# Surveon NVR Selection



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# **How to Select a Suitable NVR**

### Prerequisite to Consider



Here are some factors to take into account when selecting a suitable NVR:

#### **By Specification Requirement**

 $\bullet$  Specifications such as camera quantity & recording days , like 16CH/30days or 32CH/90days or 64CH/180days...

#### **By Storage Expansion**

 Whether it needs for extra storage space or data backup support via storage expansion (SAS JBOD/iSCSI RAID/NAS...)

#### **By Project Site Scale**

• System architecture with All-in-One Server or Client-Server NVR on the sites

#### **By Vertical Applications**

• Retail/Transportation/Banking/City Surveillance and more

### By Specification Requirement



Select based on the project requirement on camera quantity and recording days, such as support
 16CH/32CH/64CH/128CH cameras or recording days for 7/30/90/180/365 days.

#### Example 1.

- 32-channel Full HD recording
- Bit rate: 4mbps
- 24H recording
- 14 days



NVR3304

#### Example 2.

- 96-channel Full HD recording
- Bit rate: 4mbps
- 24H recording
- 180 days



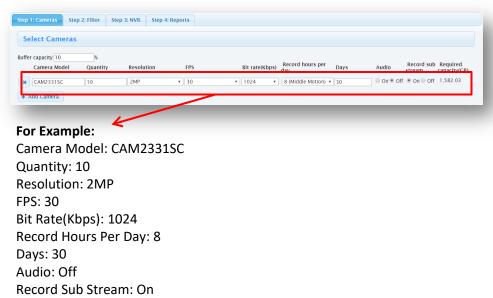
NVR5416

### Surveon NVR Selector (Step 1)



Take a few steps to specify a suitable NVR for your projects on <u>www.surveon.com/NVRSelector/NVRSelector</u>

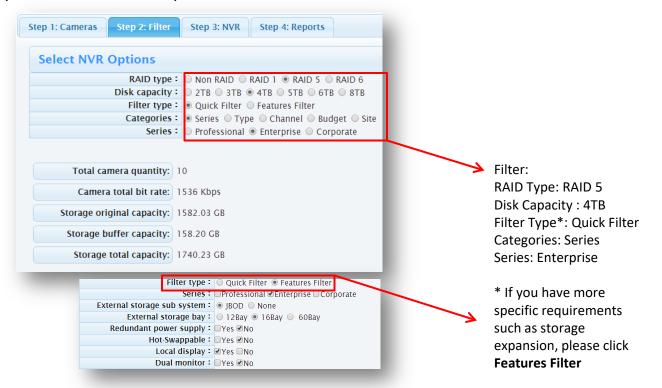
Step 1 : Enter the details of cameras.



### Surveon NVR Selector (Step 2)



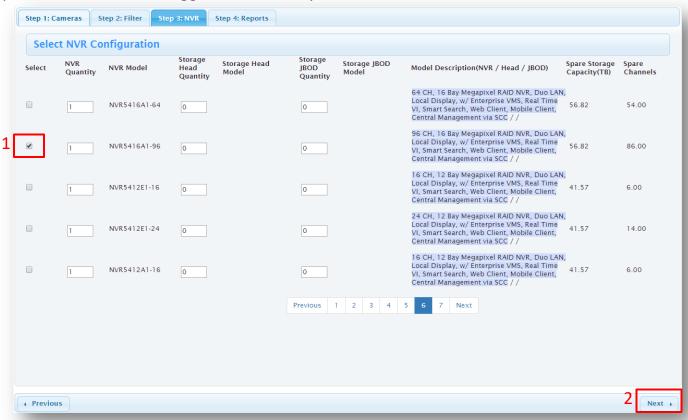
Step 2 : Fill in the NVR requirements in Filter section



### Surveon NVR Selector (Step 3)



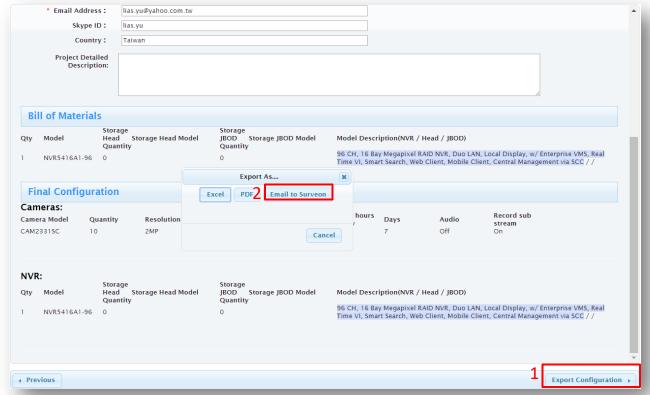
Step 3: The tool will list suggested NVRs to you. Select one or more NVRs and next.



### Surveon NVR Selector (Step 4)



Step 4 : Fill the details of your project and contact info. Click **Export Configuration** and email to Surveon for further product assistance.



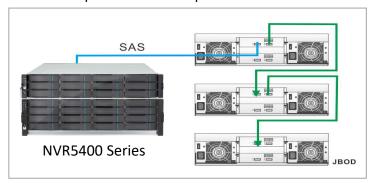
### By Storage Expansion via JBOD



#### Local Expansion with JBOD

> For longer data retention days, use local expansion with JBOD via SAS port to increase more storage capacity.

#### Local expansion with simple cable connections



#### **Recommended Models**

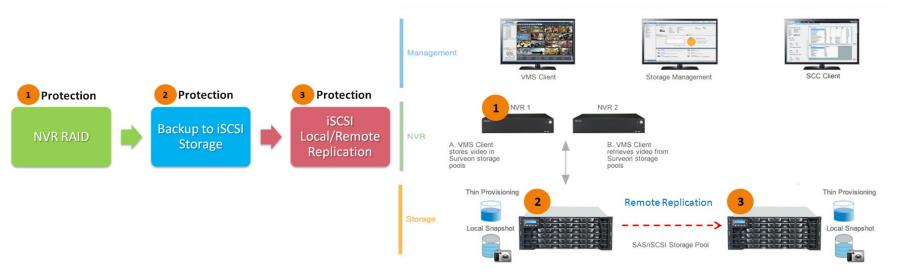


### By Storage Expansion via ISCSI



#### Backup to iSCSI Storage

- > For data backup or recording purpose, use iSCSI Storage to guarantee no video loss by triple data protection mechanism.
- > This powerful feature is applicable to all Surveon NVRs.



## By Project Site Scale



Project Site	Single Site	Multiple Site		
Suggested Architecture	All-in-One	Client-server		
Recommended Type of NVR	Desktop/Tower NVR	Rack-mount NVR		
Advantages	Save money and room for NVR	With scalability and good for centralized management		
System Diagram	Switch  Cameras  SMR8300 Series  One Server in Single Site	Machine Room  Cameras  Web Client  Network  Mobile Client  SCC Client  NVR7300 Series  Multiple Client-Servers in Multiple Sites		

### By Vertical Applications



Project Scale	Entry to Mid-range Projects	Mid-large Projects	Mission-critical Projects		
Vertical Markets	SMBs, Healthcare, Intelligent Buildings, Restaurant, Retail	Education, Transportation, Commercial, Industrial, Logistics, Harbor, Residential, Traffic	Banking, Airport, Casino, Government, City Surveillance, Critical Infrastructures		
Suggested NVR Solutions	SMR Series NVR3000 Series	NVR5400 Series Cloud NVR	NVR2100 Series NVR7300/7800 Series		
System Diagram	One Server in Single Site  Switch  Cameras  SMR8300 Series	Multiple Client-Servers in Single Sites  NVR5400 Series  NVR5400 Series  NVR5400 Series  Cameras	Multiple Client-Servers in Multiple Sites  Machine Room  Cameras  Web Client  Web Client  Web Client  Web Client  Notale Client  SCC Client  NVR7300 Series		



# **Surveon NVR Introduction**

### **NVR Product Segment**



#### Professional Economical

Desktop Standalone RAID NVR



SMR2110/5110/8300 & NVR3000 Series

4 – 64 Channels 2/4/5/8 HDD For Entry to Mid-Range Projects

#### **Enterprise Standard**

NVR Server + Subsystem Storage



NVR2100 Series

16 – 64 Channels Up to 240 HDD For Enterprise Projects

#### Corporate Mission-Critical

NVR Storage Server (3-in-1)



NVR5400/7300/7800 Series

16 – 150 Channels Up to 316 HDD For Mission-Critical Projects

#### Cloud-integrated Scalable

NVR License + Cloud-integrated Unified Storage





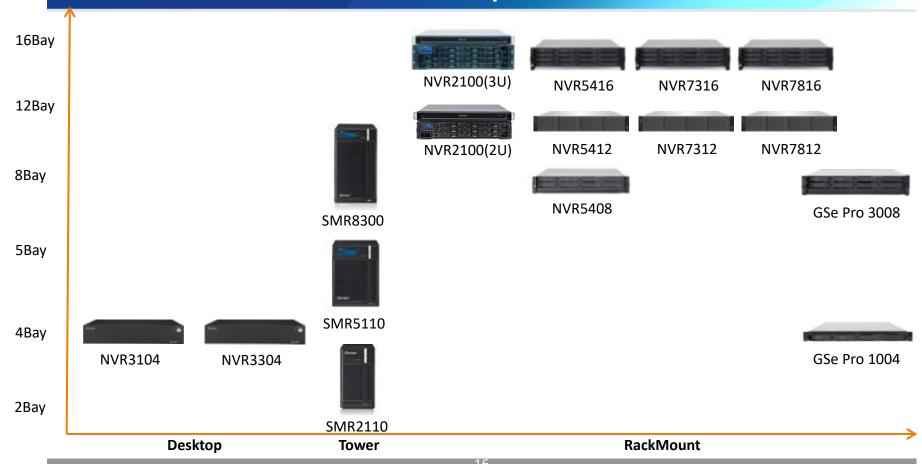


EonStor GSe Pro 1004/3008 Series

16 – 64 Channels Up to 428 HDD For A Variety of Projects

### **NVR/SMR Product Line Map**





## **Product Comparisons**



Architecture	All-i	n-One		Client-	Server		Server + Subsystem Storage
Model	SMR Series	NVR3000 Series	Cloud NVR	NVR5400 Series	NVR7300 Series	NVR7800 Series	NVR2100 Series
Recording Days	7-30 days	7-30 days	365+ days	180 days	365+ days	365+ days	365+ days
Channel Number	4-64 CH	4-32 CH	16-64 CH	16-96 CH	64-128 CH	Based on VMS	16-64 CH
Storage Expansion	iSCSI/NAS	iSCSI/NAS	JBOD	iSCSI/NAS/JBOD	iSCSI/NAS/JBOD	iSCSI/NAS/JBOD	iSCSI/SAS
RAID	RAID 1, 5, 6	RAID 1, 5, 6	RAID 0, 1 (0+1), 3, 5, 6, 10, 30, 50, 60	RAID 1, 5, 6, 1+Spare, 5+Spare, 6+Spare	RAID 1, 5, 6, 1+Spare, 5+Spare, 6+Spare	RAID 1, 5, 6, 1+Spare, 5+Spare, 6+Spare	RAID 0, 1 (0+1), 3, 5, 6, 10, 30, 50, 60
Failover Function	NA	V	NA	V	V	Based on VMS	NA
Hot-Swappable	V	NA	V	V	V	V	V (Storage)
Cableless Design	NA	NA	NA	NA	V	V	V (Storage)
Modules Design	NA	NA	V	NA	V	V	V (Storage)
Redundant Power	NA	NA	V	NA	V	V	V (Storage)
Price Position	Economy	Economy	Middle-range	Middle-range	High End	High End	High End
Suitable application		uldings Restaurant Retail Commercial, li		ansportation, lustrial, Logistics, lential, Traffic		Casino, Governme Critical Infrastructu	nt, City Surveillance, ires

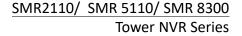


# Appendix 1: NVR Series Overview

### **SMR Series Overview**



- Highly Reliable All-in-One Tower NVR
  - Support up to 64-ch megapixel recording (up to 5MP or above)
  - Support hot-swappable hard disks with compact design
  - > Built-in RAID 1, 5, 6 for data protection
  - > Built-in Enterprise VMS with video analytics and active alarm system
  - Support SurveOne, the exclusive web-based easy system management tool
  - > Recommended applications: banking, education, retail, healthcare, industrial and transportation









### **NVR3000 Series Overview**



#### Best Cost-effective & Scalable Performance NVR

- Support up to 32-ch megapixel recording (up to 5MP or above)
- Support up to 8-bay SATA Hard Disk
- > Built-in RAID 1, 5, 6 for data protection
- > Built-in Enterprise VMS with video analytics and active alarm system
- > Support SurveOne, the exclusive web-based easy system management tool
- All-in-one desktop form factor, rack mountable design
- > Recommended applications: SMBs, retail, healthcare, logistics and intelligent buildings

NVR3104 / NVR3304 Professional Megapixel NVR



### **NVR5400 Series Overview**



- 96-ch Best C/P Value Mission Critical Server-storage NVR
  - > Up to 316 HDDs with JBOD Expansion
  - Data Protection with Spare Drive
  - > Built-in Enterprise VMS with video analytics and active alarm system
  - > Support SurveOne, the exclusive web-based easy system management tool
  - > Affordable budget with excellent performance
  - > Recommended applications: city surveillance, education, industrial, commercial and residential

NVR5416 Enterprise Megapixel NVR



### **NVR7300 Series Overview**



#### 128-ch Mission Critical Server-storage NVR

- > Up to 316 HDDs with JBOD Expansion
- Data Protection with Spare Drive
- Cableless design + hot swappable redundant power for low maintenance efforts
- > Built-in Enterprise VMS with video analytics and active alarm system
- Support SurveOne, the exclusive web-based easy system management tool
- > Cost-effective performance with Linux platform and RAID function for stable system integration
- > Recommended applications: banking, casino, airport and government

NVR7316 Corporate Megapixel NVR



### **NVR7800 Series Overview**



- Milestone VMS Pre-loaded Server-storage NVR
  - Maximum 150-ch megapixel recording (up to 3MP for nearly 2000 Mbps)
  - > Up to 316 HDDs with JBOD Expansion
  - > Cableless design + hot swappable redundant power for low maintenance efforts
  - > Cost-effective performance with built-in H/W RAID function for stable system integration
  - > User-friendly GUI: Easy setup and storage monitoring
  - > Recommended applications: banking, casino, airport





NVR7800 Series Corporate Megapixel NVR

### Cloud NVR Solutions Overview (1/2)



- Surveon Enterprise NVR with Infortrend Cloud Storage
  - Native with Surveon NVR advantages of enterprise design, data protection, and high reliability.
  - Support wide range cloud services for both private and public cloud.
  - Powerful data services and rich built-in easy IT networking applications.



GSe Pro 1004 / 3008 Corporate Megapixel NVR

### Cloud NVR Solutions Overview (2/2)



- Data Protection & Long-time Recording
  - 12Gb/s SAS connection for JBOD expansion up to 428 HDDs for years recording.
  - Built-in Infortrend patent RAID with Intelligent Drive
    Integrity (IDR) for prevention of data corruption and drive rebuild.
  - > Support iSCSI (SAN/NAS) expansion for data backup or recording purpose.
- SAN, NAS & Cloud in Single System
  - One storage supports NAS, SAN, DAS, cloud, and NVR function.
  - File sharing across multiple operating systems, including Windows, Linux, and Mac OS.
  - > Data can be directly written to block level storage with unique technology and architecture.



# **Appendix 2: Technical Information**

# 2/4/5-Bay NVR



Series	Professional			Cloud NVR	Professional
Model	SMR2110P	NVR3104P1	NVR3304E1	GSe Pro 1004-16	SMR5110P
Architecture	All-in-One	All-in-One	All-in-One	Client Server	All-in-One
Form Factor	Desktop	Desktop	Desktop	RackMount	Desktop
IP Channel Number	16 - 32	4 - 16	16 - 32	16	16 - 32
HDD Number	2x SATA	4x SATA	4x SATA	4x SATA	5x SATA
RAID	RAID 1	RAID 1, 5, 6	RAID 1, 5, 6	RAID 0, 1 (0+1), 3, 5, 6, 10, 30, 50, 60	RAID 1, 5, 6
Storage Expansion	iSCSI/NAS	iSCSI/NAS	iSCSI/NAS	NA	iSCSI/NAS
Hot-Swappable	V	NA	NA	V	V
Cableless Design	NA	NA	NA	NA	NA
Modules Design	NA	NA	NA	V	NA
Server Processor	Intel® Celeron Quad Core 2.0GHz	Intel® Celeron Dual Core 1.8GHz	Intel® Core i3 Dual Core 3.3GHz	Intel® Atom quadcore, 2.40 GHz	Intel® Celeron Quad Core 2.0GHz
System Memory	DDR3L 4GB	DDR3 2GB	DDR3 4GB	DDR3 4GB	DDR3L 4GB
Video Intelligence	Max. 4ch	Max. 4ch	Max. 8ch	NA	Max. 4ch
Local Live View	V	V	V	NA	V
Video Output	1x DVI-I	1x VGA, 1x HDMI, 1x DVI-D	1x VGA, 1x HDMI	NA	1x DVI-I
USB Port	4	6	8	4	4
LAN Port	1x Gigabit	1x Gigabit	2x Gigabit	4x Gigabit	1x Gigabit
Power Consumption	48W	250W	250W	250W	90W
Redundant Power	NA	NA	NA	V	NA
Chassis	Tower	Desktop/Rack	Desktop/Rack	1U 4-bay Rack	Tower

# 8-Bay NVR



Series		Cloud NVR		
Model	SMR8300E	SMR8300A	NVR5408E1	GSe Pro 3008-32/64
Architecture	All-in-One	All-in-One	Client-Server	Client Server
Form Factor	Desktop	Desktop	RackMount	RackMount
IP Channel Number	16 - 32	16 - 64	16 - 64	32-64
HDD Number	8x SATA	8x SATA	8x SATA	8x SATA
RAID	RAID 1, 5, 6	RAID 1, 5, 6	RAID 1, 5, 6, 1+Spare, 5+Spare, 6+Spare	RAID 0, 1 (0+1), 3, 5, 6, 10, 30, 50, 60
Storage Expansion	iSCSI/NAS	iSCSI/NAS	iSCSI/NAS/JBOD	JBOD
Hot-Swappable	V	V	V	V
Cableless Design	NA	NA	NA	NA
Modules Design	NA	NA	NA	V
Server Processor	Intel® Core i3 Dual Core 3.3GHz	Intel® Core i7 Quad Core 3.4GHz	Intel® Core i3 Dual Core 3.5GHz	Intel® Pentium-D quad-core, 1.60 GHz
System Memory	DDR3 4GB	DDR3 4GB	DDR3 16GB	DDR4 8GB/16GB
Video Intelligence	Max. 8ch	Max. 16ch	Max. 16ch	NA
Local Live View	V	V	V	NA
Video Output	1x VGA, 1x HDMI	1x VGA, 1x HDMI	1x VGA, 2x HDMI	NA
USB Port	6	6	4	4
LAN Port	2x Gigabit	2x Gigabit	4x Gigabit	4x Gigabit
Power Consumption	430W	430W	460W	250W
Redundant Power	NA	NA	NA	V
Chassis	Tower	Tower	2U 8-bay Rack	2U 8-bay Rack

# 12-Bay NVR



Series	Enterprise			Corporate			
Model	NVR5412E1	NVR5412A1	NVR2100	NVR7312Ex	NVR7312Ax	NVR7812Ex	NVR7812Ax
Architecture	Client-Server	Client-Server	Client-Server	Client-Server	Client-Server	Client-Server	Client-Server
Form Factor	RackMount	RackMount	RackMount	RackMount	RackMount	RackMount	RackMount
IP Channel Number	16-64	16-96	16 – 64	64 – 128	64 – 128	Based on VMS	Based on VMS
HDD Number	12x SATA	12x SATA	Up to 240 SATA	12x SATA	12x SATA	12x SATA	12x SATA
RAID	RAID 1, 5, 6, 1+Spare, 5+Spare, 6+Spare	RAID 1, 5, 6, 1+Spare, 5+Spare, 6+Spare	RAID 0, 1 (0+1), 3, 5, 6, 10, 30, 50, 60	RAID 1, 5, 6, 1+Spare, 5+Spare, 6+Spare	RAID 1, 5, 6, 1+Spare, 5+Spare, 6+Spare	RAID 0, 1, 5, 6, 10, 50, 60, 1+Spare, 5+Spare, 6+Spare	RAID 0, 1, 5, 6, 10, 50, 60, 1+Spare, 5+Spare, 6+Spare
Storage Expansion	iSCSI/NAS/JBOD	iSCSI/NAS/JBOD	iSCSI/SAS	iSCSI/NAS/JBOD	iSCSI/NAS/JBOD	iSCSI/SAS/JBOD	iSCSI/SAS/JBOD
Hot-Swappable	V	V	V (Storage)	V	V	V	V
Cableless Design	NA	NA	V (Storage)	V	V	V	V
Modules Design	NA	NA	V (Storage)	V	V	V	V
Server Processor	Intel® Core i3 Dual Core 3.5GHz	Intel® Xeon E3 Quad Core 3.2GHz	Intel® Core i3 3.3GHz/Intel® Xeon 3.2GHz	Intel® Core i3 Dual Core	Intel® Xeon E3- 1225/1275 Quad Core 3.2GHz	Intel® Core i3 Dual Core	Intel® Xeon E3- 1225/1275 Quad Core
System Memory	DDR3 16GB	DDR3 16GB	DDR3 4GB	DDR3 16GB	DDR3 16GB	DDR3 8GB	DDR3 8GB
Video Intelligence	Max. 16ch	Max. 16ch	Max. 32ch	Max. 32ch	Max. 32ch	Based on VMS	Based on VMS
Local Live View	V	V		V	V	V	V
Video Output	1x VGA, 2x HDMI	1x VGA, 2x HDMI	1x VGA	1x VGA, 2x HDMI	1x VGA, 2x HDMI	1x VGA, 2x HDMI	1x VGA, 2x HDMI
USB Port	4	4	2	4	4	4	4
LAN Port	4x Gigabit	4x Gigabit	2x Gigabit	2x Gigabit	2x Gigabit	4x Gigabit	4x Gigabit
Power Consumption	460W	460W	350W	460W	460W	530W	530W
Redundant Power	NA	NA	V (Storage)	V	V	V	V
Chassis	2U 12-bay Rack	2U 12-bay Rack	1U 19" Rack	2U 12-bay Rack	2U 12-bay Rack	2U 12-bay Rack	2U 12-bay Rack

# 16-Bay NVR



Series	Enterprise			Corporate				
Model	NVR5416E1	NVR5416A1	NVR2100	NVR7316Ex	NVR7316Ax	NVR7816Ex	NVR7816Ax	
Architecture	Client-Server	Client-Server	Client-Server	Client-Server	Client-Server	Client-Server	Client-Server	
Form Factor	RackMount	RackMount	RackMount	RackMount	RackMount	RackMount	RackMount	
IP Channel Number	16-64	16-96	16 – 64	64 – 128	64 – 128	Based on VMS	Based on VMS	
HDD Number	16x SATA	16x SATA	Up to 240 SATA	16x SATA	16x SATA	16x SATA	16x SATA	
RAID	RAID 1, 5, 6, 1+Spare, 5+Spare, 6+Spare	RAID 1, 5, 6, 1+Spare, 5+Spare, 6+Spare	RAID 0, 1 (0+1), 3, 5, 6, 10, 30, 50, 60	RAID 1, 5, 6, 1+Spare, 5+Spare, 6+Spare	RAID 1, 5, 6, 1+Spare, 5+Spare, 6+Spare	RAID 0, 1, 5, 6, 10, 50, 60, 1+Spare, 5+Spare, 6+Spare	RAID 0, 1, 5, 6, 10, 50, 60, 1+Spare, 5+Spare, 6+Spare	
Storage Expansion	iSCSI/NAS/JBOD	iSCSI/NAS/JBOD	iSCSI/SAS	iSCSI/NAS/JBOD	iSCSI/NAS/JBOD	iSCSI/SAS/JBOD	iSCSI/SAS/JBOD	
Hot-Swappable	V	V	V (Storage)	V	V	V	V	
Cableless Design	NA	NA	V (Storage)	V	V	V	V	
Modules Design	NA	NA	V (Storage)	V	V	V	V	
Server Processor	Intel® Core i3 Dual Core 3.5GHz	Intel® Xeon E3 Quad Core 3.2GHz	Intel® Core i3 3.3GHz/Intel® Xeon 3.2GHz	Intel® Core i3 Dual Core	Intel® Xeon E3- 1225/1275 Quad Core 3.2GHz	Intel® Core i3 Dual Core	Intel® Xeon E3- 1225/1275 Quad Core	
System Memory	DDR3 16GB	DDR3 16GB	DDR3 4GB	DDR3 16GB	DDR3 16GB	DDR3 8GB	DDR3 8GB	
Video Intelligence	Max. 16ch	Max. 16ch	Max. 32ch	Max. 32ch	Max. 32ch	Based on VMS	Based on VMS	
Local Live View	V	V		V	V	V	V	
Video Output	1x VGA, 2x HDMI	1x VGA, 2x HDMI	1x VGA	1x VGA, 2x HDMI	1x VGA, 2x HDMI	1x VGA, 2x HDMI	1x VGA, 2x HDMI	
USB Port	4	4	2	4	4	4	4	
LAN Port	4x Gigabit	4x Gigabit	2x Gigabit	2x Gigabit	2x Gigabit	4x Gigabit	4x Gigabit	
Power Consumption	460W	460W	350W	460W	460W	530W	530W	
Redundant Power	NA	NA	V (Storage)	V	V	V	V	
Chassis	3U 16-bay Rack	3U 16-bay Rack	1U 19" Rack	3U 16-bay Rack	3U 16-bay Rack	3U 16-bay Rack	3U 16-bay Rack	

### Camera Support Capability



For models supported by NVR/SMR, please visit <u>Surveon Support Camera List</u>



























































### Ask Surveon



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