



# Deep Learning NVR DVA1622



## AI-Enabled NVR for Home, Small Business, and Edge Applications

Synology NVR DVA1622 is a 2-bay desktop recording server that gives home and small business users access to fast, smart, and accurate video surveillance powered by deep learning-based algorithms. Built-in automated event detection helps safeguard properties by detecting people, vehicles, or objects and alerting staff when self-configured rules or thresholds are breached.

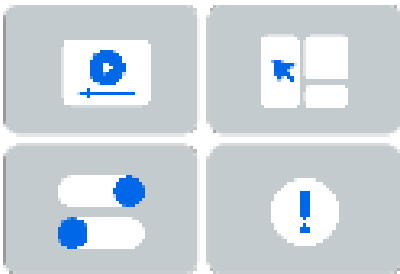
### Highlights

- **Easy and Flexible Integration**  
Roll out or upgrade surveillance deployments in no time with support for over 8,300 IP cameras, H.264/H.265, and 4K resolution<sup>1</sup>
- **Deep Video Analytics**  
Leverage congestion alerts, facial recognition, people & vehicle detection, people counting, vehicle counting, visitor trends, intrusion detection, and license plate recognition<sup>2</sup>
- **Centralized Management System**  
Operate and manage recording servers centrally as part of larger deployments, replicate footage, and perform remote updates
- **Dual Recording Support**  
Boost system redundancy and access footage during downtime with dual recording from cameras to a second server or C2 Surveillance<sup>3</sup>



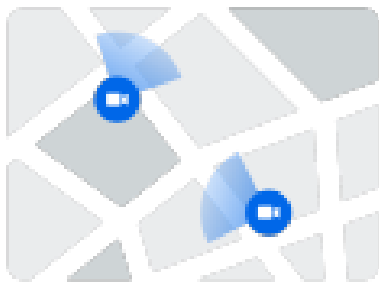
### Safeguarding Your Assets

*Surveillance Station delivers intelligent monitoring and video management tools to protect your property and assets.*



### Investigate and Take Action

*Go from watching live video, to investigating events, to activating doors and speakers at a moment's notice and without ever leaving the main Monitor Center view.*



### Your Cameras at a Glance

*With Maps, you can know at a glance where cameras are placed, events are triggered, and more with an intuitive multi-floor and multi-site map view.*

## Complete Surveillance Solution With Built-in AI Capabilities

The DVA1622 makes powerful AI-enabled surveillance available for everyone in a compact solution that includes everything you need to create an efficient surveillance system.

- **Cover all angles:** Record and manage up to 16 IP camera feeds<sup>4</sup>
- **Leverage deep learning:** Run 2 simultaneous real-time video analysis processes or 1 facial recognition task<sup>2</sup>
- **Licenses included:** Add up to 8 IP cameras without purchasing additional licenses<sup>4</sup>
- **Direct video output:** Simply plug a monitor into the built-in HDMI port to watch surveillance feeds without a separate PC or mobile device
- **Local management:** Set up, manage, and control your deployment locally by attaching a keyboard and mouse

## Everything You Need in Monitor Center

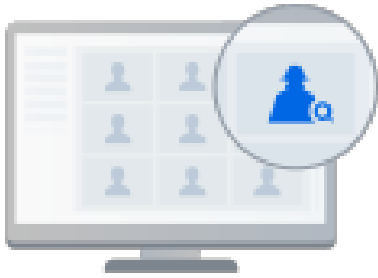
Quickly view your business or home from all angles, see where and when issues were detected, or spin back time to get to the bottom of things without ever leaving your main overview.

- **Combined view:** Monitor feeds in real time and seamlessly scrub through the timeline to investigate events, all in the same interface
- **Flexible layout:** Drag and drop, resize, and even swap video feeds freely to create a monitoring dashboard that fits your needs
- **I/O widgets:** Move essential controls to your dashboard to easily initiate actions, such as activating sirens and speakers or locking and unlocking doors
- **Automated alerts:** Keep a real-time list of detected events across your deployment conveniently on hand and click to synchronize all camera playbacks to each time point

## Better Situational Awareness With Maps

Dynamic maps not only help you determine camera and event locations, but also provide instant access to video feeds for more efficient site monitoring

- **Multi-location alerts:** Preview triggered events directly on the map with automatic zoom features to bring the most important views into focus



### Smarter Site Security

*Synology DVA and Surveillance Station elevate video surveillance into a real-time security solution, providing instant feedback and notifications.*

- **Multi-floor layouts:** Group floor plans together for a clearer understanding of where cameras are located and events happen
- **Online map integration:** Directly overlay your cameras and building layouts onto Google Maps or OpenStreetMap for better situational awareness even across multiple or larger sites

## Actionable Insights and Automated Actions

Advanced deep learning-based algorithms built into the DVA1622 convert unstructured video data into business intelligence and security insights, to bolster and automate security.

- **Facial recognition:** Instantly identify people from a custom database with an accuracy of 97.04%<sup>5</sup>
- **People and vehicle detection:** Notify admins when people or vehicles loiter in a predefined area, such as a no-parking zone or near a storefront
- **People and vehicle counting:** Count the number of people or vehicles entering and leaving an area using bidirectional counters for safety or analysis purposes
- **Intrusion detection:** Detect when people or vehicles cross a perimeter line and issue alerts to warn of potential intrusions
- **License plate recognition:** Monitor vehicles entering and leaving your premises, with the option to preconfigure different automated actions for allowed or blocked vehicles<sup>6</sup>
- **Congestion alerts:** Avoid overcrowding in designated areas by detecting when the number of people transiting or staying within a self-defined perimeter crosses a set threshold
- **Face mask detection:** Detect whether people wear face masks and be notified in case of violation



### Surveillance on the Go

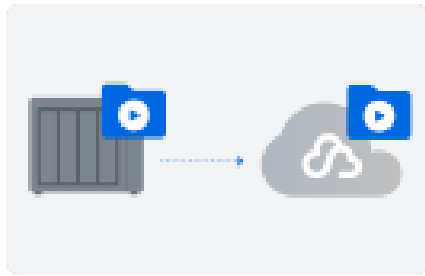
*With DS cam, you can watch surveillance video feeds, take snapshots, zoom in and adjust camera position with PTZ control, browse through recorded events, use two-way audio to communicate and receive alerts while on the go.*

## Powerful Video Management Platform

Powered by Synology Surveillance Station running on Synology DSM, the DVA1622 offers powerful and convenient video recording, management, and analysis capabilities while making deployment of new or existing cameras fast and efficient.

- **Complete data ownership with zero subscription fees:** All DVA1622 recordings are privately stored on the unit itself, free of charge
- **Works with more than 8,300 cameras:** Avoid vendor lock-in. Choose from a wider range of camera options to suit your requirements with ONVIF support<sup>1</sup> and rapidly add or migrate devices in batch

- **Remote monitoring and control:** Access your surveillance system from anywhere with browser-based access, desktop clients, and mobile apps
- **Automation & notification:** Set up custom actions when predefined events occur, such as taking snapshots when motion is detected or opening a door when the system recognizes faces from the database. Get notified with e-mail, SMS, or push notifications so that you can respond in a timely manner
- **Secure streams and storage:** Use HTTPS and SRTP capable cameras to protect video streams against eavesdropping,<sup>7</sup> and encrypt video recordings with a special password to limit access to archives



### Redundancy Options

*Keep access to crucial surveillance footage following the destruction or disconnection of your device with video backup, recording failover, and dual recording to a secondary server or C2 Surveillance.*

## Central Surveillance Management

Monitor, manage, and protect multiple Synology Deep Learning NVR and NAS systems from a single interface as part of a larger surveillance network over multiple sites with Surveillance Station Centralized Management Server (CMS).

- **Centralized monitoring:** View and analyze streams from cameras connected to any of your recording servers in your central management host's Monitor Center
- **Remote updates:** Check for and remotely install updates on all your systems directly from CMS for both offline and online servers
- **Recording failover:** Configure N+M failover to automatically switch over recording tasks to alternative servers in case of emergency for maximum service availability<sup>8</sup>
- **Data protection:** Back up footage between servers with Archive Vault or use Dual Recording to record footage on two servers simultaneously

# Hardware Overview

Front



Rear



1	Drive Trays	2	Drive Tray Locks	3	Status Indicator	4	Drive Status Indicators
5	USB 3.2 Gen 1 Port	6	Power Button	7	Fan	8	1GbE RJ-45 Port
9	Reset Button	10	HDMI Output	11	Power Port	12	Kensington Security Slot
13	USB 3.2 Gen 1 Port						

## Technical Specifications

### Hardware

CPU	Intel™ Celeron J4125 4-cores (4-threads) 2.0 GHz, burst up to 2.7 GHz
Hardware encryption engine	AES-NI
Memory	6 GB DDR4 (2 GB + 4 GB)
Compatible drive types <sup>9</sup>	<ul style="list-style-type: none"><li>• 2 x 3.5" SATA HDD (drives not included)</li><li>• Synology only guarantees full functionality, reliability, and performance for Synology drives listed on the <a href="#">compatibility list</a>.</li></ul>
Hot swappable drives	Yes
External ports	<ul style="list-style-type: none"><li>• 2 x USB 3.2 Gen 1 port</li><li>• 1 x HDMI</li></ul>
Form factor	Desktop
Size (HxWxD)	166 x 106 x 223 mm
Weight	1.51 kg
LAN ports	1 x 1GbE RJ-45
Wake on LAN/WAN	Yes
Scheduled power on/off	Yes
System fans	1 (92 x 92 x 25 mm)
AC input power voltage	100 V to 240 V AC
Power frequency	50/60 Hz, single phase
Operating environment	<ul style="list-style-type: none"><li>• Temperature: 0°C to 40°C (32°F to 104°F)</li><li>• Relative humidity: 8% to 80% RH</li></ul>
Storage environment	<ul style="list-style-type: none"><li>• Temperature: -20°C to 60°C (-5°F to 140°F)</li><li>• Relative humidity: 5% to 95% RH</li></ul>
Maximum operating altitude	5,000 m (16,400 ft)

## General DSM Specifications

Networking protocols	SMB, AFP, NFS, FTP, WebDAV, CalDAV, iSCSI, Telnet, SSH, SNMP, VPN (PPTP, OpenVPN™, L2TP)
File systems	<ul style="list-style-type: none"> <li>Internal: Btrfs, ext4</li> <li>External: Btrfs, ext4, ext3, FAT32, NTFS, HFS+, exFAT</li> </ul>
Supported RAID types	Synology Hybrid RAID, Basic, JBOD, RAID 0, RAID 1
Storage management	<ul style="list-style-type: none"> <li>Max. single volume size: 108 TB</li> <li>Max. number of system snapshots: 65,536</li> <li>Max. number of internal volumes: 64</li> </ul>
File sharing capabilities	<ul style="list-style-type: none"> <li>Max. number of local user accounts: 2,048</li> <li>Max. number of local groups: 256</li> <li>Max. number of shared folders: 512</li> <li>Max. number of concurrent SMB/NFS/AFP/FTP connections: 100</li> </ul>
Privileges	Windows® Access Control List (ACL) and application privileges
Directory services	Connects with Windows® AD/LDAP servers enabling domain users to login via SMB/NFS/AFP/FTP/File Station using their existing credentials
Security	Firewall, shared folder encryption, SMB encryption, FTP over SSL/TLS, SFTP, rsync over SSH, login auto block, Let's Encrypt support, and HTTPS (customizable cipher suite)
Supported browsers	Google Chrome®
Interface languages	English, Deutsch, Français, Italiano, Español, Dansk, Norsk, Svensk, Nederlands, Русский, Polski, Magyar, Português do Brasil, Português Europeu, Türkçe, Český, ไทย, 日本語, 한국어, 繁體中文, 简体中文

## Surveillance Station

Max. number of IP cameras	<ul style="list-style-type: none"> <li>16 channels (total of 480 FPS at 720p, H.264), including a maximum of 2 real-time Deep Video Analytics tasks<sup>2</sup></li> <li>8 free camera licenses included; additional cameras require purchase of additional licenses</li> </ul>
Deep video analytics features <sup>2</sup>	<ul style="list-style-type: none"> <li>Face recognition</li> <li>People and vehicle detection (with license plate recognition<sup>6</sup>)</li> <li>People counting</li> <li>Vehicle counting</li> <li>Intrusion detection</li> </ul>
IP camera support <sup>1</sup>	<ul style="list-style-type: none"> <li>Video codecs: MJPEG, MPEG-4, MxPEG,<sup>10</sup> H.264, and H.265</li> <li>Audio codecs: PCM, AAC, AMR, G.711, and G.726</li> <li>Camera bitrate fine-tuning via constant and variable bitrate control</li> <li>ONVIF™ 2.6, Profile S certified, Profile G for edge recording</li> </ul>
Deployment	<ul style="list-style-type: none"> <li>Import cameras from spreadsheet</li> <li>Automatically locate cameras or specify IP ranges using the streamlined batch-capable camera wizard</li> <li>Copy settings from existing cameras to easily expand existing installation</li> </ul>
Monitoring	<ul style="list-style-type: none"> <li>Drag and drop or resize streams to customize layout</li> <li>Alert panel for a quick display of the most recently triggered events</li> <li>Video quality settings: bitrate control, image quality, resolution, and FPS</li> <li>Pan Tilt Zoom (PTZ) support with configurable PTZ speed</li> <li>On-screen camera controls: camera zoom, focus, iris adjustment, auto pan, and auto object tracking</li> <li>Snapshot, and Snapshot Editor supported for instant editing after taking a snapshot</li> <li>Option to directly initiate reactions using preconfigured I/O widgets</li> <li>Preview triggered events on multi-floor or multi-location maps, with online map integration for Google Maps and OpenStreetMap</li> </ul>
Recording	<ul style="list-style-type: none"> <li>Recording format: MP4</li> <li>Automatic or manual bookmarking of events on the timeline</li> <li>Supported recording modes: manual, continuous, motion detection, I/O alarm, action rule, and customized</li> <li>Customized recording modes can be configured as a combination of conditional events, including motion detection, audio detection, tampering detection, and alarm input</li> <li>Dual recording to other Synology devices and C2 Surveillance<sup>3</sup></li> <li>Edge recording on SD cards of certain supported cameras</li> <li>Configurable pre-recording and post-recording time</li> <li>Overlaying of privacy masks and watermarks</li> <li>Encryption of recording files</li> <li>Individual encryption of downloaded recordings</li> <li>Adding watermarks to downloaded recordings</li> </ul>

Playback	<ul style="list-style-type: none"> <li>• Customizable layouts for playback in Monitor Center</li> <li>• Synchronization of all camera playbacks to a pinpointed event</li> <li>• Playback controls include pause, stop, previous/next event switching, fast forward, slow motion, and frame by frame</li> <li>• Embedded watermark support for evidence integrity</li> <li>• Image enhancements including of brightness, contrast, saturation, and sharpness (web client only)</li> </ul>
Management	<ul style="list-style-type: none"> <li>• Create and manage different user privileges</li> <li>• Rotate recorded videos by archived days or storage size</li> <li>• Event notification supported via SMS, E-mail, and mobile devices via DS cam</li> <li>• Recordings can be backed up to an external storage device or remote server</li> <li>• Built-in NTP server</li> <li>• Supported tunnel: MPEG-4, H264 via RTSP over TCP, UDP, HTTP, HTTPS, and SRTP<sup>7</sup></li> <li>• Keep your systems updated with Centralized Management System (CMS) for both intranet-only or internet-enabled deployments</li> </ul>
iOS/Android™ applications	Synology LiveCam, DS cam, DS file, DS finder
Surveillance desktop client support	Windows® 7 or later, macOS® 10.12 or later

## Environment and Packaging

Environment safety	RoHS compliant
Package contents	<ul style="list-style-type: none"> <li>• 1 x DVA1622 main unit</li> <li>• 1 x Accessory pack</li> <li>• 1 x AC power adapter</li> <li>• 1 x AC power cord</li> <li>• 1 x RJ-45 LAN cable</li> <li>• 1 x Quick Installation Guide</li> </ul>
Optional accessories <sup>11</sup>	<ul style="list-style-type: none"> <li>• Surveillance Device License Pack</li> </ul>
Warranty	3 years <sup>12</sup>

Note: Specifications are subject to change without notice. Please refer to the model's [specifications page](#) for the most up to date information.

1. Surveillance Station supports ONVIF Profile S and Profile G, as well as H.265 in Profile T. Check our [compatibility list](#) for all supported cameras.
2. The DVA1622 supports up to 2 simultaneous deep video analytics tasks or 1 facial recognition task. [Learn more](#)
3. Dual recording to C2 Surveillance requires purchase of an annual [subscription](#). A free trial is available for each Synology Account.
4. The DVA1622 comes with 8 camera licenses. Support for more cameras requires [additional licenses](#).
5. Testing by the National Institute of Standards and Technology (NIST) under their Face Recognition Vendor Test (FRVT), WILD dataset. The DVA1622 supports up to 2 deep video analytics tasks or 1 facial recognition task simultaneously.
6. License plate recognition supports license plates that contain numeric and alphanumeric characters. Higher recognition accuracy is available for French, German, Swiss, United States, and Taiwan license plates. Please check this [article](#) for an up-to-date list of supported license plates.
7. Encryption of video streams requires compatible SRTP or HTTPS capable IP cameras. Check our [compatibility list](#) for models.
8. Deep Video Analytics and Face Recognition are not supported on servers running as failover servers.
9. Check our [compatibility list](#) for supported drives.
10. Local display, browser-based viewing, and deep learning video analytics are not supported for MxPEG streams. The Surveillance Station desktop client is required to view MxPEG footage.
11. Please refer to our [compatibility list](#) for the latest optional accessories list.
12. The warranty period starts from the date of purchase as stated on your purchase receipt. Visit <https://www.synology.com/company/legal/warranty> for more information.

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