

# NVR2100 Series

## Enterprise Megapixel RAID NVR



- Maximum 64 CH Megapixel Recording (up to 5MP or above)
- Enterprise-Grade RAID Subsystem
- Expandable to Maximum 448TB
- DAS and iSCSI SAN Supported
- Scalable Client-Server Architecture
- Up to 64 CH Real-time VI Detection



Network Video Recorder

### Software Specifications

Live View	<ul style="list-style-type: none"> <li>• Real-time network camera discovery</li> <li>• Versatile views of various screen divisions</li> <li>• HTML and image overlays</li> <li>• Multiple views supported</li> <li>• View patrolling for single or multiple views</li> <li>• Real time video/event alarm display</li> <li>• Instant playback</li> <li>• Video clip bookmarking</li> <li>• Support 3 installation modes and 5 different fisheye Dewarp display modes</li> <li>• Support PAP (picture in picture) Display</li> <li>• Support 2 way audio</li> </ul>	Video Intelligence	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
eMAP	<ul style="list-style-type: none"> <li>• Drag-n-drop camera manipulation</li> <li>• Directional camera display</li> <li>• Hierarchical map structure • Real time event alert</li> <li>• Instant live video of camera</li> <li>• Multiple layer maps supported</li> </ul>	Recording Policy	<ul style="list-style-type: none"> <li>• Supports up to 64 channels megapixel recording</li> <li>• Continuous recording • Manual recording</li> <li>• Event-driven recording along with rules</li> <li>• Scheduled recording on daily or weekday basis</li> <li>• Post alarm recording 5-45 minutes</li> <li>• Pre-alarm recording 5-45 minutes</li> </ul>
PTZ	<ul style="list-style-type: none"> <li>• Pan, tilt, zoom operations (dependent of camera)</li> <li>• Built-in, floating PTZ control panel</li> <li>• Preset position (dependent of camera)</li> <li>• Scheduled or continuous camera patrolling</li> <li>• Event-driven camera patrolling</li> <li>• Support on Screen PTZ with 8 directional virtual control pad</li> <li>• Support CH Products USB joystick</li> </ul>	Rule Manager	<ul style="list-style-type: none"> <li>• Conditional recording/alert/notification</li> <li>• Email, FTP, SMS, popup window, PTZ, VI Panel, Relay output notifications</li> <li>• Sound, alarm, round-the-clock alerts</li> </ul>
I/O	<ul style="list-style-type: none"> <li>• Digital I/O management</li> <li>• Support Ethernet I/O device</li> </ul>	Remote Management	Full functional operation & management via VMS Client
Multiple Displays	<ul style="list-style-type: none"> <li>• Up to 8 monitors</li> <li>• Supports live view, playback, eMap functions</li> <li>• Direct display to secondary monitor(s)</li> </ul>	Remote Client	<ul style="list-style-type: none"> <li>• Web Client • iPhone client • Android Client</li> </ul>
Investigation	<ul style="list-style-type: none"> <li>• Search by date, time, camera</li> <li>• Search by pre-defined recent time</li> <li>• Search by VI event combinations</li> <li>• Search over multiple days</li> <li>• Search over multiple cameras</li> <li>• Frame by frame / Key frame modes playback</li> <li>• Video clip bookmarking and commenting</li> <li>• Different color display on recorded data date</li> <li>• Search via built-in VI analyzer</li> <li>• Customizable bookmark</li> <li>• Intuitive, video thumbnail search results</li> <li>• Cue-in, cue-out and repeat</li> <li>• Quick playback by video thumbnail</li> <li>• 1/8, 1/4, 1/2, 1x, 2x, 4x, 8x play, pause, stop</li> <li>• AVI-formatted video clip export</li> <li>• 4-channel synchronized playback</li> <li>• 5 different time interval scroll bar drag and drop playback</li> <li>• Support full screen playback mode</li> <li>• Support 3 installation modes and 5 different Fisheye Dewarp playback display modes</li> </ul>	3rd Party IPCAM	ACTi, Arecont Vision, Asoni, AVTECH, AXIS, Bosch, Brickcom, Dahua, D-Link, Dynacolor, EDIMAX, EverFocus, Hikvision, IQinvision, Lilin, Messoa, Mobotix, Panasonic, Samsung, Shany, SIMON, SONY, Sunell, Vivotek
Instant Playback	<ul style="list-style-type: none"> <li>• Supported in video alarm, event alarm, view functions</li> <li>• Pre-defined playback durations</li> <li>• Video clip bookmarking</li> </ul>	Storage Expansion	<ul style="list-style-type: none"> <li>• Supports Infortrend RAID storage</li> <li>• Built-in RAID storage management</li> </ul>
		General & Misc.	<ul style="list-style-type: none"> <li>• Image enhancement • Video privacy mask</li> <li>• Digital zoom in, zoom out</li> <li>• Log viewer, log export mechanism • System lockup</li> <li>• Client auto login • Automatic storage recycling</li> <li>• Client-server architecture</li> <li>• Customized authority account management</li> <li>• Customizable appearance of Surveon logo</li> <li>• Configurable video retention period</li> <li>• Digital watermark proofing</li> <li>• Support DDNS Function</li> <li>• Support NTP Server synchronized</li> <li>• Support Virtual keyboard</li> <li>• Provide System and VI setup Help assistance</li> <li>• Support Customized Event management and log mechanism</li> </ul>
		Language	<ul style="list-style-type: none"> <li>• Multiple Language supported on VMS and Web Client: English, French, German, Portuguese, Spanish, Simple Chinese, Traditional Chinese, Italian, Japanese, Russian, Slovak, Czech, Dutch and Polish</li> </ul>
		Supported Protocols	IPv4, TCP, UDP, DHCP, NTP, DDNS, SMTP, SNMP, FTP, HTTP, UPnP, RTSP, iSCSI

\* All specifications are subject to change without notice.  
 \* All brand names and registered trademarks are the property of their respective owners.

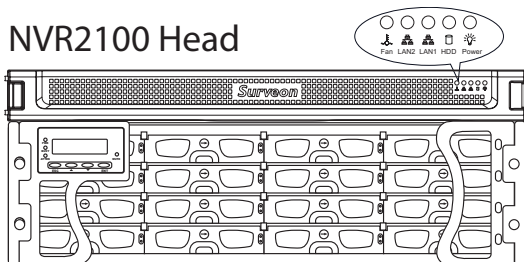
# NVR2100 Series

Enterprise Megapixel RAID NVR

## Functions

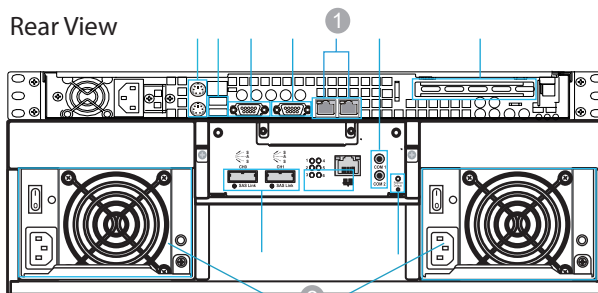
Front View

### NVR2100 Head



RAID Subsystem

Rear View



- 1 2 x Ethernet Port
- 2 Redundant Power Supply & Redundant Thermal Fan

## Hardware Specifications

NVR2100 Head	
System	Client-server architecture, Chassis: 1U 19" Rack
Server Processor	Intel Core i3 @ 3.3 GHz or Intel XEON @ 3.2 GHz
System Memory	4GB, DDRIII-1333 (Up to 32GB)
Operating System	2.5" HDD with Windows 7 Embedded System
I/O Interface	<ul style="list-style-type: none"> <li>• PS2 Mouse port x1</li> <li>• PS2 Keyboard port x1</li> <li>• USB port x2</li> <li>• Serial Port x1</li> <li>• VGA Port x1</li> <li>• RJ-45: 2x Gigabit Ethernet</li> <li>• SAS Expansion port (Option)</li> </ul>
Electrical	<ul style="list-style-type: none"> <li>• Input voltage : 100-240 V, 50-60 Hz, 4.2-1.8 Amp</li> <li>• Power: Single 350 watt AC power</li> </ul>
Power Consumption	Rated output power: 350 W
Weight	Gross weight: 16.5 kg (38 lb.)
Dimensions	50.3(W)x 43.7(D)x 4.3(H) cm (19.85" x 17.2" x 1.7")
Environmental	Temperature: <ul style="list-style-type: none"> <li>• Operating: 10° C to 35° C (50° F to 95° F)</li> <li>• Non-operating: -40° C to 70° C (-40° F to 158° F)</li> </ul> Humidity: <ul style="list-style-type: none"> <li>• Operating: 8% to 90%, non-condensing</li> <li>• Non-operating: 5% to 95% non-condensing</li> </ul>
Certification	CB, FCC / CE Class A, UL60959/ IEC 60950, CCC
RAID Subsystem	
Host Connectivity	1 or 2 SAS 4x wide ports per controller
Drive Connectivity	SAS/SATA-II disk, 12 or 16 drives per system, hot swappable
Form Factor	2~3U, 19 inch rackmount
RAID Functionality	RAID 0, 1 (0+1), 3, 5, 6, 10, 30, 50, 60, hot-spare, online expansion, RAID migration, intelligent drive handling
Environmental	Operating temperature: 5° to 40°C (35°C if battery is applied) Non-operating temperature: - 40° to 60°C Humidity: 5 to 95%, non-condensing
Dimensions	12 Bay: chassis without handles: 446(W) x 88(H) x 490(D) mm; chassis with handles: 482 (W) x 88(H) x 505(D) mm 16 Bay: chassis without handles: 445(W) x 130(H) x 488.2(D) mm; chassis with handles: 482.6(W) x 131(H) x 504.3(D) mm
Weight	Gross weight : 12 Bay:25kg ; 16 Bay: 30.5kg
Certification	CE, FCC Class B, BSMI, UL, GOST-R
Warranty	3 years

## Package Content (NVR2100 Head)

Contents	Quantity
NVR2100 Series Network Video Recorder	1
Client Installation CD/DVD	1
Quick Installation Guide	1
Slide Rails	2
Slide Bracket	2
Cable Tie	2
Power Cord	2
RAID Subsystem*	1

## Optional Accessories

Part Number	Description
ZJOYSTICK-0050	CH Products, IP Desktop USB Joystick. 3 axes joysticks for P/T control, 12 HID buttons, USB 1.1 HID compliant, Easy to use and operate.
ZETHIOBOX-0030	Ethernet I/O Box, Ethernet Digital I/O Controller, Digital Input x6, Digital Output x3 (for VMS 2.4.8)
ZPOE08-0030	8 Port 10/100Mbps 120W PoE Switch
ZPOE26-0030	24 Port 10/100Mbps + 2 Port GBE Combo (UTP/SFP) 380W PoE Switch
BH1DLS210-0010	SAS External Card (SAS 6G HBA) for NVR21xxA1 Series, NVR21xxA2 Series
H72A1XA3XXX-0030	Hitachi, Enterprise, 2TB SATA HDD, 6Gb/s
H72A2XA2XXX-0030	Hitachi, Enterprise, 3TB SATA HDD, 6Gb/s
H72A3XA3XX1-0030	Hitachi, Enterprise, 4TB SATA HDD, 6Gb/s
H1530HS2641-0030	Hitachi, 300GB SAS HDD, 6Gb/s
H1545HS2641-0030	Hitachi, 450GB SAS HDD, 6Gb/s
H1560HS2641-0030	Hitachi, 600GB SAS HDD, 6Gb/s
H72A1XS2XX1-0030	Hitachi, 2TB SAS HDD, 6Gb/s
H72A2XS2XX1-0030	Hitachi, 3TB SAS HDD, 6Gb/s
H72A1SS216-0030	Toshiba, 2TB SAS HDD, 6Gb/s

\* Hard disk drives (HDD) are purchased separately. When selecting HDDs, HDD manufacturers always urge users to choose enterprise/surveillance grade drives for 24/7 surveillance operations to ensure system stability. The surveillance hard drives on our Approved Vendor List (AVL) are engineered to work continuously, withstand high-temperature fluctuations and equipment vibrations found in any typical surveillance application. To reduce errors occurred on your RAID data and the chance of the recording performance being affected, it is highly recommended to use HDDs listed on our Approved Vendor List (AVL) to ensure reliability. Find the AVL on our web page: <http://www.surveon.com/support/hardware.asp>

# NVR2100 Series

Enterprise Megapixel RAID NVR

## Performance Validation

Model	Camera Resolution	Camera FPS	Camera Bit Rate	Recording Channels	Local Live View Channels	Local Playback Channels	Remote Live View Channels	Remote Playback Channels
SMR2006	D1/VGA	30	2M	6	6	1	16	4
SMR2006	1.3M	30	4M	6	6	1	16	4
SMR2006	2M	15	4M	6	6	1	16	4
SMR2006	3M	10	4M	6	6	1	16	4
SMR2010	D1/VGA	30	2M	10	10	1	16	4
SMR2010	1.3M	30	4M	10	10	1	16	4
SMR2010	2M	15	4M	10	10	1	16	4
SMR2010	3M	10	4M	10	10	1	16	4
SMR2016	D1/VGA	30	2M	16	16	1	16	4
SMR2016	1.3M	30	4M	16	16	1	16	4
SMR2016	2M	15	4M	16	16	1	16	4
SMR2016	3M	10	4M	16	16	1	16	4
SMR4012U	D1/VGA	30	2M	12	12	1	16	4
SMR4012U	1.3M	30	4M	12	12	1	16	4
SMR4012U	2M	15	4M	12	12	1	16	4
SMR4012U	3M	10	4M	12	12	1	16	4
SMR4016U	D1/VGA	30	2M	16	16	1	16	4
SMR4016U	1.3M	30	4M	16	16	1	16	4
SMR4016U	2M	15	4M	16	16	1	16	4
SMR4016U	3M	10	4M	16	16	1	16	4
SMR4020U	D1/VGA	30	2M	20	16 (20CH by tour)	1	16 (20CH by tour)	4
SMR4020U	1.3M	30	4M	20	16 (20CH by tour)	1	16 (20CH by tour)	4
SMR4020U	2M	15	4M	20	16 (20CH by tour)	1	16 (20CH by tour)	4
SMR4020U	3M	10	4M	20	16 (20CH by tour)	1	16 (20CH by tour)	4
SMR4012U	D1/VGA	30	2M	12	N/A	N/A	32	4
SMR4012U	1.3M	30	4M	12	N/A	N/A	32	4
SMR4012U	2M	15	4M	12	N/A	N/A	32	4
SMR4012U	3M	10	4M	12	N/A	N/A	32	4
SMR4016U	D1/VGA	30	2M	16	N/A	N/A	32	4
SMR4016U	1.3M	30	4M	16	N/A	N/A	32	4
SMR4016U	2M	15	4M	16	N/A	N/A	32	4
SMR4016U	3M	10	4M	16	N/A	N/A	32	4
SMR4020U	D1/VGA	30	2M	20	N/A	N/A	32	4
SMR4020U	1.3M	30	4M	20	N/A	N/A	32	4
SMR4020U	2M	15	4M	20	N/A	N/A	32	4
SMR4020U	3M	10	4M	20	N/A	N/A	32	4
SMR5012	D1/VGA	30	2M	12	12	1	16	4
SMR5012	1.3M	30	4M	12	12	1	16	4
SMR5012	2M	15	4M	12	12	1	16	4
SMR5012	3M	10	4M	12	12	1	16	4
SMR5016	D1/VGA	30	2M	16	16	1	16	4
SMR5016	1.3M	30	4M	16	16	1	16	4
SMR5016	2M	15	4M	16	16	1	16	4
SMR5016	3M	10	4M	16	16	1	16	4
SMR5020	D1/VGA	30	2M	20	16 (20CH by tour)	1	16 (20CH by tour)	4
SMR5020	1.3M	30	4M	20	16 (20CH by tour)	1	16 (20CH by tour)	4
SMR5020	2M	15	4M	20	16 (20CH by tour)	1	16 (20CH by tour)	4
SMR5020	3M	10	4M	20	16 (20CH by tour)	1	16 (20CH by tour)	4
SMR6025H	D1/VGA	30	2M	9+16 (IP+Analogy)	25	1	25	4
SMR6025H	1.3M	30	4M	9+16 (IP+Analogy)	25	1	25	4
SMR6025H	2M	15	4M	9+16 (IP+Analogy)	25	1	25	4
SMR6025H	3M	10	4M	9+16 (IP+Analogy)	25	1	25	4
SMR6032H	D1/VGA	30	2M	16+16 (IP+Analogy)	25 (32CH by tour)	4	25 (32CH by tour)	4
SMR6032H	1.3M	15	2M	16+16 (IP+Analogy)	25 (32CH by tour)	4	25 (32CH by tour)	4
SMR8016	D1/VGA	30	2M	16	16	4	36	4
SMR8016	1.3M	30	4M	16	16	4	36	4
SMR8016	2M	25	6M	16	16	4	36	4
SMR8016	3M	10	6M	16	16	4	36	4
SMR8025	D1/VGA	30	2M	25	25	4	36	4
SMR8025	1.3M	30	4M	25	25	4	36	4
SMR8025	2M	25	6M	25	25	4	36	4
SMR8025	3M	15	6M	25	25	4	36	4

Network Video Recorder

# NVR2100 Series

Enterprise Megapixel RAID NVR

## Performance Validation

Model	Camera Resolution	Camera FPS	Camera Bit Rate	Recording Channels	Local Live View Channels	Local Playback Channels	Remote Live View Channels	Remote Playback Channels
SMR8032	D1/VGA	30	2M	32	32	4	36	4
SMR8032	1.3M	30	4M	32	32	4	36	4
SMR8032	2M	25	6M	32	32	4	36	4
SMR8032	3M	15	6M	32	32	4	36	4
SMR8040	D1/VGA	30	2M	40	36 (40CH by tour)	4	36 (40CH by tour)	4
SMR8040	1.3M	30	4M	40	36 (40CH by tour)	4	36 (40CH by tour)	4
SMR8040	2M	25	6M	40	36 (40CH by tour)	4	36 (40CH by tour)	4
SMR8040	3M	15	6M	40	36 (40CH by tour)	4	36 (40CH by tour)	4
SMR8016U	D1/VGA	30	2M	16	16	4	36	4
SMR8016U	1.3M	30	4M	16	16	4	36	4
SMR8016U	2M	25	6M	16	16	4	36	4
SMR8016U	3M	15	6M	16	16	4	36	4
SMR8025U	D1/VGA	30	2M	25	25	4	36	4
SMR8025U	1.3M	30	4M	25	25	4	36	4
SMR8025U	2M	25	6M	25	25	4	36	4
SMR8025U	3M	15	6M	25	25	4	36	4
SMR8032U	D1/VGA	30	2M	32	32	4	36	4
SMR8032U	1.3M	30	4M	32	32	4	36	4
SMR8032U	2M	25	6M	32	32	4	36	4
SMR8032U	3M	15	6M	32	32	4	36	4
SMR8040U	D1/VGA	30	2M	40	36 (40CH by tour)	4	36 (40CH by tour)	4
SMR8040U	1.3M	30	4M	40	36 (40CH by tour)	4	36 (40CH by tour)	4
SMR8040U	2M	25	6M	40	36 (40CH by tour)	4	36 (40CH by tour)	4
SMR8040U	3M	15	6M	40	36 (40CH by tour)	4	36 (40CH by tour)	4
SMR8016U	D1/VGA	30	2M	16	N/A	N/A	72	4
SMR8016U	2M	30	4M	16	N/A	N/A	72	4
SMR8016U	2M	25	6M	16	N/A	N/A	72	4
SMR8016U	3M	15	6M	16	N/A	N/A	72	4
SMR8025U	D1/VGA	30	2M	25	N/A	N/A	72	4
SMR8025U	1.3M	30	4M	25	N/A	N/A	72	4
SMR8025U	2M	25	6M	25	N/A	N/A	72	4
SMR8025U	3M	15	6M	25	N/A	N/A	72	4
SMR8032U	D1/VGA	30	2M	32	N/A	N/A	72	4
SMR8032U	1.3M	30	4M	32	N/A	N/A	72	4
SMR8032U	2M	25	6M	32	N/A	N/A	72	4
SMR8032U	3M	15	6M	32	N/A	N/A	72	4
SMR8040U	D1/VGA	30	2M	40	N/A	N/A	72	4
SMR8040U	1.3M	30	4M	40	N/A	N/A	72	4
SMR8040U	2M	25	6M	40	N/A	N/A	72	4
SMR8040U	3M	15	6M	40	N/A	N/A	72	4
NVR2116	D1/VGA	30	2M	16	N/A	N/A	72	4
NVR2116	1.3M	30	4M	16	N/A	N/A	72	4
NVR2116	2M	25	6M	16	N/A	N/A	72	4
NVR2116	3M	15	6M	16	N/A	N/A	72	4
NVR2125	D1/VGA	30	2M	25	N/A	N/A	72	4
NVR2125	1.3M	30	4M	25	N/A	N/A	72	4
NVR2125	2M	25	6M	25	N/A	N/A	72	4
NVR2125	3M	15	6M	25	N/A	N/A	72	4
NVR2132	D1/VGA	30	2M	32	N/A	N/A	72	4
NVR2132	1.3M	30	4M	32	N/A	N/A	72	4
NVR2132	2M	25	6M	32	N/A	N/A	72	4
NVR2132	3M	15	6M	32	N/A	N/A	72	4
NVR2148	D1/VGA	30	2M	48	N/A	N/A	72	4
NVR2148	1.3M	30	4M	48	N/A	N/A	72	4
NVR2148	2M	25	6M	48	N/A	N/A	72	4
NVR2148	3M	15	6M	48	N/A	N/A	72	4
NVR2164	D1/VGA	30	2M	64	N/A	N/A	72	4
NVR2164	1.3M	30	4M	64	N/A	N/A	72	4
NVR2164	2M	25	6M	64	N/A	N/A	72	4
NVR2164	3M	15	6M	64	N/A	N/A	72	4

\* Burn-In Test condition: 14 days, round-the-clock

\* IP cameras using dual streaming capability

Network Video Recorder