Enterprise Class
Video Management Software

NetFLOW PRO
Professional
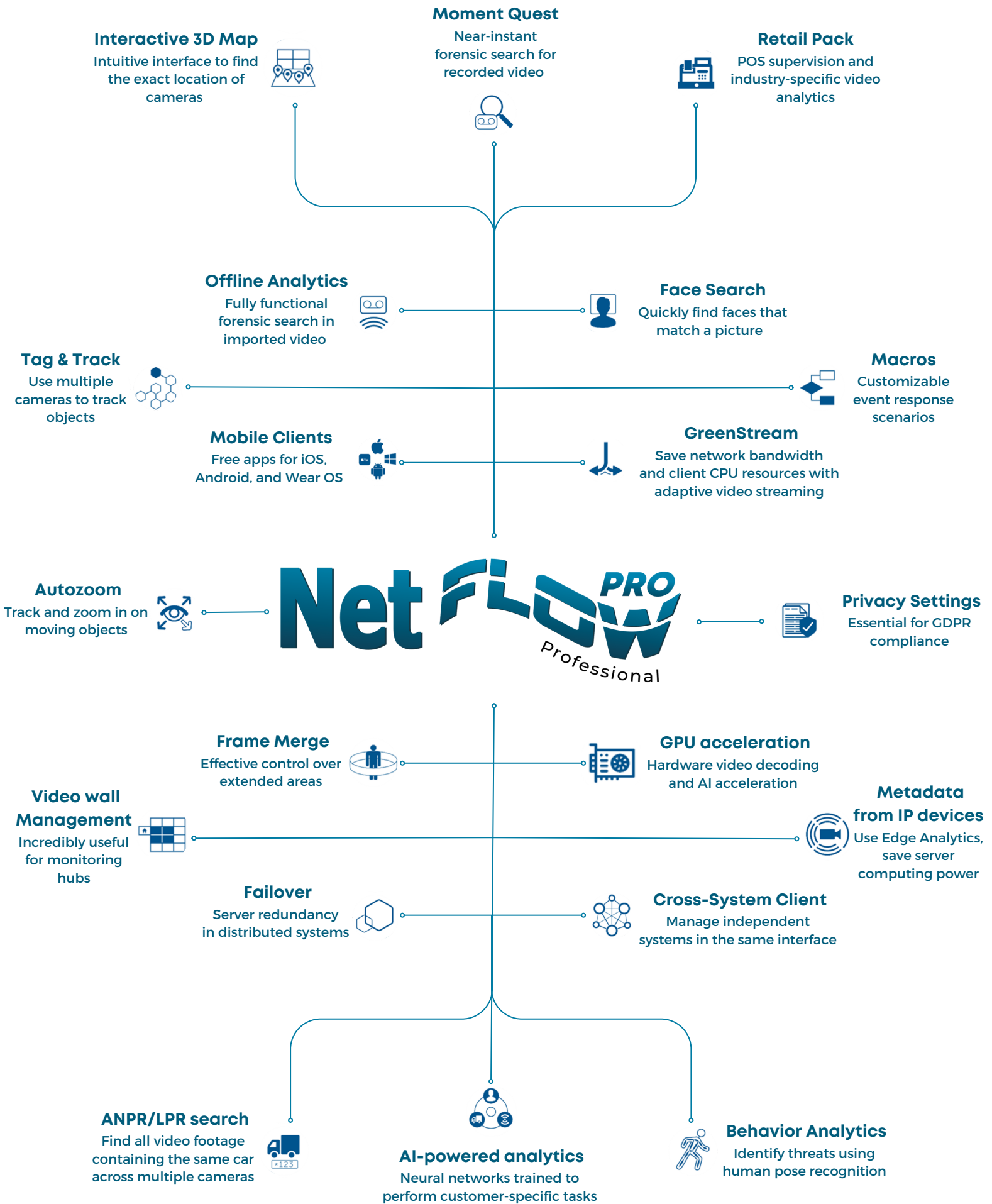
Enterprise Surveillance

Video Analytics

Tracking

Access Control Integration

License Plate Recognition

Intrusion Alarm Integration

Fire Alarm Integration

HVAC Integration

Videowall

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Net FLOW PRO Professional Powered by **WatchNET**

Security Industry's Best & Leading VMS & PSIM Software

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Intuitive interface to find the exact location of cameras

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Near-instant forensic search for recorded video

Retail Pack
POS supervision and industry-specific video analytics

Offline Analytics
Fully functional forensic search in imported video

Face Search
Quickly find faces that match a picture

Tag & Track
Use multiple cameras to track objects

Macros
Customizable event response scenarios

Mobile Clients
Free apps for iOS, Android, and Wear OS

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Save network bandwidth and client CPU resources with adaptive video streaming

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Track and zoom in on moving objects

Net FLOW PRO Professional

Privacy Settings
Essential for GDPR compliance

Frame Merge
Effective control over extended areas

GPU acceleration
Hardware video decoding and AI acceleration

Video wall Management
Incredibly useful for monitoring hubs

Metadata from IP devices
Use Edge Analytics, save server computing power

Failover
Server redundancy in distributed systems

Cross-System Client
Manage independent systems in the same interface

ANPR/LPR search
Find all video footage containing the same car across multiple cameras

AI-powered analytics
Neural networks trained to perform customer-specific tasks

Behavior Analytics
Identify threats using human pose recognition

3

Behavior Analytics

Through Behavior Analytics, potential risks can be identified at an early stage by detecting specific human postures such as lying down, raised arms, or crouching by an ATM.

In addition, Handrail Holding Detection can help enforce labor safety regulations at production facilities, construction sites, or for those working at heights.

Tracking and counting specific object types

The **Object Tracker** neural network can accurately identify specific types of moving objects, such as humans or vehicles, while filtering out false alarms in busy environments where multiple objects are in motion. Once objects have been detected, conventional video analytics such as loitering, line crossing, or object appearance/disappearance can be applied.

Additionally, the **Neural Counter** can be used to count specific types of objects, including cars in a parking lot, people on a sales floor, or items moving on a conveyor belt. This tool is useful for non-security-related solutions.

Furthermore, **Neural Networks** can be customized to the needs of a particular facility by learning from video footage captured on-site.

Smoke and fire detection

The **intelligent fire and smoke video detection** system is highly effective in detecting potential fire hotspots in open spaces **where other types of sensors may not work or are ineffective**.

This early detection capability enables timely intervention, thereby minimizing fire damage and reducing the associated risks to personnel and property.

Number Plate Recognition

Automatic scenarios can be configured to activate when a match is found, such as notifying the operator when a recognized number is on the negative watchlist or opening the barrier when the number is on the access list.

ANPR can be implemented either on the server side or on supported LPR/ANPR cameras to enable efficient and effective management of vehicle access control.

Hardware AI Acceleration
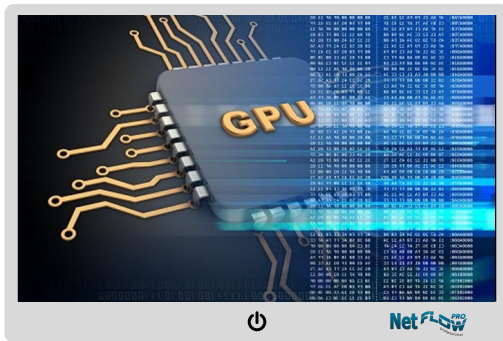
NetFLOW-PRO is **designed to utilize hardware video decoding** capabilities of integrated Intel® GPUs and NVIDIA graphics cards. In addition, the system is capable of accelerating AI processing using dedicated AI accelerators, graphics cards, and embedded CPU capabilities.

- Intel® MovidiusTM VPU.
- Integrated GPUs and AI acceleration technologies in Intel® CPUs.
- NVIDIA GeForce, Quadro, Tesla, etc.

Leveraging hardware acceleration significantly enhances server performance, resulting in a more efficient and **cost-effective intelligent** video surveillance system with **lower maintenance** requirements.

Moment Quest

Moment Quest **analyzes live video** & generates a **Metadata Stream** that provides a concise description of moving objects within the scene, which is **recorded alongside the video stream.**

To retrieve footage of an event of interest, simply specify search criteria, such as motion in a particular area, crossing of a designated line, or object size and color. The system quickly returns relevant video episodes in the form of thumbnails, enabling you to efficiently browse and select the desired footage. Additionally, you can save the search query for later use on any camera.

Face and Number Plate Search
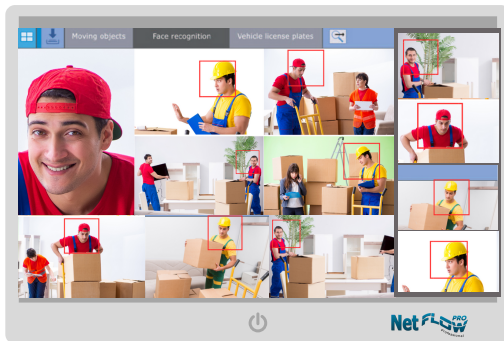
NetFLOW-PRO is equipped with Facial & License plate recognition capabilities, allowing you to search for individuals or vehicles quickly and accurately within the recorded video footage.

Whether you have a full or partial photo or license plate number, NetFLOW-PRO can easily match it against the video footage.

Furthermore, you can perform **multiple camera searches to track the target across multiple areas**. With near-instant forensic search capabilities, you can quickly find the relevant footage you need to investigate an incident.
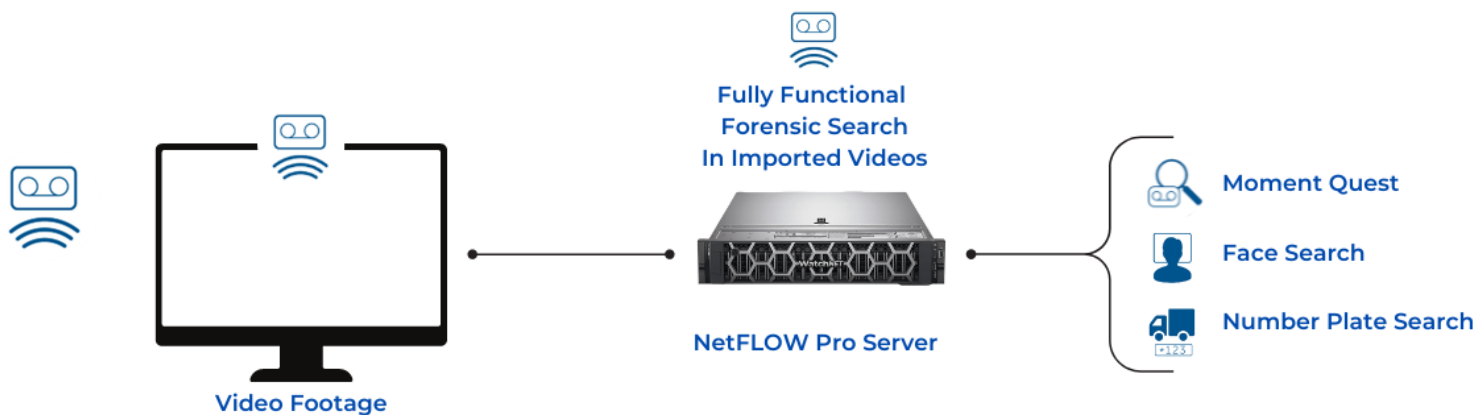
Standard Search Options

Our VMS Software offers intuitive & efficient ways to search for recorded events. You can easily find events of interest using various search functions, such as search by alarm events, bookmarks, and time intervals.

- Search by alarm events: filter alarms by type and initiator.
- Search by bookmarks: view all bookmarked events, or search by operators' comments.
- Time Slicing: split the selected time interval into video fragments of the specified duration.

Offline Analytics

Fully Functional
Forensic Search
In Imported Videos

NetFLOW Pro Server

Video Footage

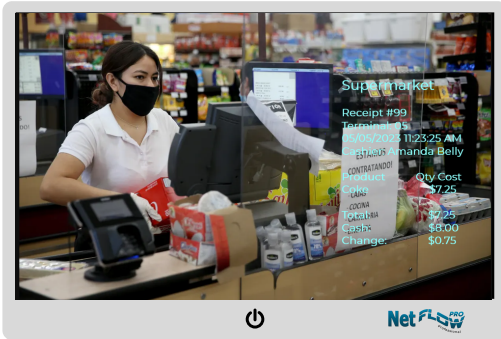Moment Quest

Face Search

Number Plate Search

Analyze imported video footage using forensic search and apply a range of functions to it.

- Moment Quest
- Face search
- Number plate search

POS Supervision

NetFLOW-PRO integrates with cash registers to provide synchronized data and video feeds. The transaction information is overlaid on the video or presented in a separate window, enabling quick search of POS transactions in the recorded footage. This provides a comprehensive view of the checkout process and helps uncover violations that are otherwise difficult to detect with conventional video surveillance.

Queue Management

By detecting the number of people in queueing areas, the tool enables you to make informed decisions about staffing levels and resource allocation.

Visitor Counter
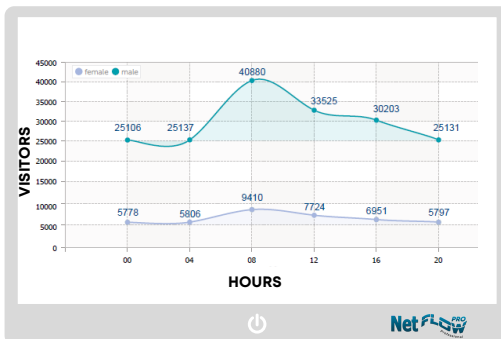
This tool provides accurate footfall counts of customers entering or exiting a store or specific area, enabling you to estimate sales conversion rates and conduct market research based on customer traffic data.

Facial Recognition

Automatically trigger an action when a match is found. For example, notify staff when a regular customer is identified on the positive watchlist, or alert security when someone on the negative watchlist is detected.

Age & Gender Guesstimation

A facial recognition tool estimates the age and gender of visitors, providing valuable insights for customer analysis, digital signage targeting, and other marketing purpose.

Online Comprehensive Reports

You can generate custom reports using data collected by NetFLOW-PRO's video analytics tools, including visitor counts, queue lengths, and age and gender estimation.

Heat Map

A **visual heat map** displays visitor activity and foot traffic patterns in different areas of the store. This data can be collected from tracking all objects or by specifying search criteria for specific objects in the forensic search feature.

Interactive 3D MAP

The interactive 3D map feature allows / superimposes camera locations on a site map and displays camera views in the same window. You can **instantly pinpoint** where a selected camera is located. Cameras in the current layout are color-coded by their status.

In **Immersion Mode**, a semi-transparent video is superimposed on the map. This makes it easy to see where an object is located and where it is going.

Tag & Track

Tag &Track Lite

- All cameras are linked to a site map.
- Operator selects a moving object to track.
- If the object leaves the field of view of one camera, NetFLOW-PRO predicts where it will appear next.
- The "destination" camera is highlighted in the current layout.
- Tag & Track Lite also works in Immersion and Archive mode.

Tag &Track Pro

- Get the "big picture" of everything happening at a site with fixed cameras.
- Obtain detailed imagery of the objects moving around it with PTZ cameras.
- A PTZ camera automatically tracks objects across multiple fixed cameras.
- Both sets of images can be recorded, which is important for event investigation.
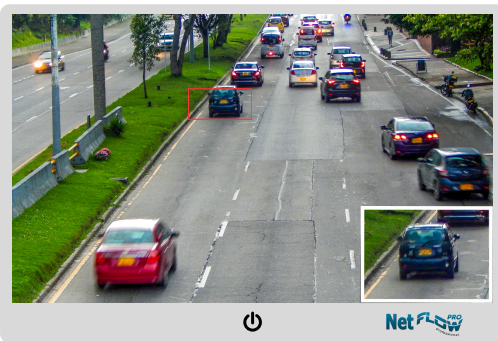
## Frame Merge
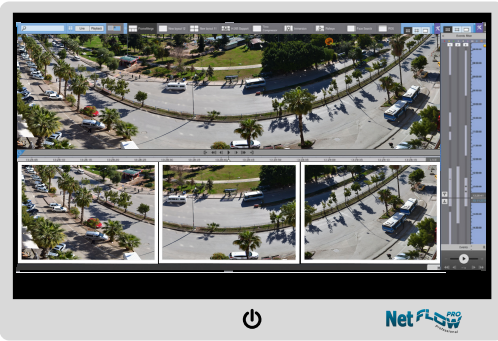
With Frame Merge, you can:
- Combine a panoramic view from up to 3 camera feeds.
- View the resulting video in Live or Archive mode.
- Export panoramic videos to standard .avi or .mkv files
- Select and zoom into any part of the panoramic image in a linked Dialog Board

Autozoom

Autozoom is a dynamic feature that adjusts the camera's view to track moving objects. It enlarges the relevant area of the scene for enhanced visibility, making it compatible with both fixed and fisheye cameras. **Autozoom automatically follows objects in the field of view**.

Image Dewarping
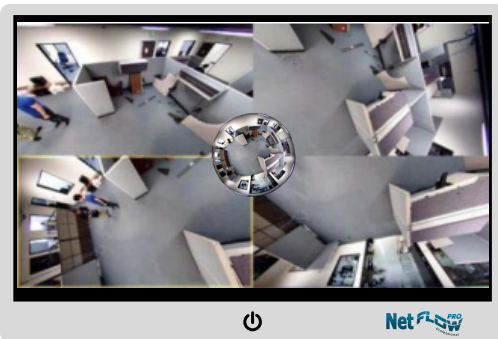
GPU-powered image correction (dewarping) is seamlessly performed on the client computer, without any additional load on the CPU. Multiple dewarped images with varying aspect ratios are presented on the client screen. NetFLOW-PRO extends support to both conventional fisheye-lens cameras and Immervision panomorph lenses.

Video Wall Management
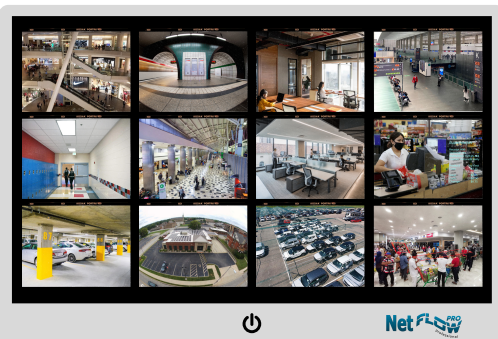
Effective management of video walls and layouts at large distributed sites:
- Send any available layout to any client computer within the system.
- Draw operator's attention to an event captured by one of the cameras in the layout.
- Show an event to all operators by sending the relevant layout to a video wall.
- Designate any client computer or several computers as a video wall.
- Manage it from any remote client connected to any server.

Support for Edge Storage
View and sync video on SD cards

NetFLOW-PRO supports on-camera (edge) storage. On-camera storage is automatically detected by NetFLOW-PRO when the relevant camera is added to the system configuration. The viewing client can display video recorded to SD cards. You can set up continuous replication of video, audio, and metadata from edge storage.

Archive replication via Interoperability Driver
Centralized storage for vehicle-based NVRs

Video footage can be synced between independent NetFLOW-PRO systems via the Interoperability Driver. Replication starts automatically when the source server is connected to the destination server. This can be used, for example, to centralize video storage of WatchNET-based NVRs installed on vehicles.

Export Functions

- Enhanced export features for recorded video
- Instant export of still frames and videos from Live Video or Archive mode.
- Export to password-protected .zip file.
- Simultaneous export of recorded video from multiple cameras
- Manage the size of exported video files: if the file size exceeds the value specified, the video is split into several files.
- Pruning (frame dropping) of exported video.
- Privacy masking: before exporting, select areas to block with solid color in the exported video sequence or image.
- Export of image zones (including dewarped fisheye frames).
- Export of user comments to recorded video.

Privacy Settings

Hide objects or faces from those in specified user roles.

Privacy settings are essential for compliance with GDPR (The EU General Data Protection Regulation). You can mask any static or moving objects in recorded video from those in specified user roles. You can also hide faces using the face detection tool. The objects or faces will be blocked while viewing and searching the archive, as well as on exported video.

Cross-System Client

Cross-System Client is useful at geographically distributed sites or multiple-location chains, such as retail stores or gas stations. You can configure and operate remote surveillance systems on a single client workstation:

- Connect a single client workstation to multiple surveillance servers on different do- mains.
- All settings and cameras associated with these servers are consolidated in a single convenient view.
- Operators can access multiple independent surveillance systems simultaneously.
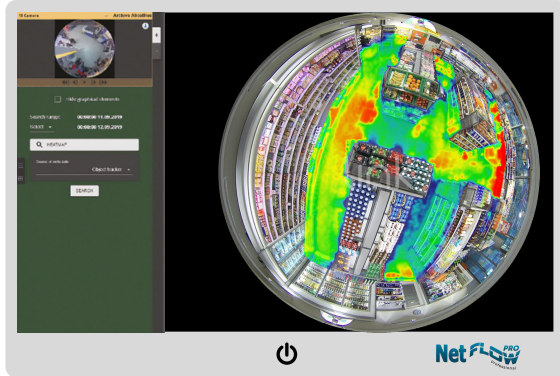
Web Client
Centralized storage for vehicle-based NVRs

Connects securely over the HTTPS protocol.
Supports H.264, H.265, MJPEG, and multi-streaming cameras.

You can:
- Configure various camera layouts.
- Search recorded video by faces, plate numbers, events, criteria (Moment Quest), and time intervals (time slicing).
- View motion heat maps.
- View alarm events.
- Work with bookmarks.
- Control PTZ cameras.
- Apply digital zoom.
- Export still frames and videos.
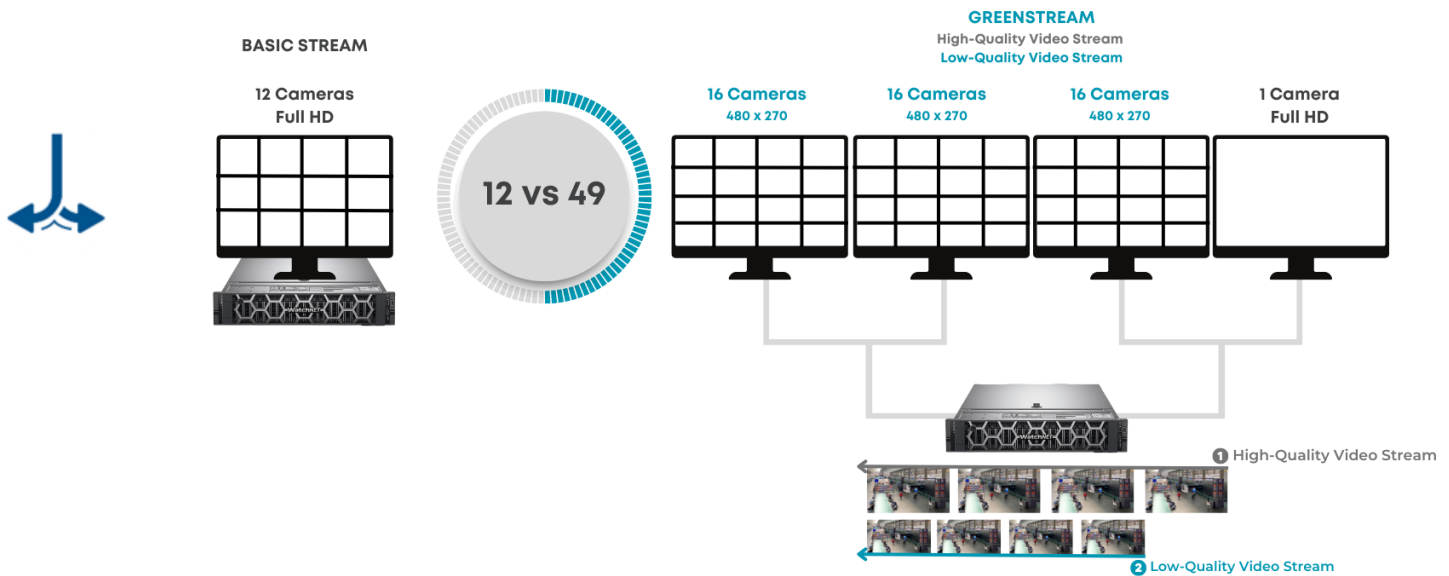- View camera and video archive statistics.

Mobile Clients
With our apps, you can:

- View live and recorded video.
- Quickly search for events.
- Control PTZ cameras.
- Work with fisheye cameras.
- Use digital zoom.
- Receive push notifications.
- Run macros.
- Use geo-maps.

GreenStream

GreenStream automatically selects a camera stream matching the current resolution of the video on the client screen. For instance:

- On a 1920 x 1080 screen with a 4 x 4 camera layout, each camera screen is only 480 x 270.
- GreenStream eliminates the need to transmit full resolution streams from all cameras.

Metadata from IP devices

Metadata is a lean description of moving objects within the scene. It is used for real-time video analysis or forensic search. Metadata is generated on cameras with embedded object trackers.

- Decompressing video/s on the server side is not necessary.
- CPU burden on the video server is significantly reduced.
- Server can handle more video streams.

UDP and Multicasting

NetFLOW-PRO features a whole range of tools for reducing bandwidth consumption and making security systems more efficient. Live Video can be streamed from a server to remote computers via UDP, multicasting is supported as well. **Multicasting frees up network capacity and optimizes resource usage.**

Client-side GPU Acceleration
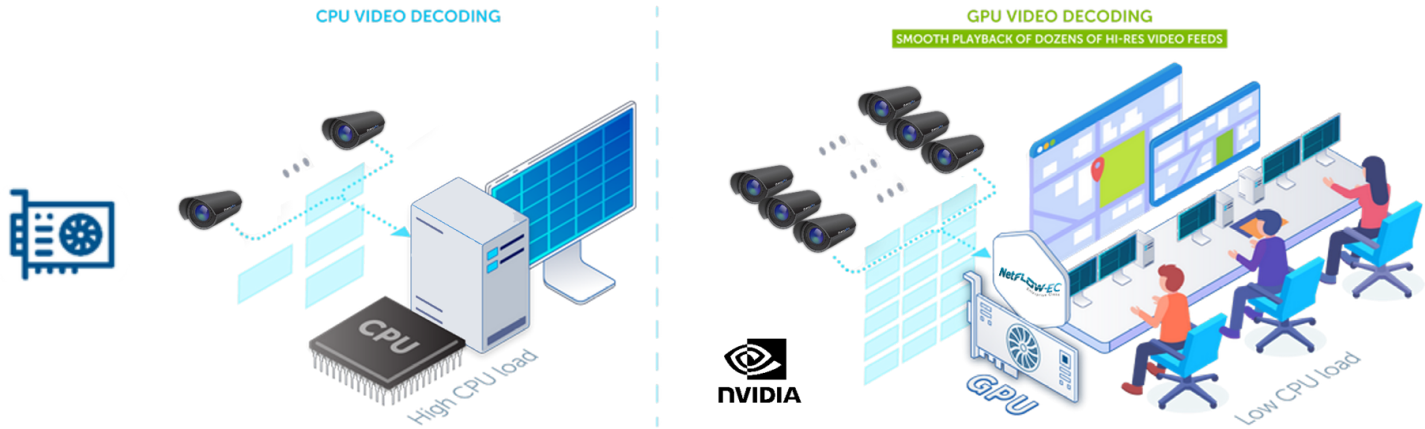
- Hardware video decoding on Intel® GPUs and NVIDIA graphics cards.
- Reduced client CPU load, especially when decoding H.265 video feeds.
- Smooth playback of dozens of Full HD videos.
- Using client computers with lower CPU performance specs.
- Building large video walls based on just a few client computers.

External Event Support

Quick and simple integration with third-party systems

Connect to external devices and systems: access control devices, security control panels, third-party software, and more. NetFLOW-PRO can:

- Receive external events.
- Save them into its database.
- Cross-reference events with recorded video
- Search events by a character string
- Display event data in real time in a separate pane
- Show events as captions on top of video

MACROS
Event Response Wizard
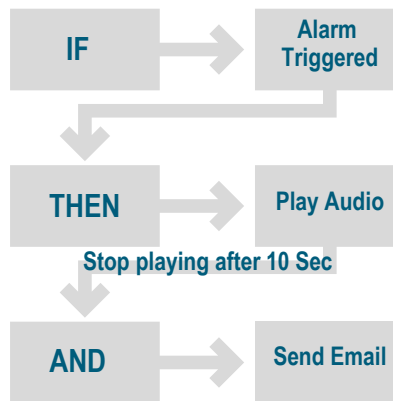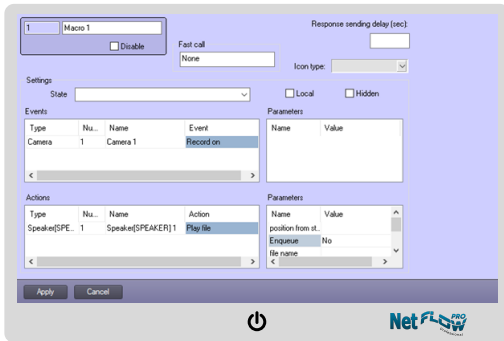
NetFLOW-PRO supports flexible configuration of complex system response to any specified set of events. Use IF...THEN logic to create a macro that automatically performs an unlimited number of actions in the system. Macros allow programming reactions to events at system and device level.

- Specify any response to any event via GUI
- Set a list of response scenarios for different subsystems
- Handle single devices or groups
- Launch macros manually
- Use macros to initialize objects on system startup

Fail Over
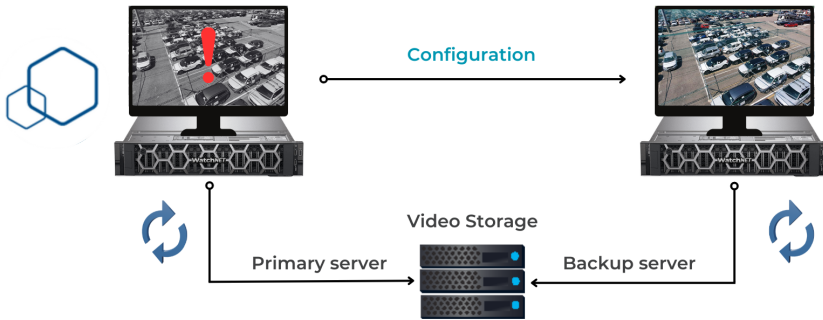
Failover quickly switches to a standby server when communication with the primary server is lost. The **standby server automatically takes over** all functions from the offline or malfunctioning server. Live video streaming and recording resume immediately. You can suspend any server in the cluster with no system downtime, e.g. for maintenance.

System Update

Silent servers update

You can update all servers within a cluster in silent mode. To do this, select the required distribution in the .zip archive or specify a web link. Servers can be updated simultaneously or in turn, which enables continuous system operation during updates.

Automatic client update

When your NetFLOW-PRO client connects to the server with a newer version of the NetFLOW-PRO, you will be prompted to update your client software. After confirmation, the update process is performed automatically.

Security Policy

Set up:

- The minimum password length.
- A password validity period.
- The number of passwords in history.
- Password strength control.
- Prevention of multiple simultaneous sessions of the same user.
- Account lockout time/number of failed login attempts.
- A range of permissible IP addresses for client computers.
- Access to the server with administrator confirmation.

Each user-related event includes the user's IP address. When accessing the server, the MAC address of the client computer is registered in the system event log. The Export Start event includes the username.

LDAP Authentication

This feature makes it possible to **DeDuplicate user administration tasks** for sysadmins at large companies. Operators can log in to a surveillance system by entering their domain credentials. The sysadmin connects LDAP directory to NetFLOW-PRO and selects which users to add. He can also associate VMS access rights with corporate directory groups. When a user profile is deleted on the LDAP server, it can be automatically deleted in NetFLOW-PRO.

Sl No	FUNCTIONALITY	EXPERT	ACE	INTEGRA
1	Number of servers in a distributed system	30	30	Unlimited
2	Total number of cameras in a system	Unlimited	Unlimited	Unlimited
3	Free Software Updates	Yes	Yes	Yes
4	Real time analytics (Object Tracker)	Yes	Yes	Yes
5	Edge analytics (camera metadata)	Yes	Yes	Yes
6	Edge storage (playback only)	Yes	Yes	Yes
7	GreenStream adaptive bandwidth management	Yes	Yes	Yes
8	3D Maps	Yes	Yes	Yes
9	Web client interface	Yes	Yes	Yes
10	TimeSlice search (search by time intervals)	Yes	Yes	Yes
11	Macros (event response wizard)	Yes	Yes	Yes
12	ONVIF Profiles G, S, T	Yes	Yes	Yes
13	Video bookmarking (searchable text comments)	Yes	Yes	Yes
14	WatchNET cloud service	Yes	Yes	Yes
15	Cross-System Client	Yes	Yes	Yes
16	WatchNET Reports	Yes	Yes	Yes
17	Storage replication	No	Yes	Yes
18	Failover	No	Yes	Yes
19	Videowall	No	Yes	Yes
20	LDAP service	No	Yes	Yes

AI features and Retail License Pack

Sl No	FUNCTIONALITY	EXPERT	ACE	INTEGRA
21	MomentQuest smart forensic search			
22	Face multicamera search			
23	Face Mask Detection			
24	LPR / ANPR multicamera search			
25	Tag&Track multicamera object tracking	Add-on	Yes	Yes
26	AI Human / Vehicle detection			
27	AI Fire / Smoke detection			
28	People Counting			
29	Heat Map			
30	Queue Detection			

Personal Protective Equipment Detection includes:

Sl No	FUNCTIONALITY	EXPERT	ACE	INTEGRA
31	Helmets			
32	Hi-viz vests	Add-on	Add-on	Add-on
33	Protective Clothing			

Human Behavior Analytics includes:

Sl No	FUNCTIONALITY	EXPERT	ACE	INTEGRA
34	Man down			
35	Raised arms	Add-on	Add-on	Add-on
36	Crouched man			
37	Social distancing			

Add-On Modules

Sl No	FUNCTIONALITY	EXPERT	ACE	INTEGRA
38	Integration With Access Control System	Up to 50 readers	Up to 100 readers	Add-on
39	Integration Fire And Security Alarms System	Add-on	Add-on	Add-on
40	Integration Perimeter Intrusion Detection System	Add-on	Add-on	Add-on
41	External Event Support (POS, access control systems)	Add-on	Add-on	Add-on
42	Facial Recognition (positive / negative list)	Add-on	Add-on	Add-on
43	LPR / ANPR (positive / negative list)	Add-on	Add-on	Add-on
44	Custom AI Analytics	Add-on	Add-on	Add-on
45	Water Level Detector	Add-on	Add-on	Add-on
46	Offline Analytics. Smart search in imported video	No	No	Yes
47	Multicamera Tracking. Tracking follows objects across multiple camera FOVs based on appearance similarity	Add-on	Add-on	Yes
48	Similarity Search	No	Add-on	Yes
49	Datacenter Domain Unification / Private Cloud	No	No	Yes

www.watchnetinc.com

* Please contact us for more information on our licensing policy for LPR/ANPR supported countries.

** To be released in the next version

*** Additional license required

DISCLAIMER

WatchNET Inc reserves the right to make changes to the specification and cost of software licenses without notice and without any obligation to make the same changes to the licenses already sold.

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NetFLOW PRO Professional

Security Industry's
Best & Leading VMS & PSIM Software

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