5TH GENERATION NETWORK VIDEO RECORDER FIPS SERIES

96 TB   **128 TB**   **160 TB**   **5-YEAR WARRANTY**

The fifth-generation Avigilon Network Video Recorder (NVR5 FIPS) FIPS series delivers secure, high-performance recording, throughput, data availability, and protection for your Avigilon video security system. Our network security recorders are pre-hardened to meet FIPS 140-2 Level 2 Security Requirements and protect data-at-rest. All NVRs are preloaded with Avigilon Control Center (ACC) video management software that uses FIPS-compliant cryptography for secure network video recording and video encryption. Avigilon cameras connected to NVR5 Servers encrypt data-in-flight using FIPS-compliant cryptography.

FEATURES

ENHANCED SECURITY DEPLOYMENT

Pre-hardened to meet compliance requirements for government deployments video data encrypted at rest to FIPS 140-2 L2, secured with onboard TPM 2.0, via Windows BitLocker, OS Drive encrypted to FIPS 140-2 L2, also secured with TPM 2.0. Server 2019 STIG-compliant Windows OS.

CERTIFIED INFRASTRUCTURE ON GOVERNMENT NETWORK

Certificate verification ensures Avigilon servers are interfacing with authorized devices such as Avigilon cameras and workstations on the Government network. Import, check, and manage server certificates via Trusted Root Certificate Authorities store to use a trusted CA-signed certificate for server/client communication.

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.

RISK MANAGEMENT FRAMEWORK

Hardening guide to help customers secure their deployment and ensure all solution components meet stringent NIST cybersecurity Risk Management Framework

USB PORT DISABLING TOOL

Disable the NVR's USB ports with an easy-to-use tool to help guard against security threats where attackers have physical access to the NVR's ports.

SUPERIOR REDUNDANCY AND RELIABLE DATA STORAGE

Reliable storage with RAID-configured redundancy offers a highly available and resilient system that protects your data. Our Premium FIPS NVRs include reliable hard drives with RAID 6 redundancy.

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

In addition to lifetime 24/7 Avigilon telephone technical support, five-year onsite parts and repair service is included with 24/7 4- hour response SLA[1]. Keep your drive warranty ensures the replaced drive remains in customer custody.

EMBEDDED WITH SECURE VIDEO MANAGEMENT SOFTWARE

Pre-configured with ACC™ software, optimized and provisioned to use FIPS-compliant cryptography for secure network video recording and video encryption.

FEDERAL GOVERNMENT COMPLIANT FACILITY

Built in a Federal Government compliant facility for authenticity and strict adherence to procurement Federal Acquisition Regulations (FAR), trade agreements (TAA), and NDAA regulations.

SOLID STATE DRIVE

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

[1] 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.

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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 improvements[3] 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 FIPS (96 128 160 TB)	200	50	8	4	2	1

[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		
Capacity		96 TB 128 TB 160 TB
Avigilon Control Center™ Edition		Core, Standard and Enterprise compatible
Network Video Streaming Performance (10 GbE - Multiple Connections)	Recording Rate:	Up to 1000 Mbps
	Playback Rate:	Up to 450 Mbps[1]
Network Video Streaming Performance (1 GbE - Multiple Connections)	Recording Rate:	Up to 600 Mbps
	Playback Rate:	Up to 450 Mbps
Operating System		STIG-Compliant Microsoft Windows Server 2019
Hard Disk Drive Configuration	Video Data:	RAID 6 Up to 12 × 3.5", hot-swappable
	Operating System:	2 × 240 GB M.2 SSD Drives, RAID 1
Recording Storage Capacity		Up to 192 TB raw; 160 TB effective (RAID 6)
Network Interface		2 × 10 GbE SFP+ ports[2] 6 × 1 GbE RJ-45 ports
Memory		4 × 8 GB DDR4
Processor		2 × Intel® 8-core Xeon®
Video Outputs		1 × VGA
Local Viewing		No
Out-of-band Management		iDRAC 9 Enterprise (network disabled for FIPS compliance)
Warranty		5-year 4-hour mission critical warranty with onsite parts delivery service.

[1] The max playback throughput can be increased by reducing the recording throughput.

[2] Direct Attach Cables (NVR5-SFPPLUS-DA for all NVR5 models) or system-specific SFP+ transceivers (NVR5-SFPPLUS-SR-A) sold separately.

MECHANICAL	
Form Factor	2U Rack Mount Chassis
Dimensions (L x W x H)	721.6 mm × 482.0 mm × 86.8 mm 28.4" × 18.98" × 3.42"
Weight	96 TB: 27 kg (60 lbs) 128 TB: 27 kg (60 lbs) 160 TB: 29 kg (63 lbs)

ELECTRICAL	
Power Input	100 to 240 VAC, 50/60 Hz, auto-switching
Power Supply	2 × 1100 W Mixed Mode
Power Consumption	Maximum 789 W (2691 BTU/h)
Power Efficiency	Titanium

ENVIRONMENTAL	
Operating Temperature	5°C to 45°C (41 °F to 113°F)
Storage Temperature	-40°C to 65°C (-40°F to 149°F)
Operating Humidity	8% to 95% relative humidity with 27°C (80.6°F) max dew point
Storage Humidity	5% to 95% RH with 27°C (80.6°F) max dew point. Atmosphere must be non-condensing at all times.

ENVIRONMENTAL

Operating Vibration	0.21 Grms at 5 Hz to 500 Hz
Storage Vibration	1.88 Grms at 10 Hz to 500 Hz
Operating Shock	6 G
Storage Shock	71 G
Operating Altitude	3,048 m (10,000 ft)
Storage Altitude	12,000 m (39,370 ft)

CERTIFICATIONS

Certifications/Directives	UL, cUL, CE, LOT9, NRCS, RCM, EAC, VCCI, BSMI, CCC (STD only), KC, BIS, UKCA
Safety	UL/CSA/IEC/EN 62368-1:2014 (2nd ed)
Electromagnetic Emissions	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 55035:2010 +A1:2015/CISPR 24:2010 +A1:2015 or EN 55035:2017

SUPPLIED ACCESSORIES

Rack Rail System	ReadyRails Sliding Rails with Cable Management Arm
Bezel	1, front
Power Cords	4 total: 2 × C13 / C14, 2 × NEMA 5-15P / C13

OUTLINE DIMENSIONS

NVR5 FIPS (96 128 160 TB)

[X.X]	INCHES
X	MM

FORM FACTOR
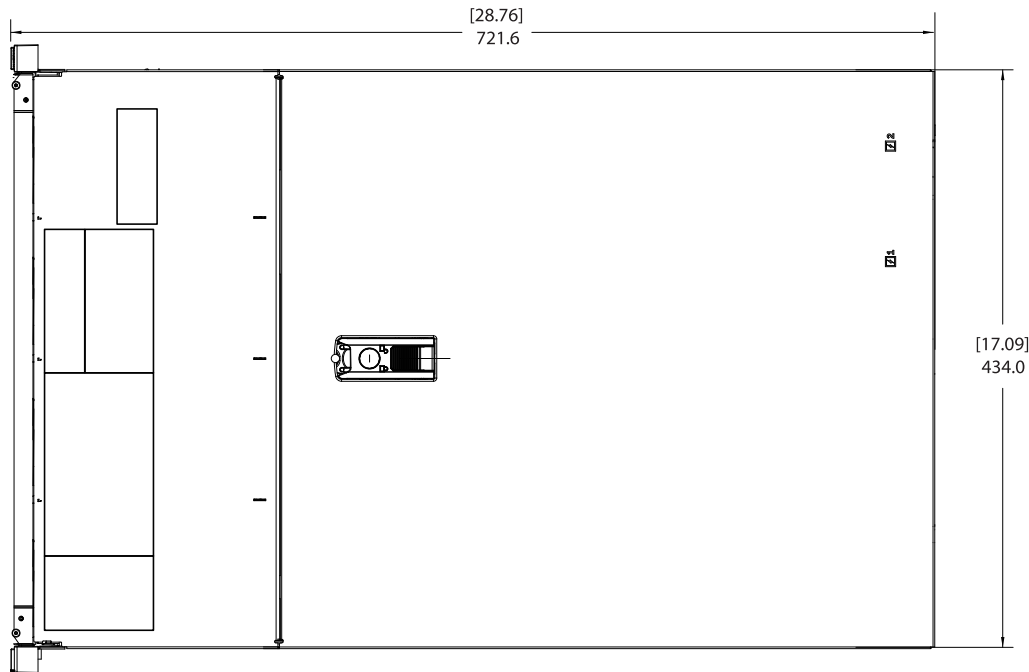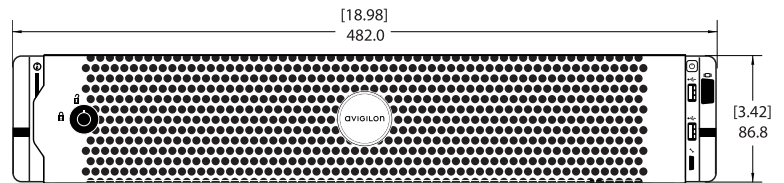
2U rack mount chassis

DIMENSIONS (L × W × H)

721.6 mm × 482.0 mm × 86.8 mm

28.4" × 18.98" × 3.42"

WEIGHT (WHEN FULLY POPULATED WITH HARD DRIVES)

28.76 kg [63.40 lbs]

ORDERING INFORMATION

NVR5	
NVR5-PRM-FIPS-96TB-NA	96 TB (120 TB Raw) NVR5 Premium FIPS with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-PRM-FIPS-128TB-NA	128 TB (160 TB Raw) NVR5 Premium FIPS with Microsoft Windows Server 2019 LTSC and Avigilon Control Center
NVR5-PRM-FIPS-160TB-NA	160 TB (192 TB Raw) NVR5 Premium FIPS 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-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
NVR5-SFPPLUS-SR-A	SFP+ Transceivers for Short Range (Multi-mode) on server side, NVR5 PRM FIPS 96-160 TB
NVR5-SFPPLUS-LR-A	SFP+ Transceivers for Long Range (Single-mode) between SAN switches, NVR5 PRM FIPS 96-160 TB
NVR5-10GBASET-A1	Network Card, QP 10 G-Base-T NVR5 PRM FIPS 96-160 TB
NVR5-RAM-16GB-A	RAM Upgrade Kit for 1 CPU Processor Only, 2 × 8 GB DDR4 3200 MT/s DIMMs, NVR5 PRM FIPS 96-160 TB

ACCESSORIES	
NVR5-PSU-1100W-A1	1100 W Hot Plug/Swappable Power Supply Kit, NVR5 PRM FIPS 96-160 TB
NVR5-HDDS-HOT-12TB	Spare hard drive, 12 TB, front/rear bay, compatible with NVR5 PRM FIPS 96 TB
NVR5-HDDS-HOT-16TB-A1	Spare hard drive, 16 TB, front/rear bay, compatible with NVR5 PRM FIPS 128-160 TB
AVA-HED1-NVR5-CONNECT-A	AVA Connectivity Kit for Direct Attachment of a NVR5 PRM FIPS 96-160 TB
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 PRM FIPS 96-160 TB (excluding Fiber Optic Cables included in AVA-HED1-NVR5-CONNECT-A)

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