

Datasheet



Deep Learning NVR

DVA7400

Synology

DVA7400



AI-Powered NVR for Proactive Security and Business Analytics

Synology Deep Learning NVR DVA7400 is a high-performance 12-bay rackmount server engineered for high-density monitoring environments requiring advanced AI analysis. Running the intuitive Surveillance Station video management system (VMS), the DVA7400 supports up to 100 camera feeds and simultaneously processes 40 real-time deep learning analytics tasks, enabling rapid deployment of large-scale surveillance infrastructure. Built-in Semantic Video Search utilizes natural language processing to locate specific subjects across various video footage.

- **Advanced AI-Powered Search**
Locate subjects across multiple cameras within seconds using natural language queries
- **High-Concurrency AI**
Support up to 100 IP cameras and handle 40 simultaneous real-time video analytics tasks
- **Unified Centralized Management**
Integrate fully with Surveillance Station for streamlined cross-site management and instant event handling
- **Extensive Third-Party Integration**
Empower your surveillance ecosystem with robust support for a wide range of third-party devices and solutions
- **Enterprise-Grade Reliability**
Rely on Synology's proven data and storage management systems engineered for mission-critical workloads

High-Capacity AI Surveillance Hub

The DVA7400 serves as a centralized, high-density intelligence hub for enterprise security networks, streamlining data ingestion and local processing.

- Supports up to 100 IP camera feeds while running 40 simultaneous, real-time AI video analytics tasks¹ to cover sprawling facilities.
- Features a high-capacity 12-bay storage architecture for long-term footage retention, facilitating compliance with demanding legal discovery requirements.
- All DVA7400 recordings and generated AI metadata are processed and privately stored on-premises for complete local data ownership.
- Built on Synology's proven data and storage management systems, engineered for mission-critical workloads.

Proactive Threat Management and Actionable Insights

Advanced deep learning-based algorithms built into the DVA7400 convert unstructured video data into business intelligence and security insights.

- Semantic Video Search leverages natural language to locate subjects across multiple cameras, all in seconds.
- Attribute Search filters by visual characteristics like clothing color or vehicle type to immediately locate specific subjects and improve search accuracy.
- License Plate Recognition monitors vehicles entering and leaving your premises, with the option to preconfigure different automated actions for allowed or blocked vehicles.
- Face Recognition identifies individuals in real time, with the option to set instant alerts for watchlisted persons.
- People and Vehicle Counting accurately tracks the number of people and vehicles entering and exiting, with reports for post-event analysis.
- People and Vehicle Detection alerts staff when people or vehicles loiter in a predefined area, such as a no-parking zone or near a storefront.
- Intrusion Detection smartly alerts when people or vehicles cross a virtual boundary from a designated direction.

Powerful Video Management Platform

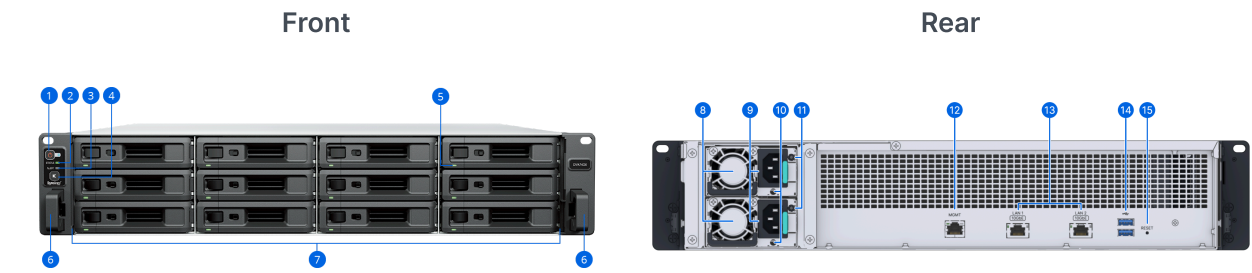
Powered by Synology Surveillance Station running on the Synology DSM operating system, the DVA7400 offers powerful video management, robust third-party integration, and comprehensive data protection.

- Avoid vendor lock-in by choosing from various compatible camera options with extensive ONVIF Profile support to match specific site requirements.
- Empower your surveillance system with robust integration support for a wide range of third-party solutions.
- Leverage the powerful Surveillance Central Management System (CMS) feature to manage massive recording server clusters and camera fleets from a single interface.
- Handle events from Event Center to search cross-server event and integrates both Synology's native events and third-party events to quickly locate relevant events.
- Streamline incident handling with the Event Center, consolidating native and third-party alerts across servers to locate critical footage quickly.
- Access your surveillance system from anywhere with browser-based access, desktop clients, and mobile apps.

Notes:

1. Semantic Video Search operates on dedicated resources separate from AI analytics; it can be enabled without impacting the 40-task real-time analytics limit.

Hardware Overview



No.	Name	No.	Name
1.	Power button and indicator	9.	Power ports
2.	Status indicator	10.	Mounting holes
3.	Alert indicator	11.	PSU indicators
4.	Alarm silence button	12.	Management port
5.	Drive status indicators	13.	10GbE RJ-45 ports
6.	Rail kit release tabs	14.	USB 3.2 Gen 1 ports
7.	Drive trays	15.	Reset button
8.	PSU fans		

Technical Specifications

Hardware

CPU	
CPU Model	AMD V1780B
CPU Architecture	64-bit
CPU Frequency	Quad Core 3.35 (base) / 3.6 (turbo) GHz
Hardware Encryption Engine (AES-NI)	v

Memory	
System Memory	16GB DDR4 ECC UDIMM
Memory Module Pre-installed	16GB
Total Memory Slots	2
Maximum Memory Capacity	32 GB (16 GB x 2)
Notes	<ul style="list-style-type: none">• Synology may revise pre-installed memory module specifications in response to component lifecycle and supply conditions. All revised components undergo the same rigorous validation to ensure equivalent compatibility, stability, and performance.• Please select Synology memory modules for optimum compatibility and reliability. Synology will not provide complete product warranty or technical support if non-Synology memory modules are used for memory expansion.• For information about recommended memory configurations, please check the Product Manual of your Synology product.

Storage

Drive Bays	12
Drive Type	<ul style="list-style-type: none">• 3.5" SATA HDD• 2.5" SATA SSD
Hot Swappable Drive	v
Notes	Synology only guarantees full functionality, reliability, and performance for Synology drives listed on the compatibility list . The use of non-validated components may limit certain functionality and result in data loss and system instability.

External Ports

RJ-45 1GbE LAN Port	1
RJ-45 10GbE LAN Port	2
USB 3.0 Port	2

Appearance

Size (Height × Width × Depth)	88 mm x 482 mm x 578 mm
Weight	12.24 kg

Others	
Wake on LAN / WAN	v
System Fan	60 mm x 60 mm x 38 mm x 3 pcs
Fan Speed Mode	<ul style="list-style-type: none"> • Cool Mode • Quiet Mode • Full-Speed Mode
Power Recovery	v
Noise Level	51.8 dB(A)
Scheduled Power On / Off	v
Power Supply Unit / Adapter	800 W
AC Input Power Voltage	100 V to 240 V AC
Power Frequency	50/60 Hz, Single Phase
Power Consumption	131.12 W (Access) 51.95 W (HDD Hibernation)
British Thermal Unit	447.12 BTU/hr (Access) 177.15 BTU/hr (HDD Hibernation)
Notes	<ul style="list-style-type: none"> • For more information on how power consumption is measured, refer to this article. • Noise testing was conducted with the Synology system fully installed with Synology SATA SSDs and in an idle state. Two G.R.A.S. type 40AE microphones were placed at a 1 m distance from the front and rear of the device. Background noise: 16.49-17.51 dB(A); Temperature: 24.25-25.75°C; Humidity: 58.2-61.8%.

Temperature	
Operating Temperature	0°C to 35°C (32°F to 95°F)
Operating Humidity	8% to 80% RH
Storage Temperature	-20°C to 60°C (-5°F to 140°F)
Storage Humidity	5% to 95% RH

Surveillance Station

Video Analysis	
Deep Video Analytics Features	<ul style="list-style-type: none"> • Semantic Video Search • Attribute Search • People and vehicle detection (with license plate recognition) • People counting • Vehicle counting • Intrusion detection • Face recognition
Deep Video Analytics Tasks	<ul style="list-style-type: none"> • People and vehicle detection: up to 40 tasks • People counting: up to 40 tasks • Vehicle counting: up to 40 tasks • Intrusion detection: up to 40 tasks • Face recognition: up to 20 tasks • License plate recognition: up to 20 tasks
Maximum Number of Registrations Supported by Face Database	10,000
Supported Languages for Semantic Video Search	English, Deutsch, Français, Italiano, Español, Norsk, Svenska, Nederlands, Русский, Polski, Português do Brasil, Português Europeu, 日本語, 繁體中文, 简体中文

General Specifications

Default Licenses	2 (Additional cameras require purchase of licenses)
Maximum IP Cameras and Total FPS (H.264)	<ul style="list-style-type: none">• 1080p: 100 channels, 1500 FPS• 3M: 85 channels, 850 FPS• 5M: 60 channels, 600 FPS• 4K: 40 channels, 400 FPS
Maximum IP Cameras and Total FPS (H.265)	<ul style="list-style-type: none">• 1080p: 100 channels, 3000 FPS• 3M: 100 channels, 1400 FPS• 5M: 85 channels, 850 FPS• 4K: 50 channels, 500 FPS
Video Codecs	<ul style="list-style-type: none">• H.264• H.264+• H.265• H.265+• MJPEG• MPEG-4
Audio Codecs	<ul style="list-style-type: none">• AMR• G711• G726• PCM
Notes	Actual system capabilities may differ depending on system configuration, drive performance, number of features enabled, and if additional workloads are present.

System Services

File System

Internal Drives	<ul style="list-style-type: none">• Btrfs
External Drives	<ul style="list-style-type: none">• Btrfs• ext4• ext3• FAT32• NTFS• HFS+• exFAT

Storage Management

Maximum Single Volume Size	<ul style="list-style-type: none">• 108 TB• 200 TB (32 GB memory required)
Maximum Internal Volume Number	32
Supported RAID Type	<ul style="list-style-type: none">• Synology Hybrid RAID• Basic• JBOD• RAID 0• RAID 1• RAID 5• RAID 6• RAID 10
RAID Migration	<ul style="list-style-type: none">• Basic to RAID 1• Basic to RAID 5• RAID 1 to RAID 5• RAID 5 to RAID 6
Volume Expansion with Larger HDDs	<ul style="list-style-type: none">• Synology Hybrid RAID• RAID 10• RAID 1• RAID 5• RAID 6
Volume Expansion by Adding a HDD	<ul style="list-style-type: none">• Synology Hybrid RAID• JBOD• RAID 5• RAID 6
Global Hot Spare Supported RAID Type	<ul style="list-style-type: none">• Synology Hybrid RAID• RAID 1• RAID 5• RAID 6• RAID 10

File Services

File Protocol	SMB/AFP/NFS/FTP/WebDAV
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Account & Shared Folder

Maximum Local User Accounts	2,048
Maximum Local Groups	256
Maximum Shared Folder	512

General Specifications

Networking Protocols	SMB1 (CIFS), SMB2, SMB3, NFSv3, NFSv4, NFSv4.1, NFS Kerberized sessions, iSCSI, HTTP, HTTPS, FTP, SNMP, LDAP, CalDAV
Supported Browsers	Google Chrome
Supported Language	English, Deutsch, Français, Italiano, Español, Dansk, Norsk, Svenska, Nederlands, Русский, Polski, Magyar, Português do Brasil, Português Europeu, Türkçe, Český, ภาษาไทย, 日本語, 한국어, 繁體中文, 简体中文

Add-on Packages

VPN Server ([Learn more](#))

Maximum Connections	40
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Environment & Packaging

Environment Safety

RoHS Compliant

Package Contents

- Main Unit × 1
- Accessory Pack × 1
- AC Power Cord × 2
- Quick Installation Guide × 1

Optional Accessories

- Plus Series 3.5" SATA HDD: [HAT3300 Series](#)
- DDR4 ECC U-DIMM: D4EU02-16GB
- Enterprise Series 3.5" SATA HDD: [HAT5300 Series](#)
- Enterprise Series 2.5" SATA SSD: [SAT5200 Series](#)
- Surveillance Device License Pack

Warranty

3 Years

Notes

The warranty period starts from the purchase date as stated on your purchase receipt. ([Learn more](#))

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