

# AI NVR

The Artificial Intelligence Network Video Recorder (AI NVR) is a purpose-built security-hardened NVR, with built-in server-side analytics that unlocks Avigilon's advanced AI capabilities on any connected video stream. This cost-effective, plug-and-play appliance combines high-performance recording with video analytics in an easy-to-deploy turnkey solution. An IT-friendly solution, the AI NVR is built on a hardened embedded OS, which can be remotely managed with Avigilon Cloud Services (ACS). Avigilon regularly provides a single firmware package that not only updates the AI NVR, but also most connected cameras, and clients. Add the power of Avigilon's advanced neural-network-based analytics to your video streams with AI NVR.



## FEATURES



### SERVER-SIDE ANALYTICS FOR NON-ANALYTIC CAMERAS

Bring Classified Object Detection, Appearance Search, Face Recognition, No Face Mask Detection, and License Plate Recognition to your existing non-analytic cameras.



### HIGH PERFORMANCE

Up to 2400 mbps of total throughput, while simultaneously running analytics.



### REMOTE MANAGEMENT

Use ACS to manage multiple AI NVRs in a single building or globally from a central location.



### ENHANCED SECURITY

All AI NVRs run Avigilon Hardened OS on an encrypted solid state drive to minimize attack vectors.



### CLOUD REMOTE SITE UPDATE

Avigilon AI NVR, Clients, and most Cameras can all be remotely upgraded together with a single signed and encrypted firmware package.



### SIMPLIFIED NETWORKING

Full recording throughput can be run on a single network port with additional ports used for failover.



### REMOTE NOTIFICATIONS ON MOBILE

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



### ALL-IN-ONE DEVICE

Achieve lower deployment costs with a single device that performs as an NVR and an analytics server.

# ANALYTICS

## CLASSIFIED OBJECT DETECTION™ (COD)



Detects and classifies people or vehicles to help operators respond faster. Unusual Activity Detection (UAD) automatically detects atypical behavior of learned objects.

ACC7-VAC license required



## AVIGILON APPEARANCE SEARCH™ (AS)

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

ACC Enterprise required



## FACE RECOGNITION (FR)

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

ACC7-FACE license required

## NO FACE MASK DETECTION



Determines whether a person is not wearing a face mask to help prevent community transmission.

ACC Enterprise required



## OCCUPANCY COUNTING

With cameras at entrances and exits, a running total of occupancy can be monitored in real time.

ACS Required



## LICENSE PLATE RECOGNITION

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

ACC7-LPR license required

AI NVR MODEL	ANALYTICS CAMERAS <sup>1</sup>		NON-ANALYTIC CAMERAS <sup>1</sup>			NUMBER OF LPR LANES <sup>2</sup>					
	AS ONLY <sup>3</sup>	AS+FR <sup>4</sup>	COD ONLY <sup>3</sup>	COD+AS <sup>4</sup>	COD+AS+FR <sup>4</sup>	DEFAULT MODE			PERFORMANCE MODE <sup>5</sup>		
						10 FPS <48 KM/H	20 FPS <100 KM/H	30 FPS <150 KM/H	10 FPS <48 KM/H	20 FPS <100 KM/H	30 FPS <150 KM/H
Premium+	200	100	55	55	50	12	6	4	53	26	17
Premium	200	100	30	30	27	8	4	2	28	14	9
Standard w/ kit <sup>6</sup>	200	100	25	25	22	7	3	2	29	14	9
Standard	200	100	12	12	11	5	2	1	15	7	5
Value	200	50	6	6	5	4	2	1	8	4	2

<sup>1</sup> These performance figures are based on validation testing by Avigilon, using Avigilon Control Center 7.14.4 software. 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; non-analytics cameras running COD – one every second.

<sup>2</sup> 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.

<sup>3</sup> For cameras at 2MP and 30 frames per second (fps).

<sup>4</sup> Requires H5A, H4A cameras, or Classified Object Detection running on non-analytic cameras.

<sup>5</sup> Requires LPR Performance mode to be enabled. Available with ACC version 7.14.6 or later. LPR Performance mode will limit other analytics on your AI NVR. See the AI NVR user guide for more information.

<sup>6</sup> Requires installation of the AINVR-STD-PRK Performance Kit on the AI NVR Standard.

## DEVICE TYPES SUPPORTED FOR ANALYTICS

Avigilon H.264 Analog Encoders

Avigilon HD H.264, H3, H3 Multisensor, H4 SL, H4 Mini dome, H4 Box, H4 Bullet, H4 Dome, and H4 Pro cameras

Avigilon H4A cameras operating for Unusual Motion Detection

Avigilon H5Pro and H4 Multisensor (in high frame-rate mode), H5M, and H5SL cameras

ONVIF® Profile S cameras

ONVIF encoders

# SPECIFICATIONS

SYSTEM		PREMIUM+ AND PREMIUM	STANDARD	VALUE
Capacity		160 TB 96 TB	128 TB 64 TB 48 TB 32 TB 24 TB	12 TB 6 TB
Avigilon Control Center™ Edition		Core, Standard, and Enterprise* compatible (ACC camera licenses are sold separately)		
Network Video Streaming Performance	Network Connection	10GbE or 1GbE Networking	1GbE Networking	
	Recording Rate	10GbE: Up to 1500 Mbps 1 GbE: Up to 1500 Mbps <sup>‡</sup>	Up to 900 Mbps	
	Playback Rate	Up to 600 Mbps <sup>†</sup>	Up to 800 Mbps	
Operating System		Avigilon Hardened OS, supports secure remote upgrades		
Drive Configuration	OS Boot	2 × M.2 Solid State drives, RAID 1		
	Video Data	RAID 6 — Up to 12 × 3.5", hot-swappable	RAID 6 — Up to 8 × 3.5", hot-swappable	RAID 5 — 4 × 3.5", hot-swappable
Recording Storage Capacity		Up to 192 TB raw, 160 TB effective (RAID 6)	Up to 64 TB raw, 48 TB effective (RAID 6)	Up to 16 TB raw, 12 TB effective (RAID 5)
Network Interface		4 × 1 GbE RJ-45 ports (1000Base-T) 4 × 10 GbE Direct Attach SFP+ ports	4 × 1 GbE RJ-45 ports (1000Base-T)	2 × 1 GbE RJ-45 ports (1000Base-T)
Memory		Premium+: 8 × 8 GB Premium: 6 × 8 GB	2 × 8 GB	
Processor		2 × Intel® Xeon®	1 × Intel® Xeon®	
Local Viewing		No video outputs — Web-based administration only		
Out-of-band Management		iDRAC9 Express		
Warranty		5-year Next Business Day (NBD) with onsite parts delivery service. 4-hour mission critical warranty upgrade available.		3-year Next Business Day (NBD) with onsite parts delivery service. 4-hour mission critical warranty upgrade available.

\* Avigilon Appearance Search and facial recognition requires Enterprise version of the ACC software.

‡ Requires the use of multiple 1GbE ports, either in a team using LACP/ALB mode or using multiple VLANs.

† The maximum playback throughput for Premium and Premium+ can be increased by reducing the recording throughput.

ELECTRICAL		PREMIUM+ AND PREMIUM	STANDARD	VALUE
Power Input		100 to 240 V AC, 50/60 Hz, auto-switching		
Power	Supply	Dual 2400W redundant (1+1), (80 PLUS Platinum)	Single 1100W non-redundant (1+0), (80 PLUS Platinum) <sup>1</sup>	Single 350W (80 PLUS Platinum) <sup>1</sup>
	Consumption	Maximum 1100W (2559.1 BTU/h)	Maximum 750W (2559.1 BTU/h)	Maximum 350 W (1340 BTU/hr)
<sup>1</sup> Optional 2nd power supply available				

SUPPLIED ACCESSORIES		PREMIUM+ AND PREMIUM	STANDARD	VALUE
Rack Rail System		Sliding rail system with cable management arm. Supports: <ul style="list-style-type: none"> <li>• Tool-less mounting in 19" wide EIA-310-E compliant square hole and unthreaded round-hole 4-post racks</li> <li>• Tooled mounting in threaded hole 4-post racks</li> </ul>		
Bezel		1, front		
Power Cord		2	1	1

CERTIFICATIONS	
Certifications/Directives	NDAA Compliant, TAA Compliant, UL, cUL, CE, RCM, BSMI, CCC, EAC, KC, NOM, NRCS, VCCI, RoHS, Reach (SVHC), WEEE, BIS

## CERTIFICATIONS

Safety	UL/CSA/IEC/EN 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
Energy	Commission Regulation (EU) No. 617/2013, ENERGY STAR 2.0
ROHS	EN 50581:2012

ENVIRONMENTAL	OPERATING	STORAGE
Temperature	10° C to 35° C (50° F to 95° F)	-40° C to 65° C (-40° F to 149° F)
Humidity	10% to 80% relative humidity with 29°C (84.2°F) maximum dew point	5% to 95% RH with 33°C (91°F) maximum dew point. Atmosphere must be non-condensing at all times
Vibration	0.26 Grms at 5 Hz to 350 Hz	1.88 Grms at 10 Hz to 500 Hz for 15 min
Shock	One pulse on each side of the system of 71 G for up to 2 ms	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
Altitude	3,048 m (10,000 ft)	12,000 m (39,370 ft)

## OUTLINE DIMENSIONS

[X.X]	INCHES
X	MM

### AI NVR PREMIUM+ AND PREMIUM

#### FORM FACTOR

2U rack mount chassis

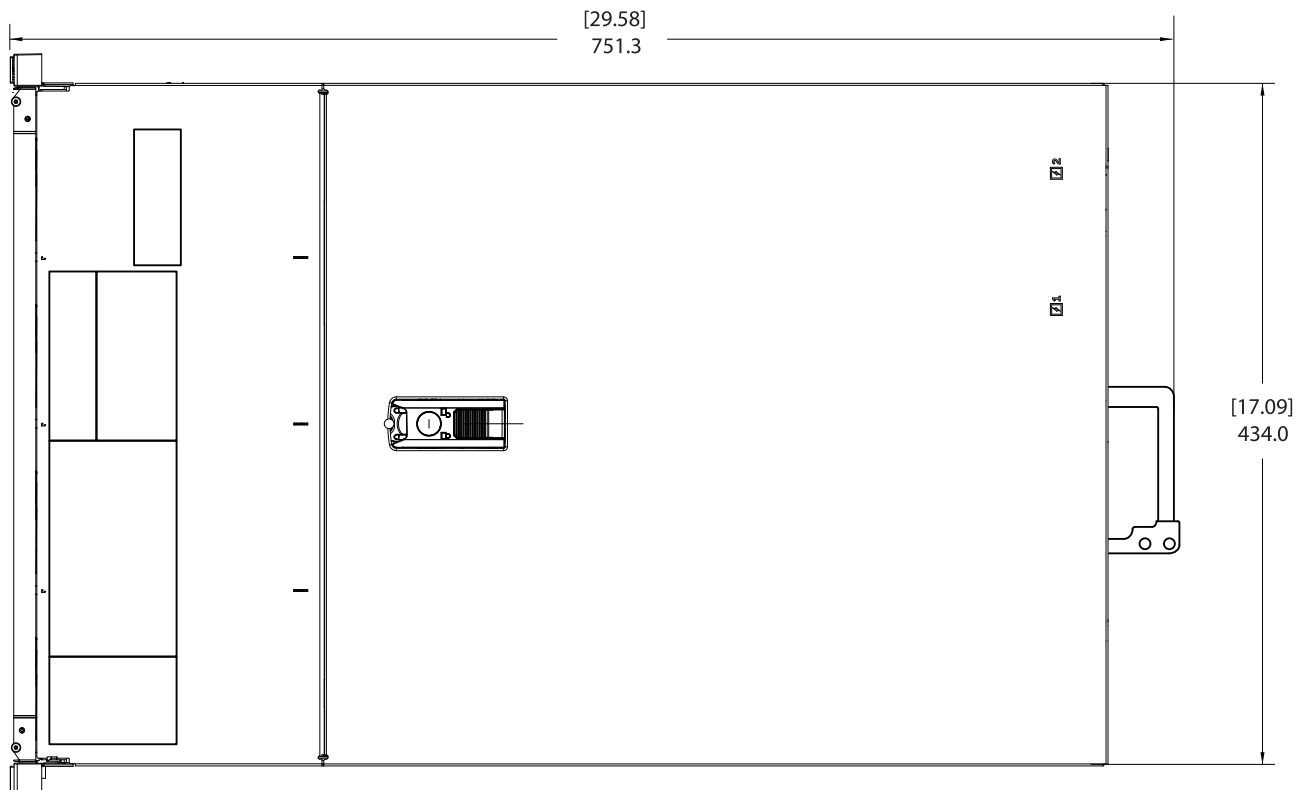
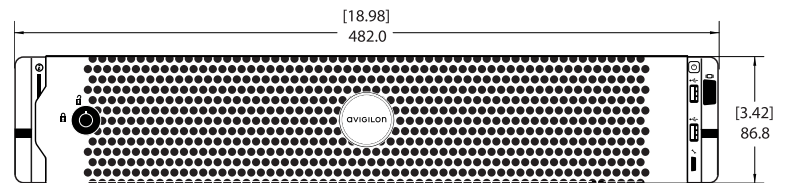
#### DIMENSIONS (L x W x H)

751.3 mm x 482.0 mm x 86.8 mm

29.58" x 18.98" x 3.42"

#### WEIGHT (WHEN FULLY POPULATED WITH HARD DRIVES)

33.1 kg [72.91 lbs]



## AI NVR STANDARD

### FORM FACTOR

2U rack mount chassis

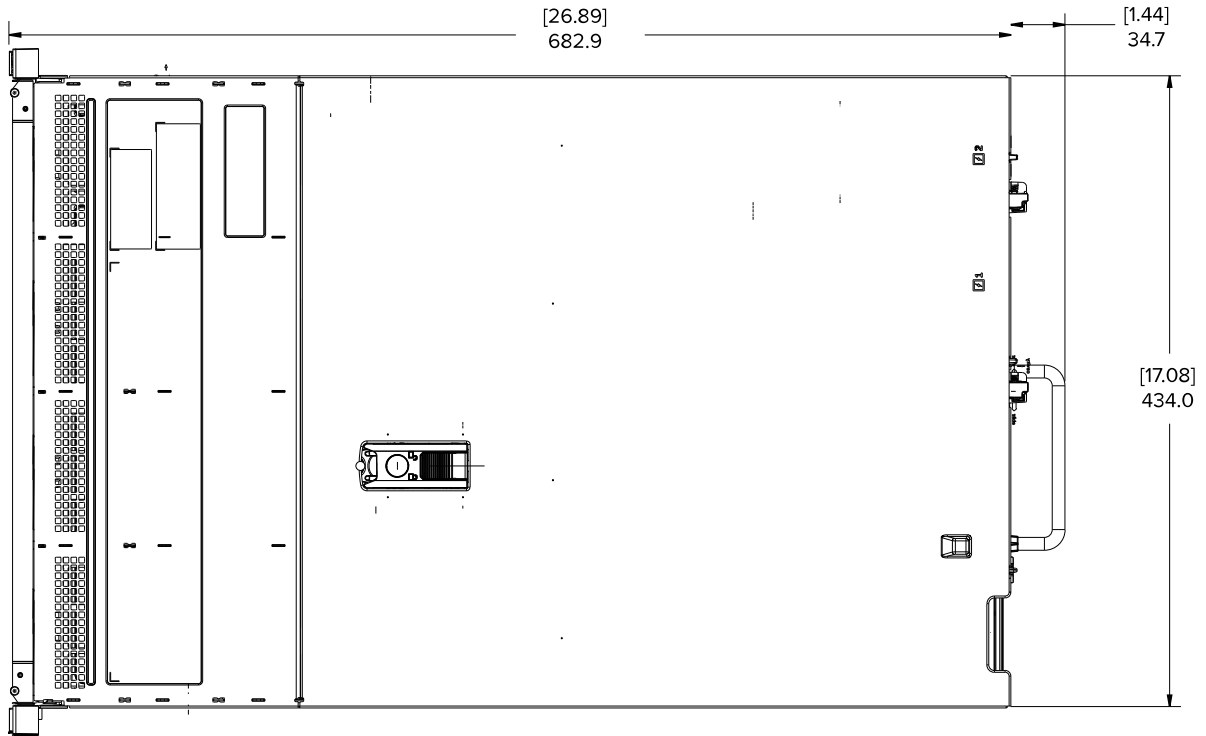
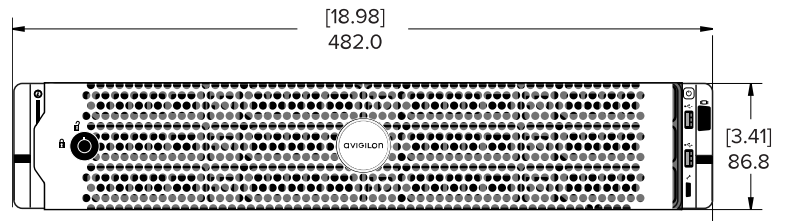
### DIMENSIONS (L x W x H)

717.6 mm x 482.0 mm x 86.8 mm

[27¾" x 19" x 3.41"]

### WEIGHT (WHEN FULLY POPULATED WITH HARD DRIVES)

34.5 kg [76 lbs]



## AI NVR VALUE

### FORM FACTOR

1U rack mount chassis

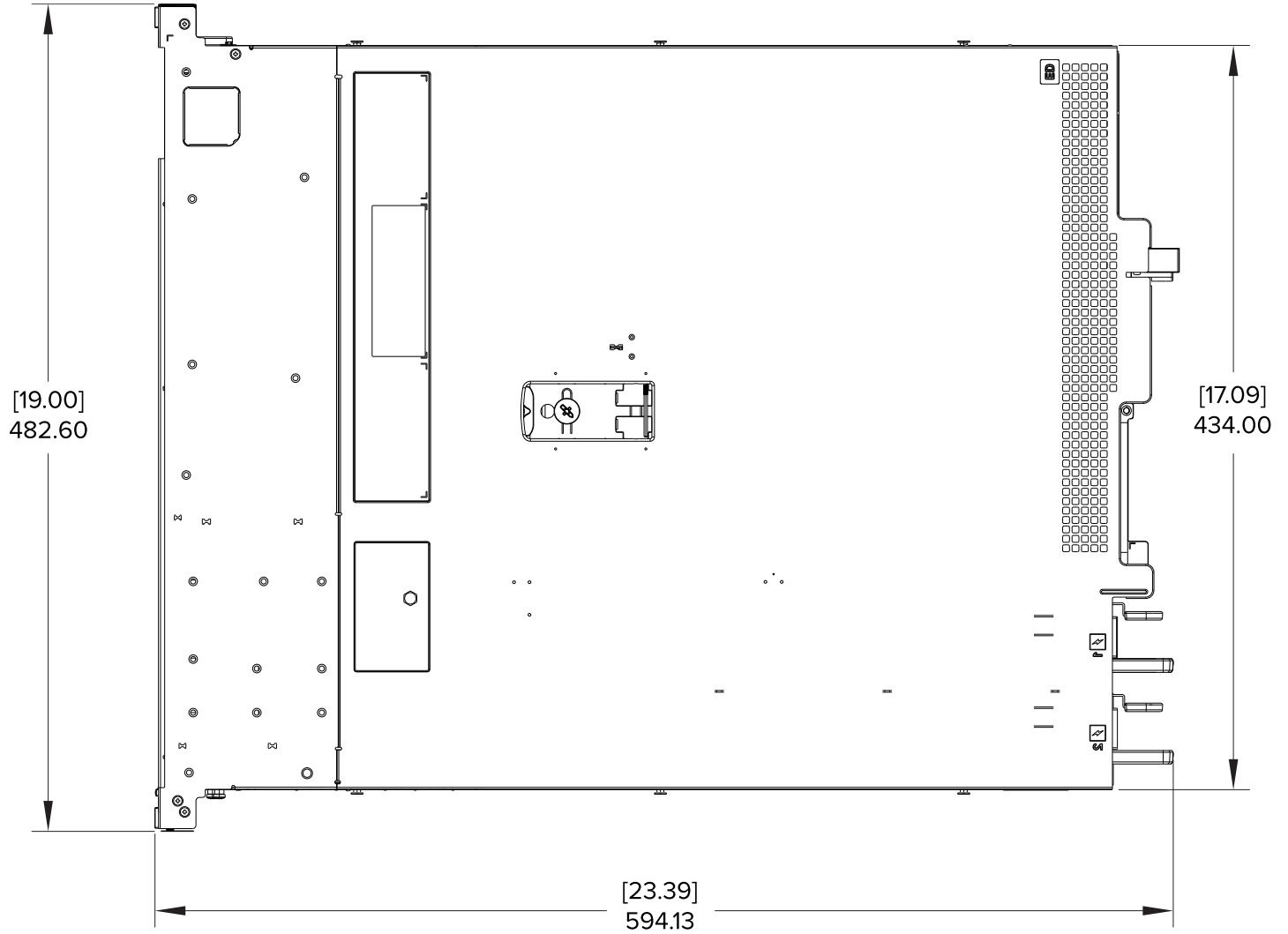
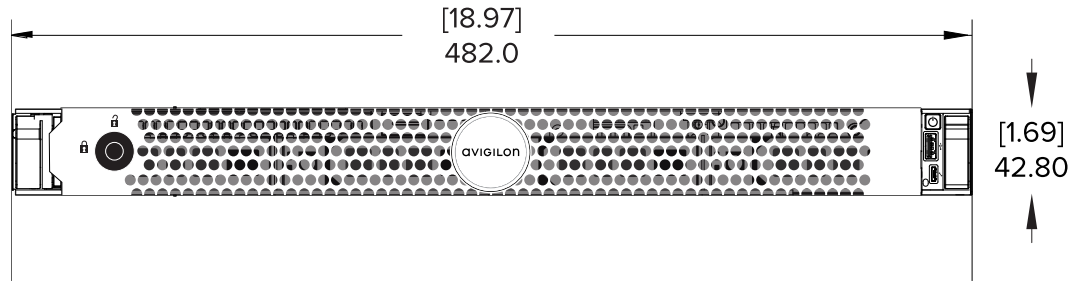
### DIMENSIONS (L x W x H)

594.1 mm x 482.6 mm x 42.8 mm

[23½" x 19" x 1.69"]

### WEIGHT

13.6 kg [30 lbs]



# ORDERING INFORMATION

## AI NVR PREMIUM+

AINVR-PRM-PLUS-64TB	AI NVR Premium+ 64 TB (80 TB Raw) with Avigilon Control Center
AINVR-PRM-PLUS-96TB	AI NVR Premium+ 96 TB (120 TB Raw) with Avigilon Control Center
AINVR-PRM-PLUS-128TB	AI NVR Premium+ 128 TB (160 TB Raw) with Avigilon Control Center
AINVR-PRM-PLUS-160TB	AI NVR Premium+ 160 TB (192 TB Raw) with Avigilon Control Center

Avigilon Control Center licenses must be purchased separately.

Avigilon Appearance Search and facial recognition requires Enterprise version of the ACC software.

## AI NVR PREMIUM

AINVR-PRM-64TB	AI NVR Premium 64 TB (80 TB Raw) with Avigilon Control Center
AINVR-PRM-96TB	AI NVR Premium 96 TB (120 TB Raw) with Avigilon Control Center
AINVR-PRM-128TB	AI NVR Premium 128 TB (160 TB Raw) with Avigilon Control Center
AINVR-PRM-160TB	AI NVR Premium 160 TB (192 TB Raw) with Avigilon Control Center

Avigilon Control Center licenses must be purchased separately.

Avigilon Appearance Search and facial recognition requires Enterprise version of the ACC software.

## AI NVR STANDARD

AINVR-STD-48TB	AI NVR Standard 48 TB (64 TB Raw) with Avigilon Control Center
AINVR-STD-32TB	AI NVR Standard 32 TB (48 TB Raw) with Avigilon Control Center
AINVR-STD-24TB	AI NVR Standard 24 TB (32 TB Raw) with Avigilon Control Center

Avigilon Control Center licenses must be purchased separately.

Avigilon Appearance Search and facial recognition requires Enterprise version of the ACC software.

## AI NVR VALUE

AINVR-VAL-12TB	AI NVR Value 12 TB (16 TB Raw) with Avigilon Control Center
AINVR-VAL-6TB	AI NVR Value 6 TB (8 TB Raw) with Avigilon Control Center

Avigilon Control Center licenses must be purchased separately.

Avigilon Appearance Search and facial recognition requires Enterprise version of the ACC software.

AINVR-PRM-PLUS-*nn*TB-NA  
AINVR-PRM-*nn*TB-NA  
AINVR-STD-*nn*TB-NA  
AINVR-VAL-*nn*TB-NA



AINVR-PRM-PLUS-*nn*TB-UK  
AINVR-PRM-*nn*TB-UK  
AINVR-STD-*nn*TB-UK  
AINVR-VAL-*nn*TB-UK



AINVR-PRM-PLUS-*nn*TB-EU  
AINVR-PRM-*nn*TB-EU  
AINVR-STD-*nn*TB-EU  
AINVR-VAL-*nn*TB-EU



AINVR-PRM-PLUS-*nn*TB-AU  
AINVR-PRM-*nn*TB-AU  
AINVR-STD-*nn*TB-AU  
AINVR-VAL-*nn*TB-AU



## SOFTWARE LICENSES

ACC7-ENT	ACC 7 Enterprise Edition license
ACC7-STD	ACC 7 Standard Edition license
ACC7-COR	ACC 7 Core Edition license
ACC7-VAC	ACC 7 Video Analytics feature channel license — Required for Classified Object Detection
ACC7-FACE	ACC 7 Face feature channel license
ACC7-FACE-10C	ACC 7 Face feature 10 channel license
ACC7-LPR	ACC 7 LPR lane license

## OPTIONS AND ACCESSORIES

AINVR-STD-PRK	Performance Kit for AINVR-STD
AINVR-STD-10GBE	Network Card, QP 10G-SFP+, for AINVR-STD
AINVR-SFPPLUS-SR	SFP+ 10GBASE-SR Optical Transceiver (single) for AI NVR Premium+, AI NVR Premium, and AI NVR Standard
AINVR-PRM-2NDPS	Redundant, hot-swappable power supply for AINVR-PRM or AINVR-PRM-PLUS
AINVR-STD-2NDPS	Redundant, hot-swappable power supply for AINVR-STD
AINVR-VAL-2NDPS	Redundant, hot-swappable power supply for AINVR-VAL
AINVR-HDDS-HOT-16TB	Spare hard drive, 16TB, for AINVR PRM 128TB and AINVR PRM PLUS 128TB
AINVR-HDDS-HOT-12TB	Spare hard drive, 12TB, for AINVR PRM 96TB and AINVR PRM PLUS 96TB
AINVR-HDDS-HOT-8TB	Spare hard drive, 8TB, for AINVR PRM 64TB, AINVR PRM PLUS 64TB, and AINVR STD 32TB/48TB
AINVR-HDDS-HOT-4TB	Spare hard drive, 4TB, for AINVR STD 24TB, AINVR VAL 12TB
AINVR-HDDS-HOT-2TB	Spare hard drive, 2TB, for AINVR VAL 6TB
IDRAC9-ENT-UPG	iDRAC Enterprise upgrade
AINVR-PRM-WARR-5Y4HMC	4-hour MC (mission critical response) service-level agreement upgrade for AINVR-PRM or AINVR-PRM-PLUS
AINVR-STD-WARR-5Y4HMC	4-hour MC (mission critical response) service-level agreement upgrade for AINVR-STD
AINVR-VAL-WARR-5Y4HMC	4-hour MC (mission critical response) service-level agreement upgrade for AINVR-VAL
AINVR-KYD-WARR-5YR	Keep Your Drive warranty for AINVR-PRM-PLUS, AINVR-PRM, AINVR-STD and AINVR-VAL

## SUPPORT

Learn more and find additional documentation at [avigilon.com](https://www.avigilon.com) or email [sales@avigilon.com](mailto:sales@avigilon.com) for specific product support.



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