



**CITY OF MANHATTAN BEACH PUBLIC WORKS
ENGINEERING DIVISION**

3621 Bell Avenue, Manhattan Beach, CA 90266

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September 12, 2023

Via Electronic Mail

Raymond Fouladian, President
L.A. High Tech Enterprises, Inc.
8726 S. Sepulveda Blvd. #A
Los Angeles, CA 90045

Re: City of Manhattan Beach Response to Bid Protest email dated 8-30-2023 (Bid. E1279-23C)

Dear Mr. Fouladian

The City of Manhattan Beach (City) received an email dated August 30, 2023 on behalf of L.A. High Tech Enterprises, Inc. protesting the bid submitted by the apparent low bidder BlueViolet Networks for the City Facility Security Cameras Public Works Yard and City Hall Fire Department and Police Department Project (Bid No. E1279-23C).

The protest argues that the Network Video Recorders (NVRs) provided in Addendum No. 4 of the Notice Inviting Bids takes precedence over any conflicting information contained in the plans. Furthermore, by not using the provided NVRs in their bid package, BlueViolet Networks was not “responsive” to the bidding instructions and specifications.

City staff notified BlueViolet Networks of the bid protest and received a formal response from them on September 1, 2023. In their response, BlueViolet Networks indicated that they used the listed manufacturer NVR models in Addendum No.4 and the minimum requirements outlined in the specifications to propose “equal or better” NVRs in their bid. L.A. High Tech Enterprises, Inc. was provided a copy of that response, and submitted a supplemental response on September 8, 2023, maintaining its position that BlueViolet Networks did not follow the bidding instructions.

In the City review of the protest, it has determined that the NVRs provided in BlueViolet Network’s bid are “equal” to the models provided in Addendum No.4, which was also acknowledged in L.A. High Tech Enterprises, Inc. supplemental response. Furthermore, Public Contract Code Section 3400, in part, provides that unless the specified product is to be sole sourced (with required findings), that implicit in every brand name listing is the “equal” qualifier. Additionally, Addendum

No. 4 cannot serve to preempt the "or equal" requirement of State law which is acknowledged and implemented through the General Provisions and Technical Specifications.

Based on the above, the City found that the protest by L.A. High Tech Enterprises, Inc. was without merit and per the Notice Inviting Bids, the City reserves the right to waive any irregularities or informalities in any bid or in the bidding process, as deemed to be in the best interest of the City.

The City of Manhattan Beach thanks L.A. High Tech Enterprises, Inc. for its interest in bidding on City projects. The City looks forward to L.A. High Tech Enterprises, Inc. continued interested in its project. Should you have any questions or need additional information, please contact me at epech@manhattanbeach.gov or at (310) 802-5340.

Regards,



Eduardo Pech
Senior Civil Engineer

Enclosures:

Bid Protest email dated 8/30/2023

A3 Communications, Inc. (dba BlueViolet Networks) response letter dated 9/1/2023

L.A. High Tech Enterprises, Inc. supplemental response email dated 9/8/2023

Eduardo Pech, P.E.

From: Raymond Fouladian <raymond@hightechlax.com>
Sent: Wednesday, August 30, 2023 5:43 PM
To: Katherine Doherty, P.E., ENV SP; Melanie Park
Cc: Eduardo Pech, P.E.
Subject: [EXTERNAL] Protest Bid: Invitation # E1279-23C
Attachments: avigilon-ai-nvr-datasheet-en (2).pdf; avigilon-nvr5-datasheet-en-rev2.pdf

EXTERNAL EMAIL: Do not click links or open attachments unless you trust the sender and know the content is safe.

To Whom it May Concern,

I hope this letter finds you well. I am writing to protest the bid:
City Facility Security Cameras Public Works Yard and City Hall Fire Department and Police Department
Invitation #
E1279-23C

Our Bid from L.A High Tech Enterprises INC, proposed exactly the specifications in Addendum 4, by Avigilon.

The Following Servers:

Base Bid

City Hall: **AINVR-PRM-160TB-NA**

Public Works Yard: **AINVR-PRM-160TB-NA**

Additive Bid

Fire & Police Department: **NVR5-PRM-288TB-S19-NA**

Addendum Number 4, which was recently introduced concerning the Avigilon Server's and Exact Model Numbers for this project, and as written it states:

"This Addendum shall take precedence over any conflicting information contained either in the plans"

In the bid protest procedure it clearly states:

"In order to be awarded a contract, the low bid must be "responsive" to the specification, and the low bidder must be a "responsible" bidder. A bid is responsive if it complies with the bidding instructions."

A Non-Avigilon Server without the exact model numbers listed above does not meet the specifications in Addendum 4 and does not follow the bidding instructions, moreover Avigilon Will NOT support a Non-Avigilon Server.

Please see the attached Datasheet/Specsheets of the Avigilon Servers we proposed, mentioned in Addendum 4, as supporting documentation.

Please let me know if you have any questions.

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Best Regards,
Raymond Fouladian
8726 S. Sepulveda Blvd. #A, Los Angeles, CA 90045
Mobile: 310.466.1734
Phone: 310.736.4140
Fax: 323.320.4376
Website: www.HighTechLAX.com
License # 977286

We Stand By Our Quality Of Work!

- CCTV
- Access Control
- Wireless Access Points
- Low Voltage
- Structured Cabling

5TH GENERATION NETWORK VIDEO RECORDERS

- 16 TB
- 24 TB
- 32 TB
- 48 TB
- 64 TB
- 96 TB
- 128 TB
- 192 TB
- 224 TB
- 252 TB
- 288 TB
- 360 TB
- 432 TB
- 5-YEAR WARRANTY

The fifth-generation Avigilon Network Video Recorder (NVR5) delivers unparalleled, high-performance recording, throughput, data availability, and protection for your Avigilon video security system. Featuring the densest storage capacity Avigilon has to offer on a single NVR, security teams can scale up to petabytes of storage at a single location, with up to 432 TB in storage per NVR. All NVR models come optimized with RAID technology, hot-swappable drives, and a five-year Avigilon warranty with dedicated support to increase system uptime and availability.



NVR5 PRM (252-432 TB)



NVR5 PRM (192-224 TB)



NVR5 STD (16-64 TB) and
NVR5 PRM (96-160 TB)

FEATURES



FLEXIBLE & SCALABLE TIER-1 STORAGE

NVR5 offers flexible configurations for security teams to cost-effectively scale up to 432 TB in tier 1 storage capacity and tailor it to their unique retention requirements.



HIGH DATA AVAILABILITY

Reliable storage with RAID-configured redundancy offers a highly available and resilient system that protects your data. All our STD & PRM models include reliable hard drives with RAID 6/60 redundancy to tolerate up to 2/4 hard drive failures.



LOWER DEPLOYMENT COSTS WITH QUICK & SIMPLE DEPLOYMENT WITH ACC PRE-CONFIGURED

The NVR5 comes pre-configured with ACC software for secure network video recording and management of Avigilon cameras up to 61 MP resolution.



INCREASE SYSTEM UPTIME & PRODUCTIVITY

Sites that have connected to the cloud and subscribed to advanced system health¹ can take advantage of system health monitoring to increase system availability, streamline maintenance time and minimize on-site service calls.



RESPOND FASTER WITH AI-POWERED ANALYTICS SUPPORT

Security teams can respond faster to critical events with the NVR5's seamless support for Avigilon Appearance Search, Facial Recognition, and LPR technologies.



RESOLVE TECHNICAL ISSUES EXPEDIENTLY WITH A SINGLE-POINT-OF-CONTACT

In addition to lifetime 24/7 Avigilon telephone technical support for the Avigilon End-to-End solution, five-year onsite parts and repair service is also included with 24/7 4-hour response SLA² for NVR5 PRM, or Next Business Day for NVR5 STD.



STRENGTHEN CYBERSECURITY

Designed with cybersecurity in mind, the NVR5 comes with a TPM 2.0 module built-in to support hardware Root of Trust authentication and data encryption.



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.

¹ On NVR5 PRM 252-432 TB, ACC 7.14.8 or later is required for full advanced system health functionality.

² Warranty coverage and support Service Level Agreement is subject to end user's geographic location. Please refer to <https://www.avigilon.com/support/warranty/avigilon> for more information.

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.



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



LICENSE PLATE RECOGNITION (LPR)

Significant improvements² in LPR performance compared to the previous generations of NVRs. 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.



ACC™ VIDEO MANAGEMENT SOFTWARE

Pre-installed and pre-configured solution for managing multi-megapixel digital IP and analog cameras.

MODEL	MAXIMUM SUPPORTED CAMERAS BY FEATURE ¹		NUMBER OF LPR LANES ²			
	APPEARANCE SEARCH ONLY ³	FACE RECOGNITION + APPEARANCE SEARCH ³	5 FPS (<16 KM/H)	10 FPS (<48 KM/H)	20 FPS (<100 KM/H)	30 FPS (<150 KM/H)
NVR5 PRM (252 288 360 432 TB)	200	50	20	10	5	3
NVR5 PRM (192 224 TB)			25	12	6	4
NVR5 PRM (96 128 160 TB)			12	6	3	2
NVR5 STD (16 24 32 48 64 TB)			12	6	3	2

¹ These performance figures are based on validation testing by Avigilon. Assumes appliance-wide average per camera rates of classified objects leaving 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 3 MP camera with 1 MP 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. ACC 7.14.10 or later is required.

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

SYSTEM		NVR5 PRM (252-432 TB)	NVR5 PRM (192-224 TB)	NVR5 PRM (96-160 TB)	NVR5 STD (16-64 TB)
Capacity		252 TB 288 TB 360 TB 432 TB	192 TB 224 TB	96 TB 128 TB 160 TB	16 TB 24 TB 32 TB 48 TB 64 TB
Avigilon Control Center™ Edition		Core, Standard and Enterprise compatible			
Network Video Streaming Performance (10 GbE - Multiple Connections)	Recording Rate:	Up to 1500 Mbps	Up to 1500 Mbps	Up to 1500 Mbps	Up to 800 Mbps ¹
	Playback Rate:	Up to 600 Mbps ²	Up to 600 Mbps ²	Up to 600 Mbps ²	Up to 600 Mbps
Network Video Streaming Performance (1 GbE - Multiple Connections)	Recording Rate:	Up to 800 Mbps	Up to 800 Mbps	Up to 700 Mbps	Up to 700 Mbps
	Playback Rate:	Up to 800 Mbps	Up to 600 Mbps	Up to 600 Mbps	Up to 600 Mbps
Operating System		Microsoft Windows Server 2019 - 16 core			
Hard Disk Drive Configuration	Video Data:	RAID 60 Up to 28 × 3.5", hot-swappable	RAID 60 Up to 18 × 3.5", hot-swappable	RAID 6 Up to 12 × 3.5", hot-swappable	RAID 6 Up to 10 × 3.5", hot-swappable
	Operating System:	2 × 480 GB M.2 SSD Drives, RAID 1	2 × 240 GB M.2 SSD Drives, RAID 1		
Recording Storage Capacity		Up to 504 TB raw; 432 TB effective (RAID 60)	Up to 288 TB raw; 224 TB effective (RAID 60)	Up to 192 TB raw; 160 TB effective (RAID 6)	Up to 80 TB raw; 64 TB effective (RAID 6)
Network Interface		2 × 10 GbE SFP+ ports ³ 4 × 1 GbE RJ-45 ports	4 × 10 GbE SFP+ ports ³ 4 × 1 GbE RJ-45 ports	2 × 10 GbE SFP+ ports ³ (optional for NVR5 STD) 6 × 1 GbE RJ-45 ports	
Memory		8 × 8 GB DDR4	6 × 8 GB DDR4	4 × 8 GB DDR4	2 × 8 GB DDR4
Processor		2 × Intel® 8-core Xeon®	1 × Intel® 16-core Xeon®	2 × Intel® 8-core Xeon®	1 × Intel® 8-core Xeon®
Video Outputs		1 × VGA			
Local Viewing		No			
Out-of-band Management		iLO Advanced	iDRAC 9 Enterprise		

¹ The maximum recording throughput for STD can be increased by adding a 2nd CPU kit and a 10 GbE Network Card.

² The max playback throughput for PRM can be increased by reducing the recording throughput.

³ Direct Attach Cables (NVR5-SFPPLUS-DA for all NVR5 models) or system-specific SFP+ transceivers (NVR5-SFPPLUS-SR-A for NVR5 16-224 TB, NVR5-SFPPLUS-SR-B for NVR5 >= 252 TB) sold separately.

MECHANICAL	NVR5 PRM (252-432 TB)	NVR5 PRM (192-224 TB)	NVR5 PRM (96-160 TB)	NVR5 STD (16-64 TB)
Form Factor	2U Rack Mount Chassis			
Dimensions (L x W x H)	872.0 mm × 479.0 mm × 87.5 mm 34.33" × 18.86" × 3.44"	751.3 mm × 482.0 mm × 86.8 mm 29.58" × 18.98" × 3.42"	721.6 mm × 482.0 mm × 86.8 mm 28.4" × 18.98" × 3.42"	
Weight	252 TB: 48 kg (107 lbs) 288 TB: 50 kg (110 lbs) 360 TB: 53 kg (116 lbs) 432 TB: 55 kg (122 lbs)	192 TB: 32 kg (70 lbs) 224 TB: 33 kg (73 lbs)	96 TB: 27 kg (60 lbs) 128 TB: 27 kg (60 lbs) 160 TB: 29 kg (63 lbs)	16 TB: 24 kg (54 lbs) 24 TB: 26 kg (57 lbs) 32 TB: 24 kg (54 lbs) 48 TB: 26 kg (57 lbs) 64 TB: 27 kg (60 lbs)
ELECTRICAL	NVR5 PRM (252-432 TB)	NVR5 PRM (192-224 TB)	NVR5 PRM (96-160 TB)	NVR5 STD (16-64 TB)
Power Input	100 to 240 VAC, 50/60 Hz, auto-switching			

ELECTRICAL	NVR5 PRM (252-432 TB)	NVR5 PRM (192-224 TB)	NVR5 PRM (96-160 TB)	NVR5 STD (16-64 TB)
Power Supply	Dual (1+1) 1000 W redundant	Dual (1+1) 1100 W	2 × 1100 W Mixed Mode	800 W Mixed Mode
Power Consumption	Maximum 580 W (1978 BTU/h)	Maximum 803 W (2740 BTU/h)	Maximum 789 W (2691 BTU/h)	Maximum 604 W (2061 BTU/h)
Power Efficiency	Titanium			Platinum

ENVIRONMENTAL	NVR5 PRM (252-432 TB)	NVR5 PRM (192-224 TB)	NVR5 PRM (96-160 TB)	NVR5 STD (16-64 TB)
Operating Temperature	10°C to 35°C (50°F to 95°F)	10°C to 35°C (50°F to 95°F)	5°C to 45°C (41 °F to 113°F)	
Storage Temperature	-30°C to 60°C (-22°F to 140°F)		-40°C to 65°C (-40°F to 149°F)	
Operating Humidity	8% to 90% relative humidity with 28°C (82.4°F) max dew point	10% to 80% relative humidity with 29°C (84.2°F) max dew point	8% to 95% relative humidity with 27°C (80.6°F) max dew point	
Storage Humidity	5% to 95% RH with 38.7°C (101.7°F) max dew point. Atmosphere must be non-condensing at all times.	5% to 95% RH with 33°C (91°F) max dew point. Atmosphere must be non-condensing at all times.	5% to 95% RH with 27°C (80.6°F) max dew point. Atmosphere must be non-condensing at all times.	
Operating Vibration	0.15 Grms at 10 Hz to 300 Hz	0.26 Grms at 5 Hz to 350 Hz	0.21 Grms at 5 Hz to 500 Hz	
Storage Vibration	0.5 Grms at 10 Hz to 500 Hz	1.88 Grms at 10 Hz to 500 Hz	1.88 Grms at 10 Hz to 500 Hz	
Operating Shock	2 G	6 G		
Storage Shock	15 G	71 G		
Operating Altitude	3,050 m (10,000 ft)	3,048 m (10,000 ft)		
Storage Altitude	9,144 m (30,000 ft)	12,000 m (39,370 ft)		

CERTIFICATIONS	NVR5 PRM (252-432 TB)	NVR5 PRM (192-224 TB)	NVR5 PRM (96-160 TB)	NVR5 STD (16-64 TB)
Certifications/Directives	UL, cUL, CE, RCM, BSMI, EAC, KC, NRCS, VCCI, RoHS, WEEE	UL, cUL, CE, LOT9, NRCS, NOM, RCM, EAC, VCCI, BSMI, CCC (STD only), KC, BIS, UKCA		
Safety	UL/CSA/EN/IEC 62368-1	UL/CSA/IEC/EN 62368-1:2014 (2nd ed)		
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	FCC Title 47 CFR Part 15 Canadian ICES-003(A) Issue 7 EN 55032:2015/CISPR 32:2015 EN 61000-3-2:2014/IEC 61000-3-2:2014 EN 61000-3-3:2013/IEC 61000-3-3:2013		
Electromagnetic Immunity	EN 55024	EN 55024:2010 +A1:2015/CISPR 24:2010 +A1:2015 or EN 55035:2017		
Warranty	5-year 4-hour mission critical warranty with onsite parts delivery service.			5-year NBD (Next Business Day) with onsite parts delivery service. 4-hour mission critical warranty upgrade available.

SUPPLIED ACCESSORIES	NVR5 PRM (252-432 TB)	NVR5 PRM (192-224 TB)	NVR5 PRM (96-160 TB)	NVR5 STD (16-64 TB)
Rack Rail System	Sliding rail system with cable management arm ¹	ReadyRails Sliding Rails with Cable Management Arm		
Bezel	1, front			
Power Cords	4 total: 2 × C13 / C14, 2 × country variants (from options below)			2 total: 1 × C13 / C14, 1 × country variant (from options below)

¹ Supports tool-less mounting in 19"-wide EIA-310-E compliant square hole, unthreaded round-hole 4-post racks, and threaded hole 4-post racks

(NA) NEMA 5-15P / C13



(UK) BS1363 / C13



(EU) SCHUKO / C13



(AU) AS3112 / C13



OUTLINE DIMENSIONS

[X.X]	INCHES
X	MM

NVR5 PRM (252 288 360 432 TB)

FORM FACTOR

2U rack mount chassis

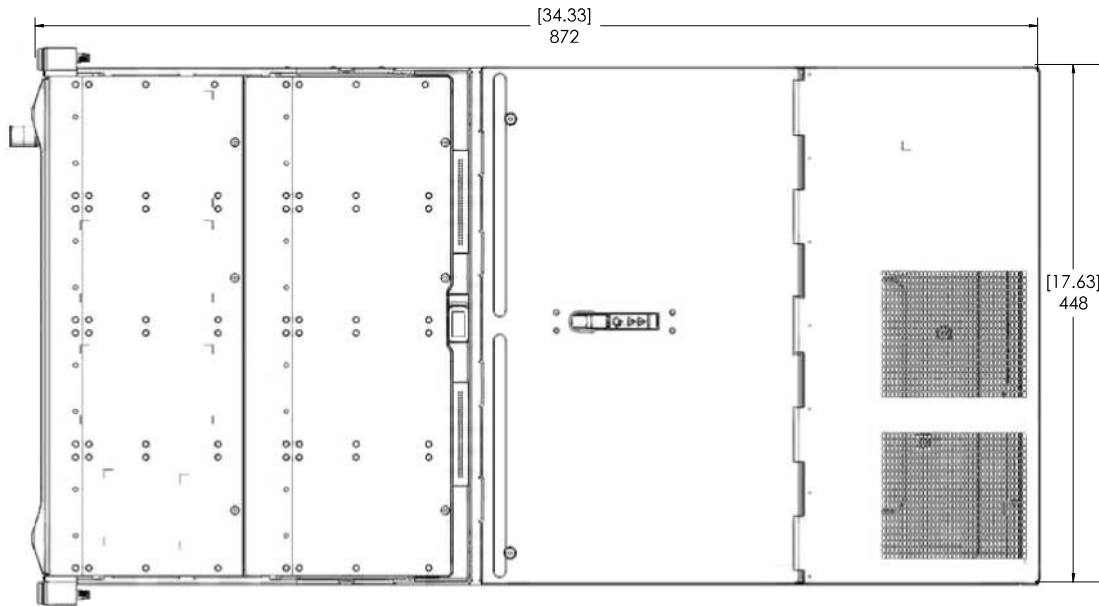
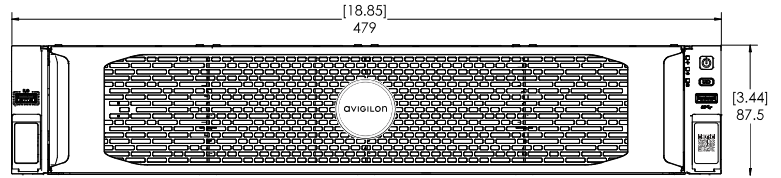
DIMENSIONS (L x W x H)

872.0 mm x 479.0 mm x 87.5 mm

34.33" x 18.86" x 3.44"

WEIGHT (WHEN FULLY POPULATED WITH HARD DRIVES)

55 kg [122 lbs]



NVR5 PRM (192 224 TB)

FORM FACTOR

2U rack mount chassis

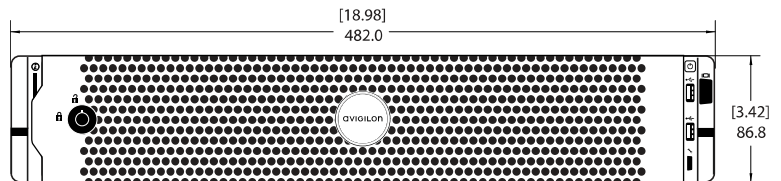
DIMENSIONS (L x W x H)

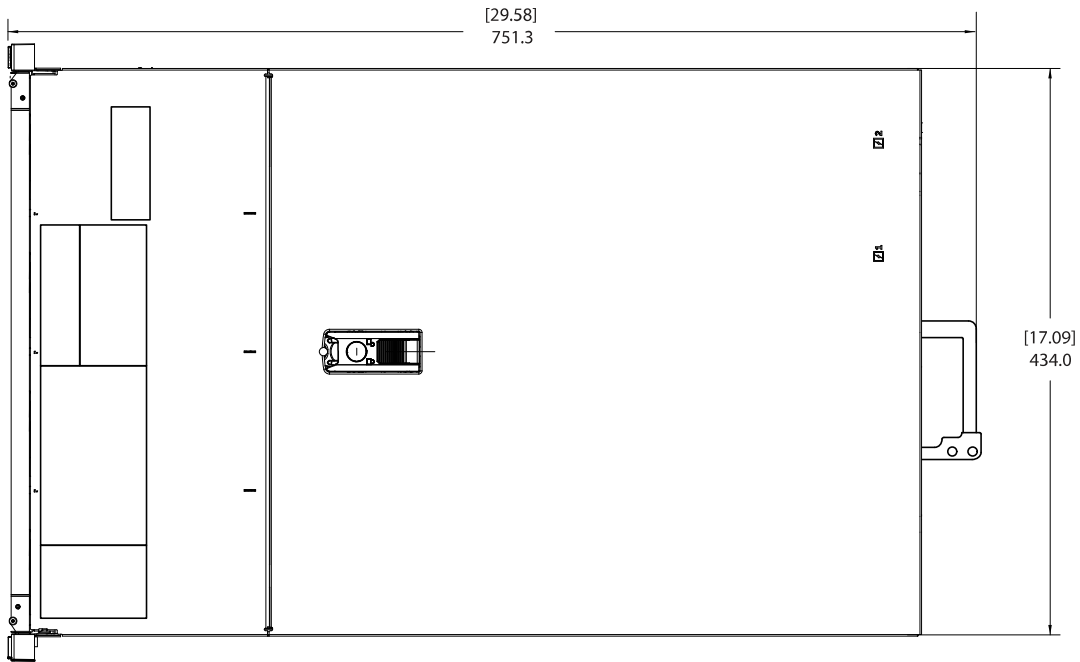
751.3 mm x 482.0 mm x 86.8 mm

29.58" x 18.98" x 3.42"

WEIGHT (WHEN FULLY POPULATED WITH HARD DRIVES)

33.1 kg [72.91 lbs]





NVR5 STD (16 24 32 48 64 TB) & NVR5 PRM (96 128 160 TB)

FORM FACTOR

2U rack mount chassis

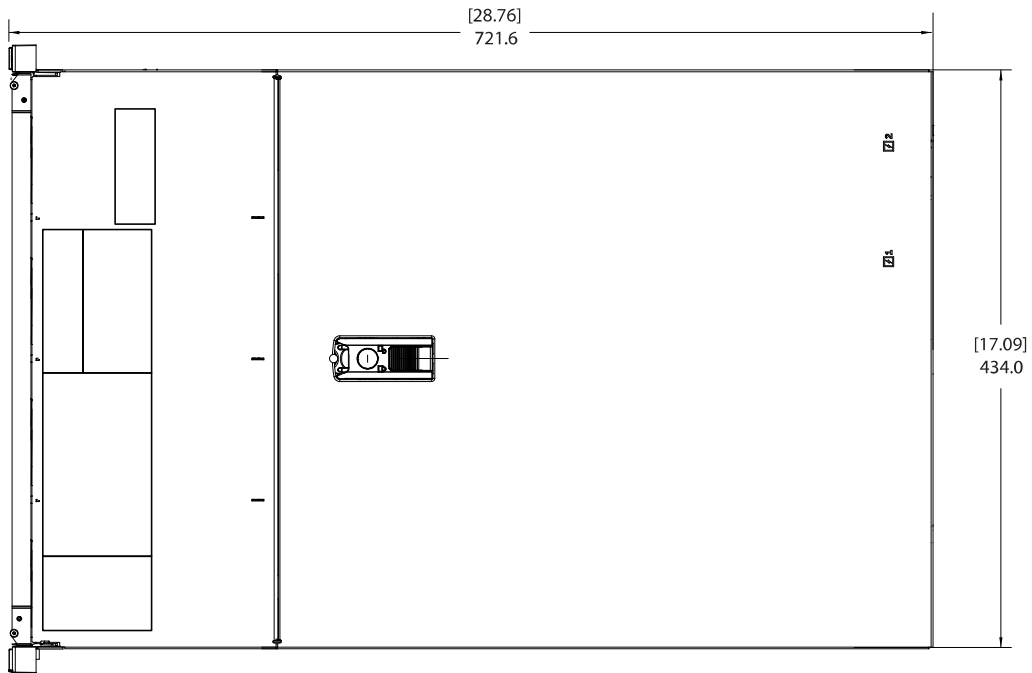
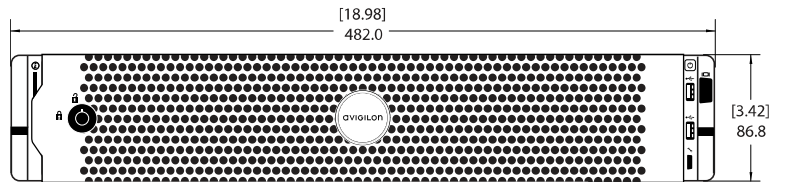
DIMENSIONS (L x W x H)

721.6 mm x 482.0 mm x 86.8 mm

28.4" x 18.98" x 3.42"

WEIGHT (WHEN FULLY POPULATED WITH HARD DRIVES)

28.76 kg [63.40 lbs]



ORDERING INFORMATION

NVR5	
NVR5-STD-16TB-W10	16 TB (24 TB Raw) NVR5 Standard with Microsoft Windows 10 v1809 LTSC and Avigilon Control Center
NVR5-STD-16TB-S19	16 TB (24 TB Raw) NVR5 Standard with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-STD-24TB-W10	24 TB (32 TB Raw) NVR5 Standard with Microsoft Windows 10 v1809 LTSC and Avigilon Control Center
NVR5-STD-24TB-S19	24 TB (32 TB Raw) NVR5 Standard with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-STD-32TB-W10	32 TB (48 TB Raw) NVR5 Standard with Microsoft Windows 10 v1809 LTSC and Avigilon Control Center
NVR5-STD-32TB-S19	32 TB (48 TB Raw) NVR5 Standard with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-STD-48TB-W10	48 TB (64 TB Raw) NVR5 Standard with Microsoft Windows 10 v1809 LTSC and Avigilon Control Center
NVR5-STD-48TB-S19	48 TB (64 TB Raw) NVR5 Standard with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-STD-64TB-W10	64 TB (80 TB Raw) NVR5 Standard with Microsoft Windows 10 v1809 LTSC and Avigilon Control Center
NVR5-STD-64TB-S19	64 TB (80 TB Raw) NVR5 Standard with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-PRM-96TB-S19	96 TB (120 TB Raw) NVR5 Premium with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-PRM-128TB-S19	128 TB (160 TB Raw) NVR5 Premium with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-PRM-160TB-S19	160 TB (192 TB Raw) NVR5 Premium with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-PRM-192TB-S19	192 TB (256 TB Raw) NVR5 Premium with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-PRM-224TB-S19	224 TB (288 TB Raw) NVR5 Premium with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-PRM-252TB-S19	252 TB (324 TB Raw) NVR5 Premium with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-PRM-288TB-S19	288 TB (360 TB Raw) NVR5 Premium with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-PRM-360TB-S19	360 TB (432 TB Raw) NVR5 Premium with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-PRM-432TB-S19	432 TB (504 TB Raw) NVR5 Premium with Microsoft Windows Server 2019 LTSC 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.	

ACCESSORIES (NVR5 PRM 252-432 TB)	
NVR5-SFPPLUS-DA	3 m (10 ft) SFP+ 10 GbE Twinax Direct Attach cable
HD-NVR4-SFPPLUS-DA	3 m (10 ft) SFP+ 10 GbE Twinax Direct Attach cable
NVR5-SFPPLUS-SR-B	SFP+ Transceivers for Short Range (Multi-mode) on server side, NVR5 >= 252 TB
NVR5-SFPPLUS-LR-B	SFP+ Transceivers for Long Range (Single-mode) between SAN switches, NVR5 >= 252 TB
NVR5-10GBASET-B	Network Card, QP 10 G-Base-T NVR5 PRM >= 252 TB
NVR5-RAM-16GB-B	RAM Upgrade Kit for 1 CPU Processor Only, 2 x 8 GB DDR4 3200 MT/s DIMMs, NVR5 PRM >= 252 TB
NVR5-PSU-1000W	1000 W Flex Slot Titanium Hot Plug/Swappable Power Supply Kit, NVR5 PRM >= 252 TB
NVR5-HDDS-INT-18TB	Spare hard drive, 18 TB, internal bay, compatible with NVR5 PRM >= 252 TB
NVR5-HDDS-HOT-18TB	Spare hard drive, 18 TB, front/rear bay, compatible with NVR5 PRM >= 252 TB
AVA-HED1-NVR5-CONNECT-B	AVA Connectivity Kit for Direct Attachment of a NVR5 PRM >= 252 TB
AVA-SAN-CONNECT-1	AVA Head Unit Connectivity Kit, includes 1 x transceiver and fiber optic cable for SAN networking
AVA-SAN-CONNECT-8	AVA Head Unit Connectivity Kit, includes 8 x transceivers and fiber optic cables for SAN networking with two network switches
NVR5-AVA-SAN-CONNECT-B	Connectivity Kit for AVA SAN networking, compatible with NVR5 PRM >= 252 TB (excluding AVA Transceiver and Fiber Optic Cables included in AVA-HED1-NVR5-CONNECT-B)
NVR-KYD-WARR-5YR-B	5-year Keep-Your-Drive Warranty Upgrade for NVR5 PRM >= 252 TB

ACCESSORIES (NVR5 STD/PRM 16-224 TB)	
NVR5-SFPPLUS-DA	3 m (10 ft) SFP+ 10 GbE Twinax Direct Attach cable
HD-NVR4-SFPPLUS-DA	3 m (10 ft) SFP+ 10 GbE Twinax Direct Attach cable
NVR4X-SFPPLUS-SR	SFP+ Transceivers for Short Range (Multi-mode) on server side

ACCESSORIES (NVR5 STD/PRM 16-224 TB)

NVR5-SFPPLUS-SR-A	SFP+ Transceivers for Short Range (Multi-mode) on server side, NVR5 16-224 TB
NVR5-SFPPLUS-LR-A	SFP+ Transceivers for Long Range (Single-mode) between SAN switches, NVR5 16-224 TB
NVR5-STD-10GBE	Network Card, DP 10 GbE SFP+ NVR5 STD 16-64 TB
NVR5-10GBASET-A1	Network Card, QP 10 G-Base-T NVR5 STD/PRM 16-160 TB (excluding 2nd CPU for NVR5 STD)
NVR5-10GBASET-A2	Network Card, QP 10 G-Base-T NVR5 PRM 192-224 TB
NVR5-RAM-16GB-A	RAM Upgrade Kit for 1 CPU Processor Only, 2 × 8 GB DDR4 3200 MT/s DIMMs, NVR5 STD/PRM 16-224 TB
NVR5-STD-2NDCPU	2nd CPU Upgrade Kit, 2 × 8 GB DDR4 3200 MT/s DIMMs, NVR5 STD 16-64 TB
NVR5-PRM-2NDCPU	2nd CPU Upgrade Kit, 6 × 8 GB DDR4 3200 MT/s DIMMs, NVR5 PRM 192-224 TB
NVR5-PSU-800W	800 W Hot Plug/Swappable Power Supply Kit, NVR5 STD 16-64 TB
NVR5-PSU-1100W-A1	1100 W Hot Plug/Swappable Power Supply Kit, NVR5 PRM 96-160 TB
NVR5-PSU-1100W-A2	1100 W Hot Plug/Swappable Power Supply Kit, NVR5 PRM 192-224 TB
NVR5-HDD-HOT-4TB	Spare hard drive, 4 TB, front/rear bay, compatible with NVR5 STD 16-24 TB
NVR5-HDD-HOT-8TB	Spare hard drive, 8 TB, front/rear bay, compatible with NVR5 STD 32-64 TB
NVR5-HDDS-HOT-12TB	Spare hard drive, 12 TB, front/rear bay, compatible with NVR PRM 96 TB
NVR5-HDDS-INT-16TB	Spare hard drive, 16 TB, internal bay, compatible with NVR5 PRM 192-224 TB
NVR5-HDDS-HOT-16TB-A1	Spare hard drive, 16 TB, front/rear bay, compatible with NVR5 PRM 128-160 TB
NVR5-HDDS-HOT-16TB-A2	Spare hard drive, 16 TB, front/rear bay, compatible with NVR5 PRM 192-224 TB
AVA-HED1-NVR5-CONNECT-A	AVA Connectivity Kit for Direct Attachment of a NVR5 STD/PRM ≤ 224 TB (excluding 2nd CPU for NVR5 STD)
AVA-SAN-CONNECT-1	AVA Head Unit Connectivity Kit, includes 1 × transceiver and fiber optic cable for SAN networking
AVA-SAN-CONNECT-8	AVA Head Unit Connectivity Kit, includes 8 × transceivers and fiber optic cables for SAN networking with two network switches
NVR5-AVA-SAN-CONNECT-A	Connectivity Kit for AVA SAN networking, compatible with NVR5 STD/PRM ≤ 224 TB (excluding 2nd CPU for NVR5 STD as well as AVA Transceiver and Fiber Optic Cables included in AVA-HED1-NVR5-CONNECT-A)
NVR-KYD-WARR-5YR-A	5-year Keep-Your-Drive Warranty Upgrade for NVR5 STD/PRM 16-224 TB
NVR5-STD-WARR-5Y4HMC	5-year 4-Hour-Mission-Critical Warranty Upgrade for NVR5 STD 16-64 TB

SUPPORT

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



Jul 2022 | Rev 2

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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 ¹		NON-ANALYTIC CAMERAS ¹			NUMBER OF LPR LANES ²					
	AS ONLY ³	AS+FR ⁴	COD ONLY ³	COD+AS ⁴	COD+AS+FR ⁴	DEFAULT MODE			PERFORMANCE MODE ⁵		
						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 ⁶	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

¹ 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.

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 For cameras at 2MP and 30 frames per second (fps).

⁴ Requires H5A, H4A cameras, or Classified Object Detection running on non-analytics cameras.

⁵ 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.

⁶ 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 [‡]	Up to 900 Mbps	
	Playback Rate	Up to 600 Mbps [†]	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) ¹	Single 350W (80 PLUS Platinum) ¹
	Consumption	Maximum 1100W (2559.1 BTU/h)	Maximum 750W (2559.1 BTU/h)	Maximum 350 W (1340 BTU/hr)
¹ 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"> • 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 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

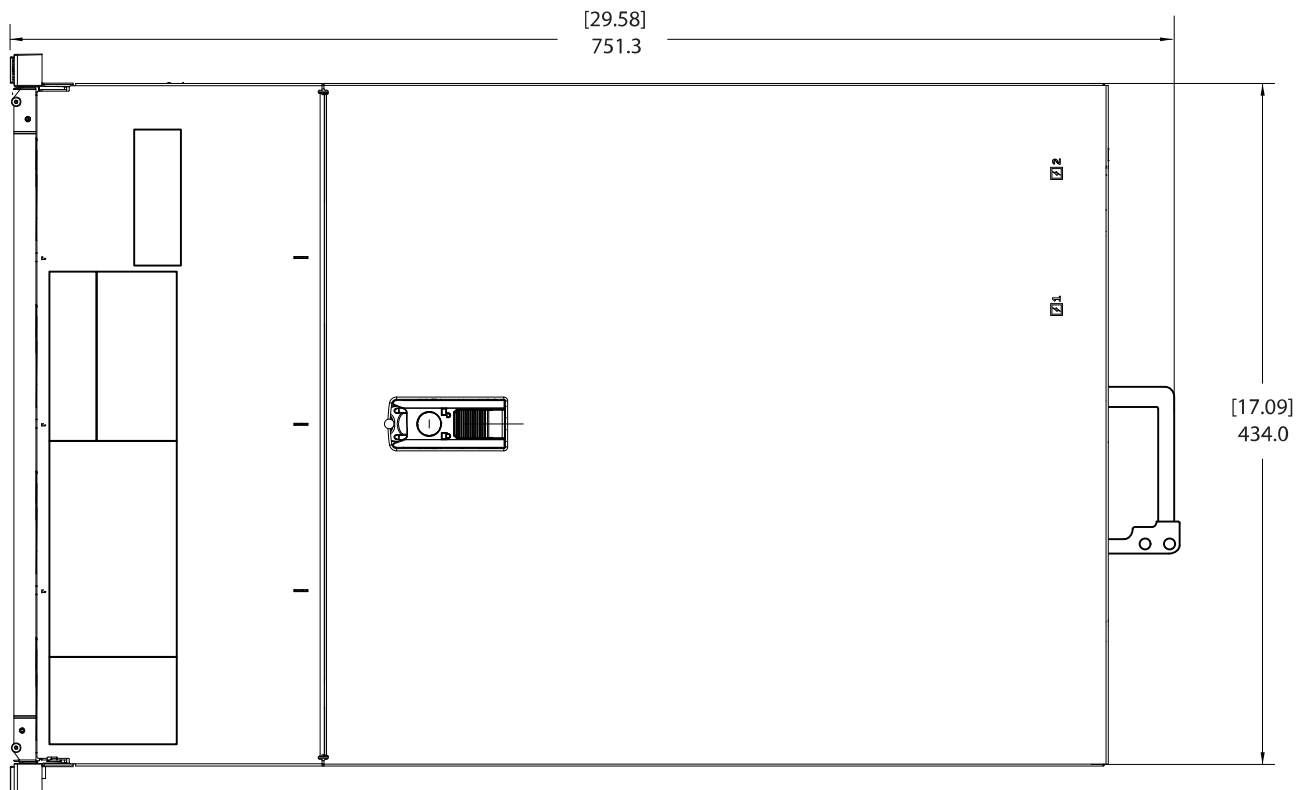
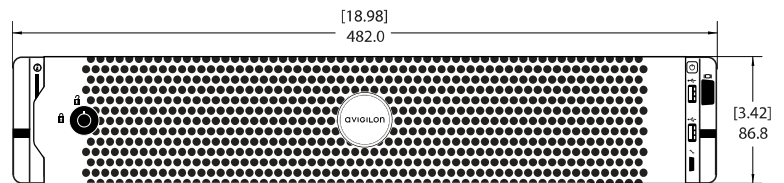
DIMENSIONS (L x W x H)

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

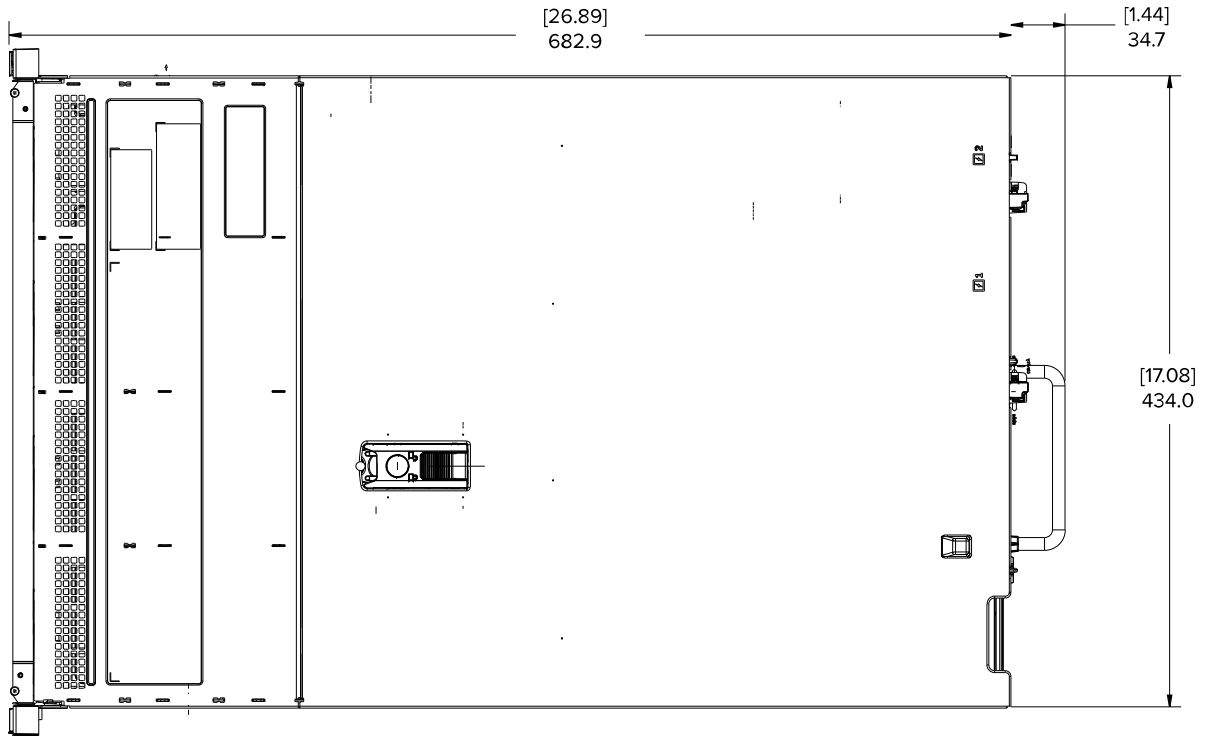
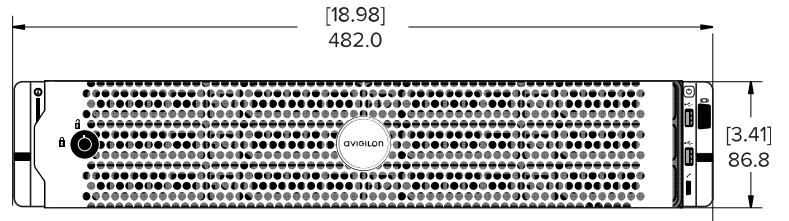
DIMENSIONS (L x W x H)

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

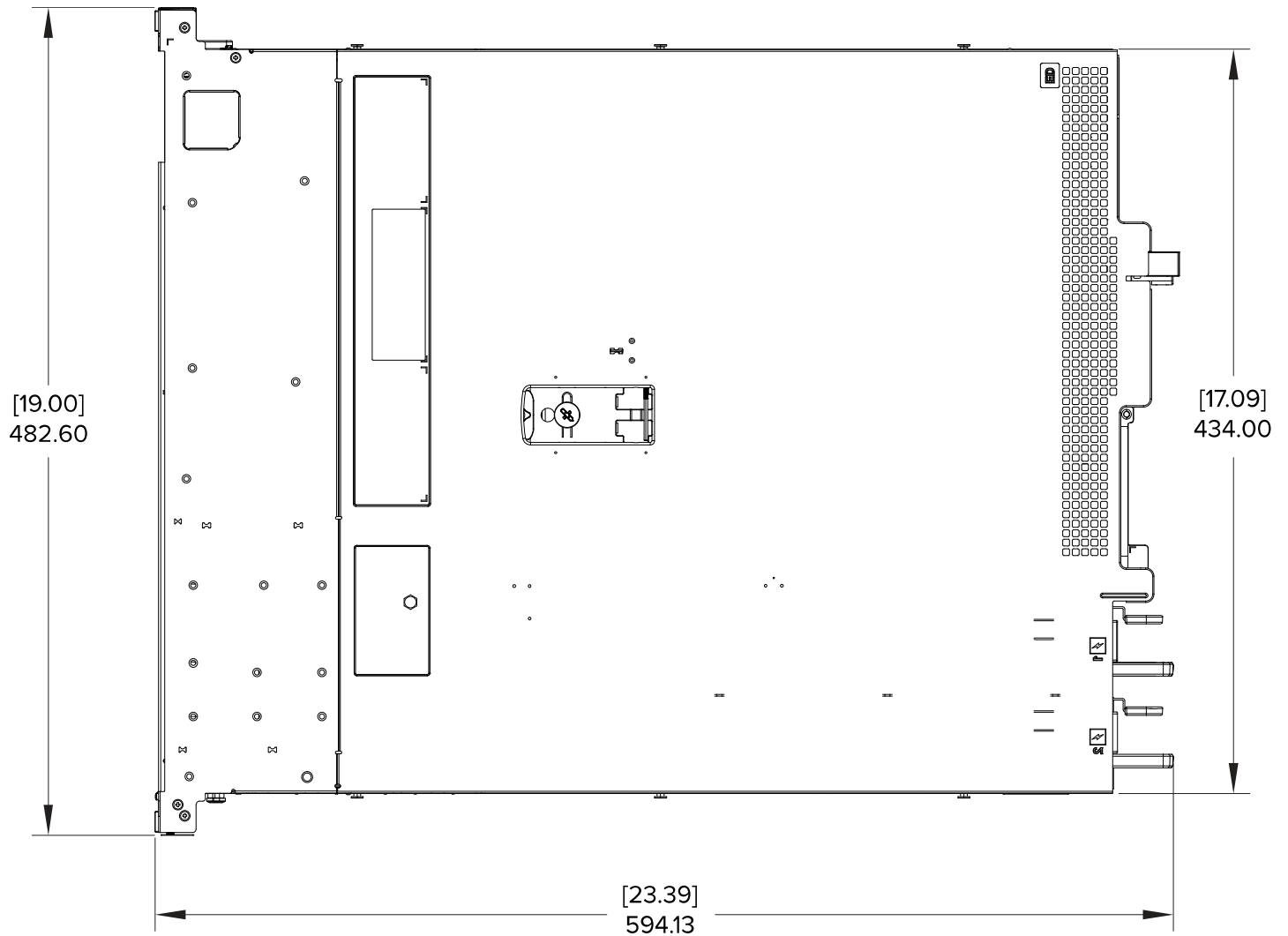
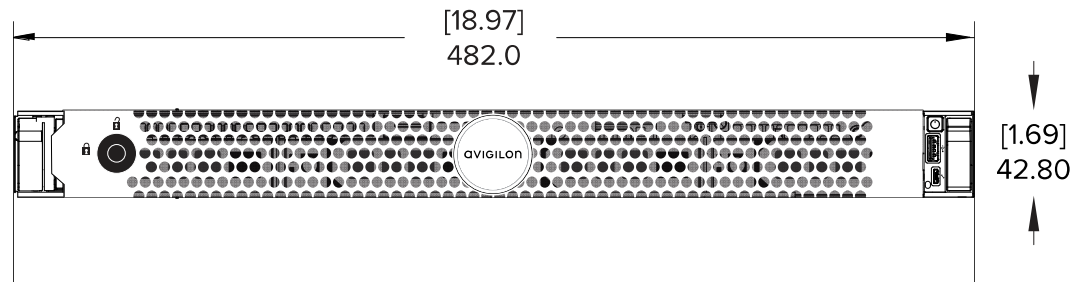
DIMENSIONS (L x W x H)

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-STD and AINVR-VAL

SUPPORT

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



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September 1, 2023

PROJECT NO. D-944

BID NO. E1279-23C

“City Facility Security Cameras Public Works Yard and City Hall Fire Depart and Police Dept”

Mr. Edward Pech and The City of Manhattan Beach,

Thank you for allowing us to respond to the concerns raised by the protesting bidder, L.A. High Tech Enterprises Inc., specific to the Addendum 4.

This is the quote taken from the protesting bidder.

“A Non-Avigilon Server without the exact model numbers listed above does not meet the specifications in Addendum 4 and does not follow the bidding instructions, moreover Avigilon Will NOT support a Non-Avigilon Server.”

Our justification in proposing an “equal or better,” server was based on section 2.02, page 10-106. With the servers we proposed were based on the specifications of the Avigilon Servers listed in Addendum 4 which we read and acknowledged.

2.02 VSS VIDEO MANAGEMENT SYSTEM (VMS)

A. General: Contractor shall provide all software and licenses required to meet the specified functions herein.

B. Video Management Software (VMS): Avigilon Unity ACC. Provide SQL database license.

C. Management Server. Configure as required by the manufacturer to meet the project requirements. System shall be configured to handle system growth for double the cameras for this initial project. Management server shall be rack mount configuration

We acknowledge and agree that the specifications identified by the servers listed in Addendum 4 “take precedence over any conflicting information,” and were met as listed in section 2.02 C. We used the listed manufacturer server models provided in Addendum 4 for the server specifications to meet the requirements listed above in section C. I am attaching a spec sheet just for reference.

As for the statement that Avigilon will not support a non-Avigilon server. That is a correct statement regarding the physical server since it was not purchased through Avigilon. The physical server will be supported by BlueViolet Networks and the manufacturer of the server.

The Avigilon servers are Dell servers that are branded Avigilon. While we sell both Avigilon branded servers and 3rd party servers, the brand name of the servers is not “material,” to its function or support of the software and licenses installed.

There are hundreds, if not thousands of Avigilon customers on 3rd party, customer provided servers or virtual machines, VM Ware and Hyper-V that Avigilon does not support. This is an obvious statement.

In fact, the largest liquor distributor in the United States, Southern Glazer Wine & Spirit has thousands of cameras on non-Avigilon branded servers.

Avigilon supports its software and the licenses through authorized partners and certified technicians.

The California Department of General Services, section 1404.2, defines Responsive and Responsible Bidder as below.

Responsive Bid: A bid is considered responsive if it indicates compliance without **material deviation** from the requirements of the solicitation and the terms and conditions of the proposed contract.

Responsible Bidder: A bidder is responsible if they possess the experience, facilities, reputation, financial resources and are fully capable of performing the contract.

Without reservation we met the requirements of a "Responsive Bid," based on the needs listed by the City and the language of the RFP.

As for the Responsible Bidder, BlueViolet Networks has been in business since 1979 with 80% of our business supporting customers in CA local government, K-12 and Higher Education. See customer list attached.

We just completed this summer a \$5M project for Mt San Jacinto College and are in middle of completing an Avigilon project for the City of Lawndale. With plenty of capacity to fulfill this project on based on the timelines outlined in the RFP.

We are also a Motorola Safety Reimagined partner, that qualifies us to provide a fully integrated solution for Cities and Police utilizing Motorola Public Safety Radios for alerting.

We are an Avigilon Elite+ Partner, the highest level of recognition from the manufacturer, with the highest discounts and number of certified technicians in Southern California.

We are a Division of The Cook & Boardman Group with the financial health and bonding capabilities of a \$1B dollar organization but with local service and support.

We have a CMAS contract for Avigilon/Motorola with labor to simplify procurement and add-ons, which I will also attach for reference.

With all of this being said, if the intent was for the City to "hard spec" the Avigilon specific part number, we apologize again for the confusion. As a show of good faith, Blue Violet Networks will honor its bid pricing to include the Avigilon branded servers listed on Addendum 4.

We hope to still be considered for your partner on this project!

Sincerely,

A handwritten signature in black ink that reads "Melissa Orwig". The signature is fluid and cursive, with a large loop at the end of the last name.

Melissa Orwig, A3 Communications DBA Blue Violet Networks



blueviolet
NETWORKS

A DIVISION OF THE COOK & BOARDMAN GROUP, LLC

Blue Violet Networks Offers Locked In customer pricing using the CMAS Award:

CMAS contracts are established for products and services that have been competitively assessed, negotiated, or bid primarily, but not exclusively, by the Federal General Services Administration. The program enables the State to streamline purchases by removing repetitive, resource intensive, costly, and time-consuming bid processes.

CALIFORNIA MULTIPLE AWARD SCHEDULE (CMAS) - DGS

California Multiple Award Schedules (CMAS) offers a wide variety of commodity, non-IT Services, and information technology products and services at prices which have been assessed to be fair, reasonable and competitive. The CMAS Program creates a pool of suppliers that an agency can solicit offers from. When utilized correctly, CMAS streamlines the procurement process. This form of procurement differs from the competitive bid process. The use of CMAS is optional and is available to state and local government agencies.

CMAS Agreement Number	CMAS Supplier Name	Term End Date
3-17-84-0052B	Blue Violet Networks	3/31/2027

Service-Hardware Installation, Security-Management Systems, Security-IT Hardware, Security-Access Control System, Brand-AVIGILON, Security-software, Security-Components, Security Surveillance System, Video-surveillance camera, Security Smart Cards

IronLink NVR / Premium / NVR5



IronLink NVR Premium Plus G2

SYSTEM

CHASSIS	2U Rackmount 18LFF
PROCESSOR	2x Intel 4210R 2.4GHz 10-core Processors
OPERATING SYSTEM	Windows Server 2019 Standard + 4-cores
MEMORY	64GB (8x8GB) RDIMM 3200MT/s
CONTROLLER	PERC H750 8GB Cache Adapter
OS DRIVES	2x 240GB M.2 SSDs (RAID 1)
HARD DRIVES	(18) Enterprise / Value* 7.2k SAS HDD (RAID 6)
EMBEDDED NETWORKING	NVIDIA Quadro T1000 4GB GPU
LOM MEZZ SLOT	(2) 10GB SFP+ + (2) 1GB Base-T
GPU	(4) 1GB Base-T
POWER SUPPLY	(2) 1100W Power Supply
WARRANTY	5 Year ProSupport NBD Onsite with KYHD
MANAGEMENT	iDRAC9 Enterprise

5TH GENERATION NETWORK VIDEO RECORDERS

16 TB

24 TB

32 TB

48 TB

64 TB

96 TB

128 TB

192 TB

224 TB

252 TB

288 TB

360 TB

432 TB

5-YEAR WARRANTY

The fifth-generation Avigilon Network Video Recorder (NVR5) delivers unparalleled, high-performance recording, throughput, data availability, and protection for your Avigilon video security system. Featuring the densest storage capacity Avigilon has to offer on a single NVR, security teams can scale up to petabytes of storage at a single location, with up to 432 TB in storage per NVR. All NVR models come optimized with RAID technology, hot-swappable drives, and a five-year Avigilon warranty with dedicated support to increase system uptime and availability.



NVR5 PRM (252-432 TB)



NVR5 PRM (192-224 TB)



NVR5 STD (16-64 TB) and
NVR5 PRM (96-160 TB)

FEATURES



FLEXIBLE & SCALABLE TIER-1 STORAGE

NVR5 offers flexible configurations for security teams to cost-effectively scale up to 432 TB in tier 1 storage capacity and tailor it to their unique retention requirements.



HIGH DATA AVAILABILITY

Reliable storage with RAID-configured redundancy offers a highly available and resilient system that protects your data. All our STD & PRM models include reliable hard drives with RAID 6/60 redundancy to tolerate up to 2/4 hard drive failures.



LOWER DEPLOYMENT COSTS WITH QUICK & SIMPLE DEPLOYMENT WITH ACC PRE-CONFIGURED

The NVR5 comes pre-configured with ACC software for secure network video recording and management of Avigilon cameras up to 61 MP resolution.



INCREASE SYSTEM UPTIME & PRODUCTIVITY

Sites that have connected to the cloud and subscribed to advanced system health¹ can take advantage of system health monitoring to increase system availability, streamline maintenance time and minimize on-site service calls.



RESPOND FASTER WITH AI-POWERED ANALYTICS SUPPORT

Security teams can respond faster to critical events with the NVR5's seamless support for Avigilon Appearance Search, Facial Recognition, and LPR technologies.



RESOLVE TECHNICAL ISSUES EXPEDIENTLY WITH A SINGLE-POINT-OF-CONTACT

In addition to lifetime 24/7 Avigilon telephone technical support for the Avigilon End-to-End solution, five-year onsite parts and repair service is also included with 24/7 4-hour response SLA² for NVR5 PRM, or Next Business Day for NVR5 STD.



STRENGTHEN CYBERSECURITY

Designed with cybersecurity in mind, the NVR5 comes with a TPM 2.0 module built-in to support hardware Root of Trust authentication and data encryption.



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.

¹ On NVR5 PRM 252-432 TB, ACC 7.14.8 or later is required for full advanced system health functionality.

² Warranty coverage and support Service Level Agreement is subject to end user's geographic location. Please refer to <https://www.avigilon.com/support/warranty/avigilon> for more information.

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.



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



LICENSE PLATE RECOGNITION (LPR)

Significant improvements² in LPR performance compared to the previous generations of NVRs. 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.



ACC™ VIDEO MANAGEMENT SOFTWARE

Pre-installed and pre-configured solution for managing multi-megapixel digital IP and analog cameras.

MODEL	MAXIMUM SUPPORTED CAMERAS BY FEATURE ¹		NUMBER OF LPR LANES ²			
	APPEARANCE SEARCH ONLY ³	FACE RECOGNITION + APPEARANCE SEARCH ³	5 FPS (<16 KM/H)	10 FPS (<48 KM/H)	20 FPS (<100 KM/H)	30 FPS (<150 KM/H)
NVR5 PRM (252 288 360 432 TB)	200	50	20	10	5	3
NVR5 PRM (192 224 TB)			25	12	6	4
NVR5 PRM (96 128 160 TB)			12	6	3	2
NVR5 STD (16 24 32 48 64 TB)			12	6	3	2

¹ These performance figures are based on validation testing by Avigilon. Assumes appliance-wide average per camera rates of classified objects leaving 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 3 MP camera with 1 MP 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. ACC 7.14.10 or later is required.

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

SYSTEM		NVR5 PRM (252-432 TB)	NVR5 PRM (192-224 TB)	NVR5 PRM (96-160 TB)	NVR5 STD (16-64 TB)
Capacity		252 TB 288 TB 360 TB 432 TB	192 TB 224 TB	96 TB 128 TB 160 TB	16 TB 24 TB 32 TB 48 TB 64 TB
Avigilon Control Center™ Edition		Core, Standard and Enterprise compatible			
Network Video Streaming Performance (10 GbE - Multiple Connections)	Recording Rate:	Up to 1500 Mbps	Up to 1500 Mbps	Up to 1500 Mbps	Up to 800 Mbps ¹
	Playback Rate:	Up to 600 Mbps ²	Up to 600 Mbps ²	Up to 600 Mbps ²	Up to 600 Mbps
Network Video Streaming Performance (1 GbE - Multiple Connections)	Recording Rate:	Up to 800 Mbps	Up to 800 Mbps	Up to 700 Mbps	Up to 700 Mbps
	Playback Rate:	Up to 800 Mbps	Up to 600 Mbps	Up to 600 Mbps	Up to 600 Mbps
Operating System		Microsoft Windows Server 2019 - 16 core			
Hard Disk Drive Configuration	Video Data:	RAID 60 Up to 28 × 3.5", hot-swappable	RAID 60 Up to 18 × 3.5", hot-swappable	RAID 6 Up to 12 × 3.5", hot-swappable	RAID 6 Up to 10 × 3.5", hot-swappable
	Operating System:	2 × 480 GB M.2 SSD Drives, RAID 1	2 × 240 GB M.2 SSD Drives, RAID 1		
Recording Storage Capacity		Up to 504 TB raw; 432 TB effective (RAID 60)	Up to 288 TB raw; 224 TB effective (RAID 60)	Up to 192 TB raw; 160 TB effective (RAID 6)	Up to 80 TB raw; 64 TB effective (RAID 6)
Network Interface		2 × 10 GbE SFP+ ports ³ 4 × 1 GbE RJ-45 ports	4 × 10 GbE SFP+ ports ³ 4 × 1 GbE RJ-45 ports	2 × 10 GbE SFP+ ports ³ (optional for NVR5 STD) 6 × 1 GbE RJ-45 ports	
Memory		8 × 8 GB DDR4	6 × 8 GB DDR4	4 × 8 GB DDR4	2 × 8 GB DDR4
Processor		2 × Intel® 8-core Xeon®	1 × Intel® 16-core Xeon®	2 × Intel® 8-core Xeon®	1 × Intel® 8-core Xeon®
Video Outputs		1 × VGA			
Local Viewing		No			
Out-of-band Management		iLO Advanced	iDRAC 9 Enterprise		
¹ The maximum recording throughput for STD can be increased by adding a 2nd CPU kit and a 10 GbE Network Card. ² The max playback throughput for PRM can be increased by reducing the recording throughput. ³ Direct Attach Cables (NVR5-SFPPLUS-DA for all NVR5 models) or system-specific SFP+ transceivers (NVR5-SFPPLUS-SR-A for NVR5 16-224 TB, NVR5-SFPPLUS-SR-B for NVR5 ≥ 252 TB) sold separately.					

MECHANICAL	NVR5 PRM (252-432 TB)	NVR5 PRM (192-224 TB)	NVR5 PRM (96-160 TB)	NVR5 STD (16-64 TB)
Form Factor	2U Rack Mount Chassis			
Dimensions (L x W x H)	872.0 mm × 479.0 mm × 87.5 mm 34.33" × 18.86" × 3.44"	751.3 mm × 482.0 mm × 86.8 mm 29.58" × 18.98" × 3.42"	721.6 mm × 482.0 mm × 86.8 mm 28.4" × 18.98" × 3.42"	
Weight	252 TB: 48 kg (107 lbs) 288 TB: 50 kg (110 lbs) 360 TB: 53 kg (116 lbs) 432 TB: 55 kg (122 lbs)	192 TB: 32 kg (70 lbs) 224 TB: 33 kg (73 lbs)	96 TB: 27 kg (60 lbs) 128 TB: 27 kg (60 lbs) 160 TB: 29 kg (63 lbs)	16 TB: 24 kg (54 lbs) 24 TB: 26 kg (57 lbs) 32 TB: 24 kg (54 lbs) 48 TB: 26 kg (57 lbs) 64 TB: 27 kg (60 lbs)

ELECTRICAL	NVR5 PRM (252-432 TB)	NVR5 PRM (192-224 TB)	NVR5 PRM (96-160 TB)	NVR5 STD (16-64 TB)
Power Input	100 to 240 VAC, 50/60 Hz, auto-switching			

ELECTRICAL	NVR5 PRM (252-432 TB)	NVR5 PRM (192-224 TB)	NVR5 PRM (96-160 TB)	NVR5 STD (16-64 TB)
Power Supply	Dual (1+1) 1000 W redundant	Dual (1+1) 1100 W	2 × 1100 W Mixed Mode	800 W Mixed Mode
Power Consumption	Maximum 580 W (1978 BTU/h)	Maximum 803 W (2740 BTU/h)	Maximum 789 W (2691 BTU/h)	Maximum 604 W (2061 BTU/h)
Power Efficiency	Titanium			Platinum

ENVIRONMENTAL	NVR5 PRM (252-432 TB)	NVR5 PRM (192-224 TB)	NVR5 PRM (96-160 TB)	NVR5 STD (16-64 TB)
Operating Temperature	10°C to 35°C (50°F to 95°F)	10°C to 35°C (50°F to 95°F)	5°C to 45°C (41 °F to 113°F)	
Storage Temperature	-30°C to 60°C (-22°F to 140°F)		-40°C to 65°C (-40°F to 149°F)	
Operating Humidity	8% to 90% relative humidity with 28°C (82.4°F) max dew point	10% to 80% relative humidity with 29°C (84.2°F) max dew point	8% to 95% relative humidity with 27°C (80.6°F) max dew point	
Storage Humidity	5% to 95% RH with 38.7°C (101.7°F) max dew point. Atmosphere must be non-condensing at all times.	5% to 95% RH with 33°C (91°F) max dew point. Atmosphere must be non-condensing at all times.	5% to 95% RH with 27°C (80.6°F) max dew point. Atmosphere must be non-condensing at all times.	
Operating Vibration	0.15 Grms at 10 Hz to 300 Hz	0.26 Grms at 5 Hz to 350 Hz	0.21 Grms at 5 Hz to 500 Hz	
Storage Vibration	0.5 Grms at 10 Hz to 500 Hz	1.88 Grms at 10 Hz to 500 Hz	1.88 Grms at 10 Hz to 500 Hz	
Operating Shock	2 G	6 G		
Storage Shock	15 G	71 G		
Operating Altitude	3,050 m (10,000 ft)	3,048 m (10,000 ft)		
Storage Altitude	9,144 m (30,000 ft)	12,000 m (39,370 ft)		

CERTIFICATIONS	NVR5 PRM (252-432 TB)	NVR5 PRM (192-224 TB)	NVR5 PRM (96-160 TB)	NVR5 STD (16-64 TB)
Certifications/Directives	UL, cUL, CE, RCM, BSMI, EAC, KC, NRCS, VCCI, RoHS, WEEE	UL, cUL, CE, LOT9, NRCS, NOM, RCM, EAC, VCCI, BSMI, CCC (STD only), KC, BIS, UKCA		
Safety	UL/CSA/EN/IEC 62368-1	UL/CSA/IEC/EN 62368-1:2014 (2nd ed)		
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	FCC Title 47 CFR Part 15 Canadian ICES-003(A) Issue 7 EN 55032:2015/CISPR 32:2015 EN 61000-3-2:2014/IEC 61000-3-2:2014 EN 61000-3-3:2013/IEC 61000-3-3:2013		
Electromagnetic Immunity	EN 55024	EN 55024:2010 +A1:2015/CISPR 24:2010 +A1:2015 or EN 55035:2017		
Warranty	5-year 4-hour mission critical warranty with onsite parts delivery service.			5-year NBD (Next Business Day) with onsite parts delivery service. 4-hour mission critical warranty upgrade available.

SUPPLIED ACCESSORIES	NVR5 PRM (252-432 TB)	NVR5 PRM (192-224 TB)	NVR5 PRM (96-160 TB)	NVR5 STD (16-64 TB)
Rack Rail System	Sliding rail system with cable management arm ¹	ReadyRails Sliding Rails with Cable Management Arm		
Bezel	1, front			
Power Cords	4 total: 2 × C13 / C14, 2 × country variants (from options below)			2 total: 1 × C13 / C14, 1 × country variant (from options below)

¹ Supports tool-less mounting in 19"-wide EIA-310-E compliant square hole, unthreaded round-hole 4-post racks, and threaded hole 4-post racks

(NA) NEMA 5-15P / C13



(UK) BS1363 / C13



(EU) SCHUKO / C13



(AU) AS3112 / C13



OUTLINE DIMENSIONS

[X.X]	INCHES
X	MM

NVR5 PRM (252 288 360 432 TB)

FORM FACTOR

2U rack mount chassis

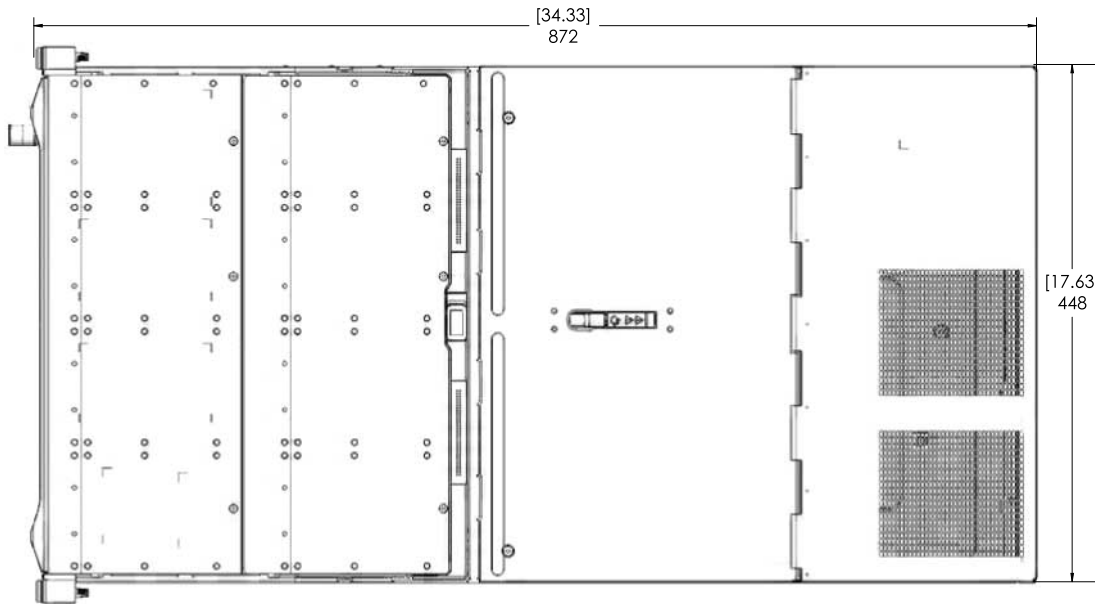
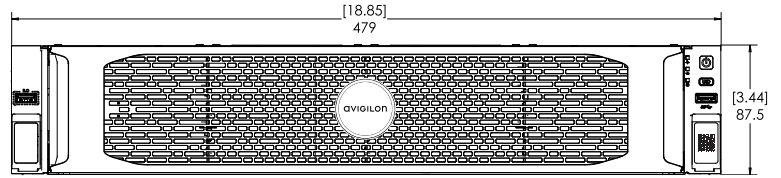
DIMENSIONS (L x W x H)

872.0 mm x 479.0 mm x 87.5 mm

34.33" x 18.86" x 3.44"

WEIGHT (WHEN FULLY POPULATED WITH HARD DRIVES)

55 kg [122 lbs]



NVR5 PRM (192 224 TB)

FORM FACTOR

2U rack mount chassis

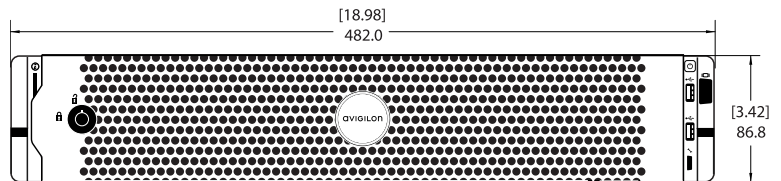
DIMENSIONS (L x W x H)

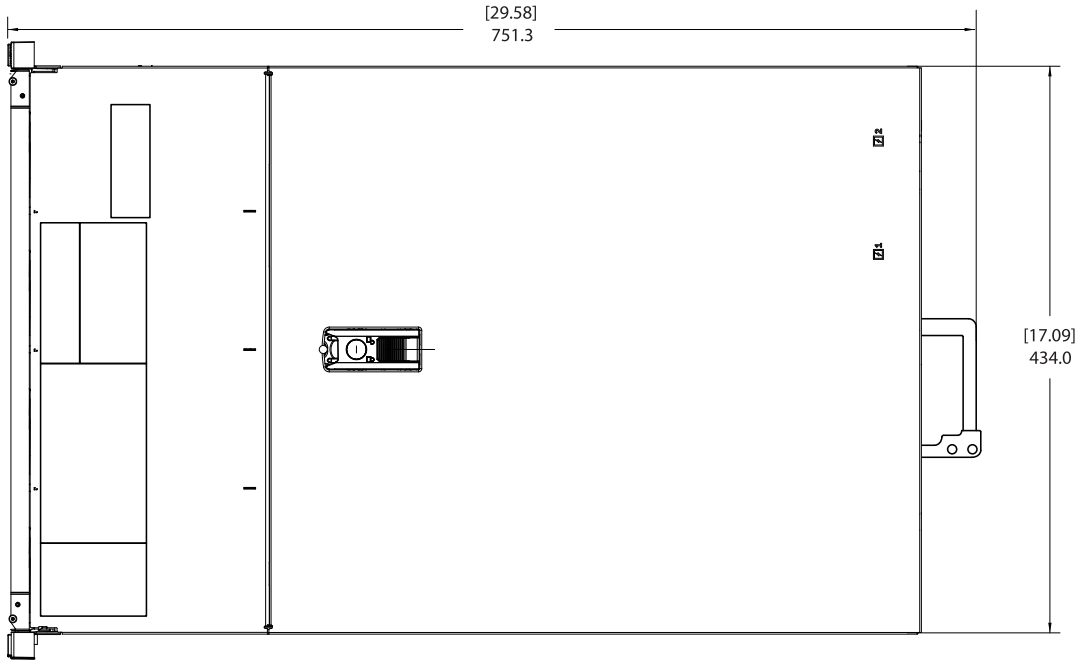
751.3 mm x 482.0 mm x 86.8 mm

29.58" x 18.98" x 3.42"

WEIGHT (WHEN FULLY POPULATED WITH HARD DRIVES)

33.1 kg [72.91 lbs]





NVR5 STD (16 24 32 48 64 TB) & NVR5 PRM (96 128 160 TB)

FORM FACTOR

2U rack mount chassis

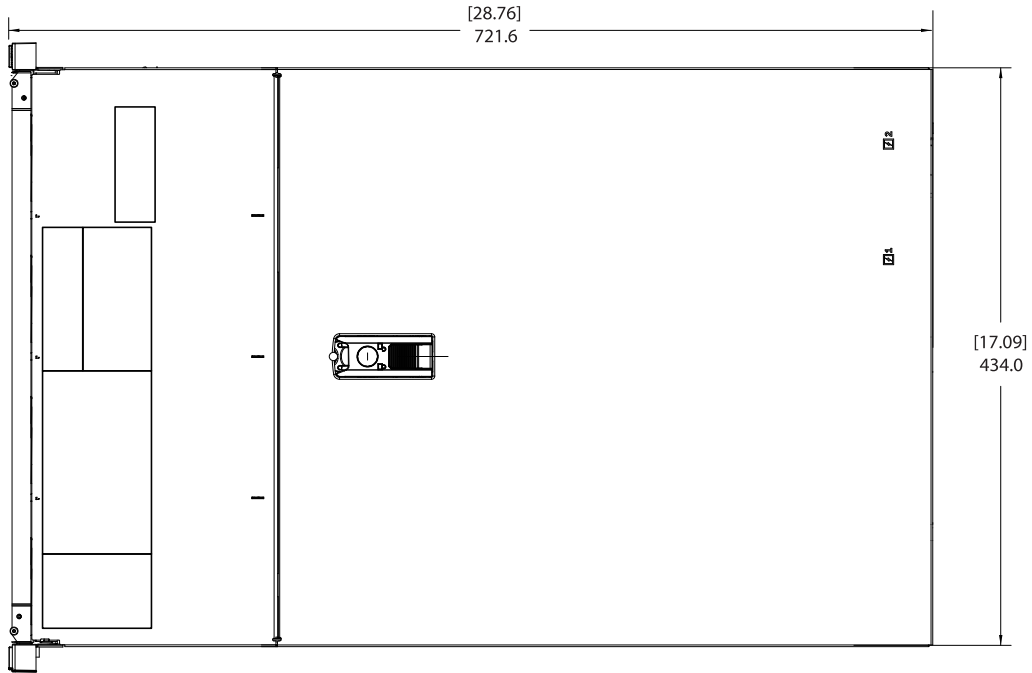
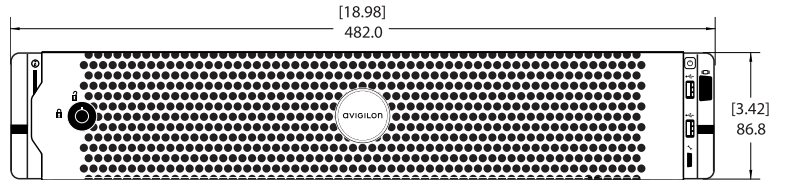
DIMENSIONS (L x W x H)

721.6 mm x 482.0 mm x 86.8 mm

28.4" x 18.98" x 3.42"

WEIGHT (WHEN FULLY POPULATED WITH HARD DRIVES)

28.76 kg [63.40 lbs]



ORDERING INFORMATION

NVR5	
NVR5-STD-16TB-W10	16 TB (24 TB Raw) NVR5 Standard with Microsoft Windows 10 v1809 LTSC and Avigilon Control Center
NVR5-STD-16TB-S19	16 TB (24 TB Raw) NVR5 Standard with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-STD-24TB-W10	24 TB (32 TB Raw) NVR5 Standard with Microsoft Windows 10 v1809 LTSC and Avigilon Control Center
NVR5-STD-24TB-S19	24 TB (32 TB Raw) NVR5 Standard with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-STD-32TB-W10	32 TB (48 TB Raw) NVR5 Standard with Microsoft Windows 10 v1809 LTSC and Avigilon Control Center
NVR5-STD-32TB-S19	32 TB (48 TB Raw) NVR5 Standard with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-STD-48TB-W10	48 TB (64 TB Raw) NVR5 Standard with Microsoft Windows 10 v1809 LTSC and Avigilon Control Center
NVR5-STD-48TB-S19	48 TB (64 TB Raw) NVR5 Standard with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-STD-64TB-W10	64 TB (80 TB Raw) NVR5 Standard with Microsoft Windows 10 v1809 LTSC and Avigilon Control Center
NVR5-STD-64TB-S19	64 TB (80 TB Raw) NVR5 Standard with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-PRM-96TB-S19	96 TB (120 TB Raw) NVR5 Premium with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-PRM-128TB-S19	128 TB (160 TB Raw) NVR5 Premium with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-PRM-160TB-S19	160 TB (192 TB Raw) NVR5 Premium with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-PRM-192TB-S19	192 TB (256 TB Raw) NVR5 Premium with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-PRM-224TB-S19	224 TB (288 TB Raw) NVR5 Premium with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-PRM-252TB-S19	252 TB (324 TB Raw) NVR5 Premium with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-PRM-288TB-S19	288 TB (360 TB Raw) NVR5 Premium with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-PRM-360TB-S19	360 TB (432 TB Raw) NVR5 Premium with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-PRM-432TB-S19	432 TB (504 TB Raw) NVR5 Premium with Microsoft Windows Server 2019 LTSC 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.

ACCESSORIES (NVR5 PRM 252-432 TB)	
NVR5-SFPPLUS-DA	3 m (10 ft) SFP+ 10 GbE Twinax Direct Attach cable
HD-NVR4-SFPPLUS-DA	3 m (10 ft) SFP+ 10 GbE Twinax Direct Attach cable
NVR5-SFPPLUS-SR-B	SFP+ Transceivers for Short Range (Multi-mode) on server side, NVR5 >= 252 TB
NVR5-SFPPLUS-LR-B	SFP+ Transceivers for Long Range (Single-mode) between SAN switches, NVR5 >= 252 TB
NVR5-10GBASET-B	Network Card, QP 10 G-Base-T NVR5 PRM >= 252 TB
NVR5-RAM-16GB-B	RAM Upgrade Kit for 1 CPU Processor Only, 2 x 8 GB DDR4 3200 MT/s DIMMs, NVR5 PRM >= 252 TB
NVR5-PSU-1000W	1000 W Flex Slot Titanium Hot Plug/Swappable Power Supply Kit, NVR5 PRM >= 252 TB
NVR5-HDDS-INT-18TB	Spare hard drive, 18 TB, internal bay, compatible with NVR5 PRM >= 252 TB
NVR5-HDDS-HOT-18TB	Spare hard drive, 18 TB, front/rear bay, compatible with NVR5 PRM >= 252 TB
AVA-HED1-NVR5-CONNECT-B	AVA Connectivity Kit for Direct Attachment of a NVR5 PRM >= 252 TB
AVA-SAN-CONNECT-1	AVA Head Unit Connectivity Kit, includes 1 x transceiver and fiber optic cable for SAN networking
AVA-SAN-CONNECT-8	AVA Head Unit Connectivity Kit, includes 8 x transceivers and fiber optic cables for SAN networking with two network switches
NVR5-AVA-SAN-CONNECT-B	Connectivity Kit for AVA SAN networking, compatible with NVR5 PRM >= 252 TB (excluding AVA Transceiver and Fiber Optic Cables included in AVA-HED1-NVR5-CONNECT-B)
NVR-KYD-WARR-5YR-B	5-year Keep-Your-Drive Warranty Upgrade for NVR5 PRM >= 252 TB

ACCESSORIES (NVR5 STD/PRM 16-224 TB)	
NVR5-SFPPLUS-DA	3 m (10 ft) SFP+ 10 GbE Twinax Direct Attach cable
HD-NVR4-SFPPLUS-DA	3 m (10 ft) SFP+ 10 GbE Twinax Direct Attach cable
NVR4X-SFPPLUS-SR	SFP+ Transceivers for Short Range (Multi-mode) on server side

ACCESSORIES (NVR5 STD/PRM 16-224 TB)

NVR5-SFPPLUS-SR-A	SFP+ Transceivers for Short Range (Multi-mode) on server side, NVR5 16-224 TB
NVR5-SFPPLUS-LR-A	SFP+ Transceivers for Long Range (Single-mode) between SAN switches, NVR5 16-224 TB
NVR5-STD-10GBE	Network Card, DP 10 GbE SFP+ NVR5 STD 16-64 TB
NVR5-10GBASET-A1	Network Card, QP 10 G-Base-T NVR5 STD/PRM 16-160 TB (excluding 2nd CPU for NVR5 STD)
NVR5-10GBASET-A2	Network Card, QP 10 G-Base-T NVR5 PRM 192-224 TB
NVR5-RAM-16GB-A	RAM Upgrade Kit for 1 CPU Processor Only, 2 × 8 GB DDR4 3200 MT/s DIMMs, NVR5 STD/PRM 16-224 TB
NVR5-STD-2NDCPU	2nd CPU Upgrade Kit, 2 × 8 GB DDR4 3200 MT/s DIMMs, NVR5 STD 16-64 TB
NVR5-PRM-2NDCPU	2nd CPU Upgrade Kit, 6 × 8 GB DDR4 3200 MT/s DIMMs, NVR5 PRM 192-224 TB
NVR5-PSU-800W	800 W Hot Plug/Swappable Power Supply Kit, NVR5 STD 16-64 TB
NVR5-PSU-1100W-A1	1100 W Hot Plug/Swappable Power Supply Kit, NVR5 PRM 96-160 TB
NVR5-PSU-1100W-A2	1100 W Hot Plug/Swappable Power Supply Kit, NVR5 PRM 192-224 TB
NVR5-HDD-HOT-4TB	Spare hard drive, 4 TB, front/rear bay, compatible with NVR5 STD 16-24 TB
NVR5-HDD-HOT-8TB	Spare hard drive, 8 TB, front/rear bay, compatible with NVR5 STD 32-64 TB
NVR5-HDDS-HOT-12TB	Spare hard drive, 12 TB, front/rear bay, compatible with NVR PRM 96 TB
NVR5-HDDS-INT-16TB	Spare hard drive, 16 TB, internal bay, compatible with NVR5 PRM 192-224 TB
NVR5-HDDS-HOT-16TB-A1	Spare hard drive, 16 TB, front/rear bay, compatible with NVR5 PRM 128-160 TB
NVR5-HDDS-HOT-16TB-A2	Spare hard drive, 16 TB, front/rear bay, compatible with NVR5 PRM 192-224 TB
AVA-HED1-NVR5-CONNECT-A	AVA Connectivity Kit for Direct Attachment of a NVR5 STD/PRM ≤ 224 TB (excluding 2nd CPU for NVR5 STD)
AVA-SAN-CONNECT-1	AVA Head Unit Connectivity Kit, includes 1 × transceiver and fiber optic cable for SAN networking
AVA-SAN-CONNECT-8	AVA Head Unit Connectivity Kit, includes 8 × transceivers and fiber optic cables for SAN networking with two network switches
NVR5-AVA-SAN-CONNECT-A	Connectivity Kit for AVA SAN networking, compatible with NVR5 STD/PRM ≤ 224 TB (excluding 2nd CPU for NVR5 STD as well as AVA Transceiver and Fiber Optic Cables included in AVA-HED1-NVR5-CONNECT-A)
NVR-KYD-WARR-5YR-A	5-year Keep-Your-Drive Warranty Upgrade for NVR5 STD/PRM 16-224 TB
NVR5-STD-WARR-5Y4HMC	5-year 4-Hour-Mission-Critical Warranty Upgrade for NVR5 STD 16-64 TB

SUPPORT

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



Jul 2022 | Rev 2

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Eduardo Pech, P.E.

From: Raymond Fouladian <raymond@hightechlax.com>
Sent: Friday, September 8, 2023 12:03 PM
To: Eduardo Pech, P.E.
Cc: Melanie Park; Katherine Doherty, P.E., ENV SP
Subject: Re: [EXTERNAL] Protest Bid: Invitation # E1279-23C

Hello Eddie,

Thank you for the update.

I respectfully disagree with their response, as the hardware specs may be the same as Avigilon, however those servers are a quarter of the price of Avigilon Servers which is not fair for others who followed the bidding instructions including Addendum 4.

Again thank you for the update and we will wait to hear back on the decision.

In the meantime, should you have any questions please do not hesitate to contact us.
Have a Great Weekend!

-Raymond
310.466.1734

On Thu, Sep 7, 2023 at 3:09 PM Eduardo Pech, P.E. <epech@manhattanbeach.gov> wrote:

Raymond,

Attached is the response from Blue Violet Networks to your bid protest. As I mentioned over the phone yesterday, we are working with our legal department to make a determination on your protest. When a decision is made, we will be sure to inform you. Thanks.

Eddie

From: Raymond Fouladian [mailto:raymond@hightechlax.com]
Sent: Wednesday, August 30, 2023 7:04 PM
To: Katherine Doherty, P.E., ENV SP <kdoherthy@manhattanbeach.gov>
Cc: Melanie Park <mpark@manhattanbeach.gov>; Eduardo Pech, P.E. <epech@manhattanbeach.gov>
Subject: Re: [EXTERNAL] Protest Bid: Invitation # E1279-23C

Thank You Katie & Team,

We will wait to hear back.

Have a good evening and please don't hesitate to contact us if you have any questions.

Thank You,
Raymond Fouladian
High-Tech Security
8726 S. Sepulveda Blvd. Suite A
Los Angeles, CA 90045
310.466.1734 cell
310.736.4140 office
323.320.4376 fax
Raymond@HighTechLAX.com
www.HighTechLAX.com
CSLB # 977286
ACO # ACO8082

On Wed, Aug 30, 2023, 6:40 PM Katherine Doherty, P.E., ENV SP <kdoherly@manhattanbeach.gov> wrote:

Mr. Fouladain,

Your protest is received. Staff will evaluate. We will also provide it to the low bidder for response.

Thank you,

Katie



KATHERINE DOHERTY, P.E., ENV SP

CITY ENGINEER

(310) 802-5352

kdoherly@manhattanbeach.gov

CITY OF MANHATTAN BEACH 3621 Bell Avenue Manhattan Beach, CA 90266

Office Hours: M-Th 7:30 AM-5:00 PM | Closed on Friday

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On Aug 30, 2023, at 5:43 PM, Raymond Fouladian <raymond@hightechlax.com> wrote:

EXTERNAL EMAIL: Do not click links or open attachments unless you trust the sender and know the content is safe.

To Whom it May Concern,

I hope this letter finds you well. I am writing to protest the bid:
City Facility Security Cameras Public Works Yard and City Hall Fire Department and Police
Department
Invitation #
E1279-23C

Our Bid from L.A High Tech Enterprises INC, proposed exactly the specifications in
Addendum 4, by Avigilon.
The Following Servers:

Base Bid
City Hall: **AINVR-PRM-160TB-NA**
Public Works Yard: **AINVR-PRM-160TB-NA**

Additive Bid
Fire & Police Department: **NVR5-PRM-288TB-S19-NA**

Addendum Number 4, which was recently introduced concerning the Avigilon Server's and
Exact Model Numbers for this project, and as written it states:
"This Addendum shall take precedence over any conflicting information contained either in the
plans"

In the bid protest procedure it clearly states:
"In order to be awarded a contract, the low bid must be "responsive" to the specification, and
the low bidder must be a "responsible" bidder. A bid is responsive if it complies with the
bidding instructions."

A Non-Avigilon Server without the exact model numbers listed above does not meet the
specifications in Addendum 4 and does not follow the bidding instructions, moreover Avigilon
Will NOT support a Non-Avigilon Server.

Please see the attached Datasheet/Specsheets of the Avigilon Servers we proposed, mentioned
in Addendum 4, as supporting documentation.

Please let me know if you have any questions.

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Best Regards,
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