

## Document History

FW version	Date	Change List
<b>V1.0</b>	2012/1/23	Initial
<b>V1.1</b>	2013/7/11	<ol style="list-style-type: none"> <li>1. New HDD compatible</li> <li>2. Touch panel support</li> <li>3. Compatible with Windows 8 (32/64 bit) and IE 10 (32 bit)</li> </ol>
<b>V1.1.2</b>	2013/9/6	<ol style="list-style-type: none"> <li>1. Add supported joystick functions</li> <li>2. Add reminders on compatible monitor</li> <li>3. Mark NS-8060 compatible HDD</li> </ol>
<b>V1.2</b>	2013/10/23	<ol style="list-style-type: none"> <li>1. Remove AXUS from DAS supporting list due to its possibly unqualified performance</li> <li>2. Mark NS-8060 compatible HDD (updated)</li> </ol>
<b>V2.0</b>	2014/03/03	<ol style="list-style-type: none"> <li>1. Add HDD compatible list for NS-8065(RAID).</li> <li>2. Compatible with Mac Safari and Windows Chrome</li> </ol>
<b>V2.0.1</b>	2014/07/03	<ol style="list-style-type: none"> <li>1. Add WD Purple series HDD compatible list</li> </ol>
<b>V2.0.1</b>	2014/09/04	<ol style="list-style-type: none"> <li>1. Add limitation on web browser support</li> </ol>
<b>V2.1</b>	2014/09/25	<ol style="list-style-type: none"> <li>1. Add IE11 support</li> </ol>
<b>V2.1</b>	2014/11/11	<ol style="list-style-type: none"> <li>1. Add Seagate 6TB Enterprise HDD support</li> </ol>
<b>V2.1</b>	2014/11/14	<ol style="list-style-type: none"> <li>1. Add Seagate SV35 + SRS series support</li> <li>2. Add ezNUUO browser support</li> </ol>
<b>V2.1.5</b>	2015/02/05	<ol style="list-style-type: none"> <li>1. Support new joysticks</li> </ol>
<b>V2.2.2</b>	2015/05/05	<ol style="list-style-type: none"> <li>1. Add Seagate Surveillance 4TB (HDD is CV13)support</li> </ol>
<b>V2.2.3</b>	2015/06/10	<ol style="list-style-type: none"> <li>1. Add Seagate Surveillance support</li> </ol>
<b>V2.2.4</b>	2015/10/12	<ol style="list-style-type: none"> <li>1. Add WD Surveillance 6TB and Toshiba Enterprise 4TB support</li> <li>2. Add NS-8065 Surveillance support list</li> </ol>
<b>V2.2.5</b>	2015/11/04	<ol style="list-style-type: none"> <li>1. Remote Client</li> </ol>
<b>V3.0.0</b>	2016/03/01	<ol style="list-style-type: none"> <li>1. New client pack 6.1.705.5</li> </ol>
<b>V3.0.0 Hotfix</b>	2016/05/05	<ol style="list-style-type: none"> <li>1. Fix critical Bug</li> </ol>
<b>V3.1.0</b>	2016/10/03	<ol style="list-style-type: none"> <li>1. Seagate rebranding update for Surveillance and SkyHawk</li> <li>2. Mark NP-8160 compatible HDD (new nvr product)</li> </ol>
<b>V3.2.0</b>	2016/12/15	<ol style="list-style-type: none"> <li>1. NP-8160 support 4K2K local display</li> </ol>
<b>V3.3.0</b>	2017/02/18	<ol style="list-style-type: none"> <li>1. Support USB joystick on local display</li> </ol>
<b>V3.5.0</b>	2017/08/25	<ol style="list-style-type: none"> <li>1. Update Remote Client to 6.1.705.15</li> <li>2. Add Seagate: ST8000VX022 &amp; ST10000VX0004 for NP-8160</li> </ol>
<b>V3.5.0</b>	2017/09/22	<ol style="list-style-type: none"> <li>1. Remove support Chrome Browser</li> </ol>

## 1. Hard Drives

Classify the compatible HDD into three types, enterprise, video surveillance and desktop. We recommend user to choose enterprise-level HDD and video surveillance-level HDD, which are with better command timeout control and reliability.

For the following conditions, we only suggest using enterprise-level HDD:

1. When the number of HDD is more than, or equal to, 5 HDDs.
2. When the NVR is installed on rack.

Green series hard drives should never be used with NUUO recorders to avoid data lost due to long wake up time from a sleeping drive.

### [3.5-inch Hard Drives] Enterprise

Vendor	Family	Model	Capacity	Interface	FW	Tested Model			
						NS-1040 NS-1080	NS-8060	NS-8065 (RAID)	NP-8160
<b>HITACHI</b>	Ultrastar A7K2000	HUA722010CLA330	1TB	SATA 3Gb/s	JP40	V			
<b>SEAGATE</b>	Constellation ES.3/ Enterprise 3.5	ST6000NM0024	6TB	SATA 6Gb/s	SN02	V	V		
		ST4000NM0033	4TB	SATA 6Gb/s	0001	V			
		ST3000NM0033	3TB	SATA 6Gb/s	0001	V			
		ST31000524NS	1TB	SATA 3Gb/s	SN12	V			
	Constellation CS/ Terascale	ST2000NC000	2TB	SATA 6Gb/s	CE02	V	V	V	
		ST4000NC000	4TB	SATA 6Gb/s	CE02	V	V	V	
<b>WD</b>	WD RE4	WD2003FYYS	2TB	SATA 3Gb/s	01.0	V			
		WD1003FBYX	1TB	SATA 3Gb/s	01.0	V	V		
		WD5003ABYX	500GB	SATA 3Gb/s	01.0	V			
	WD RE	WD4000FYYZ	4TB	SATA 6Gb/s	01.0	V	V		
		WD3000FYYZ	3TB	SATA 6Gb/s	01.0	V	V		
		WD2000FYYZ	2TB	SATA 6Gb/s	01.0	V	V		
<b>Toshiba</b>	MG03ACAxxx	MG03ACA300	3TB	SATA 6Gb/s	FL1A	V	V		
		MG03ACA200	2TB	SATA 6Gb/s	FL1A	V	V		
		MG03ACA100	1TB	SATA 6Gb/s	FL0A	V	V		
	MC04ACA xxx	MC04ACA400E	4TB	SATA 6Gb/s	FP2A	V	V		

Some listed devices may not be available, please check with your local vendors.

## Video Surveillance

Vendor	Family	Model	Capacity	Interface	FW	Tested Model			
						NS-1040 NS-2080	NS-8060	NS-8065	NP-8160
<b>SEAGATE</b>	SV35+SRS	ST3000VX004	3TB	SATA 6Gb/s	CV26	V	V		
		ST2000VX004	2TB	SATA 6Gb/s	CV26	V	V		
		ST1000VX002	1TB	SATA 6Gb/s	CV26	V	V		
	SV35 Series	ST3000VX000	3TB	SATA 6Gb/s	CV12/CV26	V	V		
		ST2000VX000	2TB	SATA 6Gb/s	CV12/CV26	V	V		
		ST2000VX002	2TB	SATA 6Gb/s	CV01	V			
		ST1000VX000	1TB	SATA 6Gb/s	CV12/CV26	V	V		
	Surveillance	ST6000VX0001	6TB	SATA 6Gb/s	VN02	V	V	V	V
		ST5000VX001	5TB	SATA 6Gb/s	VN02	V	V		
		ST4000VX000	4TB	SATA 6Gb/s	CV13	V	V		V
		ST3000VX006	3TB	SATA 6Gb/s	CV11	V	V		
		ST2000VX003	2TB	SATA 6Gb/s	CV11	V	V		
		ST1000VX001	1TB	SATA 6Gb/s	CV11	V	V		
	SkyHawk	ST10000VX0004*	10TB	SATA 6Gb/s	AV01				V
		ST8000VX022 *	8TB	SATA 6Gb/s	AV01				V
		ST4000VX007	4TB	SATA 6Gb/s	CV13	V	V		
		ST3000VX010	3TB	SATA 6Gb/s	CV11	V	V		
		ST2000VX008	2TB	SATA 6Gb/s	CV11	V	V		
	Surveillance + SRS	ST1000VX005	1TB	SATA 6Gb/s	CV11	V	V		
		ST6000VX011	6TB	SATA 6Gb/s	VN02	V	V		
		ST5000VX011	5TB	SATA 6Gb/s	VN02	V	V		
ST4000VX002		4TB	SATA 6Gb/s	CV13	V	V			

		ST3000VX005	3TB	SATA 6Gb/s	CV11	V	V		
		ST2000VX005	2TB	SATA 6Gb/s	CV11	V	V		
		ST1000VX005	1TB	SATA 6Gb/s	CV11	V	V		
	Enterprise NAS	ST6000VN0001	6TB	SATA 6Gb/s	AN02	V	V		
		ST5000VN0001	5TB	SATA 6Gb/s	AN02	V	V		
	Enterprise NAS+SRS	ST6000NV011	6TB	SATA 6Gb/s	AN02	V	V		
ST5000NV011		5TB	SATA 6Gb/s	AN02	V	V			
<b>WD</b>	Purple Series	WD60PURX	6TB	SATA 6Gb/s	0A80	V	V	V	V
		WD40PURX	4TB	SATA 6Gb/s	80.0	V	V		V
		WD30PURX	3TB	SATA 6Gb/s	80.0	V	V		
		WD20PURX	2TB	SATA 6Gb/s	80.0	V	V		
		WD10PURX	1TB	SATA 6Gb/s	01.01A01	V	V		

Some listed devices may not be available, please check with your local vendors.

\*Newly tested compatible hard drive models

## Desktop

Vendor	Family	Model	Capacity	Interface	Firmware	Tested Model			
						NS-1040 NS-1080	NS-8060	NS-8065	NP-8160
<b>HITACHI</b>	Deskstar 7K1000.D	HDS721010DLE630	1TB	SATA 6Gb/s	5R0	V	V		
		HDS723030ALA640	3TB	SATA 6Gb/s	MKA0	V			
	Deskstar 7K3000	HDS723020BLA642	2TB	SATA 6Gb/s	MN60	V			
		HDS723015BLA642	1.5TB	SATA 6Gb/s	MN60	V			
<b>SEAGATE</b>	Barracuda 7200.11	ST31500341AS	1.5TB	SATA 3Gb/s	CC1H	V			
		ST31000528AS	1TB	SATA 3Gb/s	CC38	V			
	Barracuda 7200.12	ST3500413AS	500GB	SATA 3Gb/s	CC35	V			
		ST3000DM001	3TB	SATA 6Gb/s	CC46	V			
		ST2000DM001	2TB	SATA 6Gb/s	CC46	V			
	Barracuda 7200.14	ST1000DM003	1TB	SATA 6Gb/s		V			
		Barracuda LP	ST31500541AS	1.5TB	SATA 3Gb/s	CC34	V	V	
Barracuda XT	ST33000651AS	3TB	SATA 6Gb/s	CC45	V	V			
	ST32000641AS	2TB	SATA 6Gb/s	CC13	V				
<b>WD</b>	WD Caviar Black	WD2002FAEX	2TB	SATA 6Gb/s	05.0	V			
		WD1002FAEX	1TB	SATA 6Gb/s	05.0	V	V		
	WD Red NAS Hard Drives	WD30EFRX	3TB	SATA 6Gb/s	80.0	V	V		
		WD20EFRX	2TB	SATA 6Gb/s	80.0	V			
		WD10EFRX	1TB	SATA 6Gb/s	01.0	V			

Some listed devices may not be available, please check with your local vendors.

## [2.5-inch Hard Drives] For 1bay device only Enterprise

Vendor	Family	Model	Capacity	Interface	Firmware
<b>WD</b>	WD AV-25	WD 10JUCT	1TB	SATA 3Gb/s	01.0
		WD5000LUCT	500GB	SATA 3Gb/s	01.0

Some listed devices may not be available, please check with your local vendors.

## 2. Monitor Support

Output Source	Resolution
HDMI VGA	1024x768, 60Hz
	1280x720, 60Hz
	1280x1024, 60Hz
	1920x1080, 60Hz
	2560x1440, 60Hz
	3840x2160, 60Hz

We improve HDMI compatibility in FW v1.1.2.

- 1) HDMI cable should be HDMI certificated, and its signal transmission quality depends on the diameter of wire (AWG) and the length of cable. If the length of your HDMI/VGA cable is over 1M, add a "repeater" to strengthen the signal.
- 2) When the UI/video image isn't at the correct location, correct it by the "auto adjust" function on the monitor or adjust it manually.
- 3) If encountering display issue, please use remote control to press the "10+" button, release it and press the "." button to switch monitor resolution (switching sequence: auto (default) → 1024x768 → 1280x720 → 1280x1024 → 1920x1080 → 3840x2160 (Only NVRsolo Plus support)). If it fails, please check the signal out via PC to make sure monitor is under standard regulations.

### 3. Touch Panel Support

Vendor	Model
Acer	T232HL
ViewSonic	TD2220

### 4. UPS Support

Vendor	Model
APC	APC Smart-UPS XL 3000VA (SUA3000XL)
APC	APC Back-UPS ES 500VA (BE500TW)

### 5. DAS Support

Vendor	Model	Host Interface	HDD
Promise	SmartStor DS4600	eSATA	SATA

### 6. UPnP Router (auto port-forwarding)

Vendor	Model
D-Link	DIR-300

**Note: This is the model we tested for auto port-forwarding function. Basically, all router possess UPnP function should be compatible.**

### 7. Joystick Support

Vendor	Model
Axis	T8311
Axis	295
Logitech	Attack 3

**Note: NUUO supports all the models of joysticks that are compatible with Windows.**

#### Supported functions:

Type	Function
View & Camera	Goto View # Goto Previous Camera Goto Next Camera
Screen Layout Switch	Switch Screen Layout Toggle Single Camera View Toggle Full Screen
PTZ Control	Goto Preset Point # Zoom Out Zoom In Start/Stop Patrol

## 8. Web Browser

<b>Web Internet Explorer 8 (32 bit)</b>						
<b>OS</b>	Windows XP-SP3 32 bit	Windows 2003-SP2	Windows Vista-SP2	Windows 7 32/64 bit	Windows 8 32/64 bit	Windows 10 32/64 bit
<b>PASS/FAIL</b>	PASS	X	X	PASS	-	-
<b>Web Internet Explorer 9 (32 bit)</b>						
<b>OS</b>	Windows XP-SP3 32 bit	Windows 2003-SP2	Windows Vista-SP2	Windows 7 32/64 bit	Windows 8 32/64 bit	Windows 10 32/64 bit
<b>PASS/FAIL</b>	-	X	X	PASS	-	-
<b>Web Internet Explorer 10 (32 bit)</b>						
<b>OS</b>	Windows XP-SP3 32 bit	Windows 2003-SP2	Windows Vista-SP2	Windows 7 32/64 bit	Windows 8 32/64 bit	Windows 10 32/64 bit
<b>PASS/FAIL</b>	-	-	-	PASS	PASS	-
<b>Web Internet Explorer 11</b>						
<b>OS</b>	Windows XP-SP3 32 bit	Windows 2003-SP2	Windows Vista-SP2	Windows 7 32/64 bit	Windows 8/8.1 32/64 bit	Windows 10 32/64 bit
<b>PASS/FAIL</b>	-	-	-	PASS	PASS	Pass
<b>Web Safari v6.1*</b>						
<b>OS</b>	MAC OS X 10.6	MAC OS X 10.7	MAC OS X 10.8	-	-	-
<b>PASS/FAIL</b>	-	PASS	PASS	-	-	-
<b>Web Safari v7.0*</b>						
<b>OS</b>	MAC OS X 10.6	MAC OS X 10.7	MAC OS X 10.8	-	-	-
<b>PASS/FAIL</b>	-	PASS	PASS	-	-	-

-: not available

X: not compatible

\*Below functions are not supported on Safari or Chrome.

- POS
- Fisheye dewarp

## 9.ezNUUO

ezNUUO is only supported on Windows Internet Explorer. It is not supported on Mac Safari or Windows Chrome.

## 10.FTP

<b>OS</b>	Windows XP-SP3 32 bit	Windows 2003-SP2	Windows Vista-SP2	Windows 7 32/64 bit	Windows 8 32/64 bit
<b>PASS/FAIL</b>	PASS	X	X	PASS	PASS

X: not compatible

## 11.Remote Client

Remote PC System Requirements

<b>Remote PC Minimum Requirements</b>	
<b>OS Supported</b>	Windows XP 32 bit, Windows 7 32/64 bit, Windows 8 32/64 bit, Win10 32/64-bit
<b>CPU</b>	Intel Core 2 Duo, 2.6GHz
<b>RAM</b>	1GB
<b>User Interface</b>	HTTP Web browser - Internet Explorer 8, 9, 10,11 (32 bit) NUUO client application program