**

- **POS Box (from serial port to Ethernet):** NUUO Point of Sales system works on NVRmini 2 by overlaying the transaction text from cash register or ATM machines onto live video channels. All POS recordings are searchable.

- **Remote I/O Box:** I/O signals of NUUO I/O Box are converted to Ethernet through converter, which enables NVRmini 2 to do more sophisticated application, such as starting recording when input triggered, triggering output as an event happened, and much more.

- **Panomorph PTZ (360°):** Original mode, PTZ mode, Quad mode and Perimeter mode are supported on live view and playback. Please refer to ImmerVision's website for qualified cameras.

- **APC UPS:** Continues to feed the NVRmini 2 power at an event of power outage.

- **Joystick:** Joystick support on PTZ cameras and software enabled digital PTZ function are both available in NVRmini 2. Preset points and patrol functions are also available on many camera models.

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