



VMS Pro

Client Software

The VMS Pro client software is designed to configure and manage the devices of Raysharp, including XVRs, NVRs, and IP cameras, in a unified and intuitive manner. It provides various functions including live view, video recording, video clip search and playback, and event and alarm receiving.

Key Functions

Live View

- Supports standard split-screen with up to 128 windows and wide split-screen with custom 8 × 8 windows.
- Supports split-screen customization.
- Supports live view through one or multiple fisheye cameras in fisheye Mode, and supports panoramic image, PTZ, AR dome camera, and cylinder modes.
- Supports intelligent linkage.
- Supports AI card push.
- Supports restoring the latest live view state after the client is restarted.
- Supports displaying or hiding the trigger information in live view.
- Supports different scales (original, stretched, 4:3, and 16:9) for displaying images in the preview window area.

Recording Setting

- Supports recording the main stream and sub stream for playback.
- Supports setting manual recording and schedule strategy.
- Supports continuous video recording, event video recording
- Supports customization of overwriting video files and deleting expired local video files.

Event Management

- Supports alarm sound customization.
- Supports displaying a subscribed event in real time in the event center on the client when the subscribed event is triggered.
- Supports popping up the live view and captured image when an alarm is reported.
- Supports receiving real-time events, such as face recognition events.
- Supports searching historical events by event type or event details.
- Supports exporting historical events in CSV format.
- Supports searching and downloading the captured images triggered by events and the videos triggered by events.
- Supports remote device configuration and AI scenario groups and event detection area settings.
- Supports configuring video events, intelligent analysis events

Recording Playback

- Supports remote playback.
- Supports synchronous playback of up to 16 split-screens.
- Supports real-time playback, normal playback, alarm input playback, event playback, and intelligent playback.
- Supports accurately locating the playback time.
- Supports skipping the video clips not focused during VCA playback.
- Supports filtered video clips and detected people or vehicles.
- Supports searching and exporting the captured event-triggered images by date and event type.
- Supports downloading the video files of the devices added through cloud P2P.
- Supports downloading the clipped video files.
- Provides a video player in the installation directory for viewing the downloaded video files.

- Supports searching for the recorded video files triggered by events, playing video files, and downloading video files.

Personnel Management

- Supports the management of personnel in different face recognition groups.
- Supports getting personal information from the added devices.
- Support importing and exporting personnel information and facial information.
- Supports collecting facial images through a third-party camera (USB camera or built-in camera in the computer).
- Supports viewing statistical data (including personnel and facial images) on clients and devices.

Vehicle Management

- Supports the management of license plates in different license plate recognition groups.
- Supports getting license plate information from the added devices.
- Supports importing and exporting license plate records and data.
- Supports collecting license plate images through a third-party camera (USB camera or built-in camera in the computer).
- Supports viewing statistical data (including license plate and vehicle management) on clients and devices.

Time and Attendance

- Supports setting the general rules on time and attendance.
- Supports setting different rules for different attendance scenarios, for example, single-shift scenarios, working-shift scenarios, and holiday scenarios.
- Supports customizing overtime duration and setting the corresponding working hours.

- Supports setting the schedules, shifts, and shift schedules flexibly and quickly.
- Supports setting multiple attendance sheets in one shift.
- Supports getting detailed attendance data from the management devices. The data involves sign-in, being late and leaving early, working, and working overtime.
- Supports multiple types of reports as required.
- Supports sending the original attendance data in CSV format.
- Supports counting the rest time as attendance time.
- Supports flexible weekend shift arrangements.
- Supports flexible schedules. In a flexible schedule, the days when the attendance time is not full are counted as absence days.

Security Control

- Supports adding areas as hot spots on an electronic map and watching the videos from the link cameras.

Network

- Supports cloud P2P devices.
- Supports adding devices by IP address, domain name, DDNS, and IP segment, and supports importing and exporting devices in batches.
- Supports using the Transport Layer Security (TLS) protocol to enable transmission encryption when adding devices.
- Supports searching for the activated online devices.
- Supports time synchronization by the NTP protocol from the client to the added devices.
- Supports checking the online users of devices.
- Supports the bidirectional audio and broadcast functions.
- Supports the applications in LAN and WAN.

PTZ Control

- Supports remote control, presetting, cruise, and mode setting of the PTZ.
- Supports the local menu on the control panel of the PTZ.
- Supports PTZ control of one-click cruise and one-click stop.
- Supports arming and tracking targets (human or vehicles).

Arming

- Supports transmission encryption when a private protocol is used for login.
- Supports upgrading device firmware after a new version is detected online.
- Supports importing and exporting device lists.
- Supports searching and backing up logs.
- Supports adding facial recognition devices.
- Supports remotely configuring the added devices.
- Supports adding the online devices registered on the cloud P2P after logging in to the cloud P2P.
- Supports creating a password to activate a new device.
- Supports resetting device passwords.
- Supports setting email information when activating a device and resetting the password of the device via emails.
- Supports hardware decoding of live view and playback.
- Supports downloading video files in RF, MP4 and AVI format to PCs.
- Supports user permission management.
- Supports the electronic map function, including adding, deleting, editing, viewing, zooming in/out, and moving electronic maps.
- Provides the topology management module to monitor the network health status of the connected devices.
- Provides the configuration wizards for access control, time, and attendance to help users quickly start working.
- Supports importing the events in CSV format (encrypted) for device access control to the client.

- Supports configuring the display format of the date and time of the client.
- Supports searching and analyzing the results of video and image capture tasks.
- Supports face image retrieval, human retrieval, and vehicle retrieval, and supports exporting relevant video files.

Specifications

| Type | | VMS Pro | |
|---------------------|------------------------------|---|--|
| Database | Client database | SQLite (encrypted) | |
| | Third-party database | Microsoft®SQLServer®2008 and later, SQL lite 3.28.0 and later | |
| Supported languages | | English, simplified Chinese, Russian, Italian, German, Polish, French, Spanish, Portuguese, traditional Chinese, and Japanese | |
| Customer | Arming | User | One super user and 50 sub users |
| | | Electronic map | 256 |
| | | Group | One custom group One default group |
| | | Channel | Each group has 128 channels. |
| | Video | Live view | There are 128 live views on one screen. |
| | | Auxiliary screen preview | There is one primary screen and three secondary screens for live view. |
| | | Recording Playback | 16 channels are played at a time. |
| | | Simultaneous play | 16 channels are played synchronously. |
| | | Downloading | Downloading 16 files at a time is allowed. |
| | Access permission management | Face group | There can be at most 16 groups for a single device. |
| | | License plate group | There can be at most 64 groups for a single device. |
| | | Number of registered faces | There can be at most 5000 face images registered for a single device. |
| | | Upper limit of the number of captured face images | There can be at most 1 million images for a single device. |
| | | Face attendance data | The retention period of the attendance result and that of the original records depend on the hard disk capacity and the amount of data generated during the application. |

System Requirements

*To achieve high stability and good performance, the following system requirements must be satisfied.

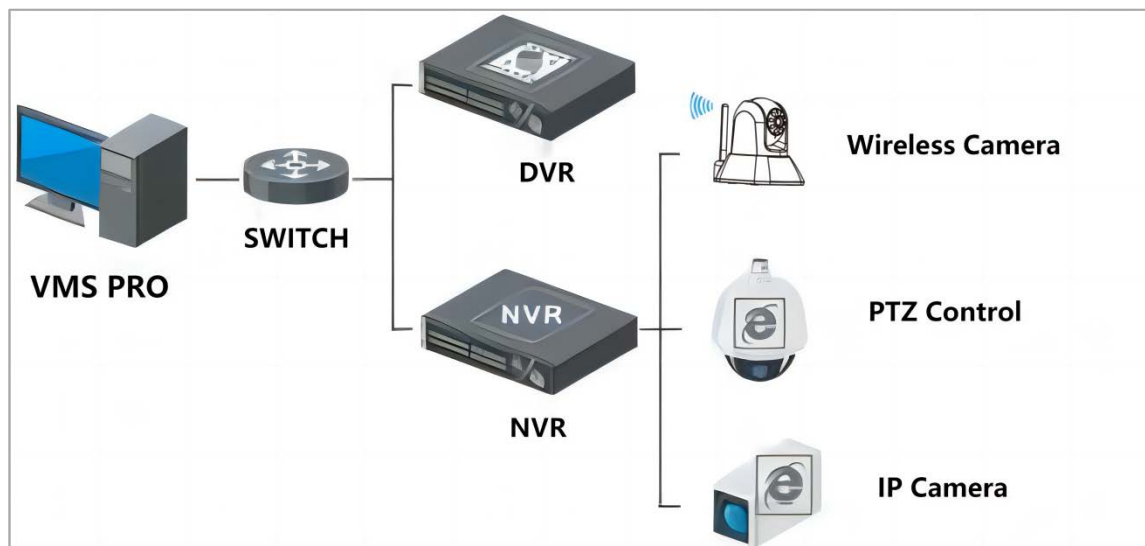
| Item | Requirement |
|------------------|---|
| Operating system | Microsoft Windows 7, 10, 11, or later(32-bit or 64-bit) |
| CPU | Intel core i5 4590 @3.3GHz or higher |
| Memory | 4 GB or larger |
| Resolution | 1280 × 768 or higher |

Live View of Performance

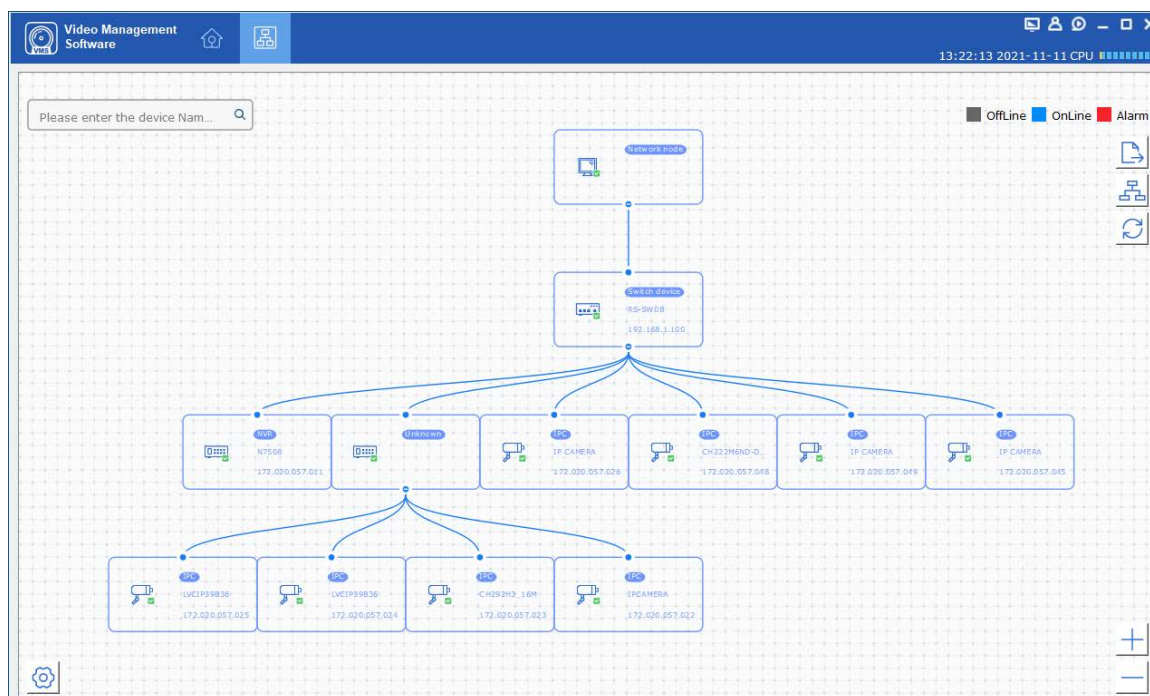
| H.264 | | | | | | | | | | | |
|------------|-----------------|------------------|---|---------|-------------|--|---------|-------------|---|---------|-------------|
| Resolution | Bit rate (Mbps) | Frame rate (fps) | CPU: i3-7100@3.90GHz Graphics card: GT730; Memory: 8 GB; Windows 10 (64-bit) | | | CPU: i5-6500@3.6GHz Graphics card: GT730; Memory: 8 GB; Windows 10 (64-bit) | | | CPU: i7-10700k@4.8GHz Graphics card: GTX1050Ti Memory: 16 GB; Windows 10 (64-bit) | | |
| | | | Number of channels | CPU (%) | Memory (MB) | Number of channels | CPU (%) | Memory (MB) | Number of channels | CPU (%) | Memory (MB) |
| 720P | 1 | 30 | 17 | 38.5 | 807 | 15 | 40.6 | 645 | 25 | 23.1 | 1048.1 |
| 1080P | 2 | 30 | 11 | 45.3 | 727 | 8 | 75.8 | 545.8 | 21 | 39.7 | 1368.1 |
| 5MP | 4 | 30 | 5 | 92.1 | 648 | 3 | 65.7 | 465.5 | 10 | 59.8 | 1490 |
| 8MP | 6 | 30 | - | - | - | - | - | - | 6 | 56.9 | 1172 |
| H.265 | | | | | | | | | | | |
| Resolution | Bit rate (Mbps) | Frame rate (fps) | CPU: i3-7100@3.90GHz Graphics card: GT730; Memory: 8 GB; Windows 10 (64-bit) | | | CPU: i5-6500@3.6GHz Graphics card: GT730; Memory: 8 GB; Windows 10 (64-bit) | | | CPU: i7-10700k@4.8GHz Graphics card: GTX1050Ti Memory: 16 GB; Windows 10 (64-bit) | | |
| | | | Number of channels | CPU (%) | Memory (MB) | Number of channels | CPU (%) | Memory (MB) | Number of channels | CPU (%) | Memory (MB) |
| 720P | 1 | 30 | 17 | 41.5 | 946 | 15 | 43.7 | 910.3 | 25 | 26.3 | 1516.5 |
| 1080P | 2 | 30 | 11 | 58 | 961.6 | 8 | 82.6 | 1016 | 21 | 46.1 | 1832.6 |
| 5MP | 4 | 30 | 5 | 92.3 | 1069 | 3 | 82.4 | 769 | 10 | 71 | 2311.9 |
| 8MP | 6 | 30 | - | - | - | - | - | - | 6 | 85.6 | 1904 |
| Resolution | Bit rate (Mbps) | Frame rate (fps) | CPU: i5-8400@2.8GHz Graphics card: GT730; Memory: 8 GB; Windows 10 (64-bit) | | | CPU: i7-12700F@4.9GHz Graphics card: GT730; Memory: 16GB; Windows 10 (64-bit) | | | | | |
| | | | Number of channels | CPU (%) | Memory (MB) | Number of channels | CPU (%) | Memory (MB) | | | |
| 720P | 1 | 30 | 20 | 33 | 1211.3 | 25 | 18.5 | 642.3 | | | |
| 1080P | 2 | 30 | 18 | 27 | 1024 | 21 | 22.4 | 1292.6 | | | |
| 5MP | 4 | 15 | 10 | 25 | 1121 | 10 | 24.6 | 1189.6 | | | |
| 8MP | 6 | 7 | 3 | 11 | 774.3 | 6 | 26 | 1346.5 | | | |

| H.264+ | | | | | | | | | | | |
|------------|-----------------|------------------|---|---------|-------------|--|---------|-------------|---|---------|-------------|
| Resolution | Bit rate (Mbps) | Frame rate (fps) | CPU: i3-7100@3.90GHz Graphics card: GT630; Memory: 8 GB; Windows 10 (64-bit) | | | CPU: i5-6500@3.6GHz Graphics card: GT730; Memory: 8 GB; Windows 10 (64-bit) | | | CPU: i7-10700k@4.8GHz Graphics card: GTX1050Ti Memory: 16 GB; Windows 10 (64-bit) | | |
| | | | Number of channels | CPU (%) | Memory (MB) | Number of channels | CPU (%) | Memory (MB) | Number of channels | CPU (%) | Memory (MB) |
| 720P | 1 | 30 | 17 | 37.1 | 807 | 15 | 41.6 | 633.1 | 25 | 30.6 | 1055 |
| 1080P | 2 | 30 | 11 | 44.5 | 724.3 | 8 | 71.5 | 524.2 | 21 | 40.5 | 1370.3 |
| 5MP | 4 | 30 | 5 | 90.5 | 638 | 3 | 60.5 | 465.9 | 10 | 54.4 | 1414.6 |
| 8MP | 6 | 30 | - | - | - | - | - | - | 6 | 56.6 | 1087.4 |
| H.265+ | | | | | | | | | | | |
| Resolution | Bit rate (Mbps) | Frame rate (fps) | CPU: i3-7100@3.90GHz Graphics card: GT630; Memory: 8 GB; Windows 10 (64-bit) | | | CPU: i5-6500@3.6GHz Graphics card: GT730; Memory: 8 GB; Windows 10 (64-bit) | | | CPU: i7-10700k@4.8GHz Graphics card: GTX1050Ti Memory: 16 GB; Windows 10 (64-bit) | | |
| | | | Number of channels | CPU (%) | Memory (MB) | Number of channels | CPU (%) | Memory (MB) | Number of channels | CPU (%) | Memory (MB) |
| 720P | 1 | 30 | 17 | 40.5 | 945 | 15 | 45.9 | 908.4 | 25 | 33 | 1611.7 |
| 1080P | 2 | 30 | 11 | 56.3 | 963 | 8 | 83.9 | 1025 | 21 | 46.3 | 1835 |
| 5MP | 4 | 30 | 5 | 91.6 | 1062 | 3 | 83.2 | 787.5 | 10 | 72.9 | 2319 |
| 8MP | 6 | 30 | - | - | - | - | - | - | 6 | 86.4 | 1919 |

Video Security Topology

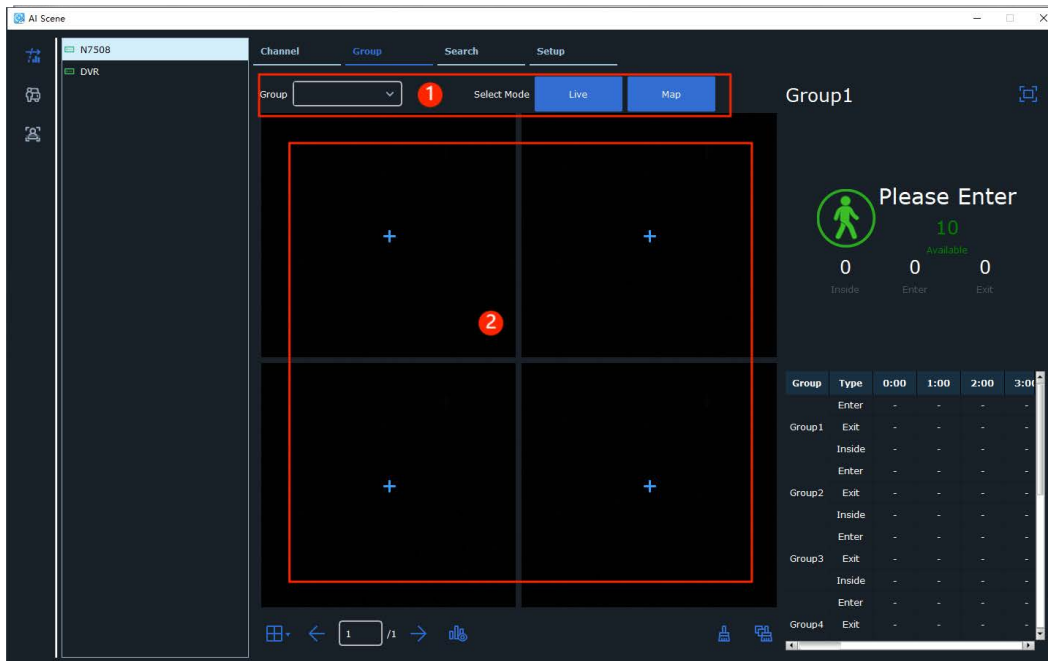


Topology Management of Thin Network Management Switches

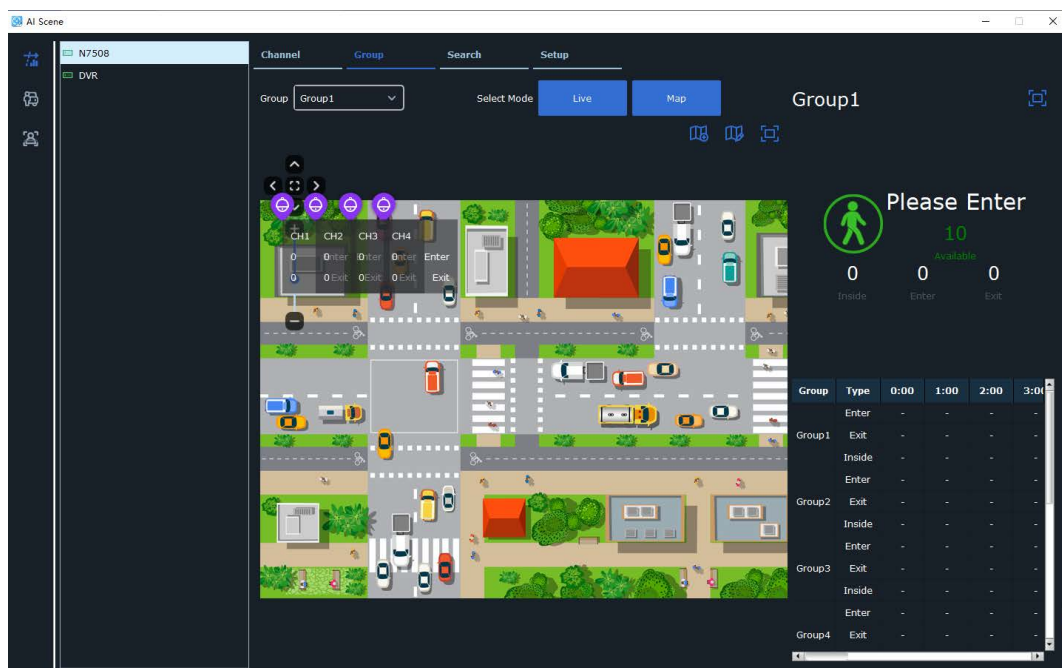


Intelligent Scenarios

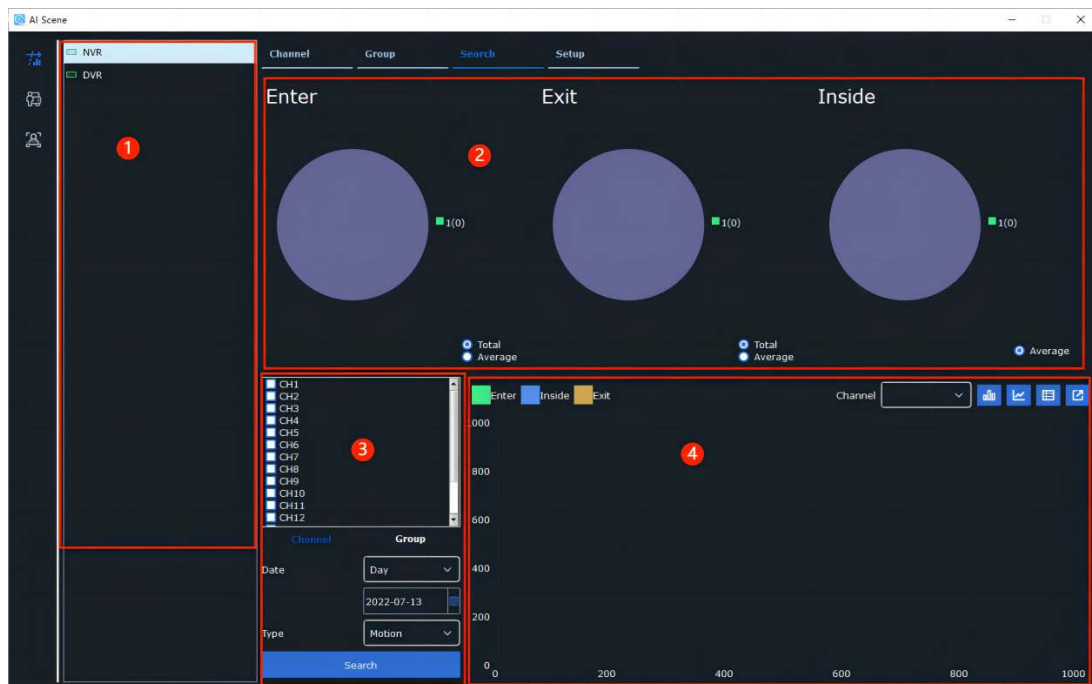
Cross Counting



Electronic Map Mode



Statistical Table



Face Attendance

