avigilon™
a Motorola Solutions Company

4th Generation Network Video Recorders

Fourth generation Avigilon Network Video Recorders provide secure, reliable and scalable platforms for high performance end-to-end security solutions. Our network security recorders are pre-configured for facial recognition and Avigilon Appearance Search™ technology. All NVRs are preloaded with Avigilon Control Center (ACC) for secure network video recording and management of multi-megapixel IP cameras up to our highest resolution 10K (61 megapixel) H5 Pro camera.

Features

AVIGILON FACIAL RECOGNITION AND APPEARANCE SEARCH NATIVE SUPPORT

Native support for Avigilon facial recognition and Appearance Search technology* which helps enable security operators to locate a specific person or vehicle of interest across an entire site or multiple sites.

INDUSTRY LEADING STORAGE DENSITY AND PERFORMANCE

From 8TB to 288TB of raw storage (6TB – 217TB effective) in a 1U or 2U chassis, NVR4 models meet the most demanding recording requirements.

SUPERIOR REDUNDANCY AND RELIABLE DATA STORAGE

Reliable storage with RAID-configured redundancy offers a highly available and resilient system that protects your data. Our PRM and STD models include reliable hard drives with RAID 6 or 60 redundancy.

SINGLE POINT OF CONTACT FOR END TO END TECHNICAL SUPPORT

All NVRs are backed by a limited-time warranty† with on-site part replacement service and lifetime 24/7 Avigilon telephone technical support.

LOWERS DEPLOYMENT COSTS

Pre-configured with ACC™ software, optimized and provisioned.

SOLID-STATE DRIVE (PRM AND STD)

Operating systems on a redundant array of Solid-State Drives designed for greater reliability and speed.

EASY RECOVERY SOLUTION

Designed with a separate and redundant array of Solid-State Drives for the operating system (PRM and STD), with a built-in recovery partition to simplify the recovery process, if needed.

INCLUDES 1 YEAR FREE CLOUD SERVICES TRIAL

Securely and remotely connect with your ACC sites through the Avigilon Cloud Services platform. The system health dashboard allows you to remotely monitor the active status of all recorders and connected cameras to minimize system downtime and prioritize maintenance of critical components.

WEB ENDPOINT TECHNOLOGY WITH REMOTE NOTIFICATIONS ON MOBILE DEVICES

Optimized for mobile connections out-of-the-box with built-in web endpoint technology. Receive instant notifications to any mobile device with full support for remote alerts.

* Avigilon Appearance Search technology and facial recognition support included for NVR4X-PRM and NVR4X-STD, and is optional for NVR4-VAL (Analytics Kit required).

† 5-year hardware warranty included for NVR4X-PRM and NVR4X-STD. 3-year hardware warranty included for NVR4-VAL (2-year extension is available for NVR4-VAL).

Analytics

Avigilon Appearance Search™

Quickly locates a specific person or vehicle of interest across an entire site using a sophisticated deep learning AI search engine.

ACC Enterprise required

License Plate Recognition (LPR)

Works with ACC software for accurate license plate capture at a range of distances and speeds. Requires an additional license.

ACC7-LPR license per channel required

Face Recognition

Detects matches from managed watchlists to alert operators of people of interest. Requires Appearance Search and an additional license.

ACC7-FACE license required

		MAXIMUM SUPPORTED CAMERAS BY FEATURE[1]			NUMBER OF LPR LANES[2]			
MODEL	ANALYTICS KIT	APPEARANCE SEARCH ONLY[3]	FACE RECOGNITION + APPEARANCE SEARCH[3]	FACE MASK DETECTION + APPEARANCE SEARCH[3]	5 FPS (<16 KM/H)	10 FPS (<48 KM/H)	20 FPS (<100 KM/H)	30 FPS (<150KM/H)
NVR4X Premium	Built-In	200	50	200	4	3	2	1
NVR4X Standard	Built-In	200	50	200	3	2	1	–
NVR4 Value	HD-NVR-ANK2-1	50	15	50	2	1	1	–

[1] These performance figures are based on validation testing by Avigilon, using Avigilon Control Center software version 7.6.4. Assumes appliance-wide average per camera rates of classified objects leaving the field of view:
- H5A cameras – One every second;
- H4A cameras – One every two seconds.

Additional licenses may be required. For more information, contact Avigilon Sales.

[2] Assumes a 3MP camera with 1MP license plate scan area and Frames Per Second (FPS) to recognize license plates up to vehicle speeds in Kilometers Per Hour (KM/H). Results may vary according to camera mounting parameters.

[3] Requires H5A or H4A cameras. The Avigilon Appearance Search camera support limit does not affect any NVR throughputs for simultaneous recording, playback and live streaming.

Specifications

			Premium		Premium		Standard		Value	
			192 TB		64 TB	96 TB	16 TB	24 TB	6 TB	12 TB
			217 TB		128 TB	157 TB	32 TB	48 TB	16 TB	24 TB
SYSTEM	Avigilon Control Center™ Edition		Core, Standard and Enterprise compatible		Core, Standard and Enterprise compatible		Core, Standard and Enterprise compatible		Core, Standard and Enterprise compatible	
	Network Video Streaming Performance[5]	Network Connection	10 GbE - multiple connections[4]	1 GbE - multiple connections	10 GbE - multiple connections[4]	1 GbE - multiple connections	1 GbE - with multiple network connections		1 GbE	
		Recording Rate	Up to 1500 Mbps (max 1250 Mbps per connection)	Up to 700 Mbps (max 600 Mbps per connection)	Up to 1500 Mbps (max 1250 Mbps per connection)	Up to 700 Mbps (max 600 Mbps per connection)	Up to 700 Mbps (max 250 Mbps per connection)		Up to 300 Mbps Up to 300 Mbps (max 300 Mbps per connection)	
		Playback Rate	Up to 600 Mbps (while simultaneously recording video)		Up to 600 Mbps (while simultaneously recording video)		Up to 450 Mbps (while simultaneously recording video)		Up to 128 Mbps (while simultaneously recording video)	
	Operating System		Microsoft Windows Server 2016		Microsoft Windows Server 2016		Microsoft Windows 10 IoT Enterprise LTSB or Windows Server 2016		Microsoft Windows 10 IoT Enterprise LTSB	
	Hard Disk Drive Configuration	Video Data	RAID 60 — Up to 18 × 3.5", hot-swappable		RAID 6 — Up to 12 × 3.5", hot-swappable		RAID 6 — Up to 8 × 3.5", hot-swappable		RAID 5 — Up to 4 × 3.5", hot-swappable	
		Operating System	2 x M.2 SSD drives, RAID 1		2 x M.2 SSD drives, RAID 1		2 x M.2 SSD drives, RAID 1		Video Data and OS hosted on separated Virtual Disks	
	Recording Storage Capacity		Up to 288 TB raw, 217 TB effective (RAID 60)		Up to 180 TB raw, 157 TB effective (RAID 6)		Up to 64 TB raw, 48 TB effective (RAID 6)		Up to 32 TB raw, 24 TB effective (RAID 5)	
	Network Interface		2 x 10 GbE SFP+ ports (transceivers not included) 4 x 1 GbE RJ-45 ports (1000Base-T)		2 x 10 GbE SFP+ ports (transceivers not included) 6 x 1 GbE RJ-45 ports (1000Base-T)		4 x 1 GbE RJ-45 ports (1000Base-T) (Optional) 2 x 10 GbE SFP+ ports (transceivers not included)		2 x 1 GbE RJ-45 ports (1000Base-T) (Optional) 2 x 10 GbE SFP+ ports (transceivers not included)	
	Memory		2 x 16 GB DDR4		2 x 16 GB DDR4		2 x 8 GB DDR4		8 GB DDR4	
	Processor		Intel® Xeon®		Intel® Xeon®		Intel® Xeon®		Intel® Xeon®	
	Video Outputs		1 x VGA		1 x VGA		1 x VGA		1 x VGA	
	Local Viewing		No		No		No		No	
	Out-of-band Management		iDRAC9 Enterprise		iDRAC9 Enterprise		iDRAC9 Express		iDRAC9 Express	

[4] The 10 GbE network connection requires the HD-NVR4X-SFPPLUS-SR transceiver accessory.
[5] These performance figures are based on validation testing by Avigilon, using Avigilon Control Center software. For more information, contact Avigilon Sales.

MECHANICAL	Form Factor	2U rack mount chassis	2U rack mount chassis	2U rack mount chassis	1U rack mount chassis
	Dimensions (LxWxH)	751.3 mm x 482 mm x 86.8 mm; 29.58" x 18.98" x 3.41"	717.6 mm x 482.0 mm x 86.8 mm; 27.71" x 18.97" x 3.41"	717.6 mm x 482.0 mm x 86.8 mm; 27.71" x 18.97" x 3.41"	594.13 mm x 482.6 mm x 42.8 mm; 23.39" x 19" x 1.69"
	Weight	46.3 kg (102 lbs) when fully populated with hard drives	34.5 kg (76 lbs)	34.5 kg (76 lbs)	13.6 kg (29.98 lbs)
ELECTRICAL	Power Input	100 to 240 VAC, 50/60 Hz, auto-switching	100 to 240 VAC, 50/60 Hz, auto-switching	100 to 240 VAC, 50/60 Hz, auto-switching	100 to 240 V AC, 50/60 Hz, auto-switching
	Power Supply	Dual redundant, hot-swappable	Dual redundant, hot-swappable	Single — optional power supply available	Single — optional power supply available
	Power Consumption	Average: 429 W (1+1) (1463.8 BTU/h), Maximum: 1100 W (2559.1 BTU/h)	Average: 333 W (1+1) (1136.2 BTU/h), Maximum: 750 W (2559.1 BTU/h)	Average: 269 W (917.9 BTU/h), Maximum: 750 W (2559.1 BTU/h)	Average: 197 W (672.2 BTU/h), Maximum: 350 W (1340 BTU/hr)
	Power Efficiency	80 PLUS Platinum, ENERGY STAR 2.0	80 PLUS Platinum, ENERGY STAR 2.0	80 PLUS Platinum, ENERGY STAR 2.0	80 PLUS Platinum, ENERGY STAR 2.0

Specifications (Cont'd)

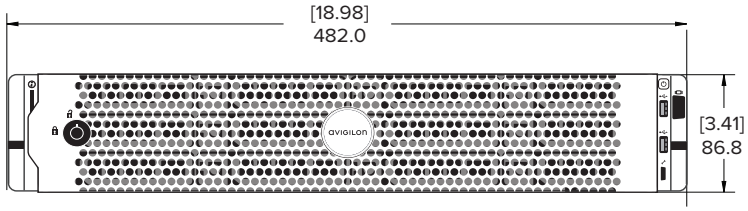
ENVIRONMENTAL	Operating Temperature		10° C to 35° C (50° F to 95° F)
	Storage Temperature		-40° C to 65° C (-40° F to 149° F)
	Operating Humidity		10% to 80% relative humidity with 29°C (84.2°F) maximum dew point
	Storage Humidity		5% to 95% RH with 33°C (91°F) maximum dew point. Atmosphere must be non-condensing at all times
	Operating Vibration		0.26 Grms at 5 Hz to 350 Hz
	Storage Vibration		1.88 Grms at 10 Hz to 500 Hz for 15 min
	Operating Shock		One pulse on each side of the system of 71 G for up to 2 ms
	Storage Shock		Six consecutively executed shock pulses in the positive and negative x, y, and z axes (one pulse on each side of the system) of 71 G for up to 2 ms
	Operating Altitude		3,048 m (10,000 ft)
	Storage Altitude		12,000 m (39,370 ft)
CERTIFICATIONS	Certifications/Directives		UL, cUL, CE, RCM, BSMI, CCC, EAC, KC, NOM, NRCS, VCCI, RoHS, Reach (SVHC), WEEE, BIS
	Safety		UL/CSA/EN/IEC 62368-1
	Electromagnetic Emissions		CFR Title 47, FCC Part 2, 15 Class A, ICES-003(A), EN 55032 Class A, EN 61000-3-2, EN 61000-3-3
	Electromagnetic Immunity		EN 55024
	Warranty	PRM and STD	5-year NBD (Next Business Day) with onsite parts delivery service. 4-hour mission critical warranty upgrade available.
		VAL	3-year NBD (Next Business Day) with onsite parts delivery service. 2-year warranty extension available.
SUPPLIED ACCESSORIES	Rack Rail System		Sliding rail system with cable management arm. Supports: • Tool-less mounting in 19"-wide EIA-310-E compliant square hole and unthreaded round-hole 4-post racks • Tooled mounting in threaded hole 4-post racks
	Bezel		1, front
	Power Cords	PRM	2
		STD and VAL	1

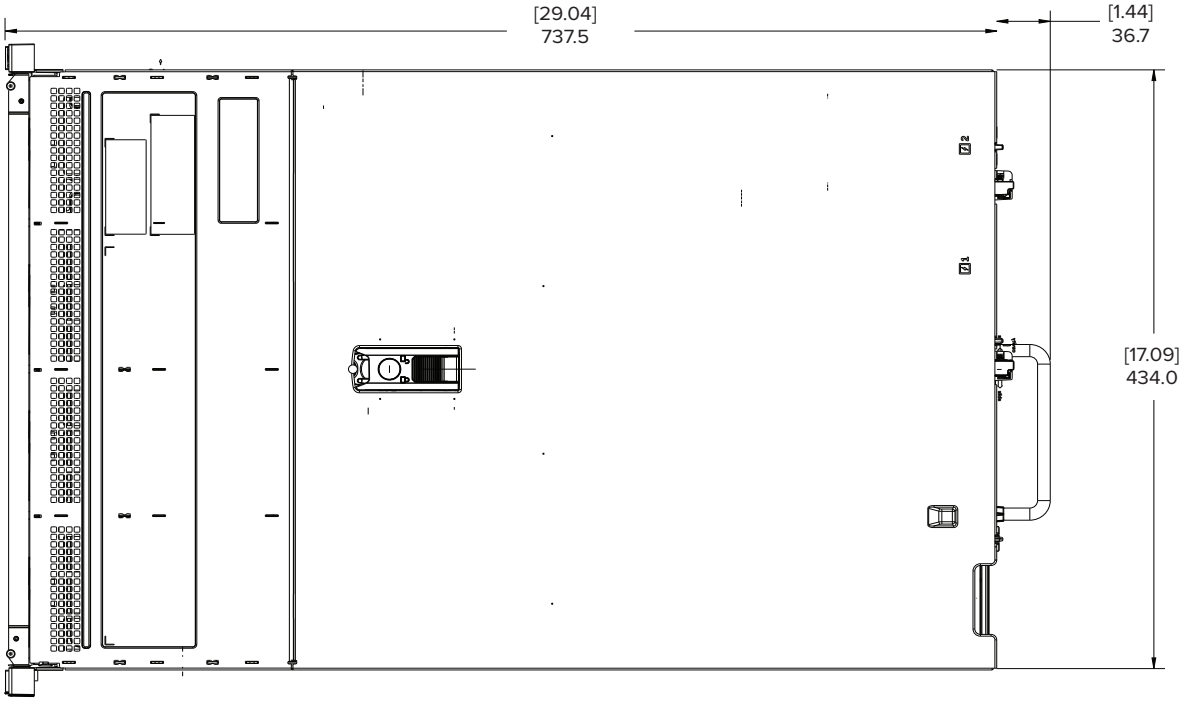
Outline Dimensions

NVR4X-PRM

(NVR4X-PRM-192TB/217TB)

[X.X]	INCHES
X	MM



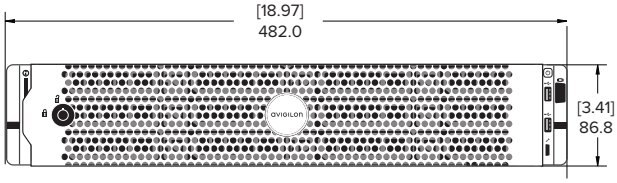


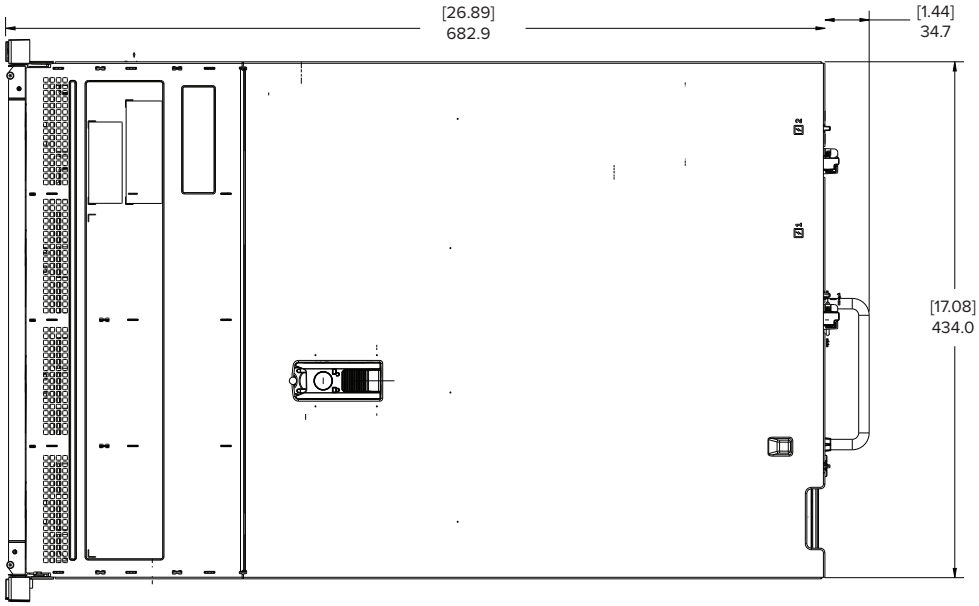
Outline Dimensions

NVR4X-PRM and NVR4X-STD

[X.X]	INCHES
X	MM

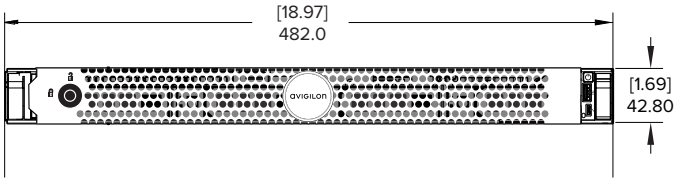
(NVR4X-PRM-64TB/96TB/128TB/157TB)

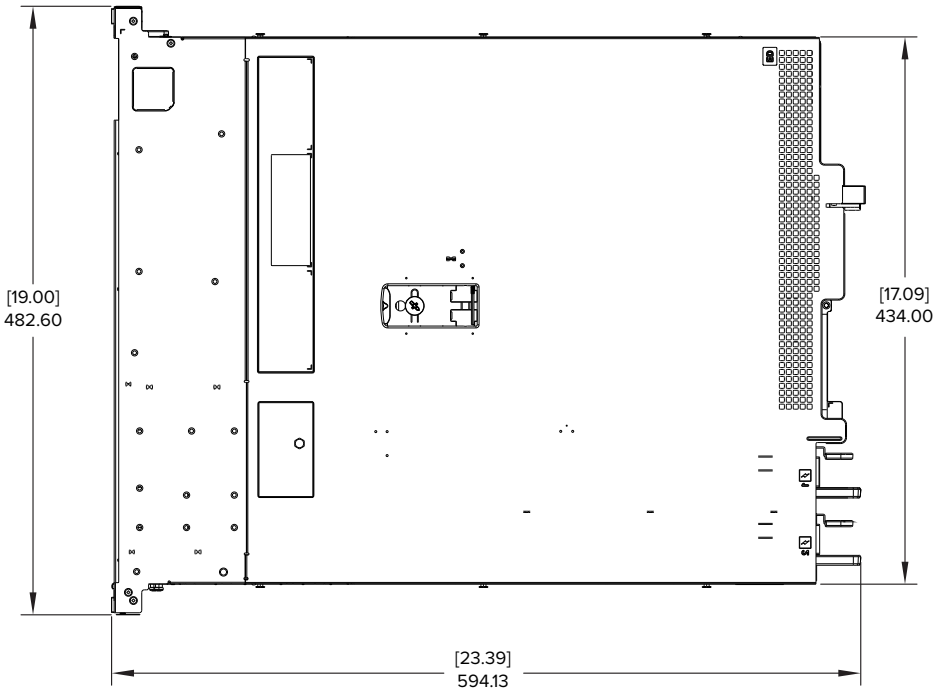




NVR4-VAL

[X.X]	INCHES
X	MM





Ordering Information

NVR4X-PRM

NVR4X-PRM-64TB	64 TB (80 TB Raw) NVR4X Premium with Microsoft Windows Server 2016 and Avigilon Control Center
NVR4X-PRM-96TB	96 TB (120 TB Raw) NVR4X Premium with Microsoft Windows Server 2016 and Avigilon Control Center
NVR4X-PRM-128TB	128 TB (160 TB Raw) NVR4X Premium with Microsoft Windows Server 2016 and Avigilon Control Center
NVR4X-PRM-157TB	157 TB (192 TB Raw) NVR4X Premium with Microsoft Windows Server 2016 and Avigilon Control Center
NVR4X-PRM-192TB	192 TB (256 TB Raw) NVR4X Premium with Microsoft Windows Server 2016 and Avigilon Control Center
NVR4X-PRM-217TB	217 TB (288 TB Raw) NVR4X Premium with Microsoft Windows Server 2016 and Avigilon Control Center
Avigilon Control Center licenses must be purchased separately. Avigilon Appearance Search and facial recognition requires Enterprise version of the ACC software.	

NVR4X-STD

NVR4X-STD-16TB-S16	16 TB (24 TB Raw) NVR4X Standard with Microsoft Windows Server 2016 and Avigilon Control Center
NVR4X-STD-16TB	16 TB (24 TB Raw) NVR4X Standard with Microsoft Windows 10 Enterprise Embedded and Avigilon Control Center
NVR4X-STD-24TB-S16	24 TB (32 TB Raw) NVR4X Standard with Microsoft Windows Server 2016 and Avigilon Control Center
NVR4X-STD-24TB	24 TB (32 TB Raw) NVR4X Standard with Microsoft Windows 10 Enterprise Embedded and Avigilon Control Center
NVR4X-STD-32TB-S16	32 TB (48 TB Raw) NVR4X Standard with Microsoft Windows Server 2016 and Avigilon Control Center
NVR4X-STD-32TB	32 TB (48 TB Raw) NVR4X Standard with Microsoft Windows 10 Enterprise Embedded and Avigilon Control Center
NVR4X-STD-48TB-S16	48 TB (64 TB Raw) NVR4X Standard with Microsoft Windows Server 2016 and Avigilon Control Center
NVR4X-STD-48TB	48 TB (64 TB Raw) NVR4X Standard with Microsoft Windows 10 Enterprise Embedded and Avigilon Control Center
Avigilon Control Center licenses must be purchased separately. Avigilon Appearance Search and facial recognition requires Enterprise version of the ACC software.	

NVR4-VAL

NVR4-VAL-6TB	6 TB (8 TB Raw) NVR4 Value with Microsoft Windows 10 Enterprise Embedded and Avigilon Control Center
NVR4-VAL-12TB	12 TB (16 TB Raw) NVR4 Value with Microsoft Windows 10 Enterprise Embedded and Avigilon Control Center
NVR4-VAL-16TB	16 TB (24 TB Raw) NVR4 Value with Microsoft Windows 10 Enterprise Embedded and Avigilon Control Center
NVR4-VAL-24TB	24 TB (32 TB Raw) NVR4 Value with Microsoft Windows 10 Enterprise Embedded and Avigilon Control Center
Avigilon Control Center licenses must be purchased separately. Avigilon Appearance Search and facial recognition requires Enterprise version of the ACC software and the optional Analytics Kit accessory (HD-NVR-ANK2-1).	

Accessories

HD-NVR-ANK2-1	Analytics Kit for Avigilon Appearance Search and facial recognition software*
NVR4-VAL-10GBE	Network Card, DP 10G-SFP+ NVR4 VAL
NVR4X-STD-10GBE	Network Card, DP 10G-SFP+ NVR4X STD
NVR4X-PRM-2NDCPU	2nd CPU Kit for NVR4X PRM
HD-NVR4-STD-2NDCPU	2nd CPU Kit for NVR4X STD, and NVR4 STD
NVR4X-1100W-2NDPS-XX	Redundant, hot-swappable power supply for NVR4X PRM 192/217TB
NVR4X-750W-2NDPS-XX	Redundant, hot-swappable power supply for NVR4X STD, and PRM 64/96/128/157TB
NVR4-VAL-2NDPS-XX	Redundant, hot-swappable power supply for NVR4 VAL
NVR4-HDDS-INT-16TB	Spare hard drive, 16TB, internal bay, for NVR4X PRM 192/217TB
NVR4-HDDS-HOT-16TB	Spare hard drive, 16TB, front or rear bay, for NVR4X PRM 128/157/192/217TB
NVR4-HDDS-HOT-12TB	Spare hard drive, 12TB, front or rear bay, for NVR4X PRM 96TB
NVR4-HDDS-HOT-8TB	Spare hard drive, 8TB, front or rear bay, for NVR4X PRM 64TB, NVR4X STD 32/48TB, and NVR4 VAL 16/24TB
NVR4-HDDS-HOT-4TB	Spare hard drive, 4TB, front or rear bay, for NVR4X STD 16/24TB and NVR4 VAL 12TB
NVR4-HDDS-HOT-2TB	Spare hard drive, 2TB, front or rear bay, for NVR4 VAL 6TB
AVA-HED1-NVR4X-PRM2-CONNECT	Avigilon Video Archive, Connectivity kit for NVR4X PRM 192/217TB
AVA-HED1-NVR4X-PRM1-CONNECT	Avigilon Video Archive, Connectivity kit for NVR4X PRM 64/96/128/157TB
AVA-HED1-NVR4X-STD-CONNECT	Avigilon Video Archive, Connectivity kit for NVR4X STD
IDRAC9-ENT-UPG	iDRAC Enterprise upgrade
HD-NVR4-SFPPLUS-DA	SFP+ 10GbE Twinax Direct Attach cable 3m
NVR4X-SFPPLUS-SR	SFP+ 10GBASE-short range transceiver
NVR4X-PRM2-WARR-5Y4HMC	4-hour MC (mission critical response) service-level agreement upgrade for NVR4X PRM 192/217TB
NVR4X-PRM1-WARR-5Y4HMC	4-hour MC (mission critical response) service-level agreement upgrade for NVR4X PRM 64/96/128/157TB
NVR4X-STD-WARR-5Y4HMC	4-hour MC (mission critical response) service-level agreement upgrade for NVR4X STD
NVR4-VAL-WARR-EXTEND-2YR	2-year warranty extension for NVR4 VAL
* Required for NVR4-VAL only.	

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