

VZ-AIPVM-N & VZ-AIPVM-P SERIES

10",23",27",32" & 43" AI PUBLIC VIEW MONITOR

IMS SOFTWARE AIPVM-N & AIPVM-P USER MANUAL



ViewZ®
www.viewzusa.com

This device complies with NDAA (National Defense Authorization Act).

Please read this manual thoroughly before use, and keep it handy for future reference.

CONTENTS

WARNING STATEMENTS	4
SYSTEM	5
1. Features	5
2. Server Type	6
3. System Requirement	7
4. System Structure	9
SETUP	10
1. Installation	10
2. Server	13
3. Login	14
DEFAULT LAYOUT	15
BASIC SETUP	17
1. Backup	17
2. Menu	19
3. System	21
4. Window	27
5. New Features	28
FEATURES	30
1. Users	30
2. Group	35
3. Devices	39
4. Live View	46
5. Playback	51
6. Layout	53
7. Real Time Alarm	55
8. Alarm Search	57

CONTENTS

9. Report Statistics	59
10. Event Linkage	61
11. Snapshot Retrieval	64
12. Log	66
13. Device Configuration	68
14. Alarm Mail	70
15. Face Recognition	72
16. Face Search	76
17. Face Library Manage	84
18. Face Match Config	90
19. Classification Query	94
20. AI Recognition	97
21. Weapon Search	99
22. Person Control	101
23. Traffic Area Configuration	105
24. People Flow Statistics	110

WARNING STATEMENTS

Important Safety Instructions

This manual describes how to use the content management system of AI PVM, including network access, device control, live view, gun detection, people count, flow control, alarm, network configuration and so on.

This manual is intended for:

- System Administrator
- Technical support engineers
- Maintenance engineers
- IP camera operators

Important Safety Instructions



DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



NOTICE

Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance deterioration, or unanticipated results.

NOTICE is used to address practices not related to personal injury.



NOTE

Calls attention to important information, best practices and tips.

NOTE is used to address information not related to personal injury, equipment damage, and environment deterioration.

SYSTEM

FEATURES



This software (**IMS**) is specifically designed for easy management of ViewZ's AI PVM. By using **IMS** software, user can have following features; easy surveillance solution, centralized management, distributed deployment, multi user remote access, device (AI PVM) management, server management, alarm management, device configuration, real time video, recorded video playback, personnel archive management, data statistics, face recognition, gun detection & notification, people count and so on.

- Multiple front-end devices can be connected to **IMS** software. **IMS** supports IPC, NVR, face capture camera, alarm box, face-recognition, temperature panel, access controller, flow statistical camera, network speaker and so on.
- **IMS** provides the centralized management and distributed deployment system. Also, **IMS** makes the unified management of resources such as users, devices, and distributed deployment of servers.
- **Authority Management:** administrator can make different authorities to different users
- **Device Management:** **IMS** supports the function of automatic search, manual addition, batch import of devices.
- **User Management:** **IMS** supports the hierarchical structure of **IMS**'s users
- **Organizational Management:** **IMS** supports the device group management. That is, **IMS** can allow or restrict the accessibility about devices
- **Real-time Monitoring:** **IMS** supports multi-screen layout preview and round tour preview
- **Video playback & download:** **IMS** supports the feature of playback & download recorded video
- **Real-time Alarm:** **IMS** can see the real-time alarm notification from AI PVM
- **Data Statistics:** **IMS** can count / analyze the alarm data of AI PVM
- **Personnel Information** management: **IMS** can let administrator make the face library data, and this data will be using for face recognition. **IMS** supports the multi-level management and batch import.
- **Face Recognition Comparison:** AI PVM can capture face images and **IMS**'s administrator can see this captured face images on the **IMS** program. Thus, **IMS** program can compare the captured face image with the face library
- **Search by Image:** **IMS** supports a random search for face images and supports for finding similar face images through face library.
- **AI Recognition:** **IMS** supports the statistics of people and gun
- **Attendance Management:** **IMS** can manage the attendance of people by using AI PVM
- **Classification Query:** **IMS** supports the retrieval of captured images for strangers, registered personnel, and filtered personnel. Also, **IMS** can see the detailed information of captured images.
- **Target on-screen Person:** **IMS** let administrator to see the associated face image in the target on-screen person, export and add to face library.
- **Event Linkage:** **IMS** can setup the linked action and it means **IMS** can make the linked action when the pre-condition is achieved. Administrator can setup the external alarm system, or send E-mail to users
- **Regional Management:** **IMS** manages area grouping and query area
- **Capture Retrieval:** **IMS** supports searching the local captured images for linked events

SYSTEM

SERVER TYPE



When user install **IMS** software to the separated or standalone computer/server, **IMS** will setup servers and client platform (main interface) on the installed computer/server.

- Server - Central Management, Media Distribution, Intelligent Analysis and Database
- Client Platform - **IMS** Software Interface

CMU - Center Management Server Unit



The **Central Management Server Unit (CMU)** controls & centralizes all features such as user management, authority management, device management, server management, alarm management, electronic map management, face database management, etc.; **CMU** is also running as a server, and can be installed on the separated server, or installed with other servers (like MDU, IAU, DS or Watchdog).

When **IMS** system start to setup, **IMS** system should connect to **CMU** (for permission authentication) in priority, and then, connect to the **Media Distribution Server Unit (MDU)** & **Intelligent Analysis Server Unit (IAU)**.

MDU - Media Distribution Server Unit



The **Media Distribution Server Unit (MDU)** forwards the audio & video streams of AI PVM to the requesting device (Client computer). **MDU** has the high performance made by the end-to-end low latency. **MDU** is also running as a server, and can be installed on the separated server, or installed with other servers (like CMU, IAU, DS or Watchdog).

When **MDU** is separately installed on a single server, IP address of **CMU** should be configured so that it can be managed by the **CMU**. The performance of **MDU** is following as the bottom table;

NIC parameters (NIC is Gigabit)

CHANNEL	CAMERA BITRATE	INPUT BITRATE	OUTPUT BITRATE
200	4 Mbps	800 Mbps	800 Mbps
400	2 Mbps	800 Mbps	800 Mbps
500	1.5 Mbps	800 Mbps	800 Mbps

SYSTEM

SERVER TYPE

DS - Database Server

 **CMU** and **IAU** use the **MySQL** as the database storage system. Thus, MySQL is running as a single server or installed with **CMU**.

IAU - Intelligent Analysis Server Unit

 The **Intelligent Analytics Server Unit** (IAU) is using for face recognition applications. Thus, **IAU** is only run by ViewZ's AI AI PVM.

IAU is also running as a server, and can be installed on the separated server, or installed with other servers (like MDU, CMU, DS or Watchdog).

For improving high performance of **IAU**, ViewZ recommends that **Intelligent Analytics Server Unit** (IAU) needs to be separately installed on a single server.

The available channel of **IAU**'s face recognition algorithm is decided by the specification of CPU & ROM.

TYPE	MODEL	ROM	AVAILABLE CHANNEL OF FACE DETECTION
CPU	Intel® Core™ i5-7500	8 G	1 ~ 3
CPU	Intel® Core™ i7-8700	8 G	2 ~ 8
CPU	Intel® Xeon® E5-2630 V4	16 G	4 ~ 10



NOTE

- Under the same condition;
When user has the fewer access-cameras, user will have the higher quality of real time video.
When user has the flow of dense people (human faces), user will have the worse quality of real time video.
- Also, user can adjust based on the actual requirements.
- The above description is only a reference and when user (admin) build up the structure, please refer these features.

SYSTEM

SERVER & CLIENT SYSTEM REQUIREMENT

Description

	CLIENT PC	Central Management Server (CMU)	Media Distribution Server (MDU)	Intelligent Analysis Server IAU (CPU Base)	Intelligent Analysis Server IAU (GPU Base)
CPU	Intel® Core™ i5-7500 or above	Intel® Core™ i5-7500 or above	Intel® Core™ i5-7500 or above	Intel® Core™ i7 or above	Intel® Core™ i7 or above
RAM	8GB or more	8GB or more	8GB or more	8GB or more	8GB or more
Network	Gigabit /s				
Storage Requirement	Minimum 50GB				
Supported OS	Microsoft(MS)® Windows® 7 Pro (64 bit), MS® Windows® 10 Pro (64 bit), MS® Windows® 10 Enterprise (64 bit), MS® Windows® Server 2012, MS® Windows® Server 2016				
Software Requirement	DirectX 11 or above	-			
Display Resolution	1600×960 or above, Default 1920x1080	-			
Graphic Card	-				
GPU Requirement	-				NVIDIA GTX 1050 or above



CAUTION

- ViewZ CMS program only support 64bit OS.
- If user's system specification meets with system requirement, user can install all server & client platform on a single computer/server.

SYSTEM

SERVER & CLIENT STRUCTURE

Description

✓  ViewZ IMS software has 3 installation plans.

- **STANDALONE:** All components of IMS is installed on the same device (computer).
- **MID DISTRIBUTION:** The IMS's server is installed on a single device (computer), and IMS's clients are installed on different devices (computers).
- **LARGE DISTRIBUTION:** All components of IMS is installed on different devices (computers).

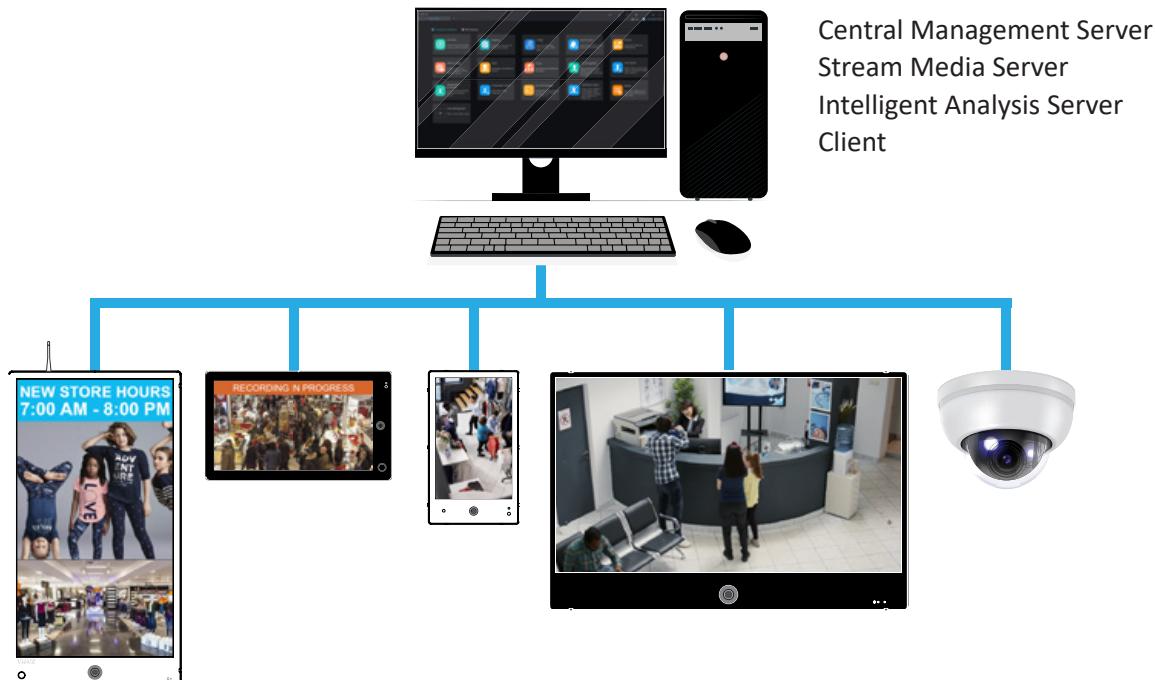


CAUTION

This content is suitable for administrators to understand the platform before installing, user (admin) can choose the appropriate installation plan.

STANDALONE Installation

 All components of the IMS software, including server and client, will be installed on the single device (computer) for easy management of small-scale monitoring system.



SETUP / INSTALLATION

INSTALLATION PROCESS

Installation & Setup

 **Step 1** Install the IMS program from the provided device. When user launch that program file, user will see below popup windows.

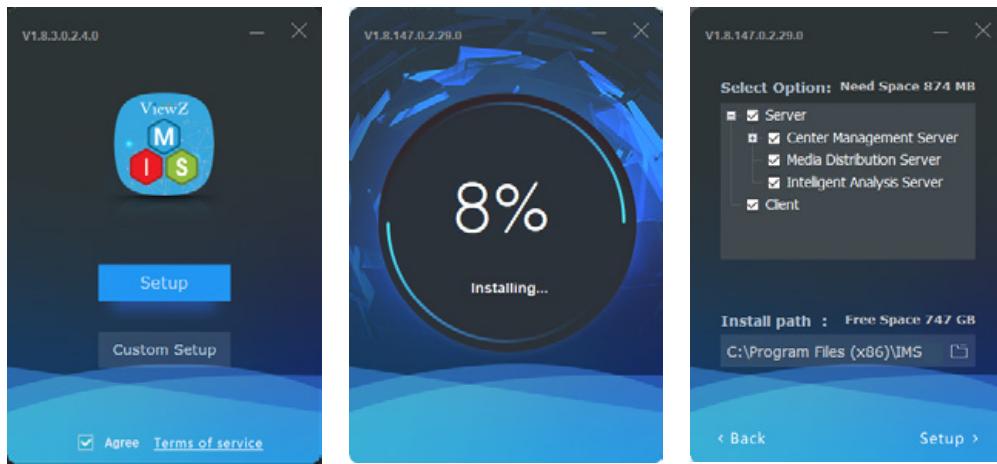


Figure 1 Installation windows

 **Step 2** Click 'Agree' to install the program. If user wants to install on different folder, please click 'Custom Setup' and adjust the value.



NOTE

- Custom Setup provides more flexible installation. User can choose 3 installation methods, which correspond to the 3 deployment modes of the platform. The way is as follows:
STANDALONE: All components of IMS is installed on the same device (computer)
MID DISTRIBUTION: The IMS's server is installed on a single device (computer), and IMS's clients are installed on different devices (computers)
LARGE DISTRIBUTION: All components of IMS is installed on different devices (computers).
- On the distributed deployment, OS's firewall would be turned off after the installation, or the IMS program is allowed to pass through that firewall. Otherwise, when log-in remotely, it will be interrupted by the firewall and login failure.
- The purpose of IMS program is to manage multiple monitoring devices such as ViewZ AI PVMs. IMS program supports centralized management, distributed deployment and multi-user remote access. With IMS program, user can setup and control the user-account, device, server, alarm, device configuration, gun detection, recorded video playback, personnel archive management, data statistics, face recognition and etc.

SETUP / INSTALLATION

INSTALLATION PROCESS / SERVER MANAGEMENT TOOLS

Description

When the IMS program is installed, the **Server Management Tools** program is also installed. The **Server Management Tools** manages servers, such as **Central Management Server Unit (CMU)**, **Media Distribution Server Unit (MDU)** and **Intelligent Analysis Server Unit (IAU)**, Database & Watchdog, which excludes the Client platform.

Server Management Tools window show the running status of servers and configure the **IP address** of CMU, MDU and IAU. **Server Management Tools** can also control the Start-Up, Stop, and Delete each server component. Also, user (admin) can manually add the service or server.

When IMS program is launched, the **Server Management Tools** is automatically run and it might be not showing on system tray. But, if user needs to configure the infomation of server, please open and setup the **Server Management Tools** program.

If IMS's servers does not start normally, IMS software will popup a notification window on the system tray (of Computer/Server), to find/fix the problem in time.

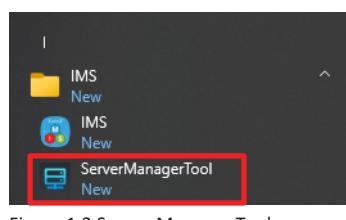
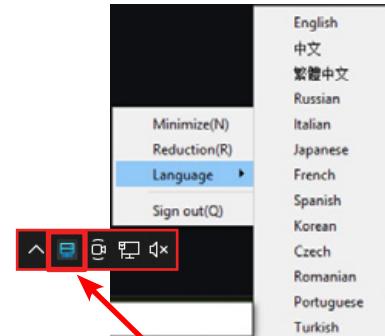


Figure 1-2 Server Manager Tool



When Right-click of Server Management Tools, user can switch the language of tool.

Step 1 Click **Start** button and find the **IMS** folder from the listed program. Then, click **Server Manager Tools** to run the **Server Management Tools** program. Then, the **Server Mangement Tools** system tray icon will be shown at the taskbar area.

Step 2 Click this icon  on the system tray. Then, user will see the **Server Management Tools** window.

SETUP / INSTALLATION

INSTALLATION PROCESS / SERVER MANAGEMENT TOOLS

Description

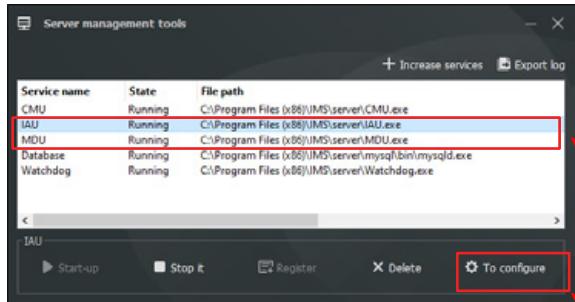


Figure 1-3 Server Manager Tools - IAU / MDU select

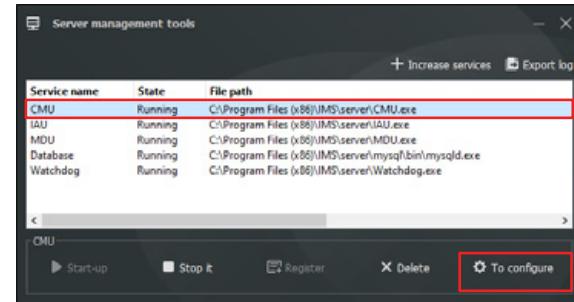


Figure 1-3 Server Manager Tools - CMU select

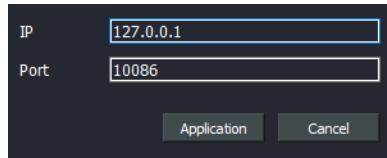


Figure 1-4 IAU / MDU's configuration data

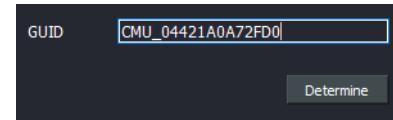


Figure 1-4 CMU's configuration data



Step 3 Click **CMU** and click 'To Configure' button to see/update **GUID** value.



Step 4 Click **IAU / MDU** and click 'To Configure' button to see/update **IP address & port number**.



NOTE

- If user forgets the super admin password, please provides the GUID value to ViewZ, we will feedback a new password with a file, and then user can use it to modify a new password.
- To Configure: configure the servers (IAU & MDU) are associated with the corresponding CMU server
- Export Log: export the log of server onto a local folder

SETUP / SERVER MANAGE

INSTALLATION PROCESS / SERVER MANAGE

Description

The IP address & port number of server can be adjusted on the **Server Management Tools** program. But, if user wants to edit server name, type, remote IP/Port, device registration port, P2P UUID, server settings, user account, devices and remote device registration port, please click **Servers** button on **IMS / All Features**.

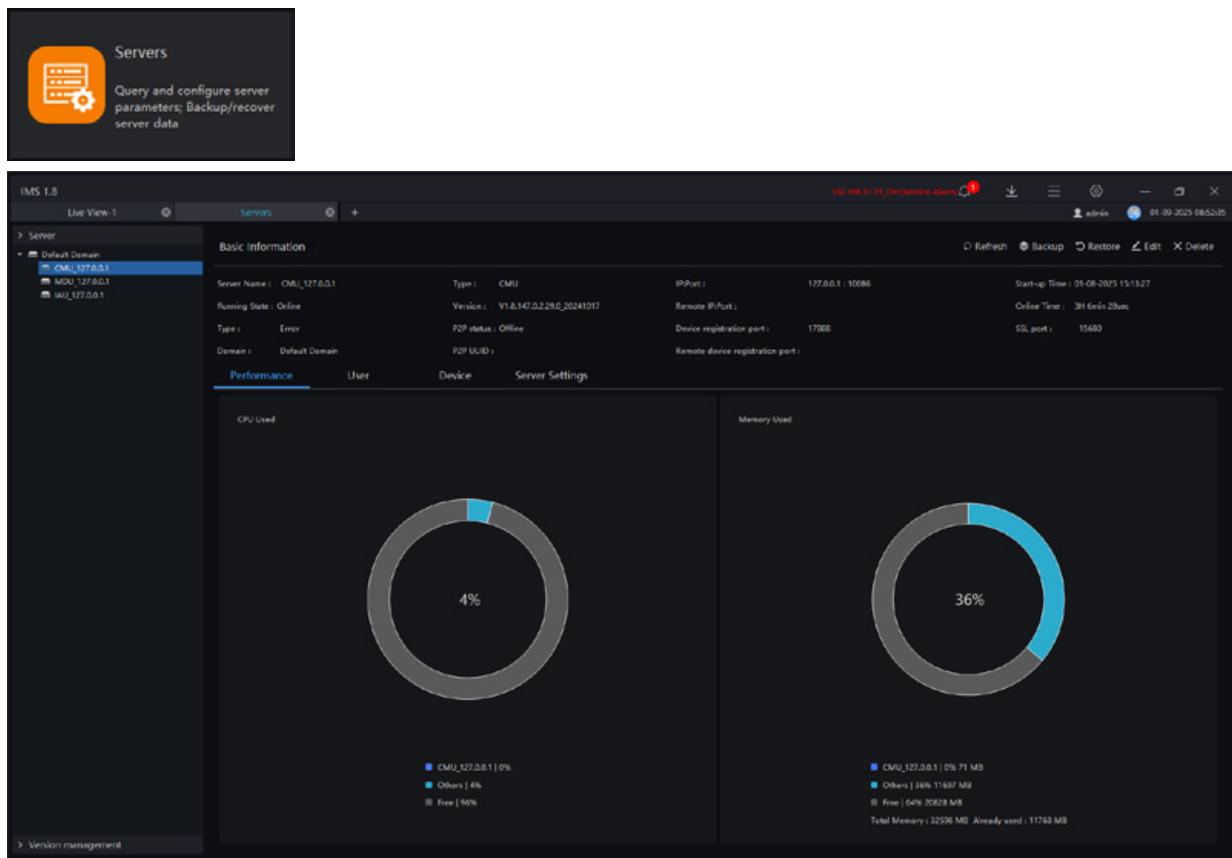


Figure 1-5 Server window

As user can see the above figure, user can login to the system through the IMS program to use the platform as follows. The platform includes basic monitoring applications and smart applications. The smart application is suitable for face recognition and supports ViewZ cameras with face detection function, including face capture camera and gun detection.



NOTE

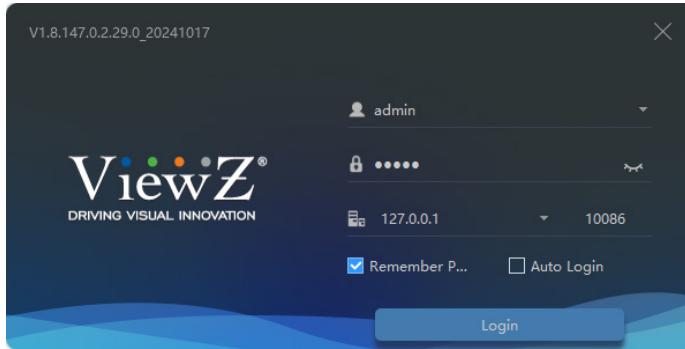
- After the IMS log-in, check the **IMS & Server Management Tools** versions. If these version does not match, a note will be shown as "**Client and server versions do not match.**" This situation is normally caused by the **IMS & Server Management Tools** was not synchronously installed. The solution is recommended to use it after updating and synchronization to avoid it.

SETUP / LOGIN

INSTALLATION PROCESS



When **IMS** program is installed, user can see the login popup window as following;



NOTE

- The default user name is **admin** and the default password is **admin**. Change the password when you log in to the system for the first time to ensure system security.
- You can change the system display language on the setting.
- If the installation is failed, please check the firewall or antivirus software setting. The server management tool runs automatically after the server is installed successfully. The IMS system tray icon will be shown.



NOTE

- If the installation is failed, it is recommended to close the firewall or antivirus software of installed computer and try it again.
- The server management tool runs automatically after the server is installed successfully. The system tray icon is  , click and open the menu.
- After successful IMS installation, user can launch the program by double click on the desktop icon. The default username, password, IP & port number is already typed.

Click "Login", the login interface is shown in figure XXXX



DEFAULT LAYOUT

MAIN PAGE LAYOUT

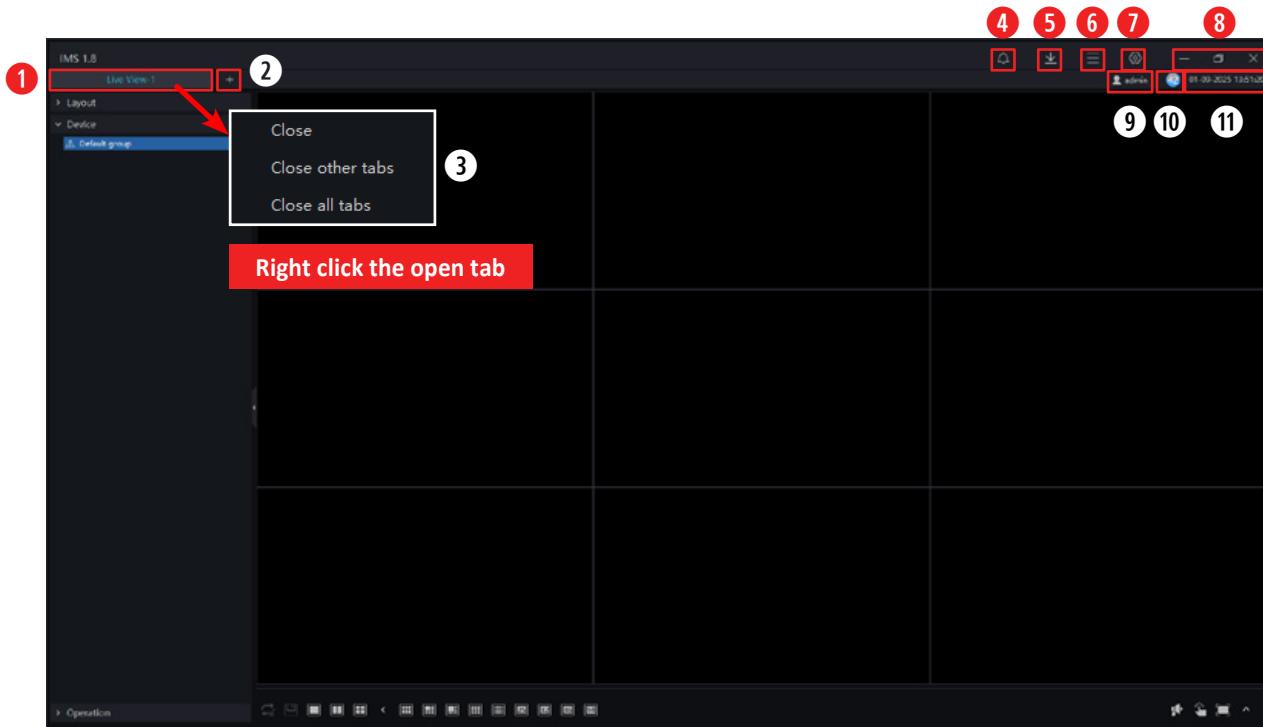


Figure 1-6 Main Page Layout window

Table 1-1 Default parameters

No.	ELEMENT	DESCRIPTION
1	OPEN WINDOW(TAB)	Click the tab to see the selected feature
2	NEW WINDOW(TAB)	Click the new tab icon  to open the new feature
3	CLOSE	When right click on the open window(tab), user can close the selected window(tab), other windows(tabs) or all open window(tab)
4	ALARM	<p>When a registered device generates an alarm, the alarm icon  will show alarm sign and alarm number.</p> <p>When user clicks the alarmed icon , user can see the real time alarm info.</p> <p>NOTE : When the registered device accepts an alarm signal, the alarm icon will be displaying within few seconds on the IMS</p>
5	BACK UP TASK	Click the backup task icon  to record & save the live video file.



NOTE

- After login, user will see the live view window as default. But, when user opens other windows, IMS system will remember the lastest open window and those will be shown from next login.

DEFAULT LAYOUT

MAIN PAGE LAYOUT

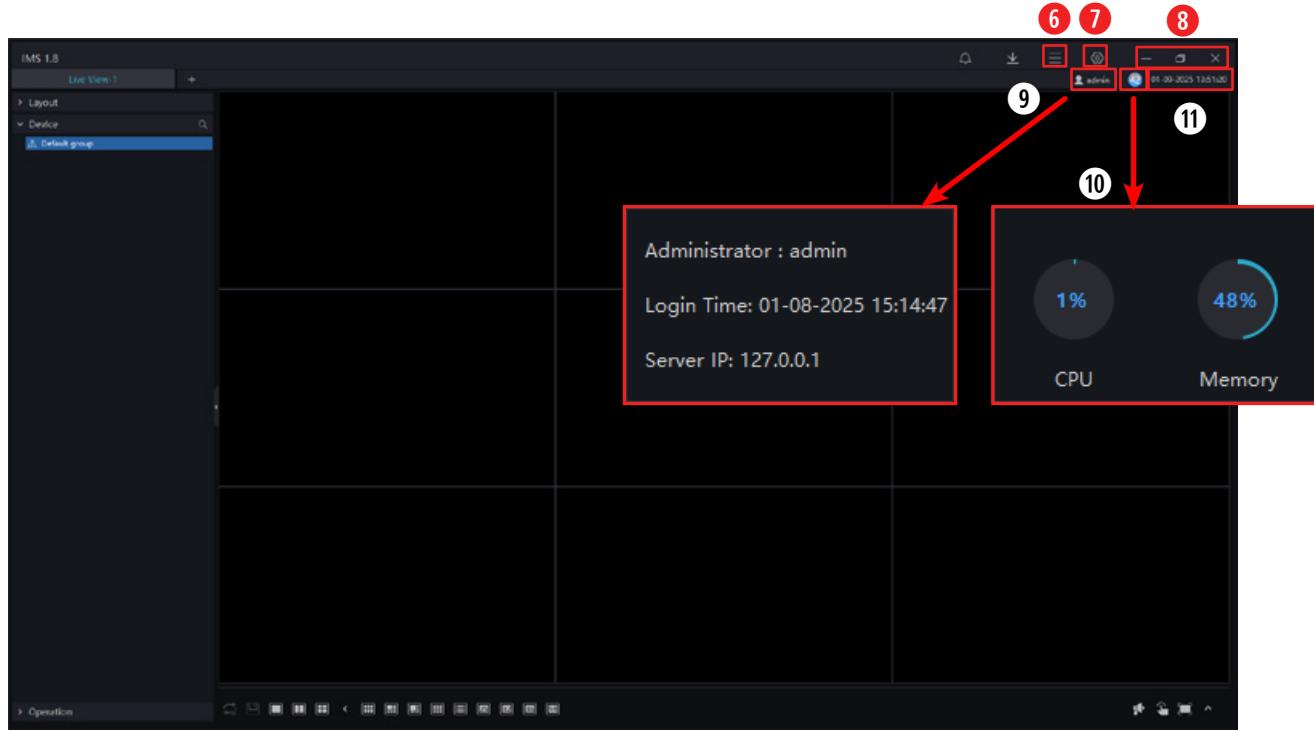
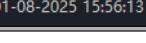


Figure 1-6 Main Page Layout window

Table 1-1 Default parameters

NO.	ELEMENT	DESCRIPTION
6	MENU	Click the menu icon  to switch user, change password, lock IMS program, change language, check SW license, check IMS version info and load an user manual
7	SYSTEM	Click the system icon  to config basic settings, alarm notification, file store, shortcut key, snapshot settigns and log-export.
8	WINDOW	Click this icon  to hide IMS window Click this icon  to reszie IMS window Click this icon  to logout/close IMS program
9	ACCOUNT INFO	Click/hover this icon  to see username, last login time and server IP address
10	SYSTEM INFO	Click/hover this icon  to see the running status of CPU & Memory (RAM)
11	TIME	User can see the system time 

BASIC SETUP

BACKUP TASK

Description

On Backup Task, user can download backup files (saved at the CMU/MDU/IAU server) to the local computer.

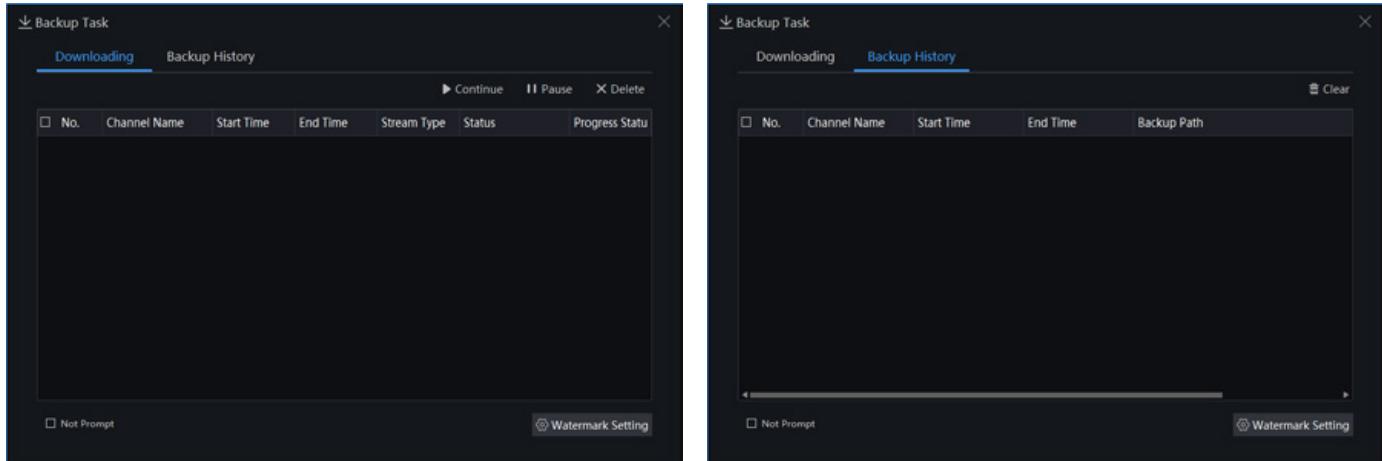


Figure 1-7 Backup Task window

Procedure

- ▶ **Step 1** Click  icon on the upper-right corner area of the main layout page. The **Backup Task** window is shown in Figure 1-3.
- ▶ **Step 2** User can also setup a **Watermark**, check the **Downloading** progress and **Backup History**.
- ▶ **Step 3** User can setup the parameter of **Watermark** according to the Table Xx-XX



Note

- User does not have to do something on Downloading window, but if needed, user can Stop, Pause, Continue or Delete downloading files.

BASIC SETUP

BACKUP TASK - WATERMARK

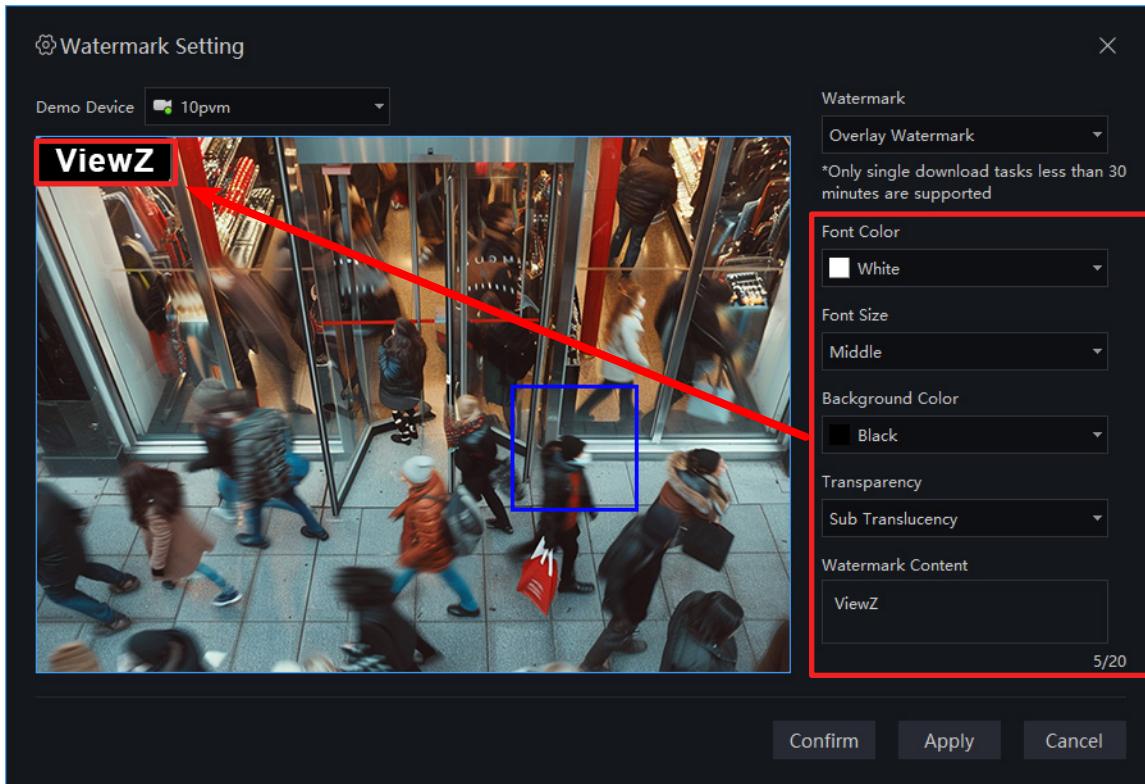


Figure 1-7 Watermark Setting window

Table 1-2 Watermark configuration parameters

Parameter	DESCRIPTION	Setting
DEMO DEVICE	Select the device to apply watermark	
WATERMARK	Select the watermark type	Default: Overlay Watermark Overlay / Not Overlay Watermark
FONT COLOR	Select a font color - White, Red, Orange, Yellow, Green, Cyan, Blue, Pink	Default: White
FONT SIZE	Select a font size - Small, Middle, Big, Extra Large	Default: Middle
FONT COLOR	Select a font color - Black, White, Red, Orange, Yellow, Green, Cyan, Blue, Pink	Default: Black
TRANSPARENCY	Select a transparency type - Lucency, Transparency, Sub Transparency, Opaque	Default: Sub Transparency
WATERMARK CONTENT	Type the watermark content	Default: Blank (Max 20 characters)

BASIC SETUP

MENU

Description

On menu, user can switch the user account, open user manual, change IMS language, lock IMS program, check the IMS software license and IMS program version.

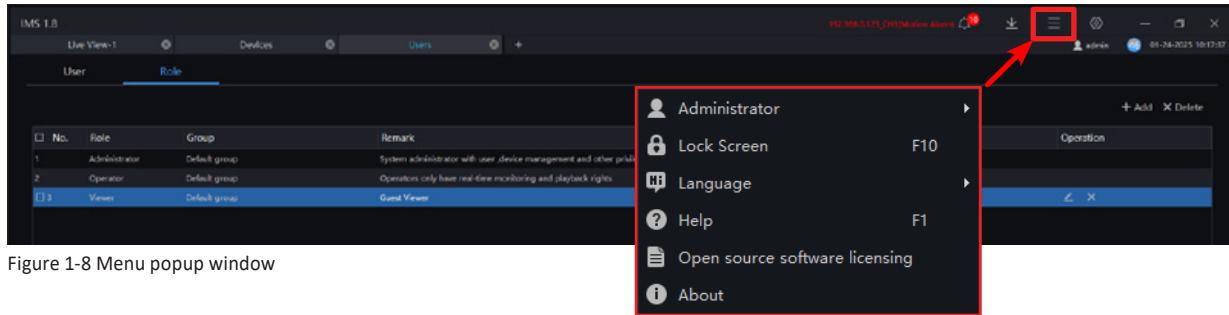


Figure 1-8 Menu popup window

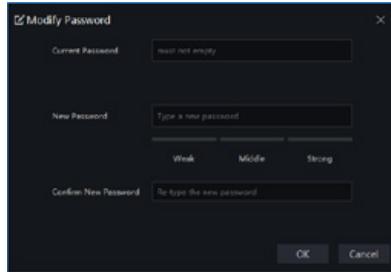


Figure 1-9 Modify password window

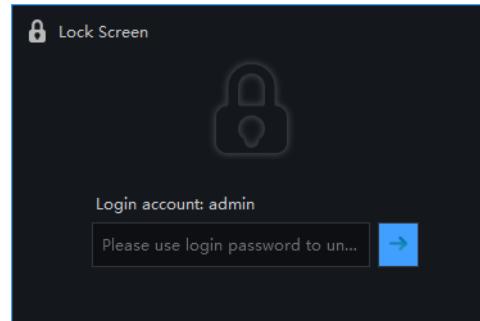


Figure 1-10 Lock screen window

Procedure

 **Step 1** Click  icon in the upper right corner area of the main page. The **MENU** window is shown in Figure 1-3.

 **Step 2** User can setup the parameters of **MENU** according to Table 5-x

BASIC SETUP

MENU

Table 1-3 Menu configuration parameters

Parameter	DESCRIPTION	Setting
Administrator	Switch Users: Switch the user account Modify Password: Change a password of current user account	
Lock Screen	Lock IMS program. To unlock IMS program, user needs to type the password	
Language	Select IMS display language	Default: English English, Spanish, French, Italian & etc.
Help	Open IMS user manual	
Open Source Software License	Open IMS open source software license file	
About	Display IMS program version	

**NOTE**

- Currently, ViewZ IMS program only supports Windows OS 64bit and specially designed for live video management. Users can remotely access real-time video and video recordings, and manage users, devices, servers, alarms, etc. and meanwhile control registered devices. That is, ViewZ IMS integrates common users and administrator uses to facilitate unified management of resources.

BASIC SETUP

SYSTEM

Description

On the system setup, user can edit the usage rate of system resources, add more alarm notification, setup the path of system audio & recording video files, change shortcut keys and export log files.

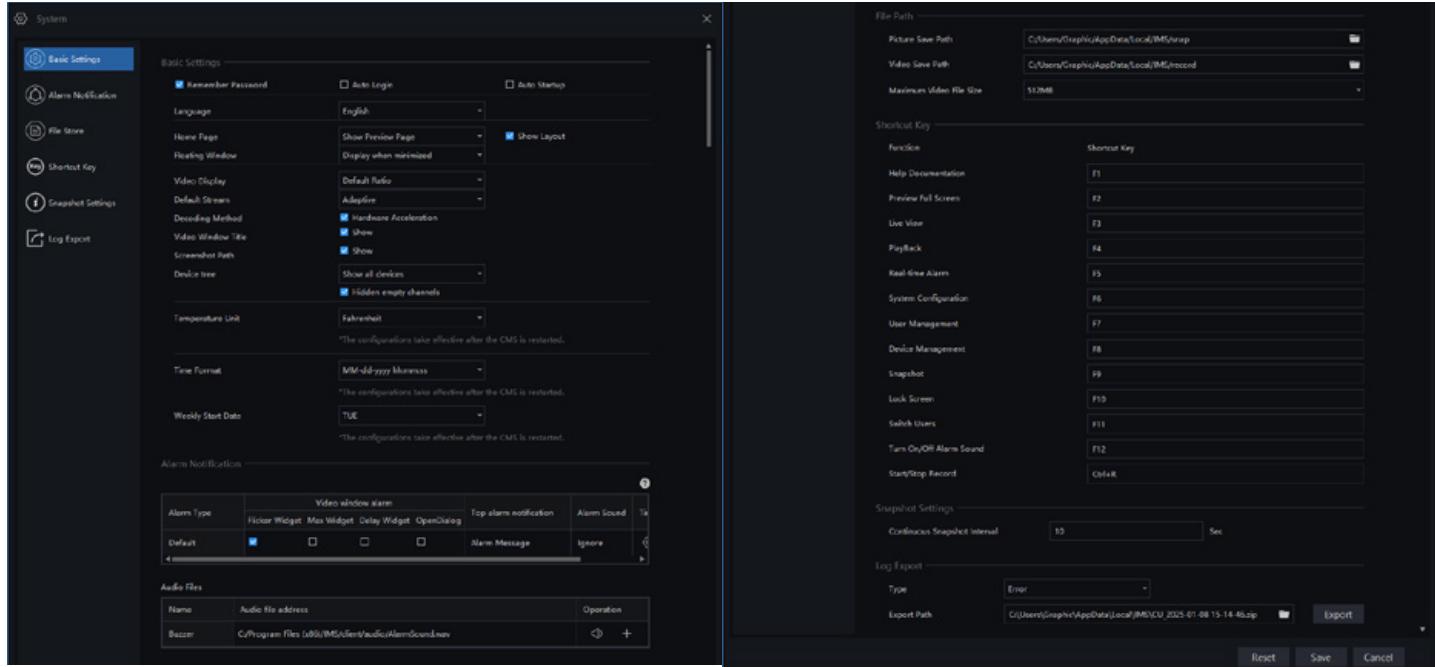


Figure 1-11 System window

Procedure

Step 1 Click  in the upper right corner of the main page as shown in Figure 1-3.

Step 2 User can setup the parameters of system including the **Basic Settings, Alarm Notification, File Store, Shortcut Key, Snapshot Settings & Log Export** according to Table 5-1.

BASIC SETUP

SYSTEM - BASIC SETTING

Table 1-4 System-Basic Setting parameters

Parameter	DESCRIPTION	Setting
Remember PWD	Save the login password when user login	Default: On
Auto Login	User can start the IMS program without login	Default: OFF
Auto Startup	When user turn on this feature, the IMS program will be automatically started after computer boot up	Default: OFF
Language	Select the IMS program language	Default: English
Homepage	Show previous page: when user login, user will see the last open page Show new page: when user login, user will see the Common Functions / All Features page	Default: Show Previous Page
Floating Window	Display when minimized: user will see the popup window, even if user minimized IMS window Not show: user will not see the popup window, even if user minimized IMS window	Default: Display when minimized
Video Display	User can choose the default video ratio of registered camera/device	Default: Default Ratio Default Ratio, FullScreen, 4:3, 5:4, 16:9
Default Stream	User can choose the default video stream of registered camera/device	Default: Adaptive Adaptive, Main Stream, Sub Stream
Decoding Method	Activate/deactivate the hardware acceleration	Default: ON (Hardware Acceleration)
Video Window Title	Show the live video window title	Default: ON
Screenshot Path	Show the path of screenshot	Default: ON
Device Tree	Show all registered devices on the device tree or show online devices only	Default: Show All Devices Show All devices / Online devices only
Temperature Unit	Select a temperature display format	Default: Fahrenheit / Celsius
Time Format	Select a time format display	Default: MM-dd-yyyy hh:mm:ss
Weekly Start Date	Select a starting date on week time table	Default: SUN



Note

- **Decoding Method:** hardware acceleration is a technique where the process of decoding video data is significantly sped up by utilizing the dedicated processing power of a graphics card (GPU) instead of the primary CPU, resulting in smoother playback and improved system performance, especially for high-resolution videos.

BASIC SETUP

SYSTEM - ALARM NOTIFICATION

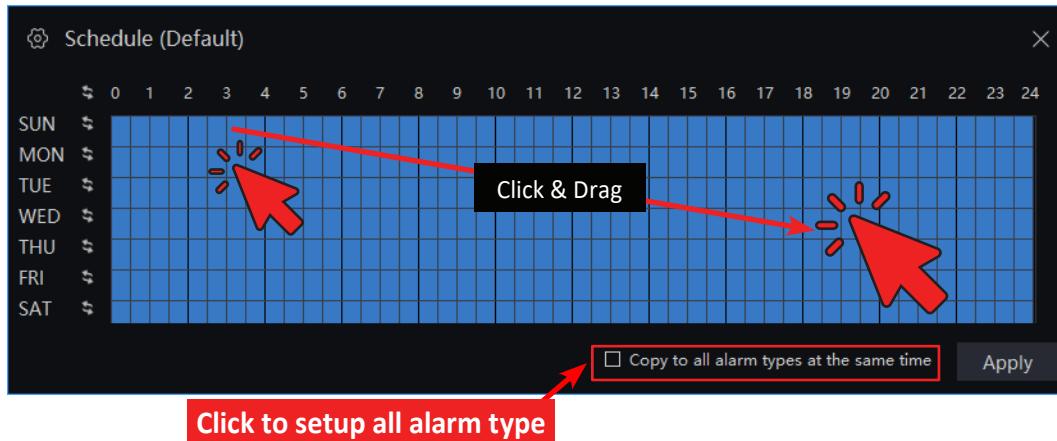
Table 1-5 System-Alarm Notification parameters

Parameter	DESCRIPTION	Setting
Video Window Alarm	Setup the video window alarm - flicker widget, max widget, delay widget & open dialog	Default: Flicker Widget
Top Alarm	User can display Alarm Message , only show Alarm	Default: Alarm Message
Notification	Quantitiy or ignore Alarm Message	
Alarm Sound	User can setup the Alarm Sound	Default: Ignore Ignore, Broadcast, Buzzer
Time	Setup the time schedule of alarm notification	Default: ON
Operation	User can add or delete the new alarm type	



Note

- Click  icon to setup the schedule of alarm, user need to make a time table on Schedule



- On the schedule, hold down the left mouse button, drag and release mouse to select the deployment time within 0:00-24:00 from Monday to Sunday.
- Click a check box (at the bottom of Schedule window) to apply all alarm types at the same time.
- User can setup a specific time range & delete a day schedule by clicking the blue bar on time table

BASIC SETUP

SYSTEM - ALARM NOTIFICATION - NEW

Table 1-5 System-Alarm Notification parameters

Parameter	DESCRIPTION	Setting
Server Alarm	Setup the alarm of server status & user can select it, such as Server Off/RAM/IO/HDD overload, regional people alarm & warning	Default: Server Offline
Device Alarm	Setup the device alarm & user can select it, such as I/O, Network disconnected, HDD abnormal, Disk full, Network storage, Disk space, Storage fail & etc.	Default: I/O Alarm
Channel Alarm	Setup the channel alarm & user can select it, such as motion, camera mask, video loss, boundary crossing, single line crossing, loitering and etc.	Default: Motion Alarm
Comparison Alarm	Setup the comparison alarm & user can select it, such as stranger & comparison alarm	Default: Stranger Alarm
Over Temp. Alarm	Setup the over temperature alarm	Default: Over Temperature Alarm
Intelligent Recognition Alarm	Setup the intelligent recognition alarm	Default: Alarm without Mask

SYSTEM - ALARM NOTIFICATION - AUDIO FILES

Table 1-6 System-Alarm Notification Audio parameters

Parameter	DESCRIPTION	Setting
Audio File	User can add/delete a sound for alarm or buzzer	
Name	Type the sound name on IMS system	Default: Blank
Audio File Address	Display the audio file path	Default: Blank
Operation - Sound	Click  icon to ring a sound	
Operation - Add	Click  icon to add a sound to IMS system	
Operation - Delete	Click  icon to delete a sound from IMS system	

BASIC SETUP

SYSTEM - FILE STORE

Table 1-7 System-File Store parameters

Parameter	DESCRIPTION	Setting
Picture Save Path	Setup the file location of screenshot & picture	Default: Local Computer Folder :/Users/XX/AppData/Local/IMS/snap
Video Save Path	Setup the file location of recording video	Default: Local Computer Folder :/Users/XX/AppData/Local/IMS/record
Max Video File Size	Setup the max video file size of recording video	Default: 512MB 256MB, 512MB, 1GB & 2GB

SYSTEM - SHORTCUT KEY

Table 1-8 System-Shortcut Key parameters

Parameter	DESCRIPTION	Setting
Help Documentation	Setup a shortcut key to open a user manual  NOTE - User can setup a new shortcut key by pressing the key combination user want to use (like Ctrl + Alt +A, Shift + Ctrl +B or etc.)	Default: F1
Live View	Setup a shortcut key to open a window of Live View	Default: F3
Playback	Setup a shortcut key to open a window of Playback	Default: F4
Realtime Alarm	Setup a shortcut key to open a window of Realtime Alarm	Default: F5
System Configuration	Setup a shortcut key to open a window of system	Default: F6
User Management	Setup a shortcut key to open a window of user management	Default: F7
Device Management	Setup a shortcut key to open a window of device management	Default: F8
Snapshot	Setup a shortcut key to take a snapshot	Default: F9
Lock Screen	Setup a shortcut key to lock IMS program	Default: F10
Switch Users	Setup a shortcut key to switch a user account	Default: F11
Preview Full Screen	Setup a shortcut key to switch full screen mode	Default: F2
Turn On/Off Alarm Sound	Setup a shortcut key to turn on/off alarm sound	Default: F12
Start/Stop Record	Setup a shortcut key to start & stop video record	Default: Ctrl + R
PTZ Zoom In	Setup a shortcut key to run PTZ zoom in	Default: Ctrl + A
PTZ Zoom Out	Setup a shortcut key to run PTZ zoom out	Default: Ctrl + D
Scroll In	Setup a shortcut key to scroll in	Default: Up
Scroll Out	Setup a shortcut key to scroll out	Default: Down
Restore Video	Setup a shortcut key to restore the video	Default: Ctrl + C

BASIC SETUP

SYSTEM - SNAPSHOT SETTINGS

Table 1-9 System-Snapshot Setting parameters

Parameter	DESCRIPTION	Setting
Continuous	Setup the interval time of continuous snapshot	Default: 10 sec
Snapshot Interval		

SYSTEM - LOG EXPORT

Table 1-10 System-Log Export parameters

Parameter	DESCRIPTION	Setting
Type	Select a log type	Default: Debug Error, Debug, Warning
Export Path	Setup the file location of log export	Default: Debug

BASIC SETUP

WINDOW

Description

On the main page, user can hide, resize and close IMS program.

Procedure

 **Step 1** Click  icon in the upper right corner of the main page. Then, user will see the status bar instead of IMS full screen window as shown in Figure xxx.



Figure 1-12 Popup window

 **Step 2** Click  icon in the upper right corner of the main page. Then, user will see the resized window.

 **Step 3** Click  icon to close IMS program in the upper right corner of the main page.

BASIC SETUP

OPEN NEW FEATURE

Description

User can add/open the new window (feature) by clicking this icon  to config **Basic Functions** (Live View, Playback, Layout, Real-Time Alarm, Alarm Search, Report Statistics, Event Linkage, Snapshot Retrieval), **Configuration Maintenance** (Devices, Log, Group, Users, Device Config, Servers, Alarm Mail), **Face Recognition** (Face Recognition, Face Search, Face Lib Manage, Classification Query) and **Multi-target Recognition** (AI Recognition, Weapon Search, Person Control, Traffic Area Config, People Flow Statistics).

Procedure

 **Step 1** Click  in the upper tab area of the main page. The **Common Functions & All Features** dialog box is displayed, as shown in Figure 1-13 and Figure 1-14.



Figure 1-13 Add New Feature window

 **Step 2** User can click the desired feature icon on **Commn Functions** or click **All Features** tab to see all features.



NOTE

- Currently, ViewZ IMS program only supports Windows OS and specially designed for live video management. Users can remotely access real-time video and video recordings, and manage users, devices, servers, alarms, etc. and meanwhile control registered devices. That is, ViewZ IMS integrates common users and administrator users to facilitate unified management of resources.

BASIC SETUP

OPEN NEW FEATURE

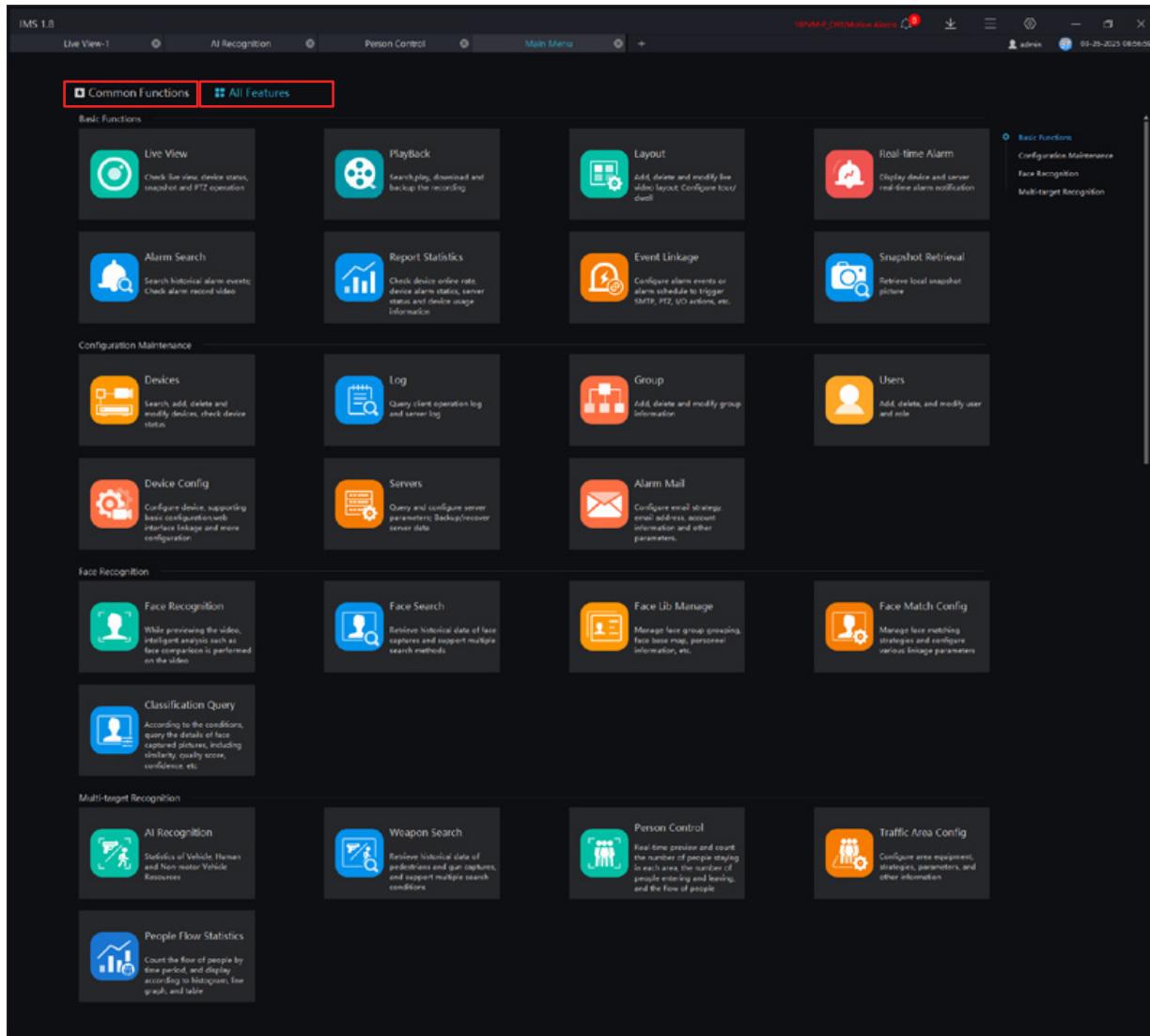


Figure 1-14 All Features window

 **Step 3** Click the desired feature icon and then user will see the new feature window.



Note

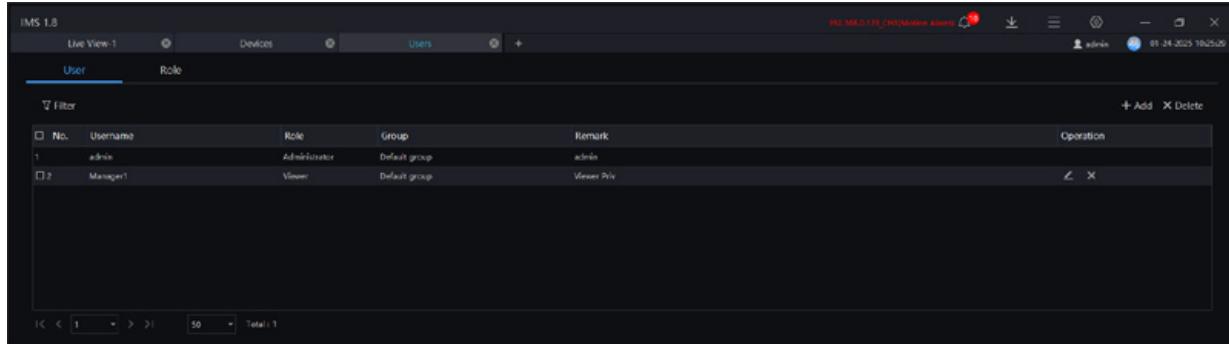
- **Common Functions:** If a feature is continuously using, user can add this feature to Common Function page to use it easily.
- **All Features:** Display all IMS features.
- **Card Management:** Add or remove a feature to **Common Function** interface as shown in Figure 1-14

FEATURES

CONFIGURATION MAINTENANCE / USERS - User & Role

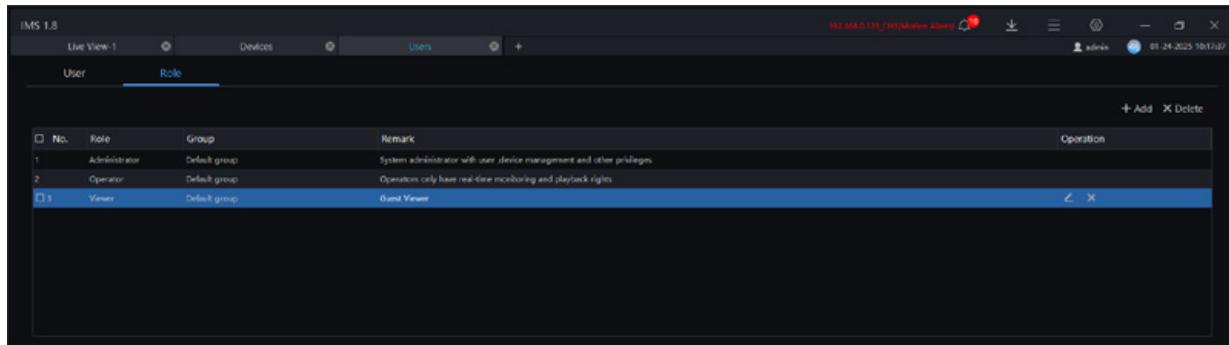
Description

The IMS program let user (default administrator) have one of administrator, operator & user-defined roles. Also, user (default administrator) can create an user account based on a role. User (default administrator) can assign the menu, channel, layout & face library permissions to user account & role.



No.	Username	Role	Group	Remark	Operation
1	admin	Administrator	Default group	admin	 
2	Manager1	Viewer	Default group	Viewer Pov	 

Figure 2-1 User window



No.	Role	Group	Remark	Operation
1	Administrator	Default group	System administrator with user, device management and other privileges	 
2	Operator	Default group	Operators only have real-time monitoring and playback rights	 
3	Viewer	Default group	Guest Viewer	 

Figure 2-2 Role window



Note

- Click  icon in the upper tab area of the main page and click  icon on **Common Functions / All Features**. Then, user can add / delete an user account & role. The default user account and role cannot be edited or deleted.

FEATURES

CONFIGURATION MAINTENANCE / USERS - User & Role - Role Add

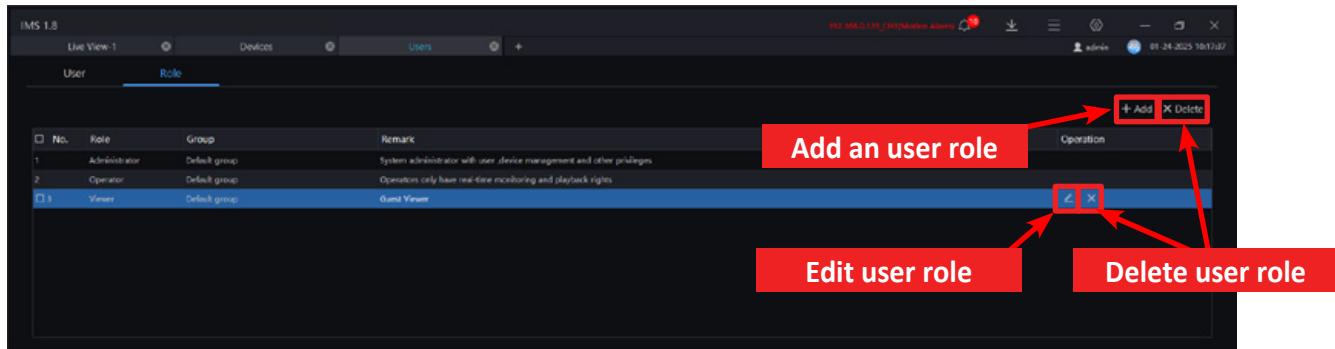


Figure 2-2 Role window

Step 1 Click **+ Add** button on the top-right corner of role window as shown in Figure 2-2. Then, user (administrator) can setup the role for user accounts, as shown in Figure 2-3.

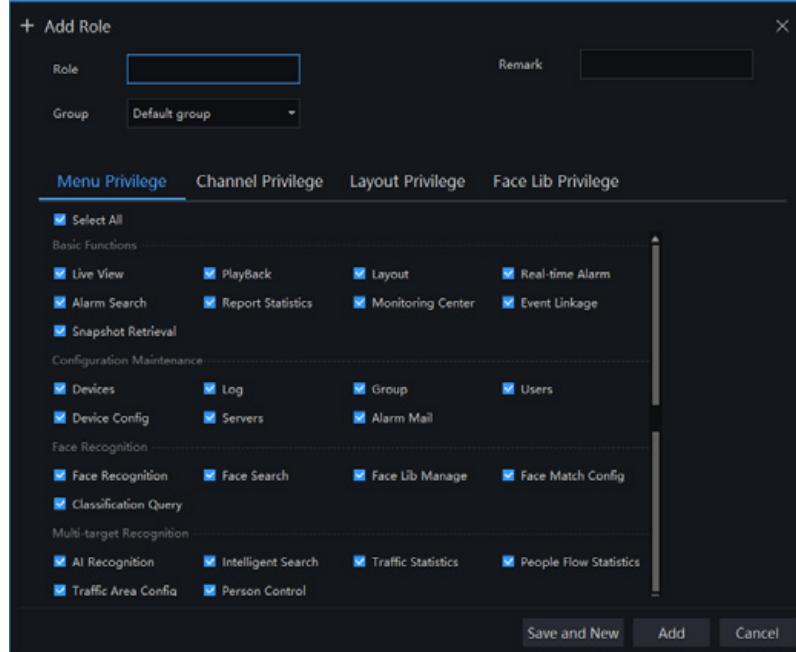


Figure 2-3 Add Role window

Step 2 User can setup the parameters of new **Role** permission including the access of **Menu** (Main Features), **Channel**, **Layout** & **Face** detection library according to Table 2-1.

FEATURES

CONFIGURATION MAINTENANCE / USERS - User & Role - Role Add

Table 2-1 Role configuration parameters

Parameter	DESCRIPTION	Setting
Menu Privilege	User can select which features can be accessible for the new role	Default: Select All
Channel Privilege	User can select which group & devices can be accessible for the new role	Default: Select All
Layout Privilege	User can let new user account use Add Layout feature	Default: Add Layout
Face Lib Privilege	User can select which library can be accessible for the new role	Default: Select All
Role	Type the role name	Default: Blank
Remark	Type the remark (note)	Default: Blank
Group	Select the group of new user account	Default: Default



Step 3 Click Add or Save & New.

- If the message "**Add success**" is displayed, the IMS system saves the settings.
- If user cannot add or see the error message, correct the parameters correctly.



Step 4 Click Delete.

- User will see the **Manage Role window** to confirm '**Delete the selected role**'. Click **Confirm** to delete selected user account or **Cancel** the delete.



Note

- When user (administrator) creates the new user role, user (administrator) can only select the provided group. If user (administrator) wants to make the new group, please refer page 37.

FEATURES

CONFIGURATION MAINTENANCE / USERS - User & Role - User Add

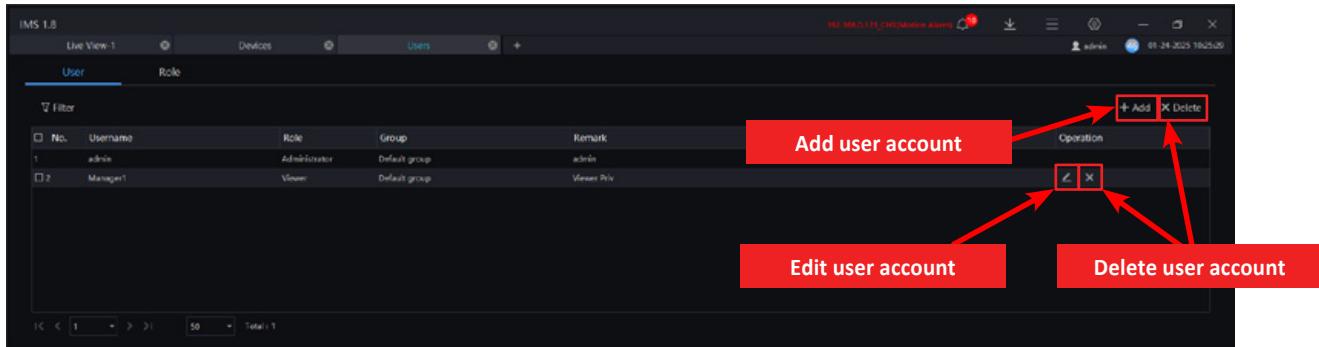


Figure 2-1 User window

Step 1 Click **+ Add** button on the top-right corner of user window as shown in Figure 2-1. Then, user (administrator) can setup the user account as shown in Figure 2-4.

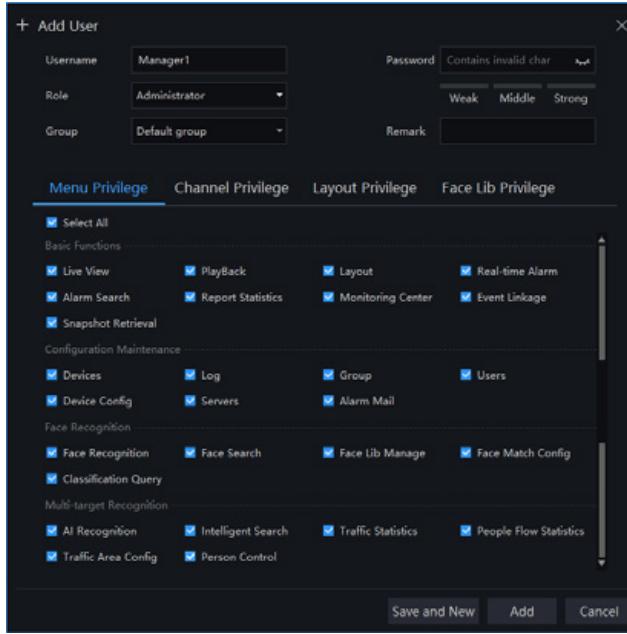


Figure 2-4 Add User window

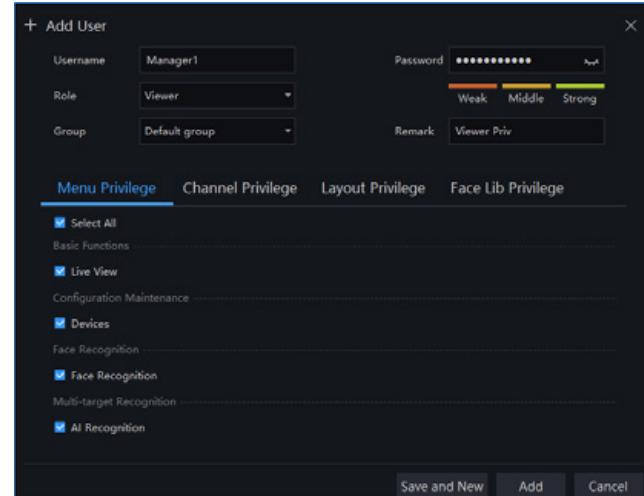


Figure 2-4 Add User window

Step 2 User can setup the parameters of new user including the access of **Menu** (Main Features), **Channel**, **Layout** & **Face** detection library according to Table 2-2.

FEATURES

CONFIGURATION MAINTENANCE / USERS - User & Role - User Add

Table 2-2 User configuration parameters

Parameter	DESCRIPTION	Setting
Menu Privilege	User can select which features can be accessible for new user account	Default: Select All
Channel Privilege	User can select which group & devices can be accessible for new user account	Default: Select All
Layout Privilege	User can let new user account use Add Layout feature	Default: Add Layout
Face Lib Privilege	User can select which library can be accessible for new user account	Default: Select All
Username	Type the new username	Default: Blank
Password	Type the password	Default: Blank
Role	Select the role of new user account	Default: Administrator
Group	Select the group of new user account	Default: Default
Remark	Type the remark (note)	Default: Default



Step 3 Click **Add** or **Save & New**.

- If the message "**Add success**" is displayed, the IMS system saves the settings.
- If user cannot add or see the error message, correct the parameters correctly.



Step 4 Click **Delete**.

- User will see the **Users** window to confirm '**Delete the selected user account**'. Click **Confirm** to delete selected user account or **Cancel** the delete.



Note

- When user (administrator) creates the new user account, user (administrator) can only select the provided group. If user (administrator) wants to make the new group, please refer page 37.
- We recommend user (administrator) to setup the complicated password and save this password for the safe usage.

FEATURES

CONFIGURATION MAINTENANCE / GROUP

Description

The IMS program let user (default administrator) create/edit/delete a group which can help user to manage user accounts and devices. of administrator, operator & user-defined roles. Also, user (default administrator) can create an user account based on a role. User (default administrator) can assign the menu, channel, layout & face library permissions to user account & role.

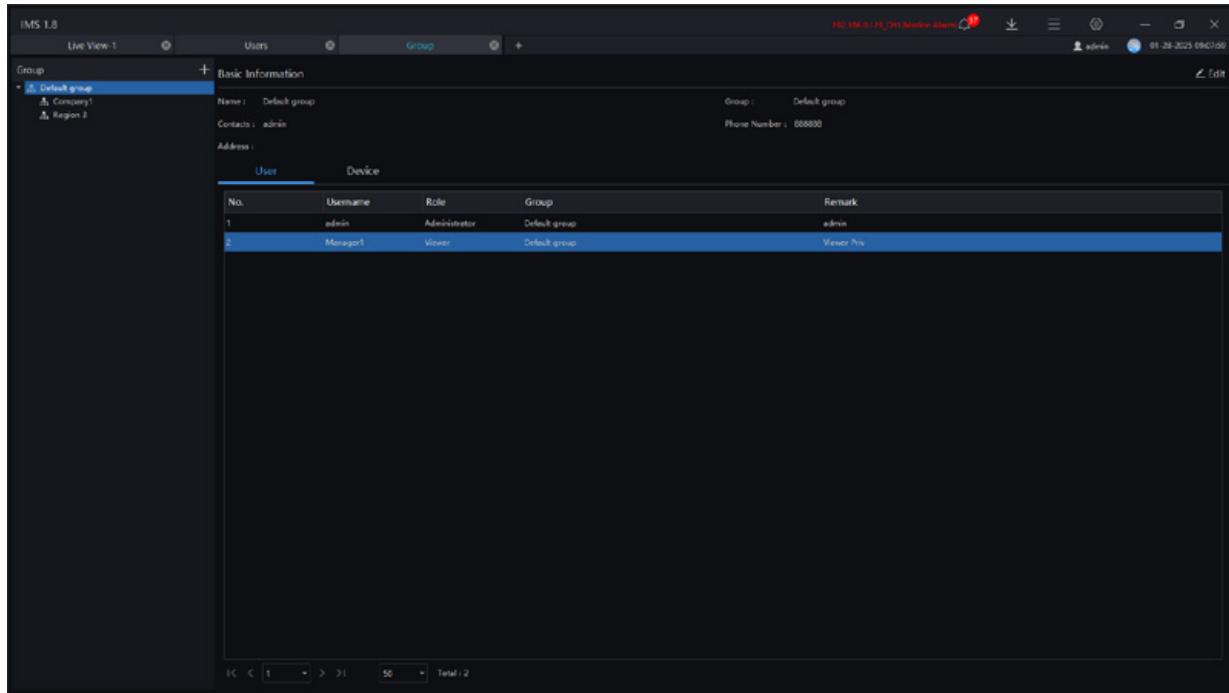


Figure 2-5 Group window



Note

- Click **+** icon in the upper tab area of the main page and click **Group** icon on **Common Functions / All Features**. Then, user can add / edit / delete a group. The default group name is Default which can be editable.

FEATURES

CONFIGURATION MAINTENANCE / GROUP - Add

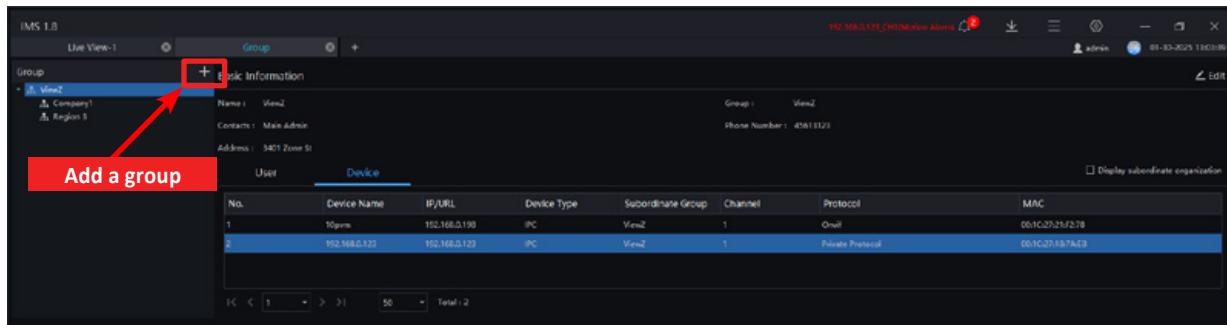


Figure 2-5 Group window

 **Step 1** Click **+** button on the top-left corner of group window as shown in Figure 2-5. Then, user (administrator) can create a group as shown in Figure 2-6.

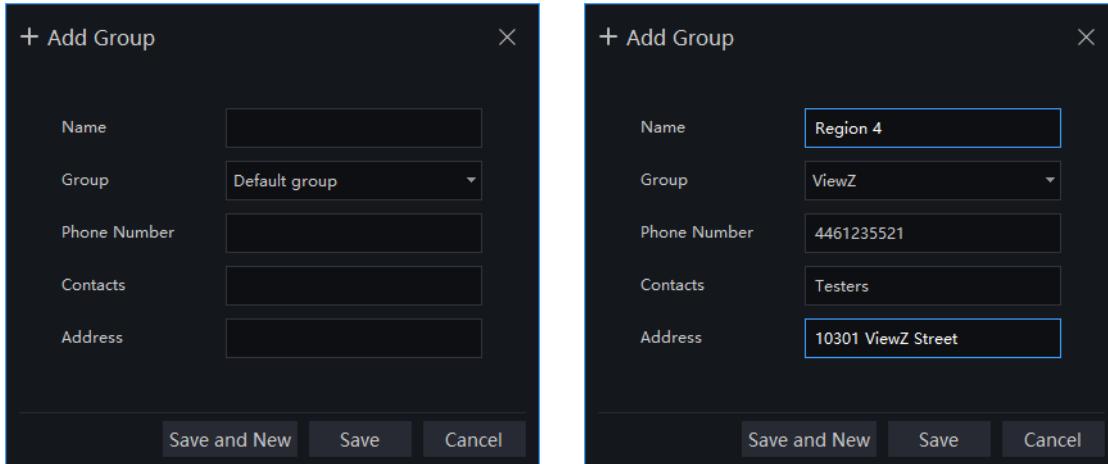


Figure 2-6 Group Add window

 **Step 2** User can setup the parameters of new group including Name, Phone Number, Contacts & Address under the default group.

FEATURES

CONFIGURATION MAINTENANCE / GROUP - Edit & Delete

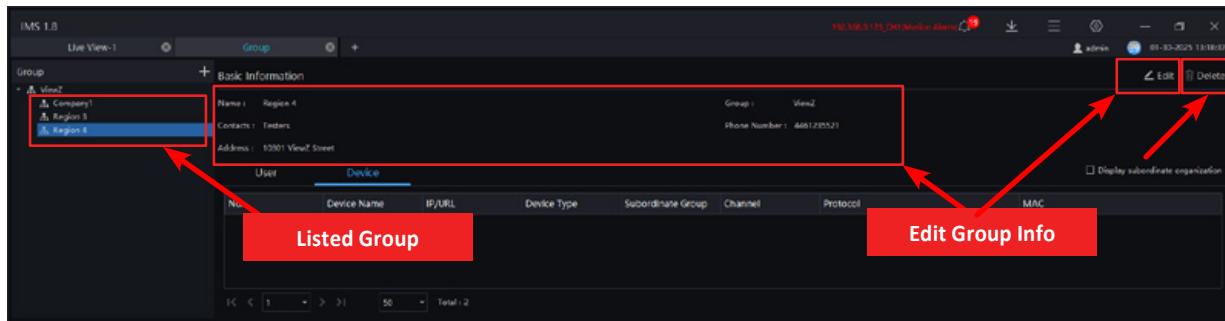


Figure 2-6 New Group window

Step 3 Click **Edit** button to edit group information or click **Delete** button to delete a selected group as shown in Figure 2-6.

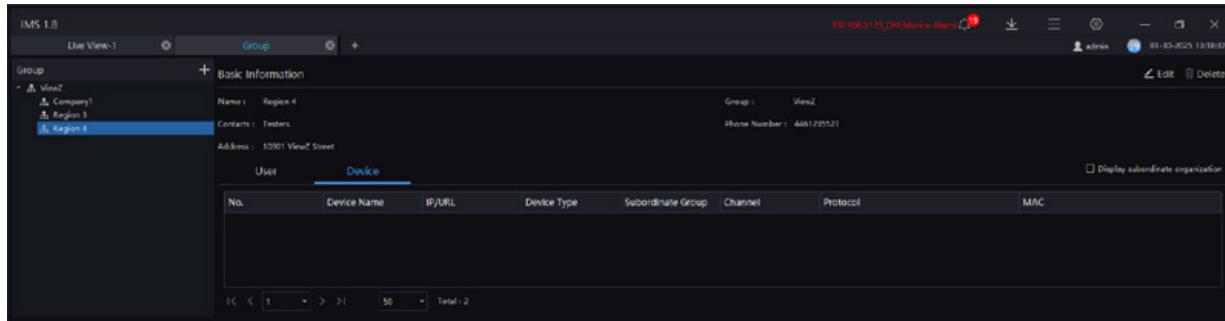


Figure 2-6 New Group window

Step 4 When user creates a new group, user cannot see any device or user account under the created group as shown in Figure 2-6.

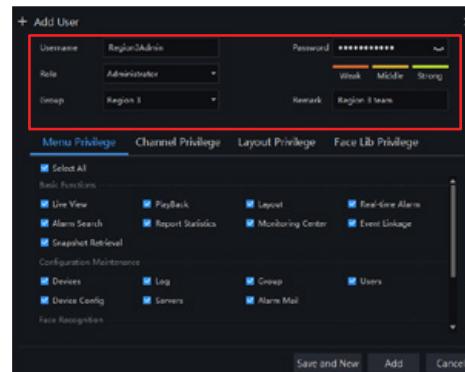


Figure 2-4 Add User window

Step 5 Try to add an user account under the specific group as shown in Figure 2-4.

FEATURES

CONFIGURATION MAINTENANCE / GROUP - Edit & Delete

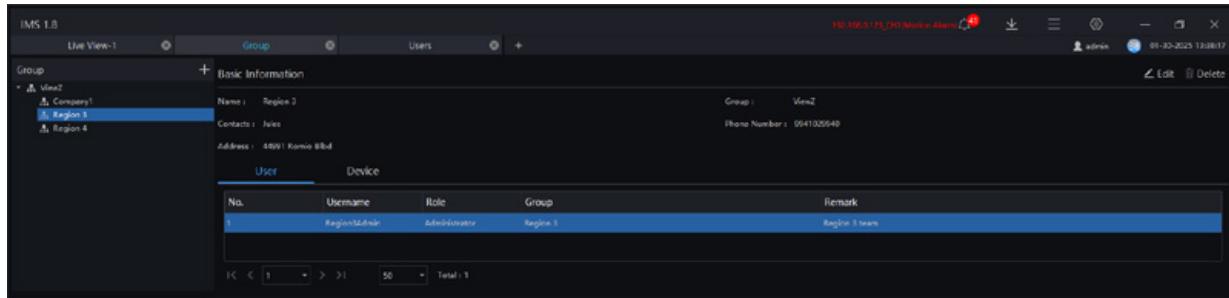


Figure 2-7 Group window

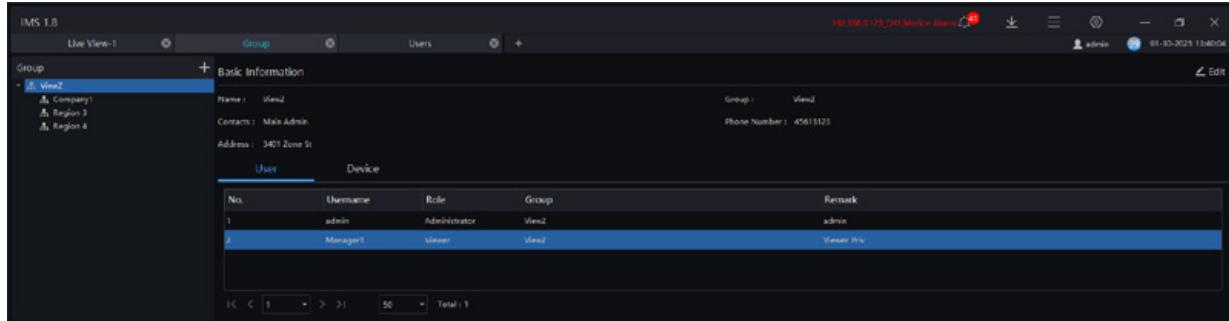


Figure 2-7-1 Group window

 **Step 6** Click the specific group and then, user can see the added user account as shown in Figure 2-7 & Figure 2-7-1. Then, user (administrator) will see the difference between the parent group and specific group.



Note

- User (administrator) can use the group to manage many devices & user accounts.

FEATURES

CONFIGURATION MAINTENANCE / DEVICES

Description

At the device management page, user can add devices (such as IPC, DVR, NVR) through automatic searching, manual add or batch import. The platform supports the following device types: IPC, DVR, NVR, thermal imaging camera, face capture camera, human thermometer devices and so on.

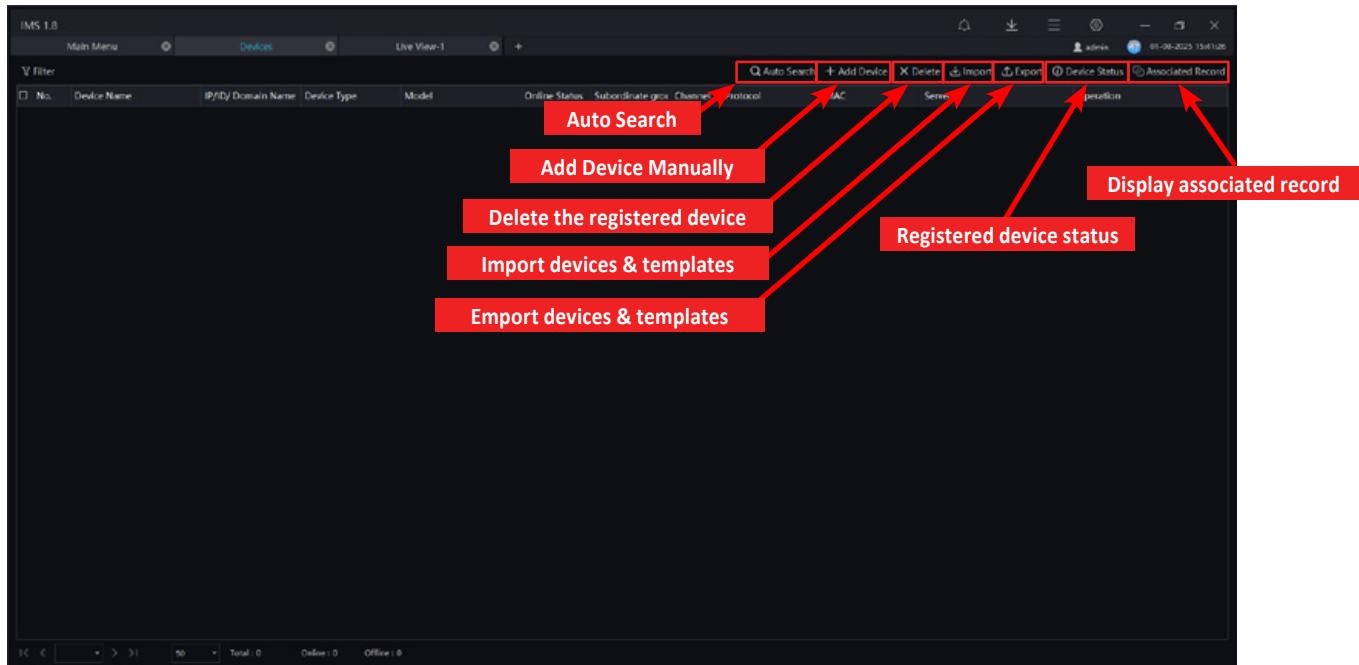


Figure 2-8 Device window

Step 1 Click  **Devices** icon on **Common Functions / All Features**. Then, user can add / edit / delete devices as shown in Figure 2-8

Step 2 User can setup the parameters of devices including **Auto Search, Add Device, Delete, Import, Export, Device Status & Associated Record** according to Table 2-3.

FEATURES

CONFIGURATION MAINTENANCE / DEVICES - Auto Search

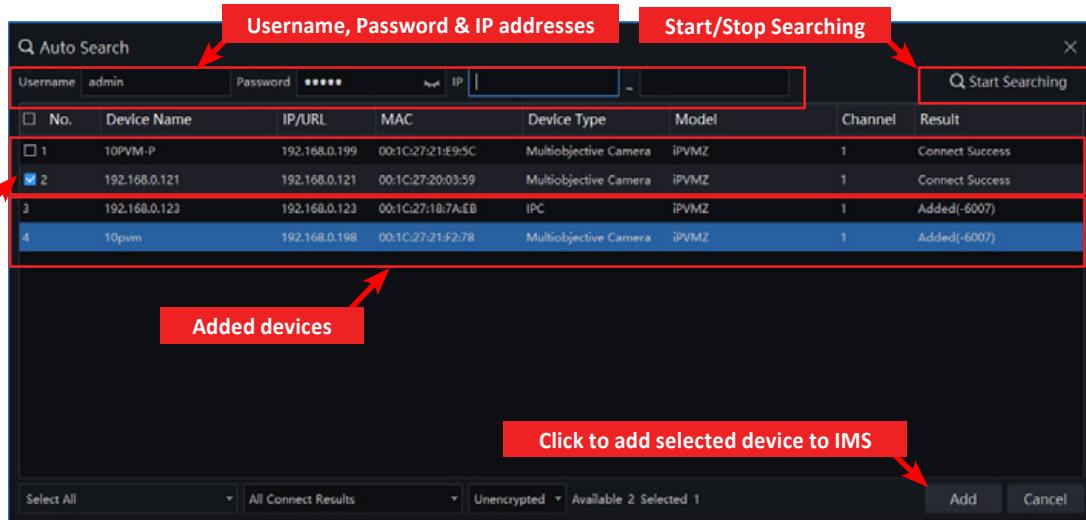


Figure 2-9 Auto Search window

Table 2-3 Auto Search parameters

Parameter	DESCRIPTION	Setting
START SEARCHING	Click Q Start Searching button to start automatic searching in local network	
STOP SEARCHING	Click Q Stop Searching (18s) button to stop automatic searching in local network	
USERNAME	Type the username of selected device	Default: Blank
PASSWORD	Type the password of selected device	Default: Blank
IP	Type the a IP address or IP address range of devices	Default: Blank
ADD	Click to add a searched device to IMS system	N/A



Note

- User (administrator) can use the group to manage many devices & user accounts.

FEATURES

CONFIGURATION MAINTENANCE / DEVICES - Add Device

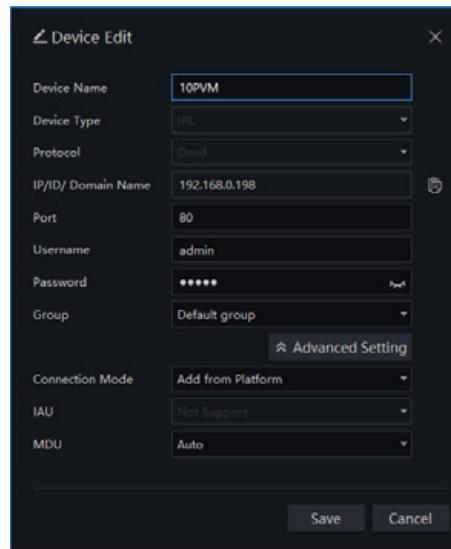


Figure 2-10 Add Device window

Table 2-4 Add Device parameters

Parameter	DESCRIPTION	Setting
DEVICE NAME	Type the device name	
DEVICE TYPE	Select the device type - IPC, DVR, Speed Dome, NVR, Decoder, Fisheye, Thermal Camera, Face Box, Face Capture/Multiobjective Camera, Alarm Box & etc.	Default: IPC
PROTOCOL	Select the protocol - Private Protocol, Onvif, P2P, Private Protocol (Unencrypted)	Default: Onvif
IP/ID/DOMAIN NAME	Type the IP/ID/Domain name or address	Default: blank
PORT	Type the port number	Default: blank
USERNAME	Type the username of selected device	Default: blank
PASSWORD	Type the password of selected device	Default: blank
GROUP	Select a group which device will be included	Default: blank
CONNECTION MODE	Select a mode - Add from Platform / Registration  NOTE The Registration mode is using for adding a new device via WAN (Internet), without port forward Please refer to page 44	Default: Add from Platform
MDU	Select a mode - Auto / MDU IP address	Default: Auto

FEATURES

CONFIGURATION MAINTENANCE / DEVICES - Add Device from Different Location

Description

When user has multiple AI PVM devices located at different locations and user wants to add IP-PVM devices to ViewZ IMS program or other management system, user manually has to do port forward each IP-PVMs one by one. However, ViewZ's IMS program provides a simple solution to add & manage multiple AI PVM devices by using of Registration connection mode on IMS program.

By using IMS program, user does not need to worry about lots of port forwarding. User just inputs the IMS server info to each AI PVM's Web Control, and only 6 port forwaring on user (administrator) side router. The below description is how to setup about this;

 **Step 1** Confirm the computer/device (IMS installed) or user's router has a public IP address/domain.

 **Step 2** Click  **Server** icon on **Common Functions / All Features**. Then, user can check the device registration port numbers as shown in Figure x-xxx

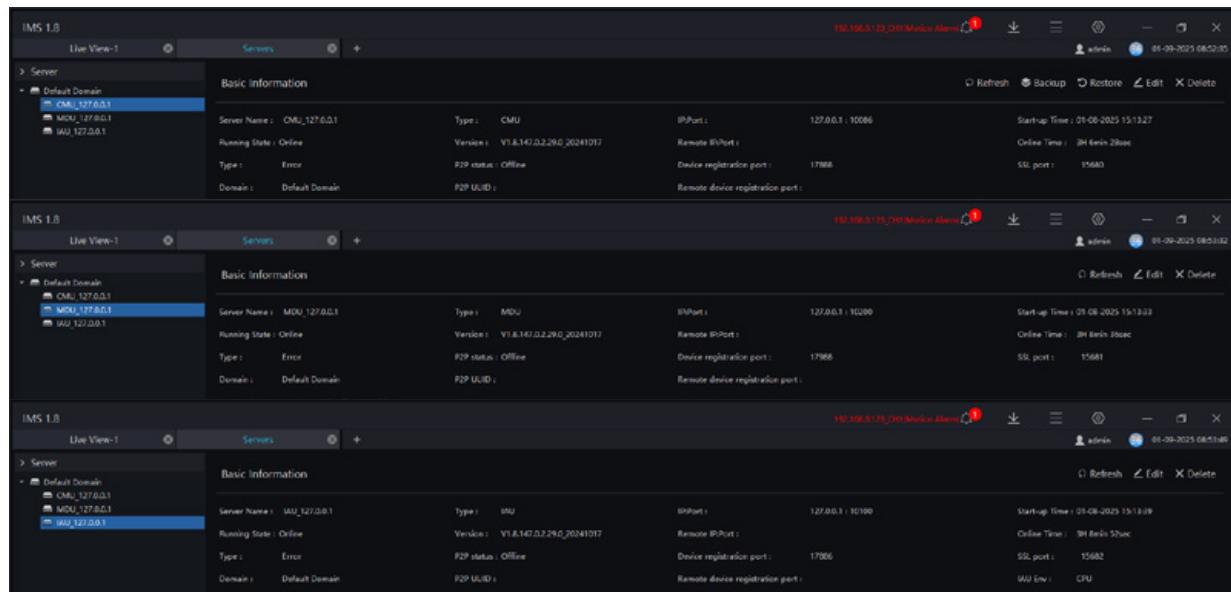


Figure 2-11 Server window

 **Step 3** Check each Device Registration Port number of CMU/MDU/IAU as shown in Figure XX.
By default, CMU registration port number is 17888, MDU is 17988 and IAU is 17886



Note

- The Registration Connection mode is only working for ViewZ AI PVM series.

FEATURES

CONFIGURATION MAINTENANCE / DEVICES - Add Device from Different Location

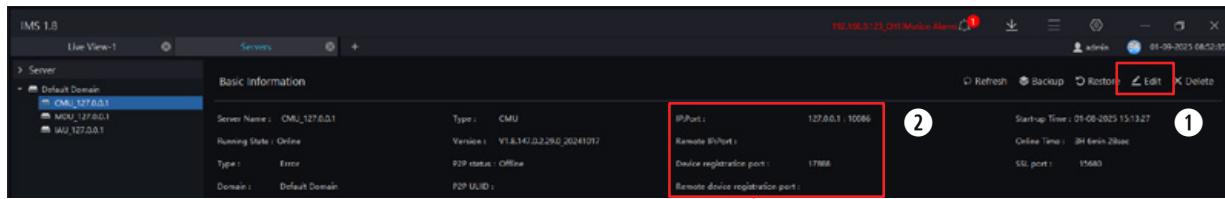
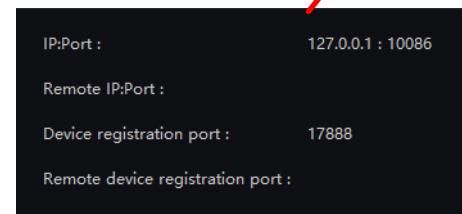


Figure 2-12 CMU Server window



 **Step 4** Check the public IP address/domain of the computer/device (IMS installed) or user's router as shown in Figure XX.

Table 2-5 CMU Server configuration parameters

Parameter	DESCRIPTION	Setting
IP-Port	IP address of CMU server	Default: 127.0.0.1
Remote IP-Port	Public/Static IP address of router which includes IMS computer	Default: IPC
Device Registration Port	Port number of CMU/MDU/IAU server	Default: 17888 (CMU), 17988 (MDU), 17886 (IAU)
Remote Device Registration Port	Port number of Remote Device Registration Port. These are will be same as Device Registration Port.	Default: 17888 (CMU), 17988 (MDU), 17886 (IAU)



Note

- On the router which IMS program is located, user needs to do port forwarding for CMU/MDU/IAU server as shown in Figure XXX.
The default port number of router: CMU(17888), MDU(17988), IAU(17886)
The IP-Port number needs to do port forwarding: CMU (xxx.xxx.xxx.xxx:AAAAAA), MDU (xxx.xxx.xxx.xxx:BBBBBB), IAU (xxx.xxx.xxx.xxx:CCCCCC)
- The 6 ports should be opened on the user router (which has IMS system)
- If user does not need to access IMS remotely, no need to configure this port.

FEATURES

CONFIGURATION MAINTENANCE / DEVICES - Add Device from Different Location

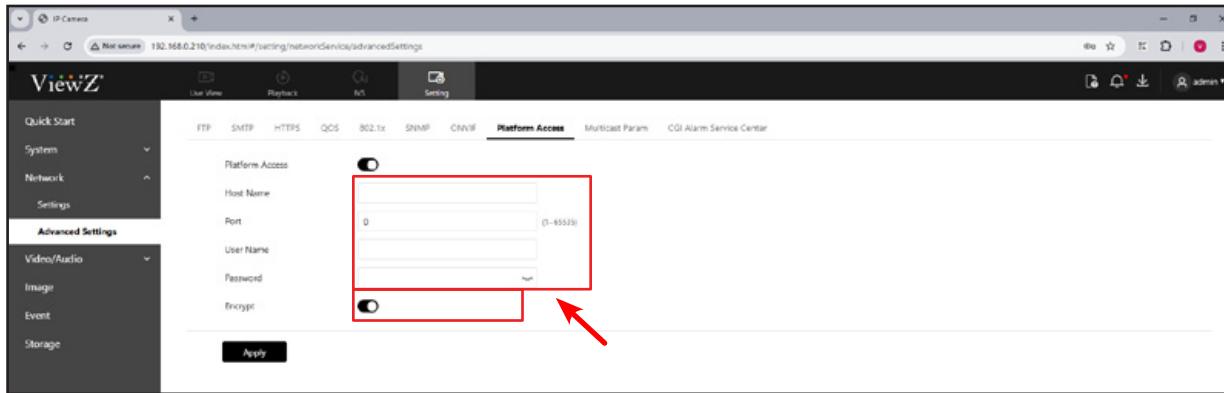


Figure 2-13 Platform Access window

 **Step 5** After the setup of IMS program, go to **IP-PVM's Web Control** browser > **Network** > **Advanced Settings** > **Platform Access** as shown in Figure xx. Setup the parameters of IP-PVM's Web Control platform access as;

Table 2-6 Platform Access configuration parameters

Parameter	DESCRIPTION	Setting
Hostname	Public(or Static) IP address of IMS's router or IMS computer	Default: blank
Port	Port number of Remote Device Registration IMS>Server>CMU	Default: blank
User Name	IMS's user name	Default: blank
Password	IMS's password	Default: blank



Figure 2-14 Device Info window

 **Step 6** Check the IP-PVM's device ID at **IP-PVM's Web Control** browser > **Setting** > **System** > **Settings** as shown in Figure 2-14.

FEATURES

CONFIGURATION MAINTENANCE / DEVICES - Add Device from Different Location

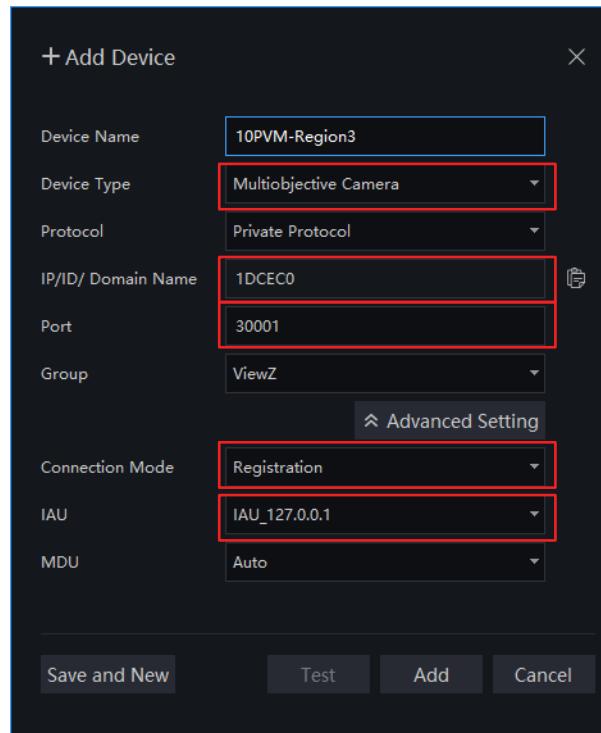


Figure 2-15 Add Device window

 **Step 7** After the setup of IMS & IP-PVM's Web Control, go to **IMS > Devices > Add Device** as shown in Figure 2-15. Setup the parameters of **Add Device** as;

Table 2-7 Add Device configuration parameters

Parameter	DESCRIPTION	Setting
Device Type	Select Multiobjective Camera for AI PVM	Default: IPC
IP/ID/Domain Name	Type the device ID of AI PVM (MAC address of AI PVM)	Default: blank
Port	Port number of AI PVM - ViewZ AI PVM's default port number is 30001	Default: 30001
Connection Mode	Select the Registration mode	Default: Add from platform/Registration

 **Step 8** Click 'Add' button to add a AI PVM and then user can see the lived video.



Note

- If user needs to setup 'Encrypt' as shown in Figure XX, then go to **IMS > Servers > CMU > Server** setting and select Private protocol. And also select the protocol as Private Protocol as shown in Figure XX.

FEATURES

BASIC FUNCTION / LIVE VIEW - Main Page Layout

Description

On the **Live View** window, user can see the real-time video, real-time cruise video, local video, take a screenshot, open the audio, record a video, zoom in the video, switch the video stream, save the layout and control the PTZ. The right-click of live video window will show a menu to set video parameters.

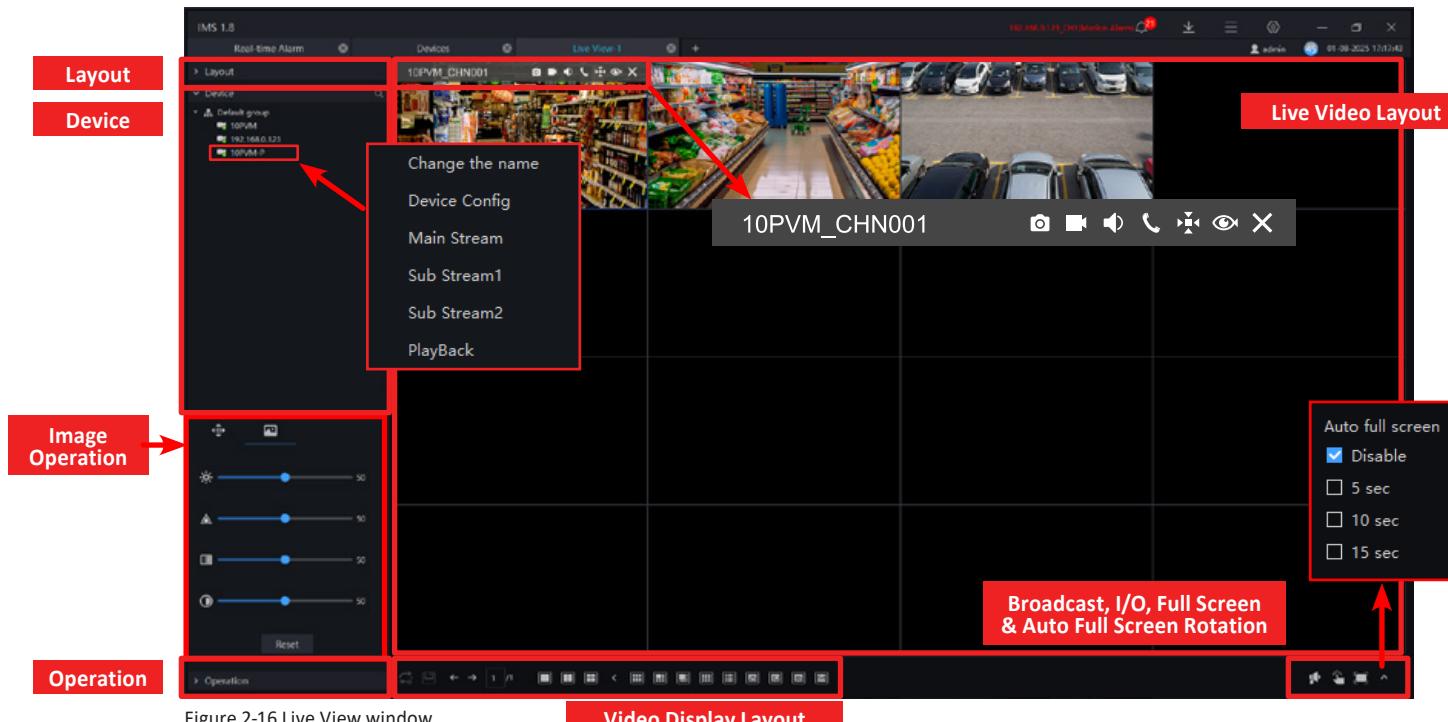


Figure 2-16 Live View window

Video Display Layout

Step 1 Click  **Live View** icon on **Common Functions / All Features**. Then, user can see all live view which was registered as shown in Figure 2-16.

Step 2 User can setup the parameters of Live View window according to Table 2-8.

Step 3 When user move the mouse on the top of selected live video window, user can take a snapshot, record a live video, turn on the sound, use intercome, control PTZ, switch fisheye and close the selected live video.

FEATURES

BASIC FUNCTION / LIVE VIEW - Main Page Layout

Table 2-8 Live View configuration parameters

Parameter	DESCRIPTION	Setting
LAYOUT	User can use or apply the default/new layout.	
DEVICE	See the registered device list and group. When user click right button on blank area, user can select 'Show all' or 'Online only'. When user click right button on the selected device, user can change the device name, configure the selected device, switch the stream of live video and playback the recorded video	Default: Show all
OPERATION	Control the PTZ parameter of dome device	
IMAGE OPERATION	Adjust the brightness, sharpness, saturation and contrast of selected live video.	Default: Brightness 50 (0 ~ 100) Sharpness 50 (0 ~ 100) Saturation 50 (0 ~ 100) Contrast 50 (0 ~ 100)
VIDEO	Select the preformat layout (Full, 2, 4, 6, 8, 9, 16, 25, 32, 36, 64) and save the current layout	
DISPLAY LAYOUT		
BROADCAST	Turn On/Off the broadcasting signal to the selected group or devices	
I/O OUTPUT	Turn On/Off the I/O output of selected device	
FULL SCREEN	Turn On/Off the full screen of selected layout	
AUTO FULL SCREEN	Turn On/Off the automatic full screen mode. User can select a time interval of full screen.	Default: Disable Disable, 5sec, 10sec, 15sec



Note

- **Layout: Layout Function** is using for binding the registered devices with windows. The default layout only show blank box window.
- **Device:** display the device list under current user account, user can see the real-time video by double click or drag&drop a live video to live video window. When user moves the mouse arrow on the top position of live video window, user can see the title info, record a video and take a screenshot.
- **Operation:** this function is only available for the dome camera device with PTZ and ViewZ AI PVM does not support this function.

FEATURES

BASIC FUNCTION / LIVE VIEW - Device Broadcast

Description

If the registered camera has a speaker function or audio-out device is registered on IMS system, these devices can be broadcasting.

If the computer (installed IMS program) has a microphone to collect audio, click  (Broadcast) icon to setup the broadcasting on the bottom right corner. Select the device to play and click 'Turn on broadcast', then the chosen device will play the audio from platform. Click 'Turn off broadcasting' to end playing.

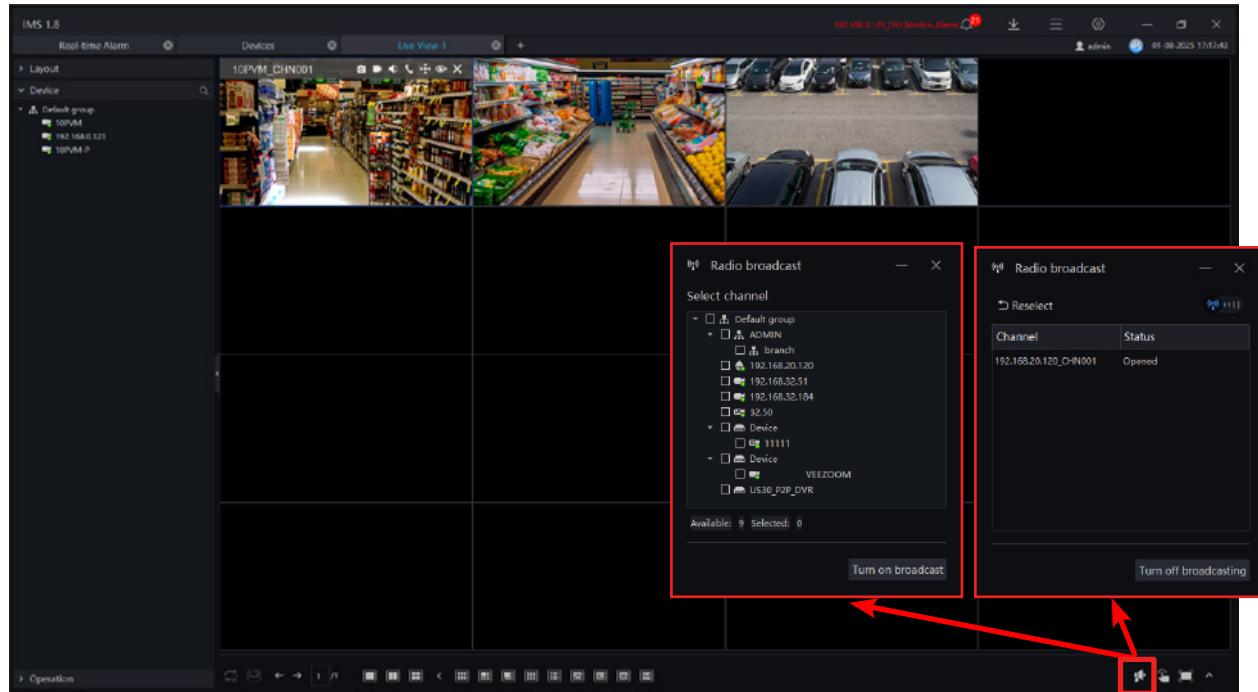


Figure 2-17 Live View - Broadcast window



Note

- ViewZ AI PVM does not support this function.

FEATURES

BASIC FUNCTION / LIVE VIEW - Popup Menu

Description

When user right-click on a live video window, user can see the popup menu and this popup menu has active/inactive menu options based on the registered device.

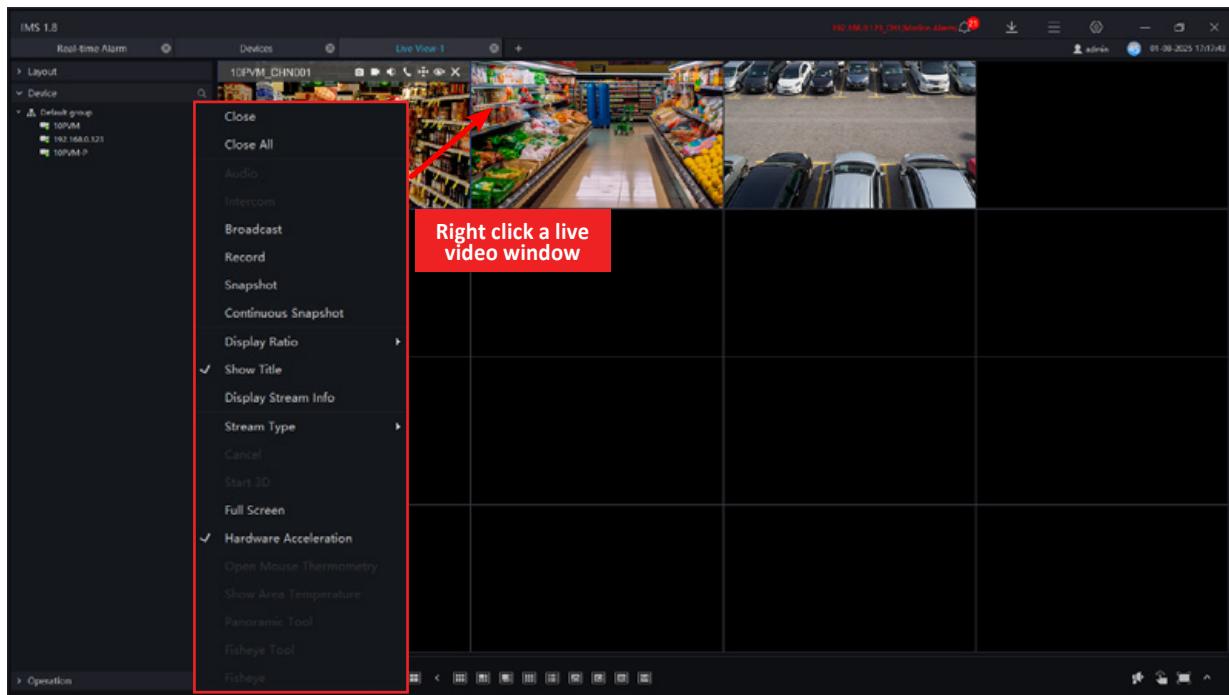


Figure 2-18 Live View Popup window

 **Step 1** Click the right button on the selected live video window.

 **Step 2** User can setup the parameters of MENU including **Close**, **Close All**, **Audio**, **Intercom**, **Broadcast**, **Record**, **Snapshot**, **Continuous Snapshot**, **Display Ratio**, **Show Title**, **Display Stream Info**, **Stream Type**, **Cancel**, **Start 3D**, **Full Screen**, **Hardware Acceleration**, **Open Mouse Thermometry**, **Show Area Temperature**, **Panoramic Tool**, **Fisheye Tool**, **Fisheye** according to Table 2-9.

FEATURES

BASIC FUNCTION / LIVE VIEW

Table 2-9 Live View Popup configuration parameters

Parameter	DESCRIPTION	Setting
CLOSE	Close the live video on the selected window	
CLOSE ALL	Close all live video on all live video window	
AUDIO	Turn on the sound of selected live video window	N/A
INTERCOM	Turn on the intercom function	N/A
BROADCAST	Broadcast the sound from the selected live video	
RECORD	Record a live video to local storage	
SNAPSHOT	Take a snapshot and save it to local storage	
CONTINUOUS SNAPSHOT	Take continuous snapshots	
DISPLAY RATIO	Setup the display ratio	Default: Default Ratio Default Ratio, Full Screen, 4:3, 5:4,16:9
SHOW TITLE	Display the live video title	Default: ON
DISPLAY STREAM INFO	Display the selected live video stream information	Default: OFF
STREAM TYPE	Select the live video stream type	Default: Main Stream Main / Sub 1 / Sub 2 Stream
CANCEL	Cancel the effect	N/A
START 3D	Start 3D effect on the selected live video window	N/A
FULL SCREEN	Setup the full screen of selected live video	Default: OFF
HARDWARE ACCELERATION	Let IMS program use an idle hardware resource	Default: ON
OPEN MOUSE	A method for measuring a mouse's body temperature	N/A
THERMOMETRY	temperature using an infrared thermometer	
SHOW AREA TEMPERATURE	Display the area temperature of selected device	N/A
SHOW AREA TEMPERATURE	Display the area temperature of selected device	N/A
PANORAMIC TOOL	Setup the panoramic camera option	N/A
FISHEYE TOOL	Setup the fisheye camera option	N/A
FISHEYE	Turn ON/OFF the fisheye camera view	N/A



Note

- ViewZ AI PVM does not support some function on popup menu.

FEATURES

BASIC FUNCTION / PLAYBACK

Description

On the playback, the live video from the front-end device can be played back and backed up, support multiple channels synchronous playback, support playback control operations. This function requires the registered device should have the SD card, NAS server and FTP server. On this feature, user can see recorded videos, take a snapshot and save/download videos or images.

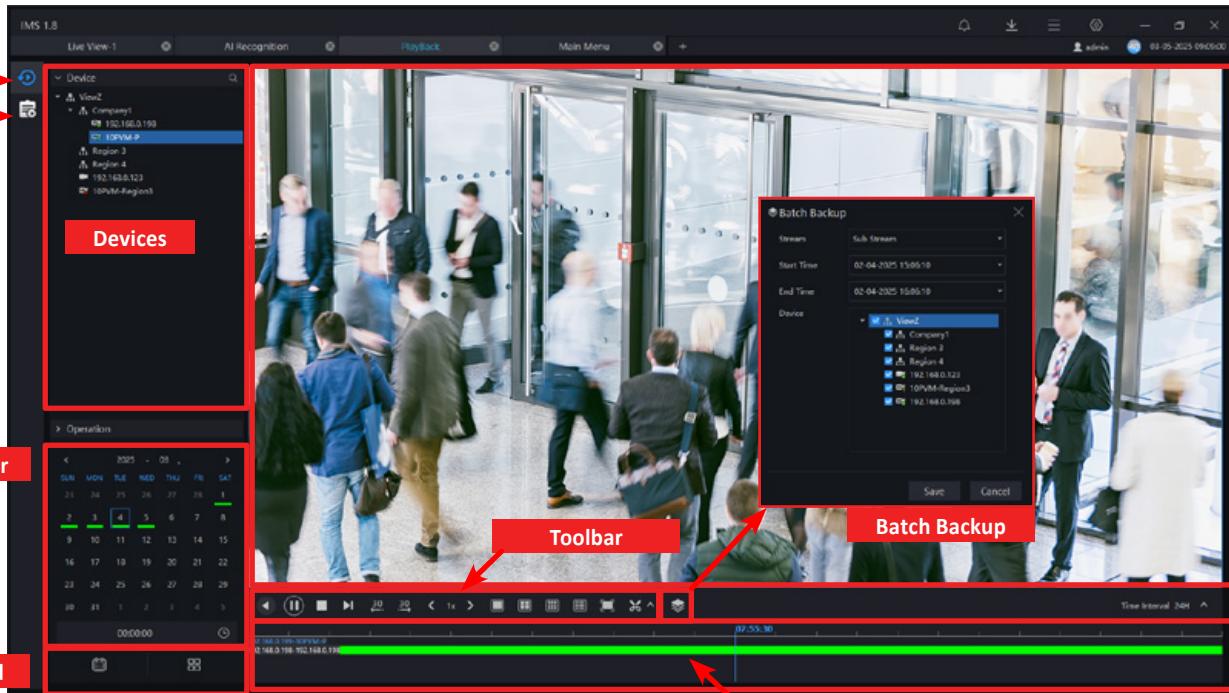


Figure 2-19 Playback window

 **Step 1** Click  **Playback** icon on **Common Functions / All Features**. Then, user can check and see recorded videos from all registered devices as shown in Figure 2-19.

 **Step 2** User can setup the parameters of **Playback** according to Table 2-10.



Note

- ViewZ AI PVM does not support some function on popup menu.

FEATURES

BASIC FUNCTION / PLAYBACK

Table 2-10 Playback configuration parameters

Parameter	DESCRIPTION	Setting
PLAYBACK	Check the recorded video from registered devices	
EVENT PLAYBACK	Click  icon to setup the Event Playback. Check the recorded data of special device	N/A
DEVICE	Display the registered device  NOTE  it means which device play recording videos  it means which device has recording video files  it means which device is disconnected  it means which device has no recording files	
OPERATION	Setup the PTZ parameters	N/A
CALENDAR	This calendar show which date has recording files. If a date has a green under bar, it means there is recording files.	
CALENDAR/GIRD	Click  icon to show/hide the calendar Click  icon to show/hide the video grid	
TOOL BAR	Setup the parameter of playback screen	
TIME TABLE	Display a timeline of recorded video files. User can pickup the specific time during timeline	



On the **Playback** page, you can perform the following operations:

- Click  to rewind the playing video.
- Click   to pause & play the recorded video.
- Click  to stop the playing video.
- Click  to play the next frame of playing video.
- Click   to backward & forward 30 seconds of playing video.
- Click   to setup the speed of playing video (1/16, 1/8, 1/4, 1/2, 1, 2, 4, 8 times)
- Click     to change the display layout.
- Click  to setup the full screen.
- Click  and pick a spot & drag it on timeline. Click  to download a recorded video file as MP4 format.
- Click  to do batch bacup
- Click   to setup the timeline of 15min, 30min, 1 hour, 4 hour, 8 hour, 12 hour & 24 hour
- When user selects a date on calendar, user would need to pick up the exact time by manual input.
Click   to type the desirable time and click  to set positioning on timeline.

FEATURES

BASIC FUNCTION / LAYOUT

Description

User can create a layout that have some/all windows of layout are binding with registered devices. Thus, user can also make special windows of layout which windows have some devices and setup a rotating interval display of devices.

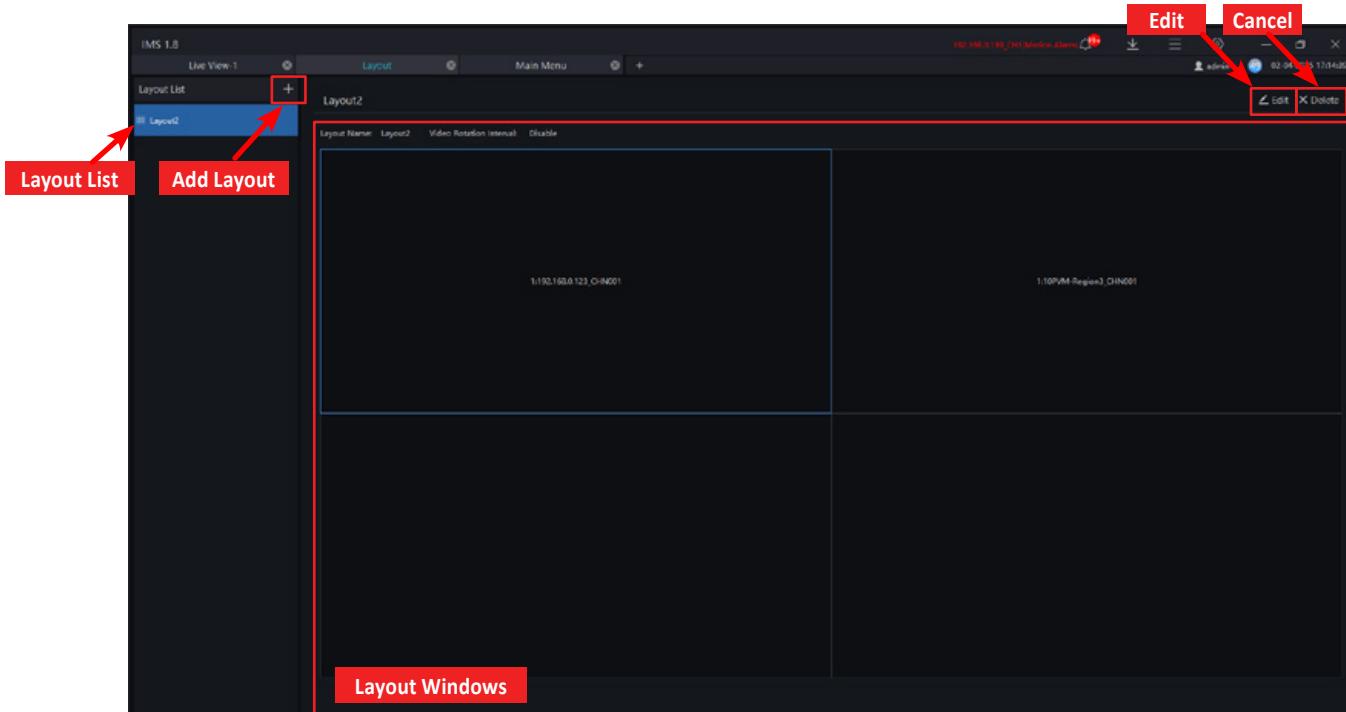


Figure 2-20 Layout window

- ▶ **Step 1** Click  **Layout** icon on **Common Functions / All Features**. Then, user can create custom layout with registered devices as shown in Figure 2-20.
- ▶ **Step 2** Click  **Edit** button to edit the created layout and click  **Cancel** button to cancel the edit.
- ▶ **Step 3** Click  icon to make a new layout. Set the parameters of **Layout** according to Table 2-11.
- ▶ **Note**
 - User can only choose the empty preset layout.

FEATURES

BASIC FUNCTION / LAYOUT

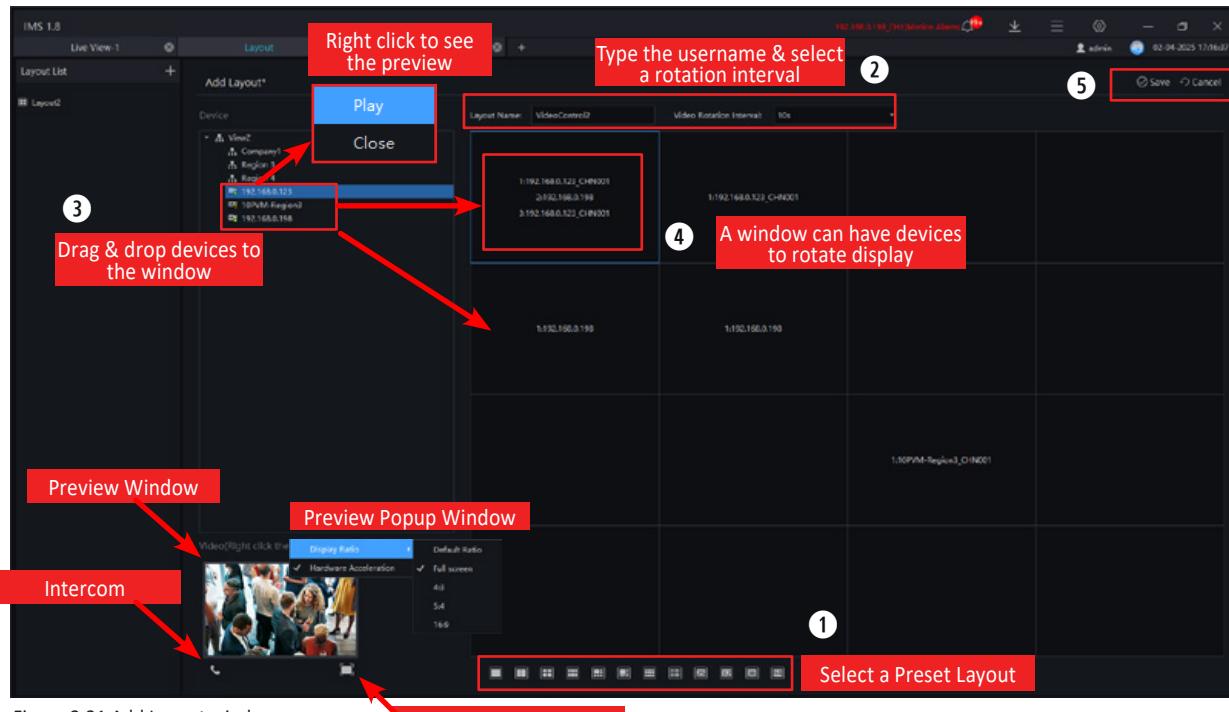


Table 2-11 Add Layout configuration parameters

Parameter	DESCRIPTION	Setting
LAYOUT LIST	List the created layouts	
LAYOUT NAME	Type a name of created layout	Default: blank
VIDEO ROTATION	Select a time interval to display registered devices on the selected window	Default: Disable (Disable, 10s, 30s, 60s)
INTERVAL		
PREVIEW WINDOW	User can check/see the preview of registered devices. Click the right button on the selected device, then user can choose the Play/Stop preview. NOTE User can setup the Display Ratio (Default Ratio, Full Screen, 4:3, 5:4, 16:9) & HardwareAcceleration	Default: Blank
PRESET	Select one of preset layout	
SAVE/CANCEL	Save or cancel the current adjusted layout	

FEATURES

BASIC FUNCTION / REAL-TIME ALARM

Description

From the front-end devices, IMS program can receive alarm information in real time. Thus, IMS program can also manage single or batch alarms.

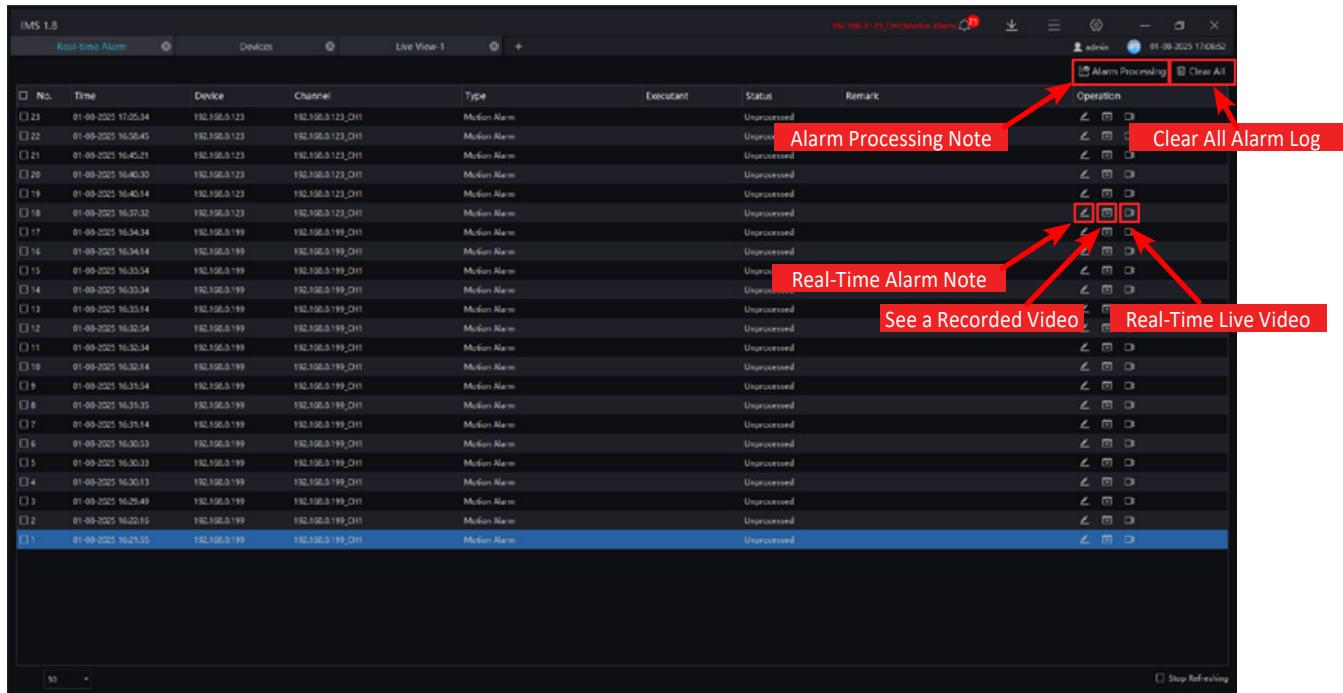


Figure 2-22 Real Time Alarm window

Step 1 Click  **Real-Time Alarm** icon on **Common Functions / All Features**. Then, user can manage single & batch alarms with registered devices as shown in Figure 2-22.

Step 2 View the **Real-Time Alarm** window and set the **Real-Time Alarm** parameters as shown in Table 2-12.



Note

- User can also open the Real-Time Alarm window by clicking  icon on the top right corner.

FEATURES

BASIC FUNCTION / REAL-TIME ALARM

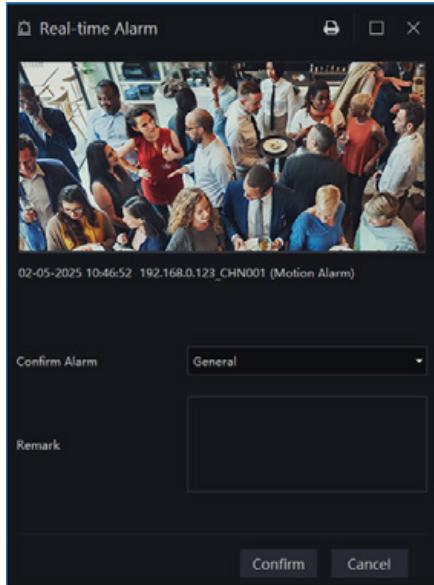


Figure 2-23 Current Live Video of Real Time Alarm window with note / type

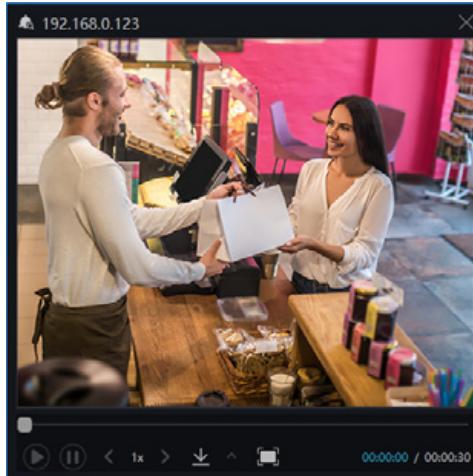


Figure 2-24 A Recorded Video of recorded Real Time Alarm window



Figure 2-25 Current Live Video of recorded Real Time Alarm window

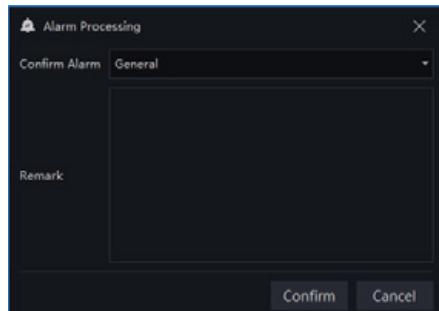


Figure 2-26 Alarm Processing window

Table 2-12 Real Time Alarm configuration parameters

Parameter	DESCRIPTION	Setting
REALTIME ALARM NOTE	Click icon to open Real-Time Alarm window. User can setup an alarm type & add a note	
RECORDED VIDEO	Click icon to open the recorded video window. User can see or download the recorded video.	
LIVE VIDEO	Click icon to open the live video window	Default: Blank
ALARM PROCESSING	Click icon to setup the selected alarm log. User can change the selected alarm type and add a note for the selected alarm	
CLEAR ALL	Click icon to clear all alarm log	



Note

- When user double click a selected line on the Real-Time Alram window, user will see the Real-Time Alarm note window.

FEATURES

BASIC FUNCTION / ALARM SEARCH

Description

From the front-end devices, IMS program can receive alarm information in real time. Thus, IMS program can also manage single or batch alarms.

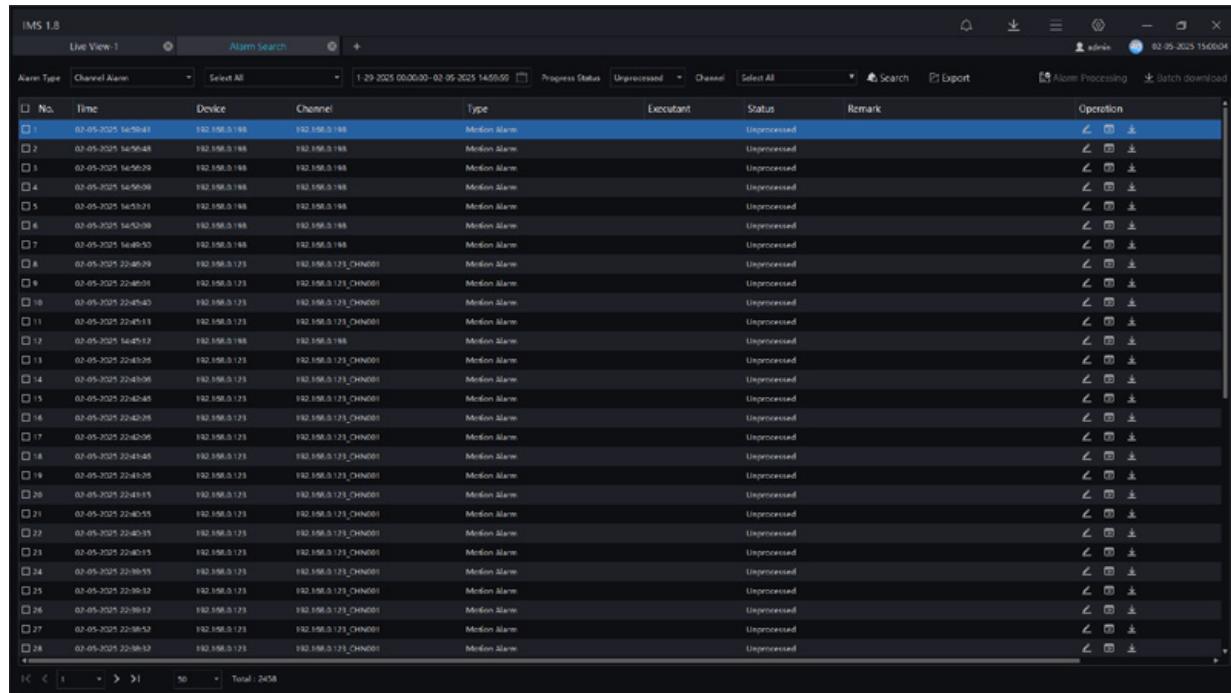


Figure 2-27 Alarm Search window



Step 1 Click  **Alarm Search** icon on **Common Functions / All Features**. Then, user can manage single & batch alarms with registered devices as shown in Figure 2-27.



Step 2 View the **Alarm Search** window and set the **Alarm Search** parameters as shown in Table 2-13.



Note

- User can also open the Real-Time Alarm window by clicking icon on the top right corner.

FEATURES

BASIC FUNCTION / ALARM SEARCH

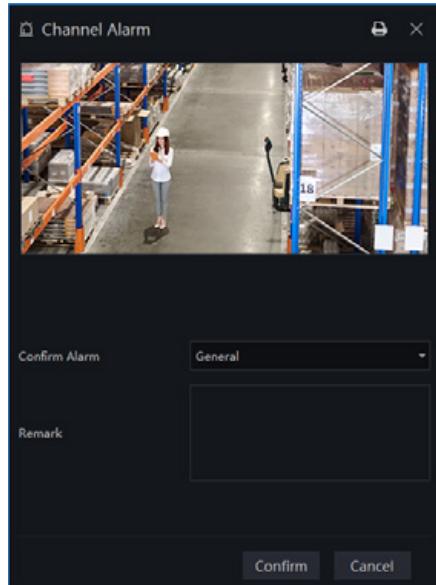


Figure 2-28 A Single Alarm window

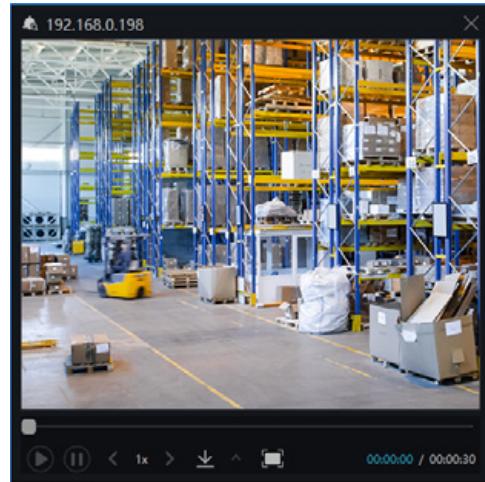


Figure 2-29 A Single Recorded Video window

Table 2-13 Alarm Search configuration parameters

Parameter	DESCRIPTION	Setting
CHANNEL ALARM	Click icon to open Real-Time Alarm window. User can setup an alarm type & add a note	
RECORDED VIDEO	Click icon to open the recorded video window. User can see or download the recorded vide.	
DOWNLOAD	Click icon to download the recorded video	
ALARM PROCESSING	Click button to setup the selected alarm log. User can change the selected alarm type and add a note for the selected alarm	
BATCH DOWNLOAD	Click button to download multiple files	
ALARM TYPE	Select a type of alarm and detailed - Device, Channel, Server, Over Temperature, Comparison, Intelligent Recognition, Access Control	Default: Channel Alarm / Select All
PERIOD	Select & display alarm logs of specific period	Default: 1 week (from 7days ago)
PROGRESS STATUS	Select & display Processed and Unprocessed alarm log	Default: Unprocessed
SEARCH & EXPORT	Click buttons to search alarm logs based on selection and export this result as excel file	

FEATURES

BASIC FUNCTION / REPORT STATISTICS

Description

User can see the alarm statistics of group & devices , and the access rate of online devices.



Figure 2-30 Report Statistics - Group Alarm window

 **Step 1** Click  **Report Statistics** icon on **Common Functions / All Features**. Then, user can manage the report of **Group Alarm**, **Device Alarm**, **Group Online** and **Device Online** with registered devices as shown in Figure 2-30.

 **Step 2** View the **Report Statistics** window and set the **Report Statistics** parameters as shown in Table 2-14



Note

- When user double click a selected line on the Real-Time Alram window, user will see the Real-Time Alarm note window.

FEATURES

BASIC FUNCTION / REPORT STATISTICS



Figure 2-31 Report Statistics - Device Alarm Statistics window



Figure 2-32 Report Statistics - Group Online window

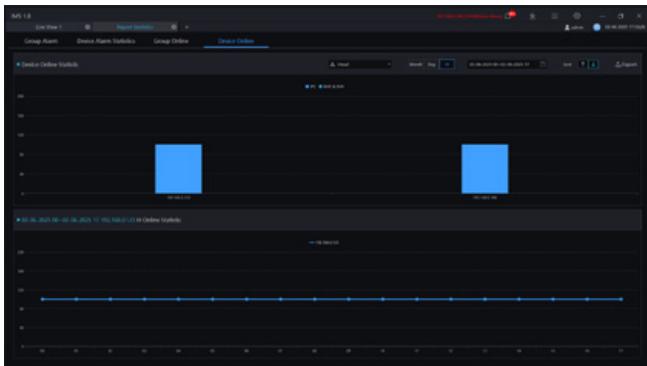


Figure 2-33 Report Statistics - Device Online window

Table 2-14 Stream configuration parameters

Parameter	DESCRIPTION	Setting
GROUP ALARM	Display the alarm log by group	
DEVICE ALARM STATISTICS	Display the alarm log by devices	
GROUP ONLINE	Display the online time of group devices	
DEVICE ONLINE	Display the online time of devices	
EXPORT	Click Export button to display a report data as PDF format	
DATE	Click Month Day H button to setup the report data based on the time format - Month, Day & Hour	Default: Hour
GROUP	Click ViewZ button to select a group which display a report data	Default: Select All

FEATURES

BASIC FUNCTION / EVENT LINKAGE

Description

ViewZ IMS program can let user make a linked event triggered by alarm event. When user selects a trigger action, then IMS will perform linked actions on IMS.

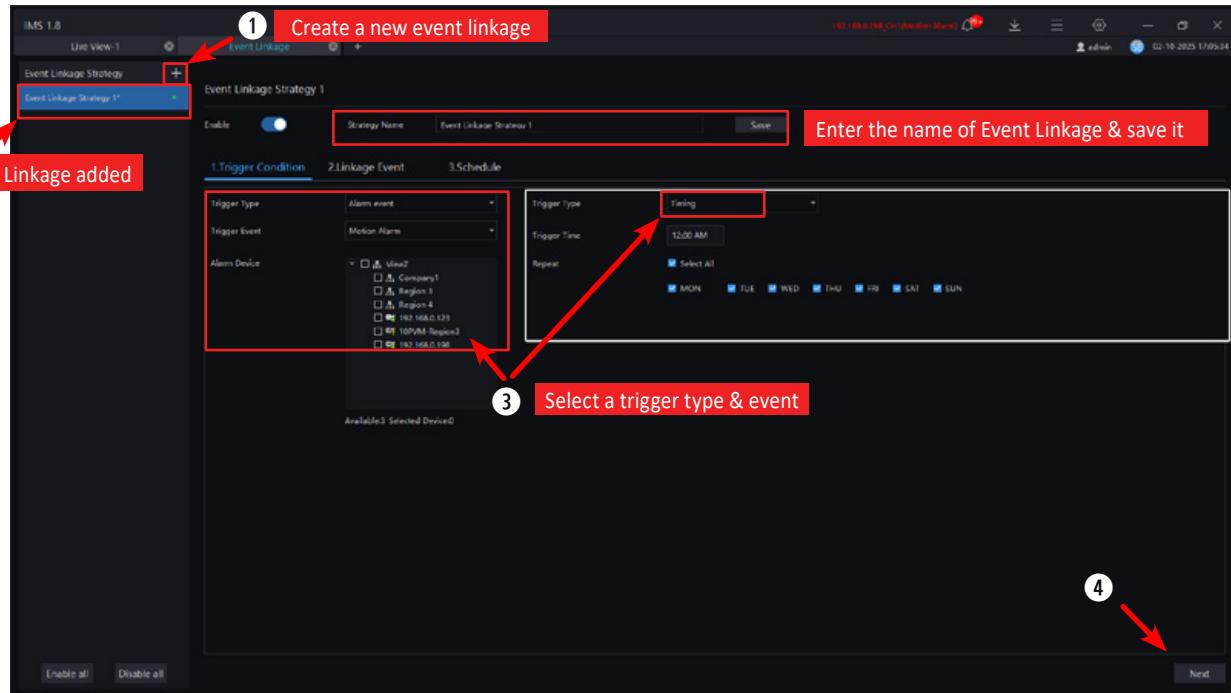


Figure 2-34 Event Linkage - Trigger Condition window

Step 1 Click  **Event Linkage** icon on **Common Functions / All Features**. Then, user can setup the linked event action with registered devices as shown in Figure 2-34.

Step 2 Setup the **Event Linkage - Trigger Condition** parameters as shown in Table 2-15

Table 2-15 Event Linkage - Trigger Condition parameters

Parameter	DESCRIPTION	Setting
TRIGGER TYPE	Select a trigger type - Alarm Event or Timing (act a linked event based on the specific time)	Default: Alarm Event
TRIGGER EVENT	Select an event type - motion, camera mask, I/O, video loss, network disconnection and etc	Default: Motion Alarm
ALARM DEVICE	Select a device or group which will be affected	Default: OFF

FEATURES

BASIC FUNCTION / EVENT LINKAGE

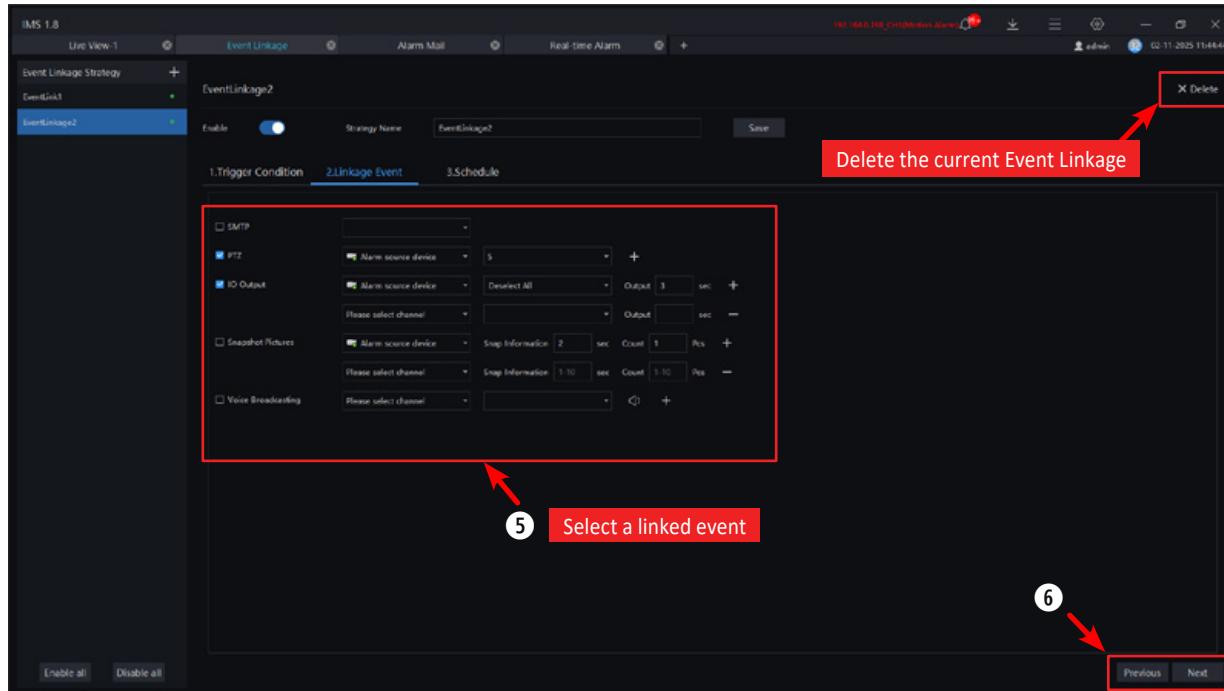


Figure 2-35 Event Linkage - Linkage Event window

 **Step 3** Setup the **Event Linkage - Linkage Event** parameters as shown in Table 2-16

Table 2-16 Event Linkage - Linkage Event parameters

Parameter	DESCRIPTION	Setting
SMTP	Send an email based on preset SMTP information	Default: Blank
PTZ	Select devices, device group or all to do PTZ control	Default: OFF
I/O OUTPUT	Select devices, device group or all to send I/O signal	Default: OFF
SNAPSHOT PICTURES	Select devices, device group or all to take a snapshot. User can setup the snapshot number and duration.	Default: OFF
VOICE BROADCASTING	User can send a sound broadcasting when IMS get a trigger signal.	Default: OFF

FEATURES

BASIC FUNCTION / EVENT LINKAGE

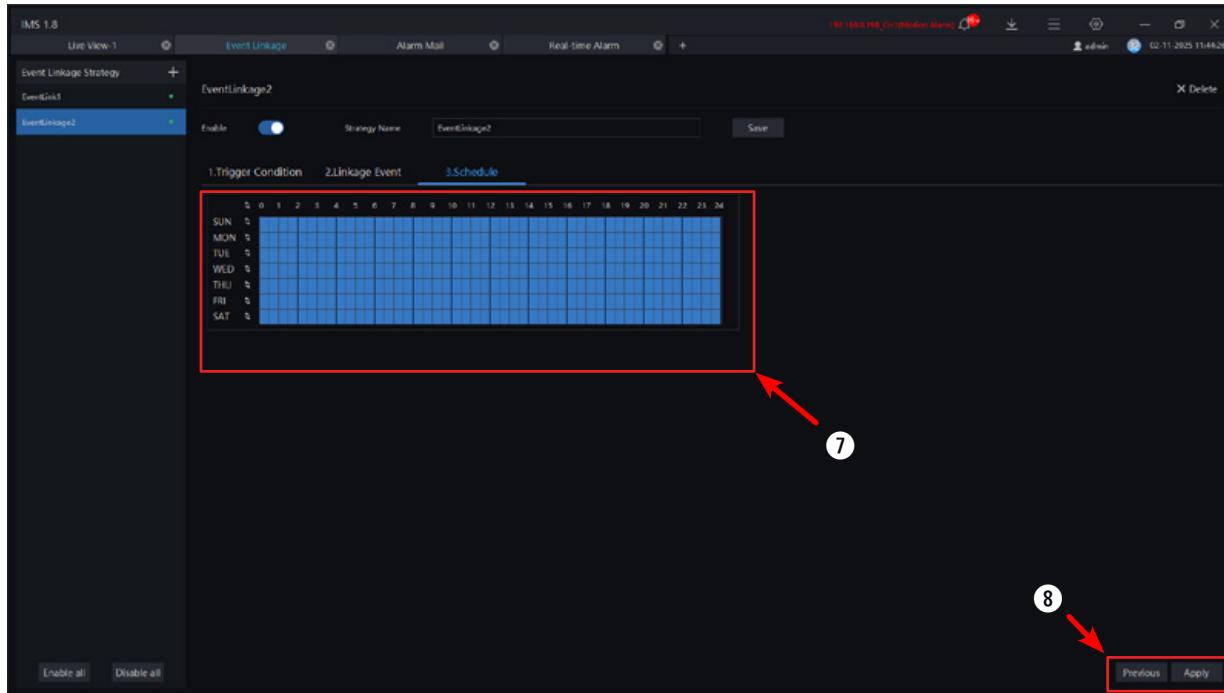
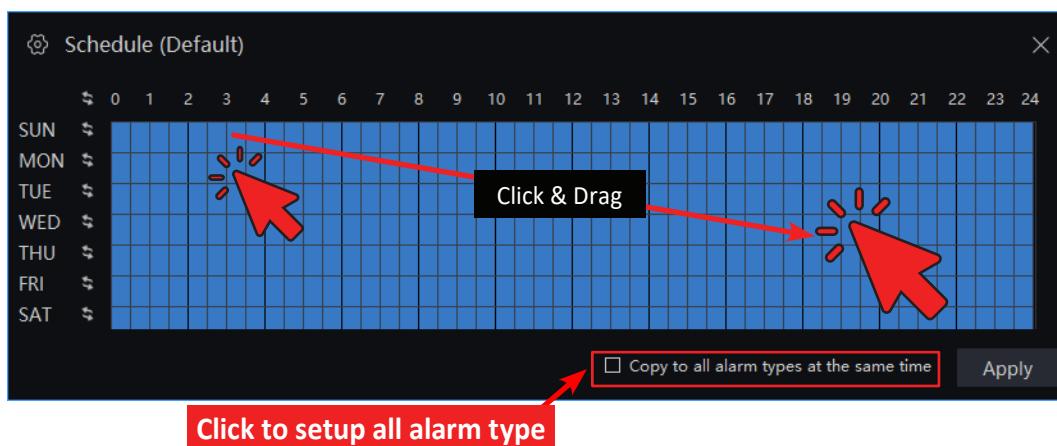


Figure 2-36 Event Linkage - Schedule window

Step 4 Setup the **Schedule** of Event Linkage to make a time table on Schedule.



- On the schedule, hold down the left mouse button, drag and release mouse to select the deployment time within 0:00-24:00 from Monday to Sunday.
- Click a check box (at the bottom of Schedule window) to apply all alarm types at the same time.
- User can setup a specific time range & delete a day schedule by clicking the blue bar on time table

FEATURES

BASIC FUNCTION / SNAPSHOT RETRIEVAL

Description

Snapshot Retrieval is used for searching captured images from **Event Linkage** data. At the deploying **Schedule of Snapshot Retrieval**, search the alarm source device and query the panoramic pictures captured by other linked devices.

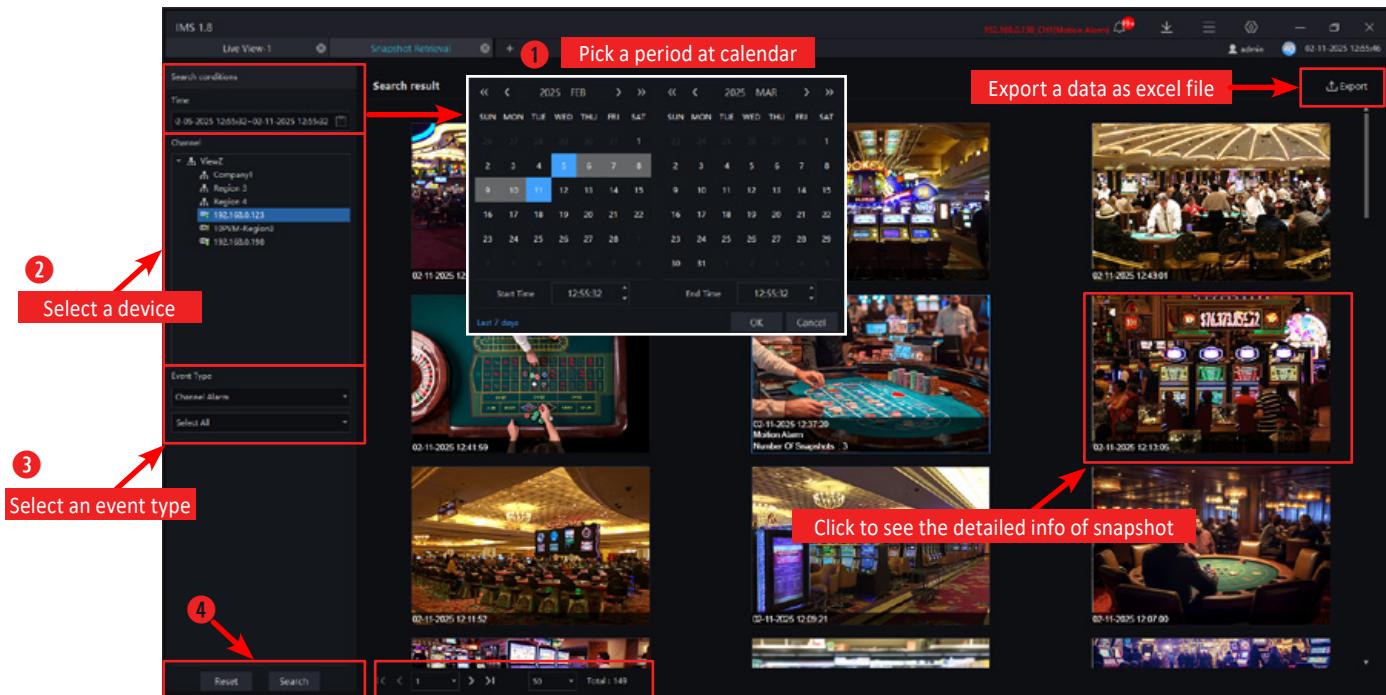


Figure 2-37 Snapshot Retrieval window

Pagination & Quantity of data display



Step 1 Click  **Snapshot Retrieval** icon on **Common Functions / All Features**. Then, user can search snapshot images from **Event Linkage** with registered devices as shown in Figure 2-37.



Step 2 Setup the **Snapshot Retrieval** parameters as shown in Table 2-17.

FEATURES

BASIC FUNCTION / SNAPSHOT RETRIEVAL

Table 2-17 Snapshot Retrieval configuration parameters

Parameter	DESCRIPTION	Setting
TIME	Select a time period which setup max 7 days	Default: Current to last 7 days
CHANNEL	Select a device which has snapshot images from Event Linkage	Default: OFF
EVENT TYPE	Select an alarm type - Channel or Device  NOTE AI PVM does not support Device Alarm event type	Default: Channel Alarm
RESET/SEARCH	Click RESET button to clear search condition Click SEARCH button to search snapshot data	



Note

- When user open the calendar, the default period of date is 7 days from the current to previous 7 days.
- AI PVM does not support to search a type of Device Alarm.
- When user mouse over a snapshot image, then user will see the information of alarm type, captured time and number of snapshot.

FEATURES

CONFIGURATION MAINTENANCE / LOG

Description

By using this feature, user can search & export a log data of system, server & operation.

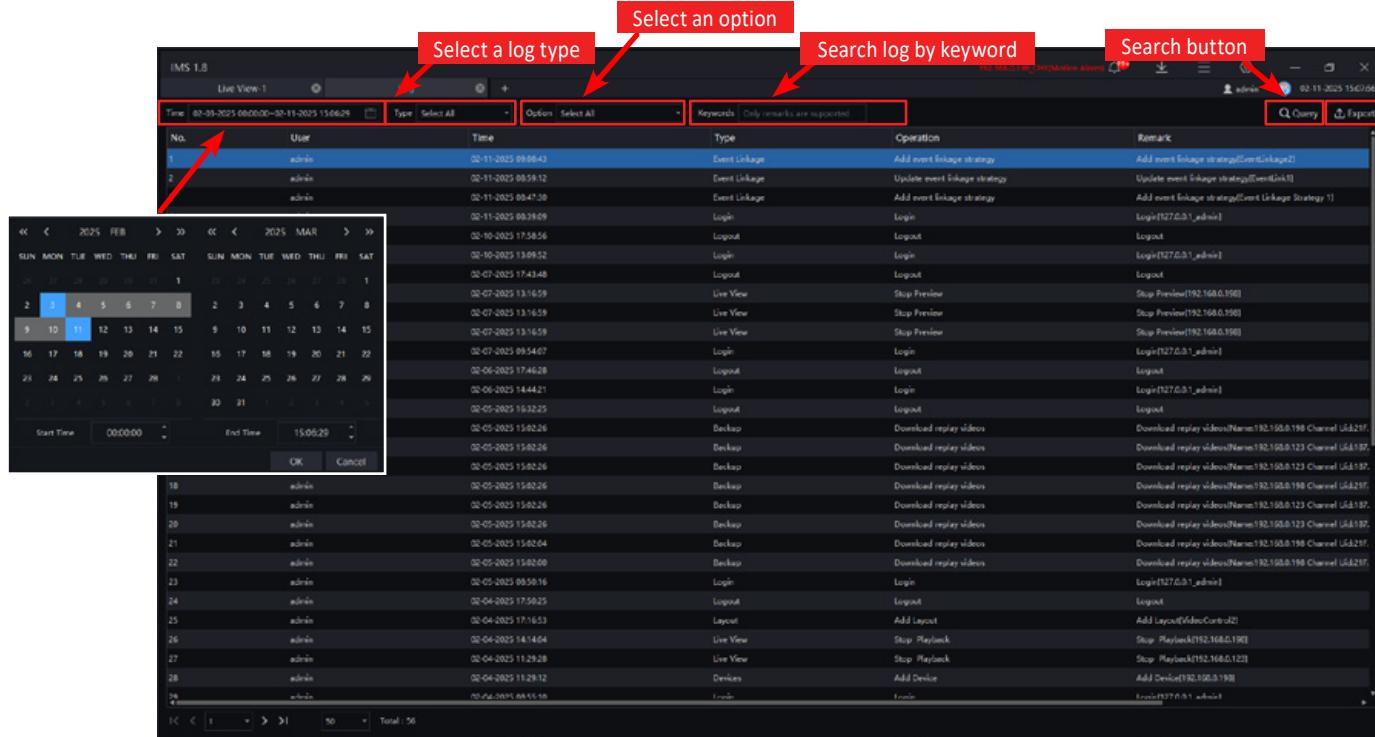


Figure 3-1 Log window

Step 1 Click  Log icon on **Common Functions / All Features**. Then, user can search & export log record of IMS system as shown in Figure 3-1.

Step 2 Setup the **Log** parameters as shown in Table 3-1

FEATURES

CONFIGURATION MAINTENANCE / LOG

Table 3-1 Log configuration parameters

Parameter	DESCRIPTION	Setting
TIME	Select a time period	Default: Current to last 1 days
TYPE	Select a log type - System, Operation, Service & All  NOTE AI PVM does not support Mobile log	Default: Select All
OPTION	The default selection is ALL. User can select single or many options.	Default: Select All
KEYWORD	Type the keyword of remark	Default: Blank
QUERY	Click to search log data based on previous settings	
EXPORT	Click to export log data as an excel file	


Note

- User can see the log data of system, server and operation such as login, logout, event linkage, preview, download, layout, device and etc.,

FEATURES

CONFIGURATION MAINTENANCE / DEVICE CONFIG

Description

On the **Device Config**, user can see & setup registered AI PVM's parameters of the front-end device, such as bit rate, motion detection, OSD, image, maintenance and so on. The configuration function is related to the firmware version of AI PVM. Please refer to the actual situation.

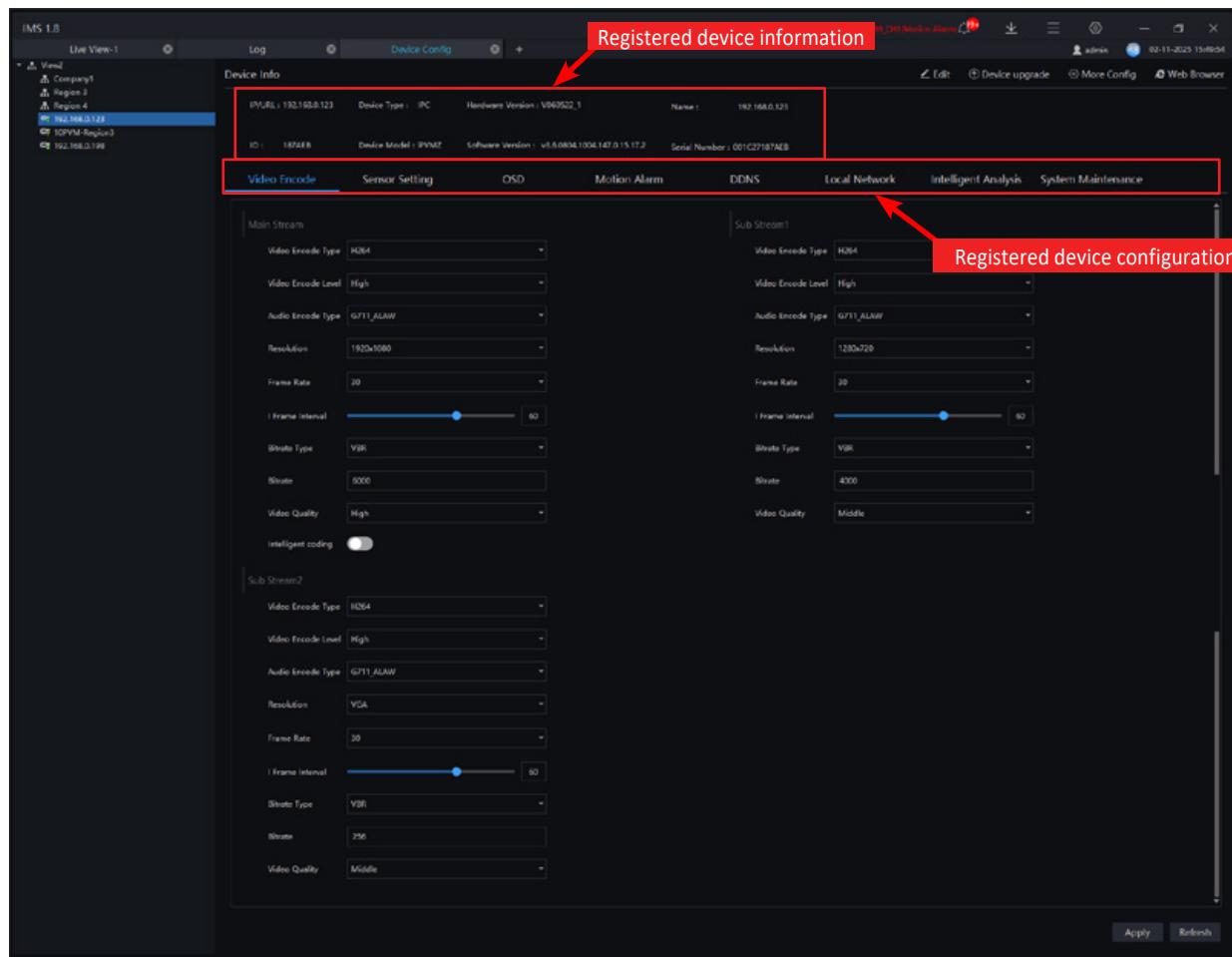


Figure 3-2 Device Config window

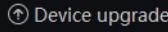
 **Step 1** Click  **Device Config** icon on **Common Functions / All Features**. Then, user can see & setup parameters of registered AI PVM as shown in Figure 3-2.

 **Step 2** Setup the **Device Config** parameters as shown in Table 3-2

FEATURES

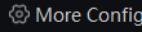
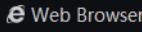
CONFIGURATION MAINTENANCE / DEVICE CONFIG

Table 3-2 Device Config configuration parameters

Parameter	DESCRIPTION	Setting
IP/URL	Display the IP/URL address of selected device	Default: The value is fixed
HARDWARE Ver.	Display the hardware version of selected device	Default: The value is fixed
NAME	Display the name of selected device	
ID	Display the ID of selected device - this ID is using for registering device to IMS	Default: The value is fixed
DEVICE MODE	Display the name of device mode	Default: The value is fixed
SOFTWARE Ver.	Display the software version	Default: The value is fixed
SERIAL NUMBER	MAC address of registered device	Default: The value is fixed
EDIT	Click  button to edit device name	Default: The value is fixed
DEVICE UPGRADE	Click  button to upgrade the firmware of selected device	Default: The value is fixed
DEVICE CONFIG	The configuration parameters are setup by the version of AI PVM	Default: The value is fixed



Note

- If the registered device is **NVR**, users can set recording strategy and disk management.
- If the registered device is **Thermal Cameras**, users can set thermal parameters, or smoker and flame detection.
- When user register a device as **IPC**, user can directly access to this registered device via  **More Config** button or  **Web Browser** button.

FEATURES

CONFIGURATION MAINTENANCE / ALARM MAIL

Description

On the **Alarm Mail**, user can send an email with alarm information - such as alarm time, device name, device ID, channel name, target name and target library.

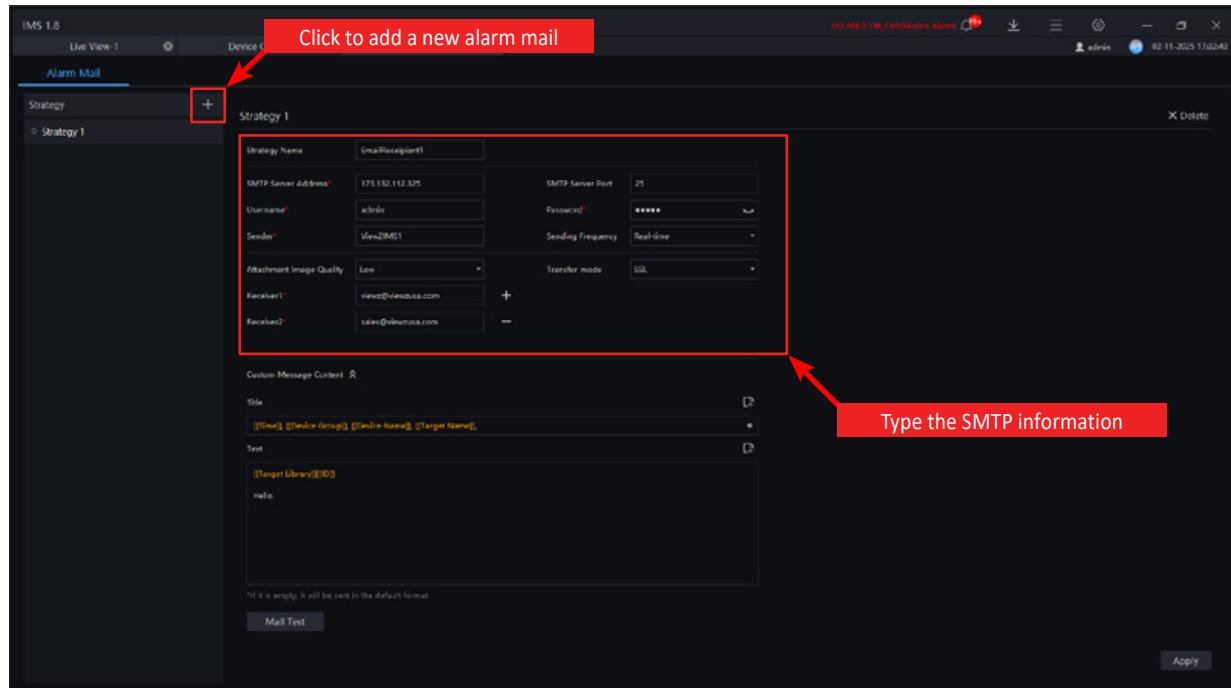


Figure 3-3 Alarm Mail window

Step 1 Click  **Device Config** icon on **Common Functions / All Features**. Then, user can see & setup parameters of registered AI PVM as shown in Figure 3-3.

Step 2 Setup the **Device Config** parameters as shown in Table 3-3

FEATURES

CONFIGURATION MAINTENANCE / ALARM MAIL

Table 3-3 Alarm Mail configuration parameters

Parameter	DESCRIPTION	Setting
STRATEGY NAME	Type the name of alarm mail	Default: Blank
SMTP SERVER ADDR	Type the SMTP server address	Default: Blank
SMTP SERVER PORT	Type the SMTP server port	Default: 25
USERNAME	Type the username of SMTP server connection	Default: Blank
PASSWORD	Type the password of SMTP server connection	Default: Blank
SENDER	Type the name of sender	Default: Blank
SENDING FREQUENCY	Set the frequency of email sending - 1min, 2min, 5min, 10min, 30min & Real-time	Default: Real-time
ATTACHMENT IMAGE QUALITY	Set the quality of attached image - Low, Middle, High	Default: Low
TRANSFER MODE	Set the type of email encryption - No Encryption, SSL, STARTTLS	Default: No Encryption
RECEIVER	Type the email address of receiver	Default: Blank
TITLE	Type the title of alarm email	Default: Blank
TEXT	Type the text of alarm email	Default: Blank



Note

- This feature would cause high network traffic.

FEATURES

FACE RECOGNITION

Description

On the **Face Recognition** window, user (admin) can see the result of captured face snapshots and face snapshot comparison in real time. To use face snapshot comparison feature, user (admin) needs to add a face image in advance through the **Face Lib Manage** feature. Thus, user (admin) can broadcast the voice alarm.

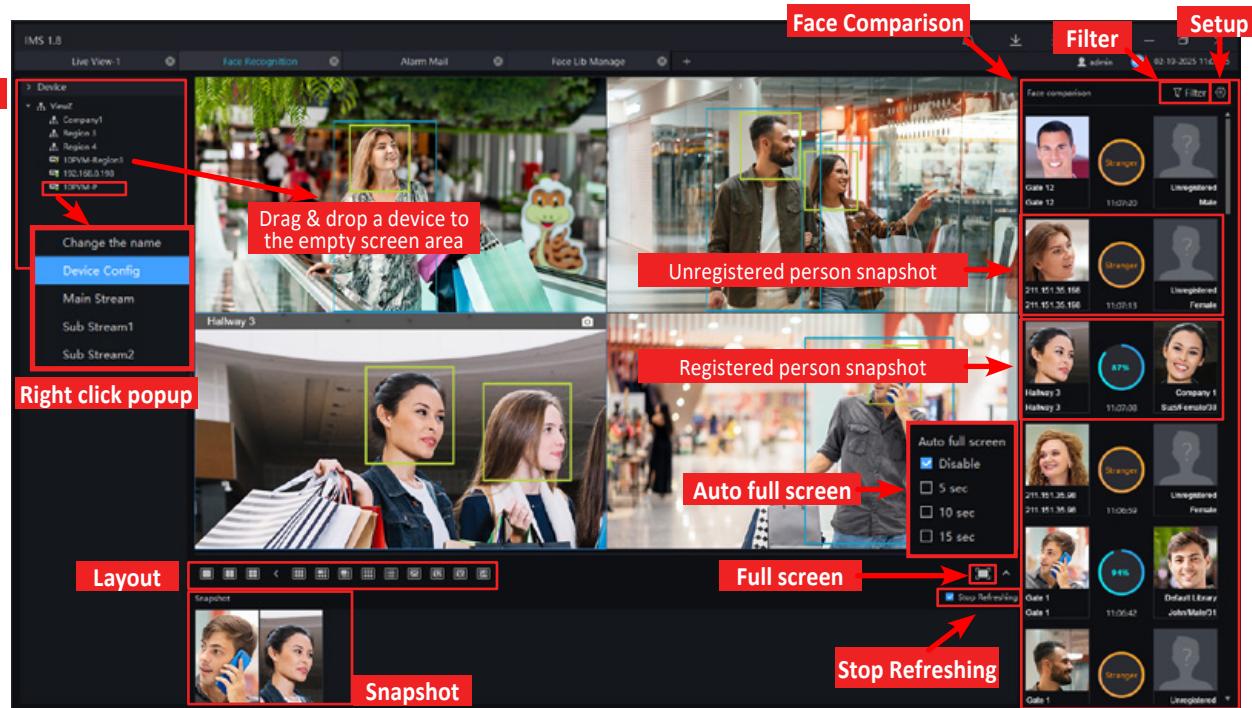


Figure 3-4 Face Recognition window

 **Step 1** Click  **Face Recognition** icon on **Common Functions / All Features**. Then, user can see & setup parameters of **Face Recognition** as shown in Figure 3-4.

 **Step 2** Setup the **Face Recognition** parameters as shown in Table 3-4



Note

- Face recognition feature use CPU resource to run the face recognition algorithm and this feature can be configured at the feature of **Servers** 

FEATURES

FACE RECOGNITION

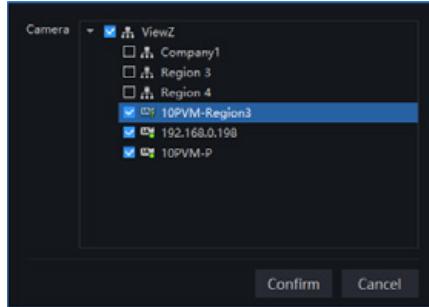


Figure 3-5 Face Recognition - Filter window

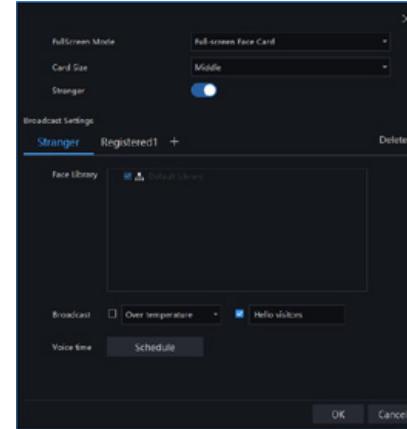


Figure 3-6 Face Recognition - Setup / Stranger window

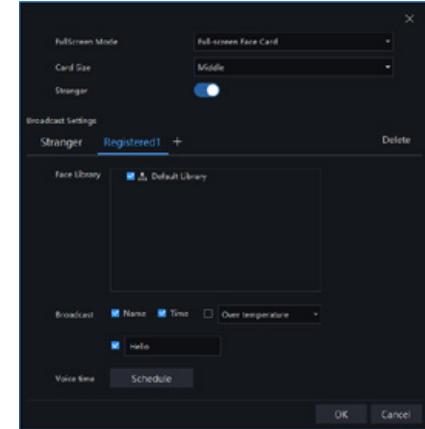


Figure 3-7 Face Recognition - Setup / Registered window

Table 3-5 Face Recognition parameters

Parameter	DESCRIPTION	Setting
DEVICE LIST	Display devices which has face recognition function. User can drag & drop a selected device to an empty screen area.	
LAYOUT	Select the layout of screen	
SNAPSHOT	Display snapshots of registered people when they are captured by devices	
FULL SCREEN	Click  button to set the screen as full screen mode	
AUTO FULL SCREEN	Click  button and select an option to switch the current layout as a full screen of selected screen - disable, 5sec, 10sec & 15sec	Default: Disable
STOP REFRESHING	Check <input type="checkbox"/> Stop Refreshing box to stop capturing actions on all registered devices	Default: OFF
FACE COMPARISON	Display the result of face comparison based on the Face Library	
FILTER	Click  button to select which devices or group will use face recognition function	Default: All

FEATURES

FACE RECOGNITION

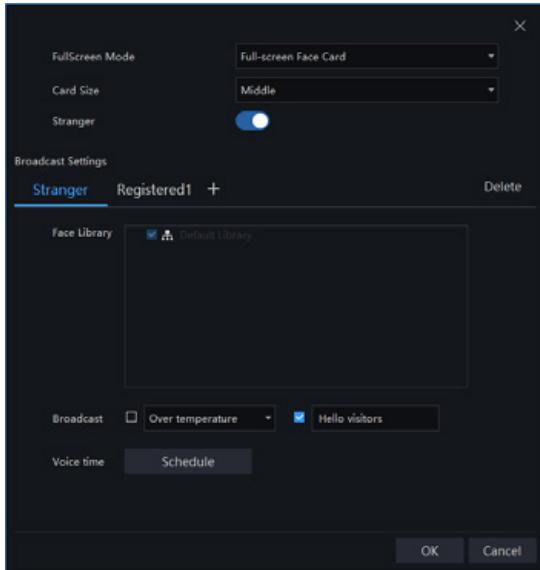


Figure 3-6 Face Recognition - Setup / Stranger window

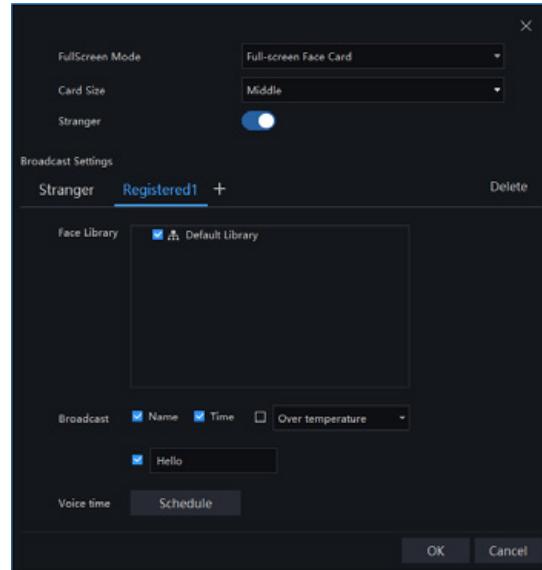


Figure 3-7 Face Recognition - Setup / Registered window



Step 3 Setup the **Face Recognition/Setup** parameters as shown in Table 3-6

Table 3-6 Face Recognition - Setup / Stranger & Registered configuration parameters

Parameter	DESCRIPTION	Setting
SETUP	Click  button to set the action when face snapshot is captured by devices	
FULLSCREEN MODE	Select a type of face card display	Default: Fullscreen Face List Card
CARD SIZE	When user selects ' <u>Full-screen Face card</u> ' option at <u>Fullscreen Mode</u> , user can select a card size - Middle, Small & Big	Default: Middle
STRANGER	Set the capture availability about unregistered people	Default: ON
BROADCAST SETTINGS	Set the action when registered or unregistered face snapshots are captured	
STRANGER	Set the action when unregistered faces are captured	
FACE LIBRARY	Select which face library will be using to compare	Default: N/A
BROADCAST TEMP.	Set the action of temperature	Default: N/A
BROADCAST TEXT	Type the text which will be broadcasting via speaker	Default: XXXX
VOICE TIME	Set the schedule of time	Default: All

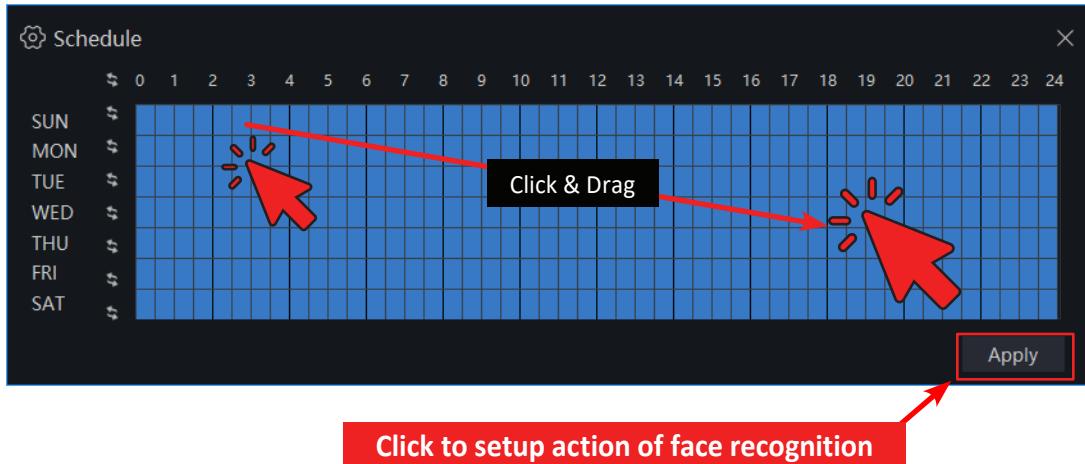
FEATURES

FACE RECOGNITION

Table 3-6 Face Recognition - Setup / Stranger & Registered configuration parameters

Parameter	DESCRIPTION	Setting
REGISTERED1	Set the action when registered faces are captured	
FACE LIBRARY	Select which face library will be using to compare	Default: All
BROADCAST NAME	Set the voice broadcasting of name	Default: ON
BROADCAST TIME	Set the voice broadcasting of time	Default: ON
BROADCAST TEMP.	Set the action of temperature	Default: N/A
BROADCAST TEXT	Type the text which will be broadcasting via speaker	Default: XXXX
VOICE TIME	Set the schedule of time	Default: All
REGISTERED #..	Click + button to add a new action when capturing face snapshots	

 **Step 4** Setup the **Schedule** of Face Recognition to make a time table on **Schedule**.



- On the schedule, hold down the left mouse button, drag and release mouse to select the deployment time within 0:00-24:00 from Monday to Sunday.
- User can setup a specific time range & delete a day schedule by clicking the blue bar on time table

FEATURES

FACE RECOGNITION / FACE SEARCH

Description

On the **Face Search** window, user can search a face image from all captured face snapshots during a period, or select/upload a face image to retrieve a face snapshot that matches the face similarity from the IMS system. Thus, user can add a face snapshot to **Face Library** (person data) of IMS system.

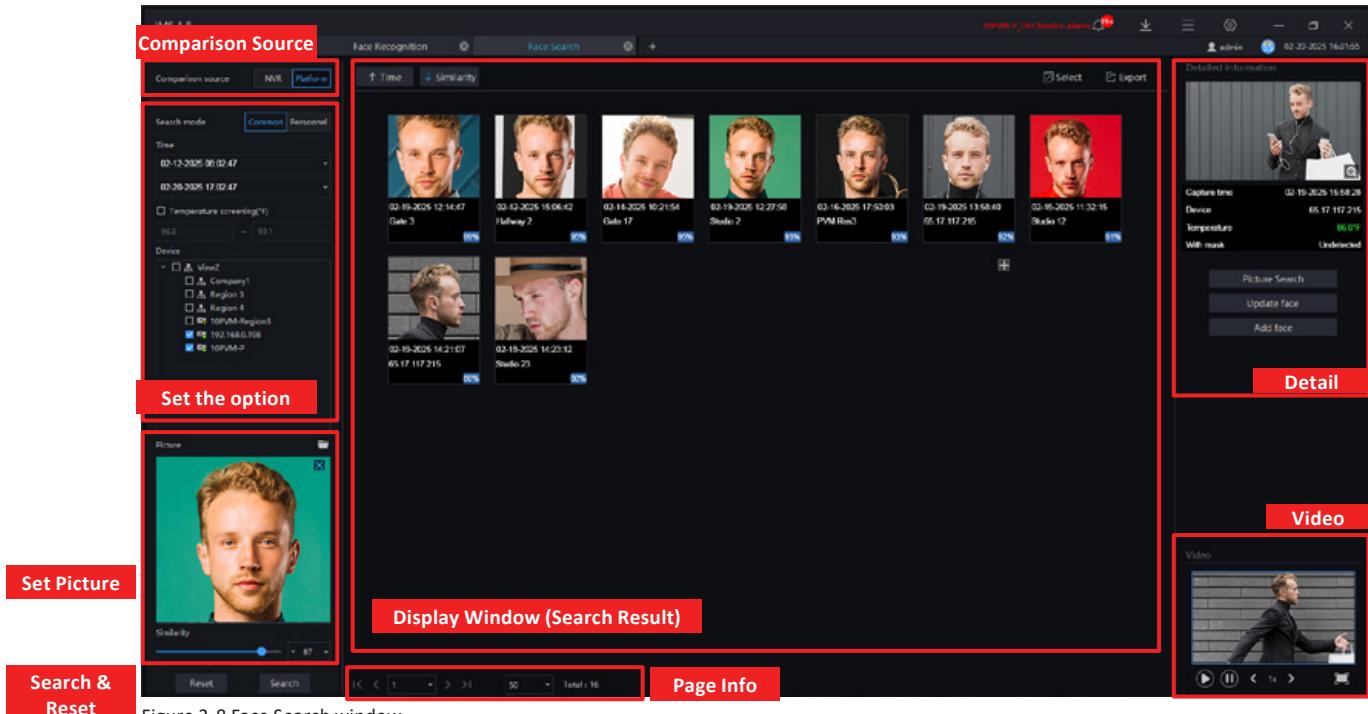


Figure 3-8 Face Search window



Step 1 Click  **Face Search** icon on **Common Functions / All Features**. Then, user can see & setup parameters of **Face Search** as shown in Figure 3-8.



Step 2 Setup the default **Face Recognition** parameters as shown in Table 3-7



Note

- On the comparison source, platform means registered devices and group. And NVR will not be described in this user manual.
- Searched data (captured face image) will be shown as a block card.

FEATURES

FACE RECOGNITION / FACE SEARCH

Table 3-7 Face Search configuration parameter

Parameter	DESCRIPTION	Setting
COMPARISON SOURCE	Select a source between registered NVR & Platform	Default: Platform
SEARCH MODE	Select a Search Mode between Common & Personnel	Default: Common
RESULT OF SEARCH	<p>Display the search result which will show the captured time, captured device and similar percentage</p> <p>Click button to sort searched data as time.</p> <p>Click button to sort searched data as similar captured face images</p> <p>Click button to export searched data as an Excel file with captured images</p>	Default: Blank
SEARCH	Click button to search captured images based on the option of time, person type, device, face library & added face image	
RESET	Click button to reset the option of SEARCH MODE	
PAGE INFO.	Display the total number of searched data (captured face images) and select a number of searched data per page	
DETAILED INFO.	When user clicks a searched face image block, user will see the detailed information.	
VIDEO	When user selects a searched data block and selected data block has a recorded video, user can directly see the recorded video on this window.	

FEATURES

FACE RECOGNITION / FACE SEARCH - Common Search

 **Step 3** Setup the **Face Search / Common** parameters as shown in Table 3-8.

- 1) Select a **Common** tab on **Search Mode**
- 2) Select a duration of Time
- 3) Select the registered device or group to search a face image
- 4) Add a face image to search similar face images on the database of IMS system.
- 5) Click **Search** button and see the result

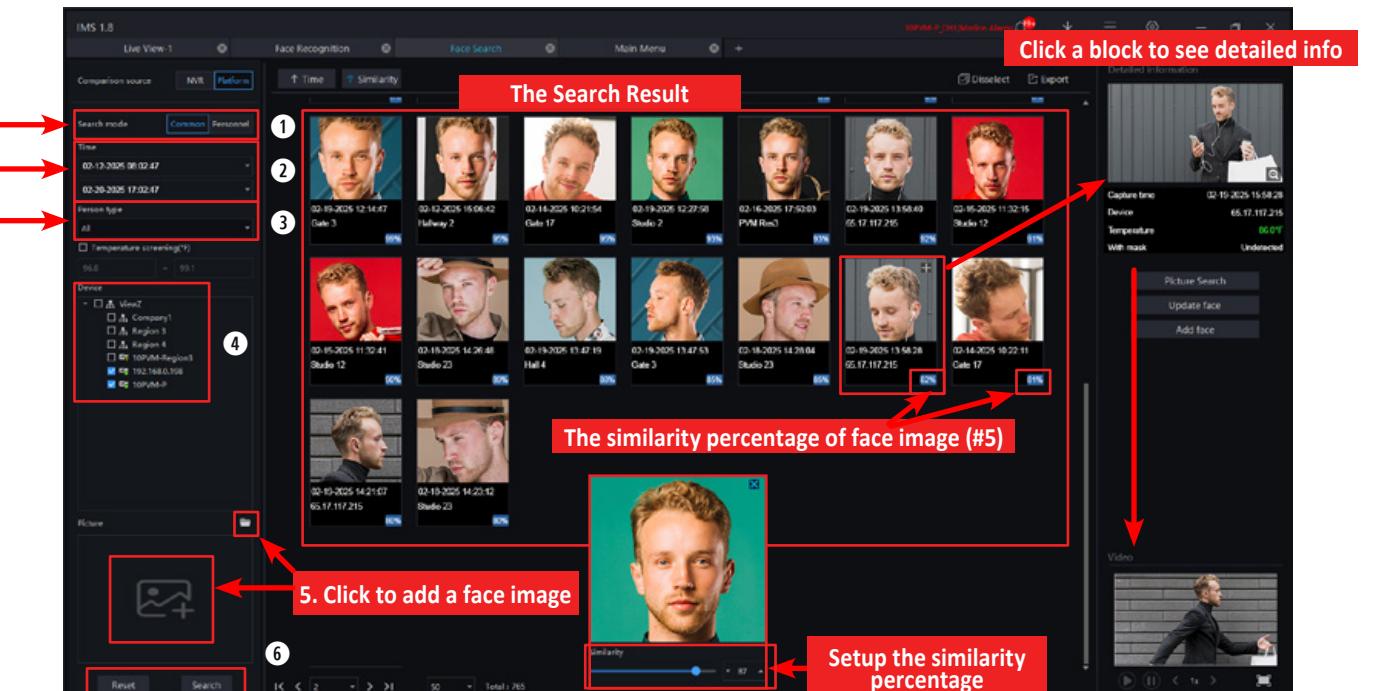


Figure 3-9 Face Search - Common Search window

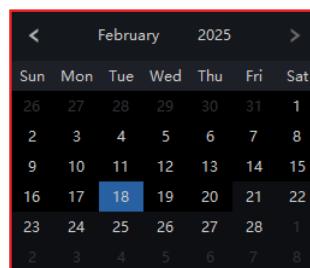


Figure 3-9 Face Search - Common Search window



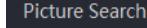
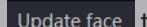
Note

- When user setup the period of time, please setup the specific time. If user setup too long period of time, it will take a time to process it.
- When user add a face image, user can setup the similarity percentage from searched face images.

FEATURES

FACE RECOGNITION / FACE SEARCH - Common Search

Table 3-8 Face Search - Common Search configuration parameters

Parameter	DESCRIPTION	Setting
COMMON	Search a face image saved on IMS system.	
TIME	Set the period of time	Default: Current Time (Start/End)
PERSON TYPE	<p>Set which type of person will be found on this feature</p> <p>Person Group: search the similar face snapshots under registered face image data only</p> <p>Show Only Stranger: search face snapshots under non-registered face images only</p> <p> NOTE This feature is only available without adding face image</p>	Default: All
DEVICE	Select which group or devices' captured face images will be searched and listed	Default: All devices
PICTURE	Click  button to add a face image from local PC.	
SEARCH RESULT	List the search result as blocks. Each block shows a captured time, device name and similar percentage.	
PICTURE SEARCH	Select a face snapshot from search result, and click  button to search similar face images from search result.	
UPDATE FACE	Select a face snapshot from search result, and click  to update/add a registered face image.	
ADD FACE	Select a face snapshot from search result, and click  button to add the selected face image to Face Library.	



Note

- Update face image refers to page xx
- Add face image refers to page xx

FEATURES

FACE RECOGNITION / FACE SEARCH - Personnel Search

 Step 4 Setup the **Face Search / Personnel** parameters as shown in Table 3-9.

- 1) Select a **Personnel** tab on the **Search Mode**
- 2) Select a duration of Time
- 3) Select a person who needs to be searched
- 4) Select the registered device or group to search a face image
- 5) Click **Search** button and see the result

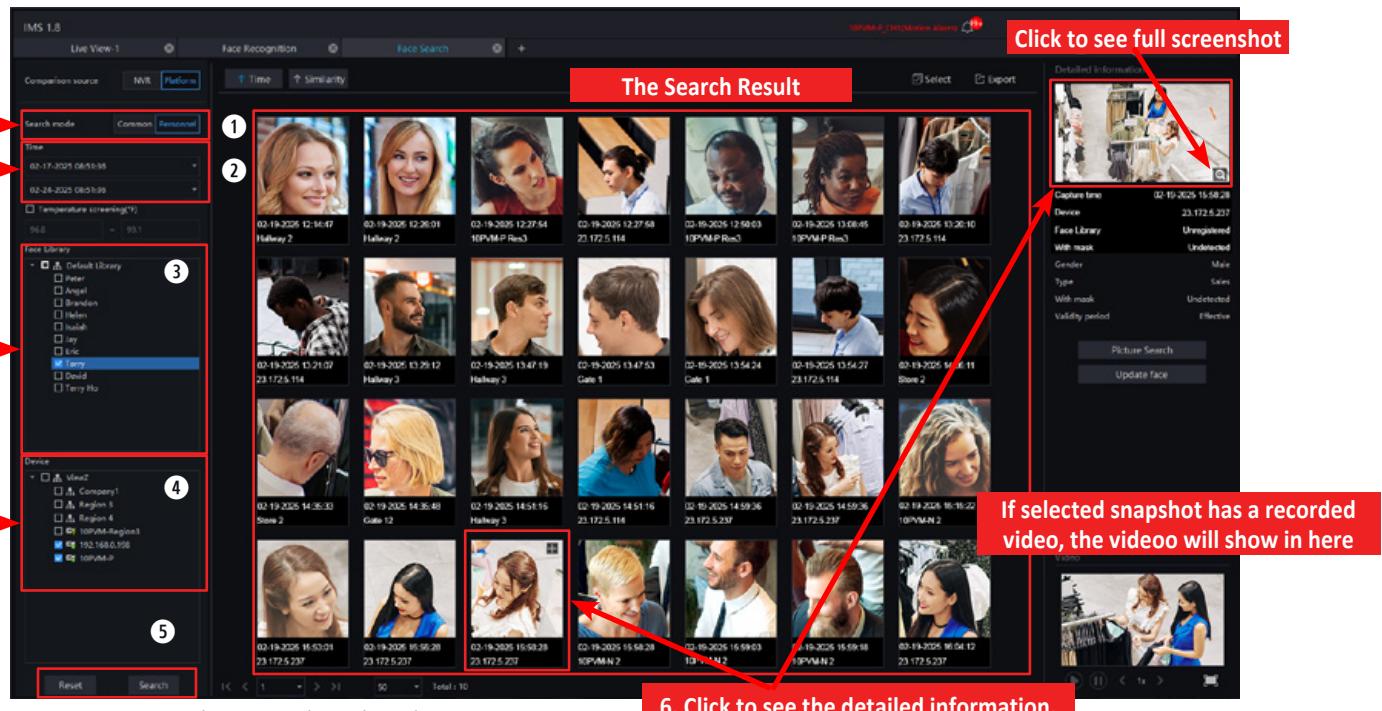


Figure 3-10 Face Search - Personnel Search window

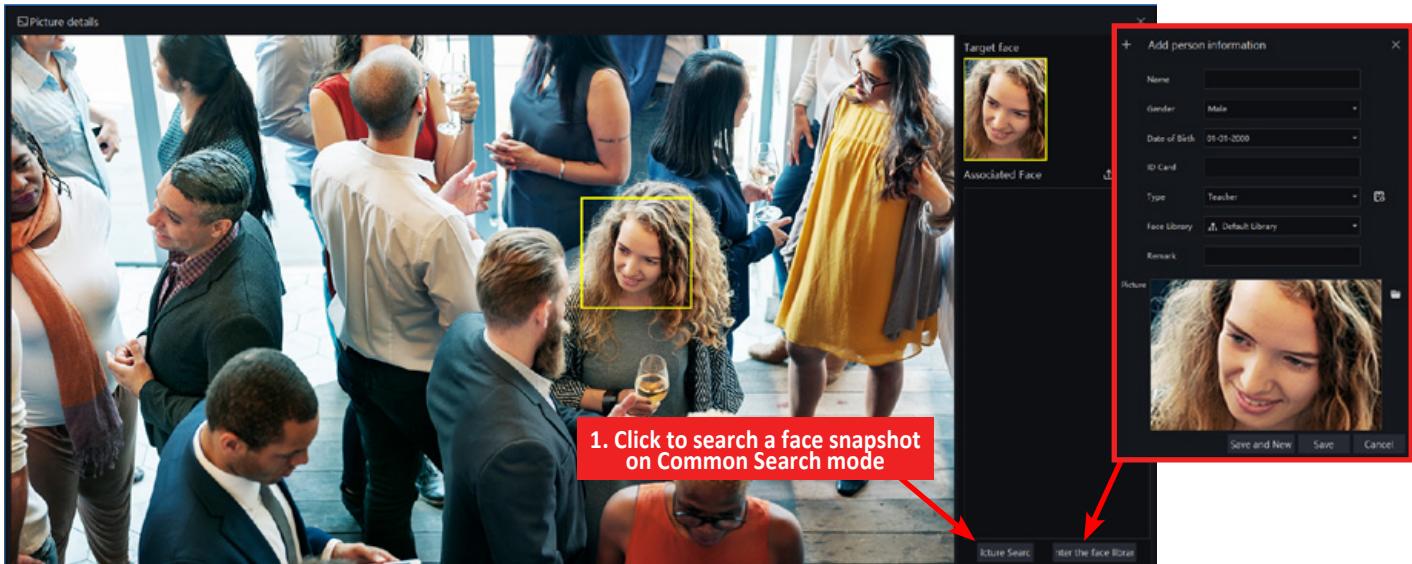


Figure 3-11 Face Search - Personnel Search window

FEATURES

FACE RECOGNITION / FACE SEARCH - Personnel Search

Table 3-9 Face Search - Personnel Search configuration parameters

Parameter	DESCRIPTION	Setting
PERSONNEL	Search a face image matching with registered face images.	
TIME	Set the period of time	Default: Current Time (Start/End)
FACE LIBRARY	Select a person who will be searched on the snapshot database of IMS system	Default: All
DEVICE	Select which group or devices' captured face images will be searched and listed	Default: All devices
SEARCH RESULT	List the search result as blocks. Each block shows a captured time, device name and so on.	
PICTURE SEARCH	Select a face snapshot from search result, and click Picture Search button to search similar face images from search result.  NOTE This feature will switch the current view to the Common window	
UPDATE FACE	Select a face snapshot from search result, and click Update face to update/add a registered face image.	
PICTURE DETAIL	When user click a snapshot on search result, user can see the detailed info on Detailed Information window. Click  button to launch a Picture Details window. From this window, user can see the full screen shots, register a current face image & jump to the Common search mode.	



Note

- Update face image refers to page xx
- Add face image refers to page xx
- When user setup the period of time, please setup the specific time. If user setup too long period of time, it will take a time to process it.

FEATURES

FACE RECOGNITION / FACE SEARCH - Update Face / Add Face

 **Step 5** Setup the **Face Search / Update & Add Face** parameters as shown in Table 3-10.

- 1) After listing of search result, user can add the selected snapshot to **Face Library** (person data) or update face image library by clicking  button of selected face image.
- These features are same as **Update Face & Add Face**, on **Detailed Information** window.

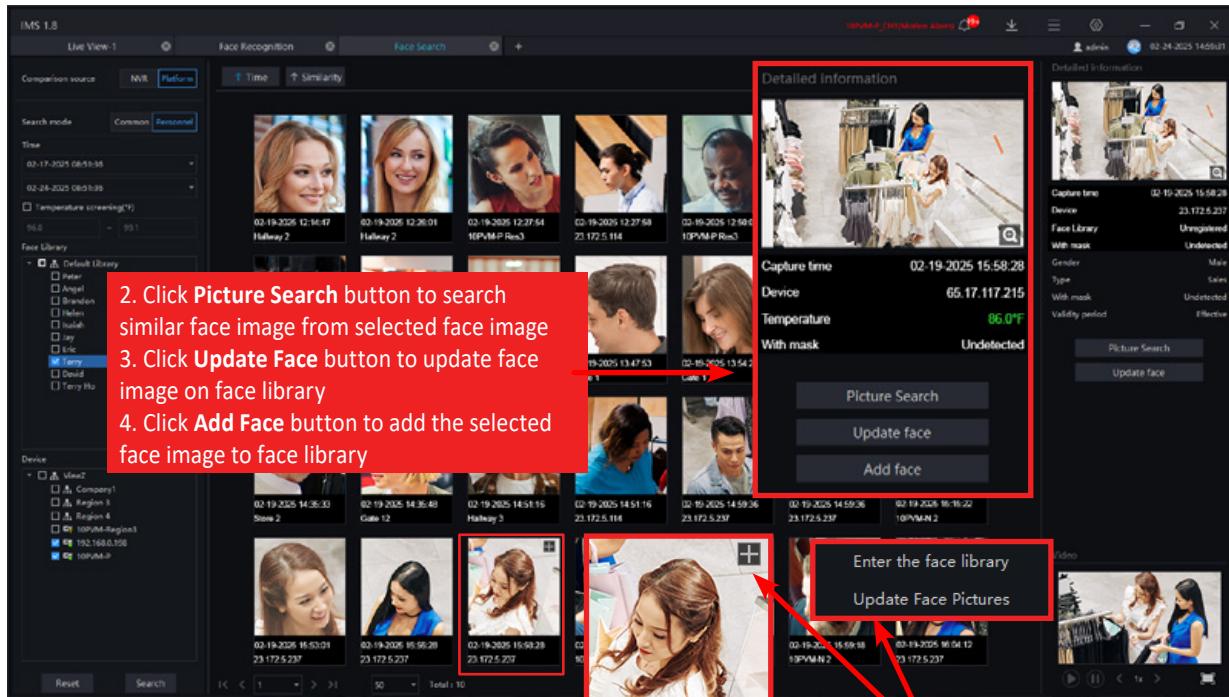


Figure 3-10 Face Search - Personnel Search window

1. Click  button to add or update face image to face library
- 2) Click **Update face** button on **Detailed Information** window. User can add several face snapshots to the existing **Face Library** data. This feature helps to find more correct face image from snapshots. When user click this button, user will see below popup window.

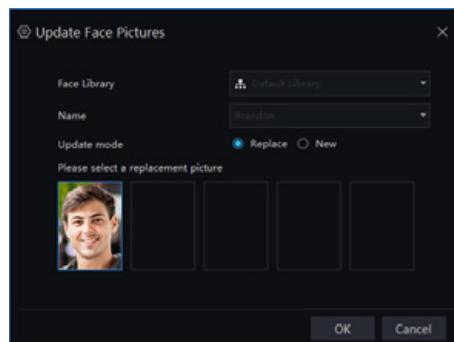


Figure 3-12 Update Face Picture window

FEATURES

FACE RECOGNITION / FACE SEARCH - Update Face / Add Face

3) Click **Add face** button on **Detailed Information** window. User can add a face image with detailed information to the **Face Library** (person data).

Figure 3-13 Add Person Information /
Basic Information window

Figure 3-13 Add Person Information /
Access Control window



Note

- Add face image refers to page xx

FEATURES

FACE RECOGNITION / FACE LIBRARY MANAGE

Description

On the **Face Lib Manage** window, user (admin) can create multilevel **Face Library** (Personnel data library) directories and add/edit personal information with multiple parameters, such as face images, ID number and etc. That is, when user (admin) make a data of person and the registered AI PVM's camera detects a face, this captured face image will be compared with the **Face Library** (Personnel data library) and IMS system let user(admin) know who was captured.

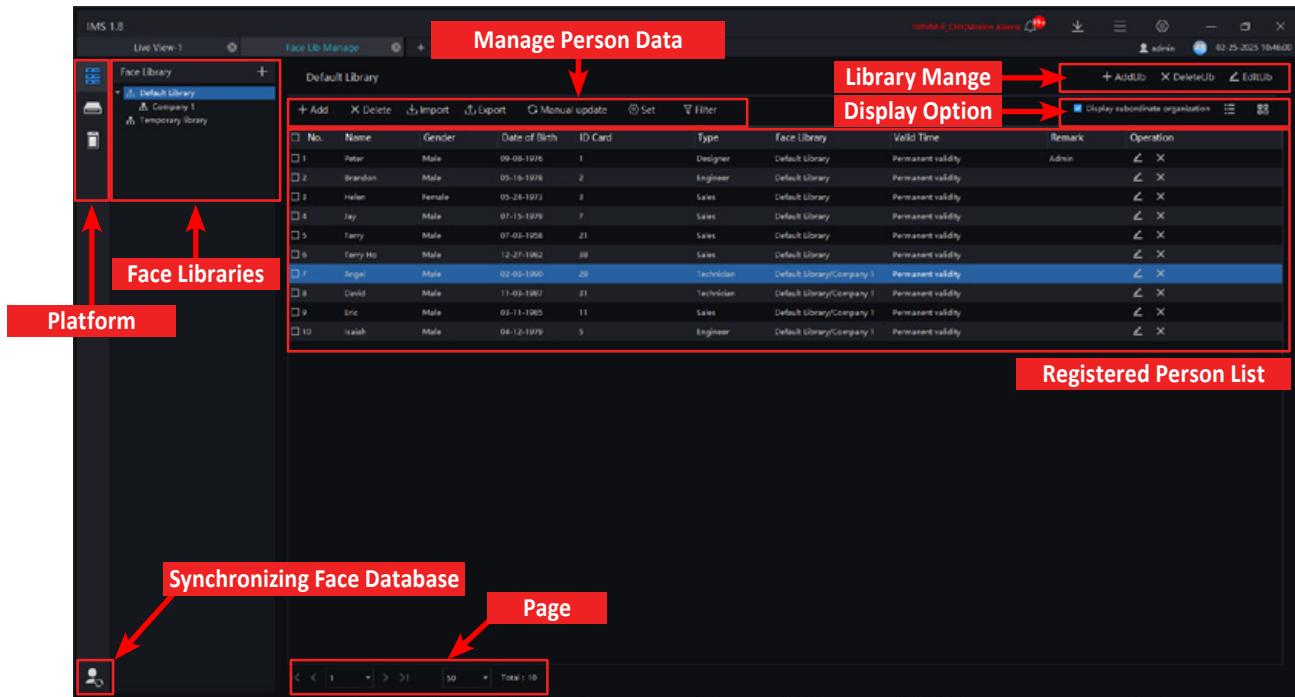


Figure 3-14 Face Library Manage window

- ▶ **Step 1** Click **Face Lib Manage** icon on **Common Functions / All Features**. Then, user can see & setup parameters of **Face Lib Manage** as shown in Figure 3-14.
- ▶ **Step 2** Setup the default **Face Lib Manage** parameters as shown in Table 3-11



Note

- **Synchronizing database** is not available on AI PVM.
- When user creates groups, the group can be using for specific usage.

FEATURES

FACE RECOGNITION / FACE LIBRARY MANAGE

Table 3-11 Face Library Manage configuration parameters

Parameter	DESCRIPTION	Setting
PLATFORM	User can select a platform - Face Library, NVR & Face Recognition Panel.  NOTE Face Library is only applicable for AI PVM	Default: Face Library
FACE LIBRARY	List of Face Library	Default: Default Library
MANAGE	Manage the personnel data	
LIBRARY MANAGE	Add, delete & edit a Face Library	
DISPLAY OPTION	User can select a display type of personnel data and show personnel data of low level library	
PERSON LIST	List of registered personnel data	
PAGE	Manage the database page	
SYNCHRONIZING	Synchronize the updated face snapshot with the existed database	

 **Step 3** Check up 'Display Subordinate Organization' box to display all personnel data of **Face Libraries**. If this option is off, user (admin) will only see the personnel data of selected **Face Library**.

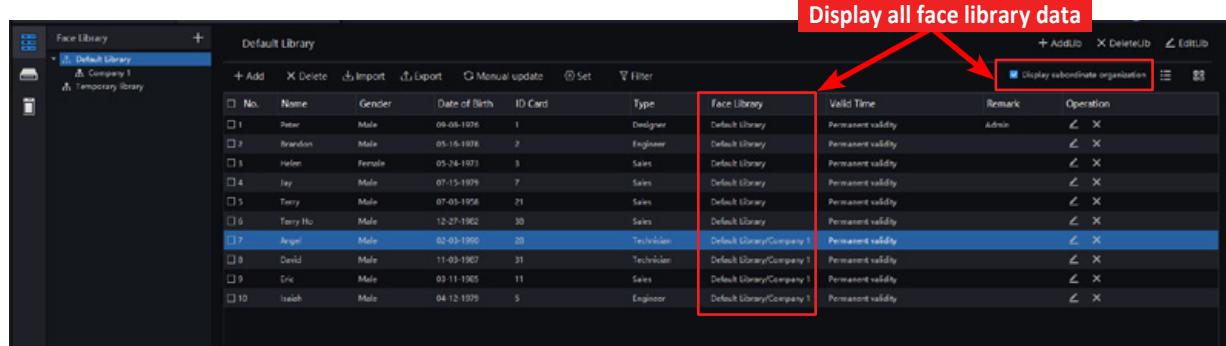


Figure 3-16 Face Library Manage - Display Subordinate Organization window

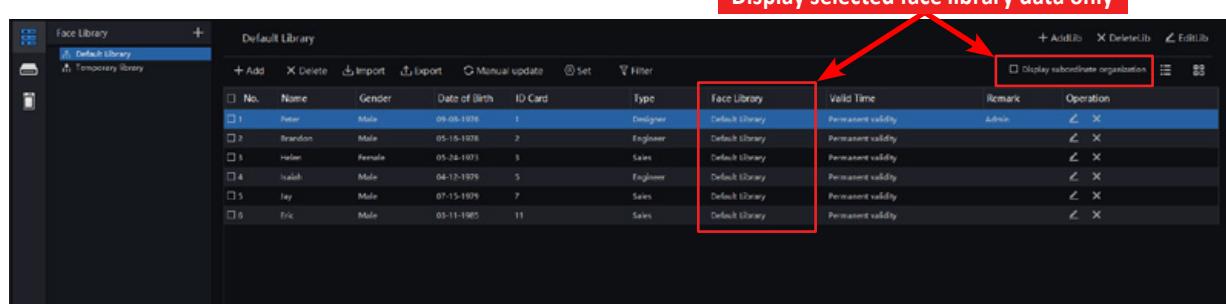


Figure 3-16 Face Library Manage - Display Subordinate Organization window

FEATURES

FACE RECOGNITION / FACE LIBRARY MANAGE - DISPLAY OPTION

 Step 4 Click  button to display personnel data as a list type or click  button to display face images as block type.

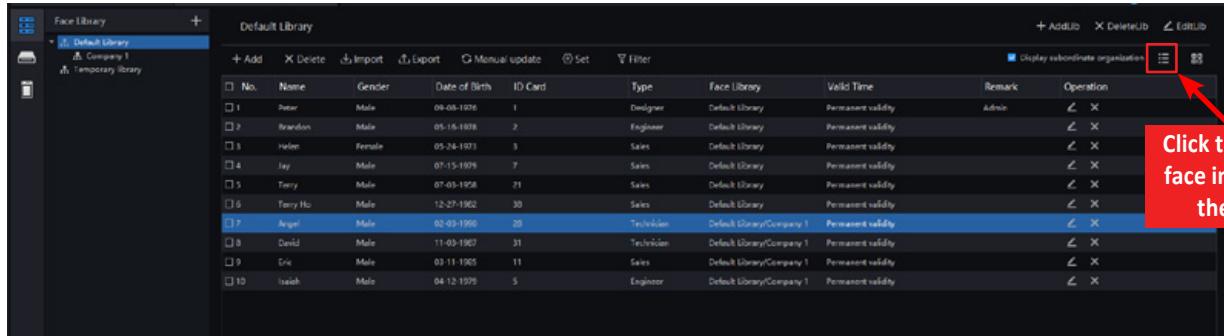


Figure 3-17 Face Library Manage - Display List Mode window

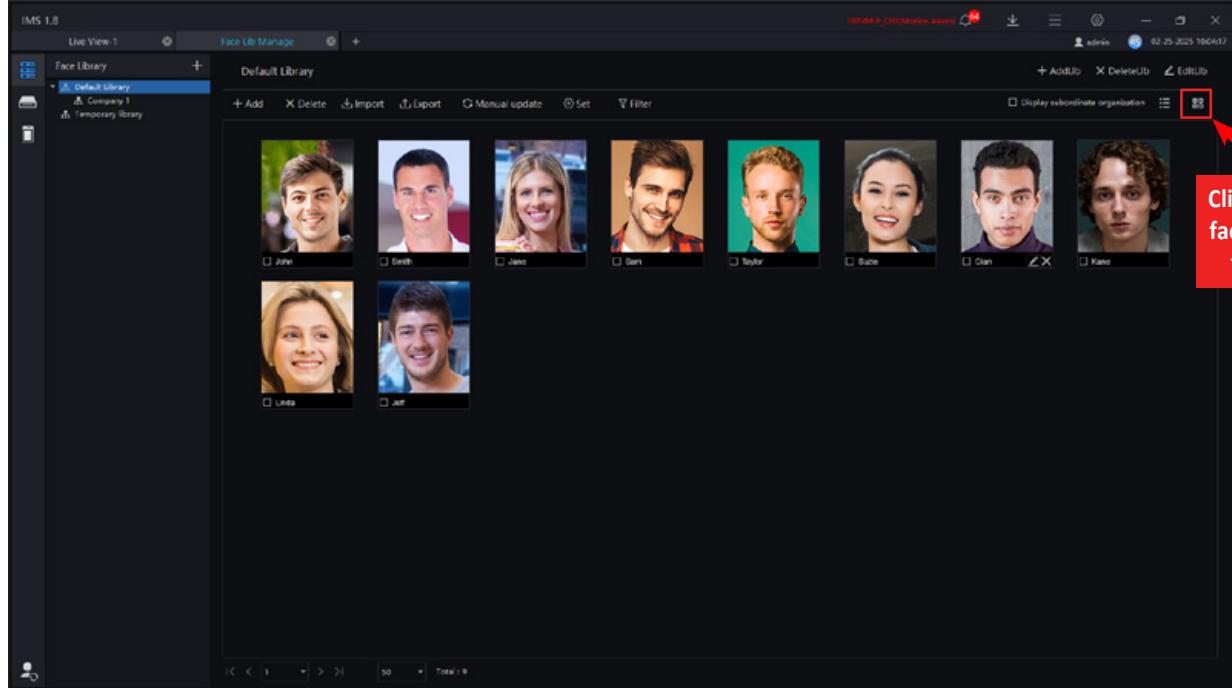


Figure 3-17 Face Library Manage - Display Card Mode window

FEATURES

FACE RECOGNITION / FACE LIBRARY MANAGE - LIBRARY

 Step 5 Click **+ AddLib** button (on the top right corner) or **+** (on the top left corner) button to create a **Face Library**. Also, user (admin) can edit or delete **Face Libraries**.

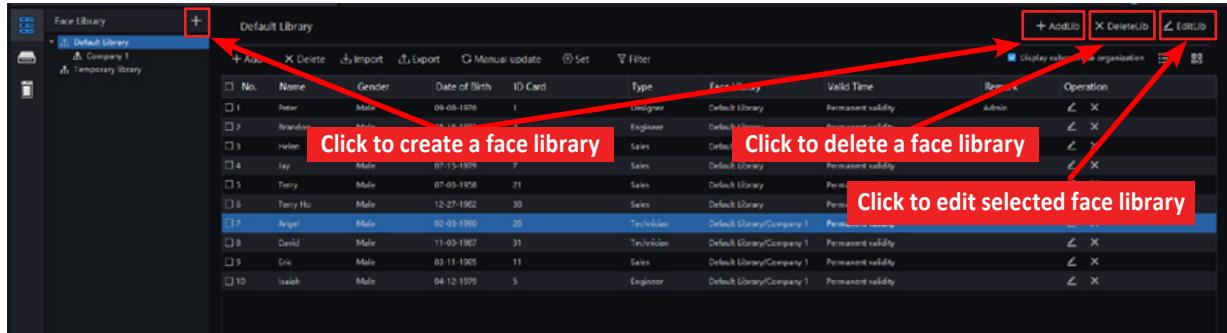


Figure 3-14 Face Library Manage window

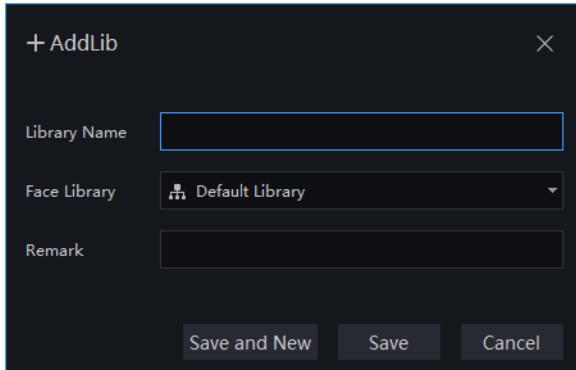


Figure 3-18 Face Library Manage - Add Lib window

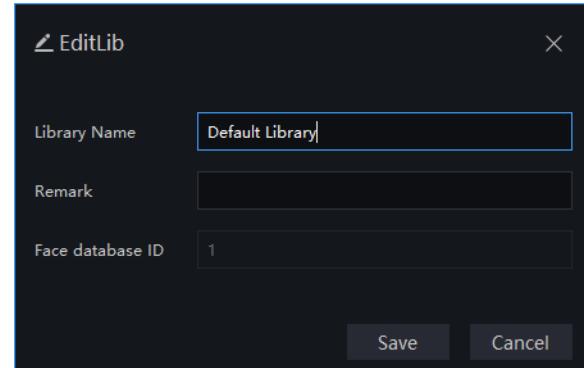


Figure 3-18 Face Library Manage - Edit Lib window



Note

- **Default Library** cannot be deleted or edited.
- User can only create face libraries under **Default Library**.

FEATURES

FACE RECOGNITION / FACE LIBRARY MANAGE - MANAGE PERSONNEL DATA

Step 6 On the operation menu, user (admin) can add, edit & delete a personnel data. User can also import & export personnel data as an excel file, and manually update face images on the selected **Face Library**.

Step 7 Setup the default **Face Lib Manage / Operation** parameters as shown in Table 3-12

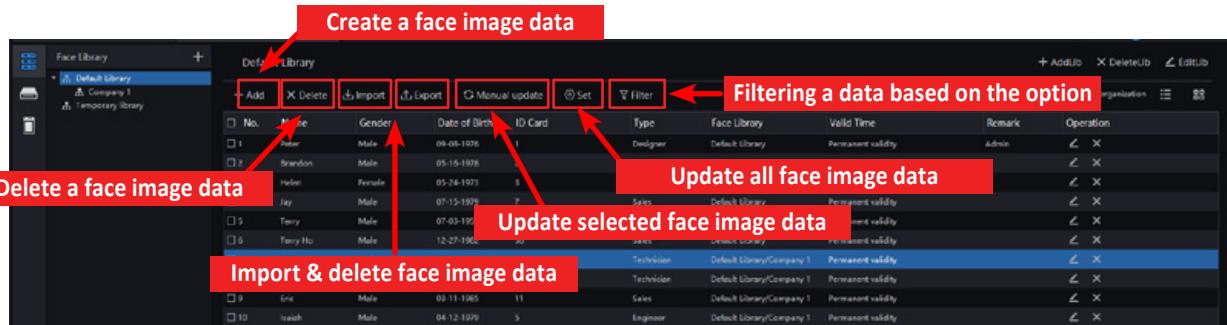


Figure 3-14 Face Library Manage window

Figure 3-12 Face Library Manage configuration parameters

Parameter	DESCRIPTION	Setting
ADD	Click + Add button to add a personnel data	
DELETE	Click X Delete button to delete a personnel data	
IMPORT	Click Import button to import personnel data (image, form & template) file from local PC, or import device data information	
EXPORT	Click Export button to export personnel data or template file	
MANUAL UPDATE	Click Manual update button to update face images	
SET	Click Set button to setup the automatic update of face images	
FILTER	Click Filter button to filter (or search) a personnel data based on the option	



Note

- **Access Control** feature is not available on AI PVM
- On the **Picture**, User can add several face images to increase the comparison rate (correct of comparison)

FEATURES

FACE RECOGNITION / FACE LIBRARY MANAGE - MANAGE PERSONNEL DATA

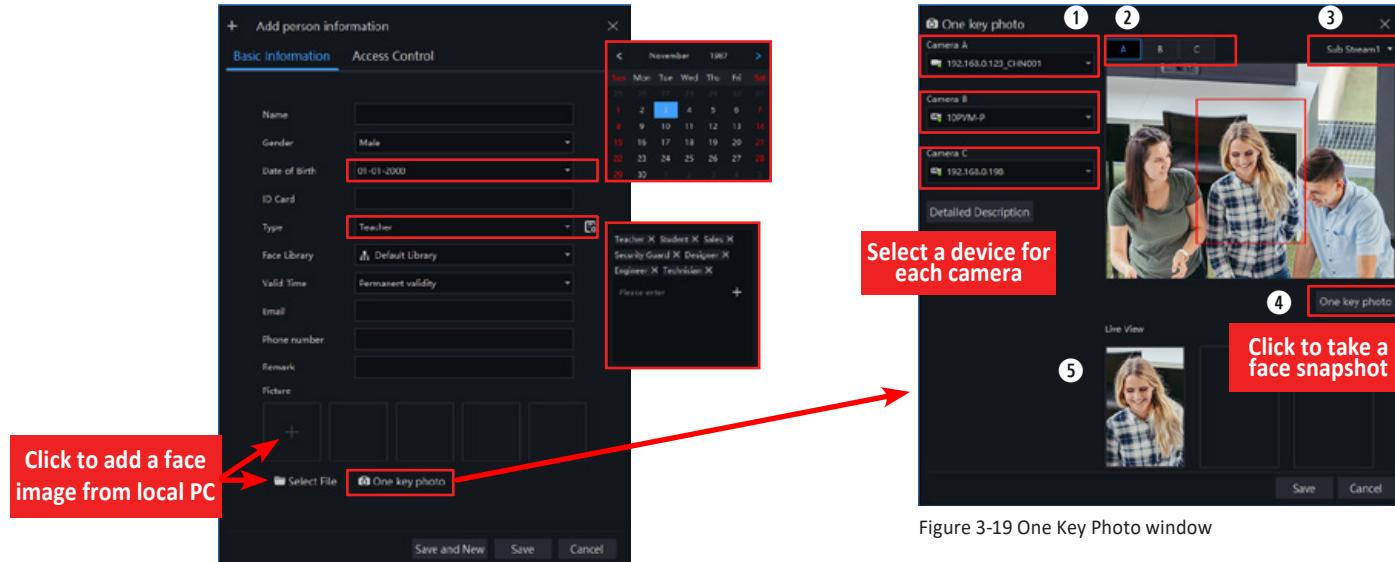


Figure 3-19 One Key Photo window

Figure 3-19 Add Personnel Information window

Table 3-13 Face Library Manage - Add Personnel Information configuration parameters

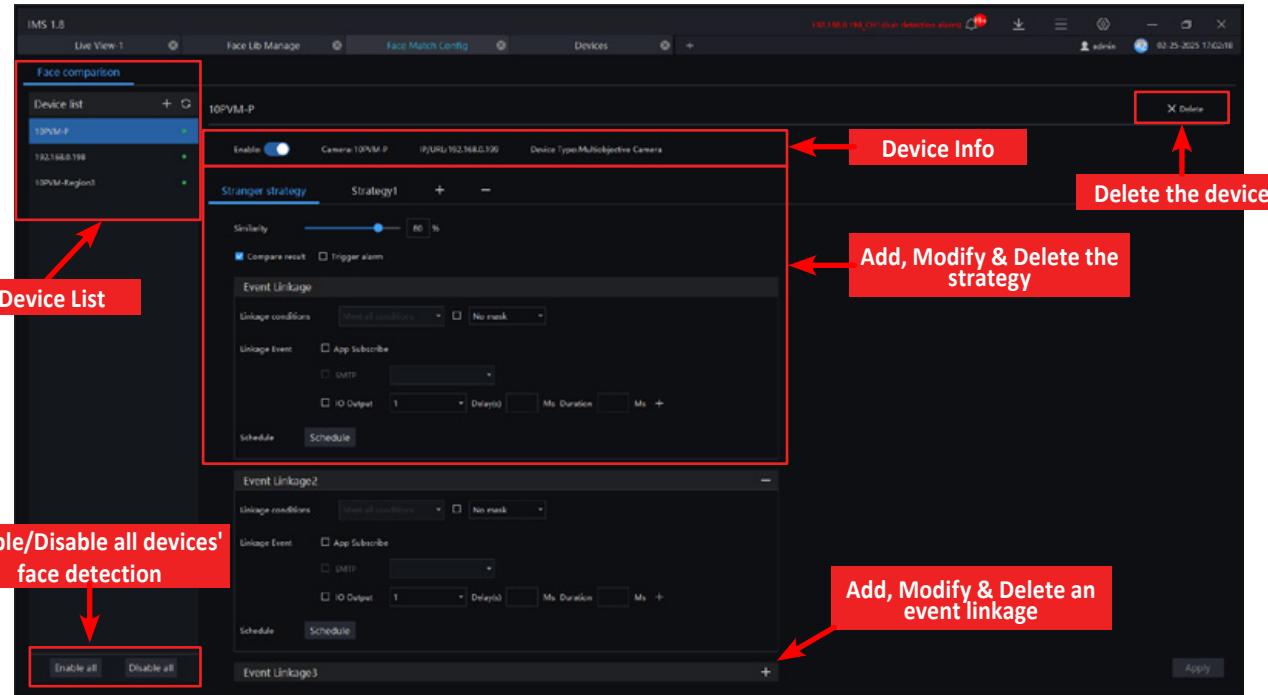
Parameter	DESCRIPTION	Setting
NAME	Type a name of person	
GENDER	Select a gender	
DATE OF BIRTH	Select a date of birth	
ID CARD	Type an ID of person	
TYPE	Select a position of person. Also, user can create a type (position, job or etc) for a person	
FACE LIBRARY	Select a Face Library	
VALID TIME	Select a valid time of personnel information	Default: Permanent Validity
EMAIL	Type an email address	
PHONE NUMBER	Type a phone number	
REMARK	Type a note	
PICTURE	Click <input type="file"/> Select File or <input type="button"/> One key photo button to add a face image	
ONE KEY PHOTO	Click One key photo button to take a face snapshot directly from registered devices	
CAMERA A,B,C	Select 3 cameras to take face snapshots	
STREAM	Select a camera stream - Main, Sub1 & Sub2	
ONE KEY PHOTO	Click One key photo button to take a face snapshot	

FEATURES

FACE RECOGNITION / FACE MATCH CONFIG

Description

On the **Face Match Configuration** window, user(administrator) can add a comparison strategy between the camera and the face library for different cameras to be compared with different face databases. When the camera detects a face, it only compares with the chosen library. Thus, user can setup an alarm notice based on the setup of **Face Match Config**.



Step 1 Click  **Face Match Config** icon on **Common Functions / All Features**. Then, user can see & setup parameters of **Face Match Config** as shown in Figure 3-20.

Step 2 Setup the default **Face Match Config** parameters as shown in Table 3-14

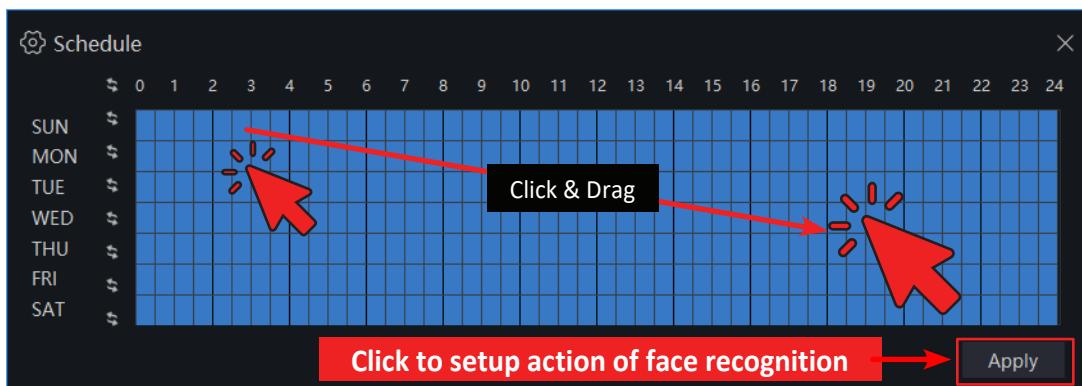
FEATURES

FACE RECOGNITION / FACE MATCH CONFIG

Table 3-14 Face Match Config - Setup face matching configuration parameters

Parameter	DESCRIPTION	Setting
DEVICE LIST	List devices which have a function of face detection	
DEVICE INFO	Detailed information of selected device	
DELETE	Delete the selected device	
STRATEGY	Add, modify or delete the strategy about stranger or registered personnel	
FACE LIB	Select the library using for face comparison	
SIMILARITY	Setup the similarity of face comparison	
COMPARE RESULT	Setup the result of comparison	Default: On
TRIGGER ALARM	Setup the trigger alarm	Default: Off
EVENT LINKAGE	Add, modify or delete the event linkage	
LINKAGE CONDITION	Select the linkage condition	Default: Off
LINKAGE EVENT	Setup the linked event - Apps, SMTP & IO Output	Default: Off
SCHEDULE	Setup the time of linkage event	Default: Off
ENABLE/DISABLE ALL	Enable or disable all devices' face detection function	

 **Step 3** Setup the **Schedule** of Face Match Config to make a time table on **Schedule**.



- On the schedule, hold down the left mouse button, drag and release mouse to select the deployment time within 0:00-24:00 from Monday to Sunday.
- User can setup a specific time range & delete a day schedule by clicking the blue bar on time table

FEATURES

FACE RECOGNITION / FACE MATCH CONFIG

 **Step 4** After the setup of **Face Match Config**, user needs to add an alarm notification on **System > Alarm Notification**, to use this function.

 **Step 5** Click **+** to add an alarm notification. When user clicks this button, the alarm type window will be displayed and select **Comparison Alarm & Comparison/Stranger Alarm**.

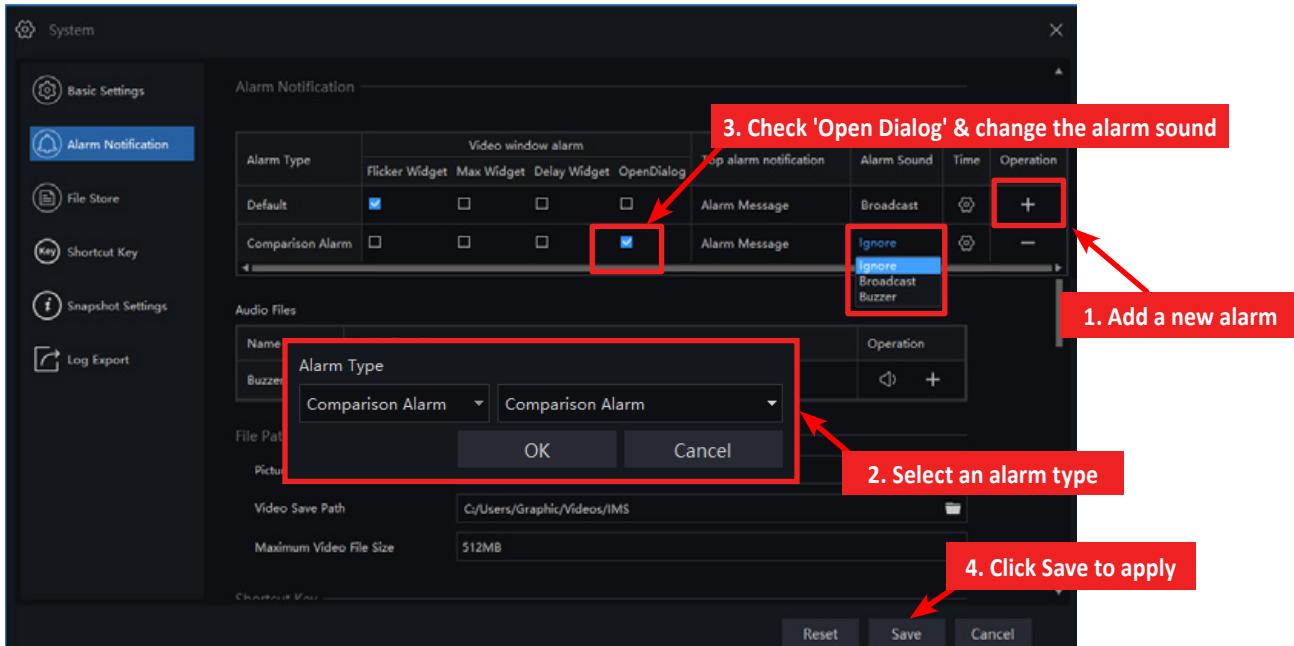


Figure 3-21 Face Match Config > Alarm Notification setup

 **Step 6** Click OK button to apply the new alarm notification.

 **Step 7** Check up Open Dialog box and setup the alarm sound if necessary.

 **Step 8** Click Save button to apply this updated value.

FEATURES

FACE RECOGNITION / FACE MATCH CONFIG

 **Step 9** After the setup of **Alarm Notification** & **Face Match Config**, user can always see the alarm notification window (with sound) on the IMS.

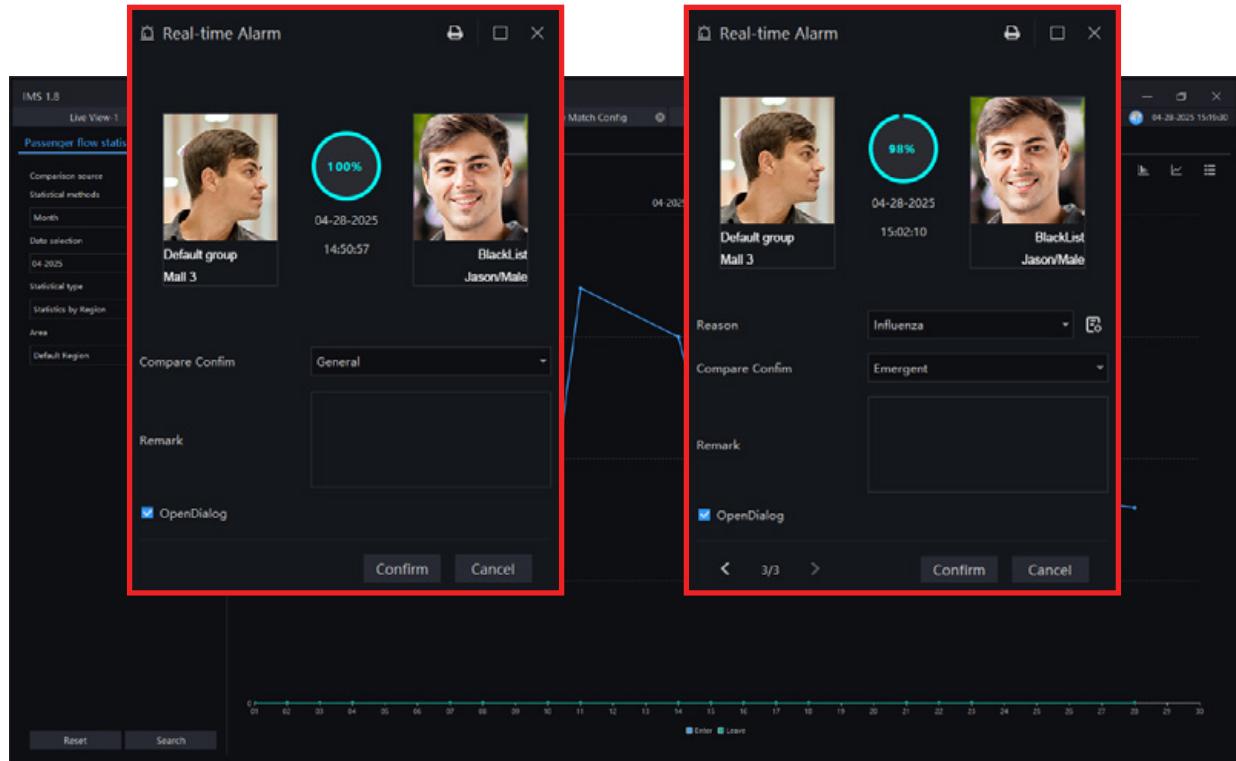


Figure 3-22 Face Match Config - Real Time Alarm window



Note

- To use the specific real-time alarm notification, user needs to select an **User Group**, add the new **Alarm Notification** and setup the **Face Match Config**.

FEATURES

FACE RECOGNITION / CLASSIFICATION QUERY

Description

On the **Classification Query** window, user (admin) can search a face snapshot with specific conditions, such as capture quality, similarity, ambiguity, confidence, face width & height size and pupil distance.

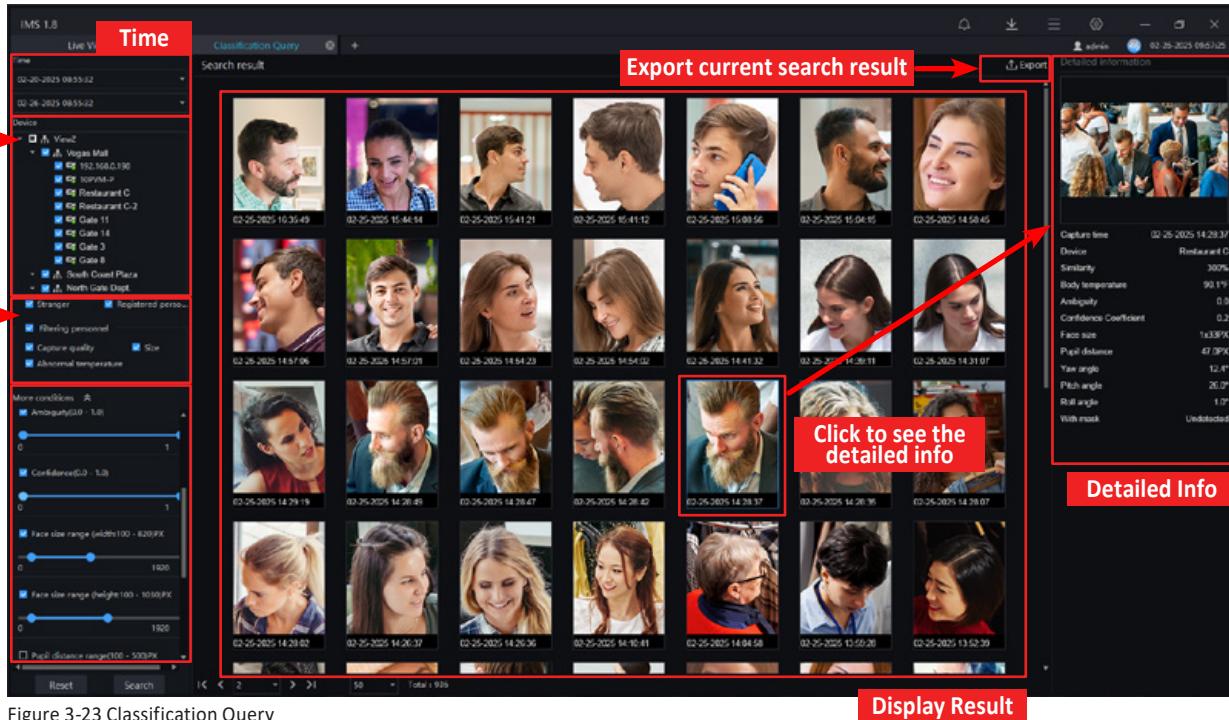


Figure 3-23 Classification Query

 **Step 1** Click  **Classification Query** icon on **Common Functions / All Features**. Then, user can see & setup parameters of **Face Match Config** as shown in Figure 3-23.

 **Step 2** Setup the default **Classification Query** parameters as shown in Table 3-15



Note

- This search result of classification query comes from all captured images, under the period

FEATURES

FACE RECOGNITION / CLASSIFICATION QUERY

Table 3-15 Classification Query configuration parameters

Parameter	DESCRIPTION	Setting
TIME	Set the searching period	Default: Current Time
DEVICE LIST	Select devices which will be searched	Default: All registered devices
STRANGER	Search snapshots of all stranger	Default: ON
REGISTERED PERSONNEL	Search snapshots of all registered personnel	Default: ON
FILTERING PERSONNEL	Search snapshots of all stranger & registered personnel under condition of capture quality, size & abnormal temperature	Default: ON
CAPTURE QUALITY	Search specific snapshots from captured face images, based on the capture quality	Default: ON
SIZE	Search specific snapshots from captured face images, based on the size	Default: ON
ABNORMAL TEMP.	Search specific snapshots from captured face images, based on the abnormal temperature	Default: ON
MASK WEARING SCREENING	Search snapshots of masked/unmasked people	N/A
SIMILARITY	Search specific snapshots from captured face images, based on the similarity among registered personnel or strangers	Default: OFF (0 ~ 100)
BODY TEMPERATURE	Search specific snapshots from captured face images, based on the body temperature	Default: OFF (95 ~ 108°F)
AMBIGUITY	Search specific snapshots from captured face images, based on the ambiguity of facial expression	Default: OFF (0.0 ~ 1.0)
CONFIDENCE	Search specific snapshots from captured face images, based on the confidence of facial expression	Default: OFF (0.0 ~ 1.0)



Note

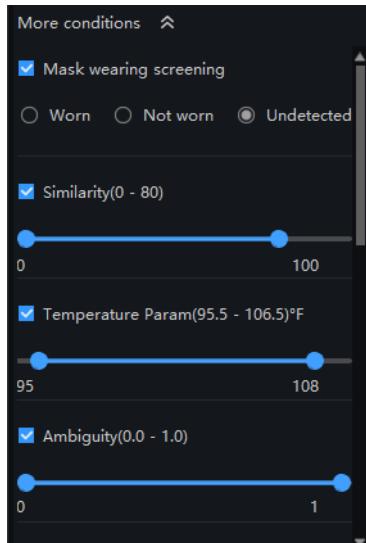
- If user setup the confidence value is 1, the search result of classification query will show confident face images. If the confidence value is 0, the search result of classification query will show uncomfortable face images on the search result.
- If user setup the ambiguity value is 1, the search result of classification query will show ambiguous face images. If the ambiguity value is 0, the search result of classification query will show unambiguous face images on the search result.
- 3 features (abnormal temperature, mask wearing screening & body temperature) are not applicable on ViewZ IP-PVMs

FEATURES

FACE RECOGNITION / CLASSIFICATION QUERY

Table 3-15 Classification Query configuration parameters

Parameter	DESCRIPTION	Setting
FACE SIZE	Search specific snapshots from captured face images, based on the width of face size	Default: OFF (0px ~ 1920px)
WIDTH RANGE	Search specific snapshots from captured face images, based on the height of face size	Default: OFF (0px ~ 1920px)
FACE SIZE	Search specific snapshots from captured face images, based on the pupillary distance (PD)	Default: OFF (0px ~ 1920px)
HEIGHT RANGE	Search specific snapshots from captured face images, based on the yaw angle	Default: OFF (0 ~ 90°)
PUPIL DISTANCE	Search specific snapshots from captured face images, based on the pitch angle	Default: OFF (0 ~ 90°)
YAW ANGLE	Search specific snapshots from captured face images, based on the roll angle	Default: OFF (0 ~ 90°)
PITCH ANGLE	Search result based on the given condition	Default: OFF (0 ~ 90°)
ROLL ANGLE	See the detailed information based on the result of classification query	



Note

- Yaw, pitch & roll angle features are not applicable on the IP-PVM

FEATURES

MULTI-TARGET RECOGNITION / AI RECOGNITION

Description

On the **AI Recognition** window, user (admin) can take a snapshot of personnel and gun by IP-PVM's AI cameras

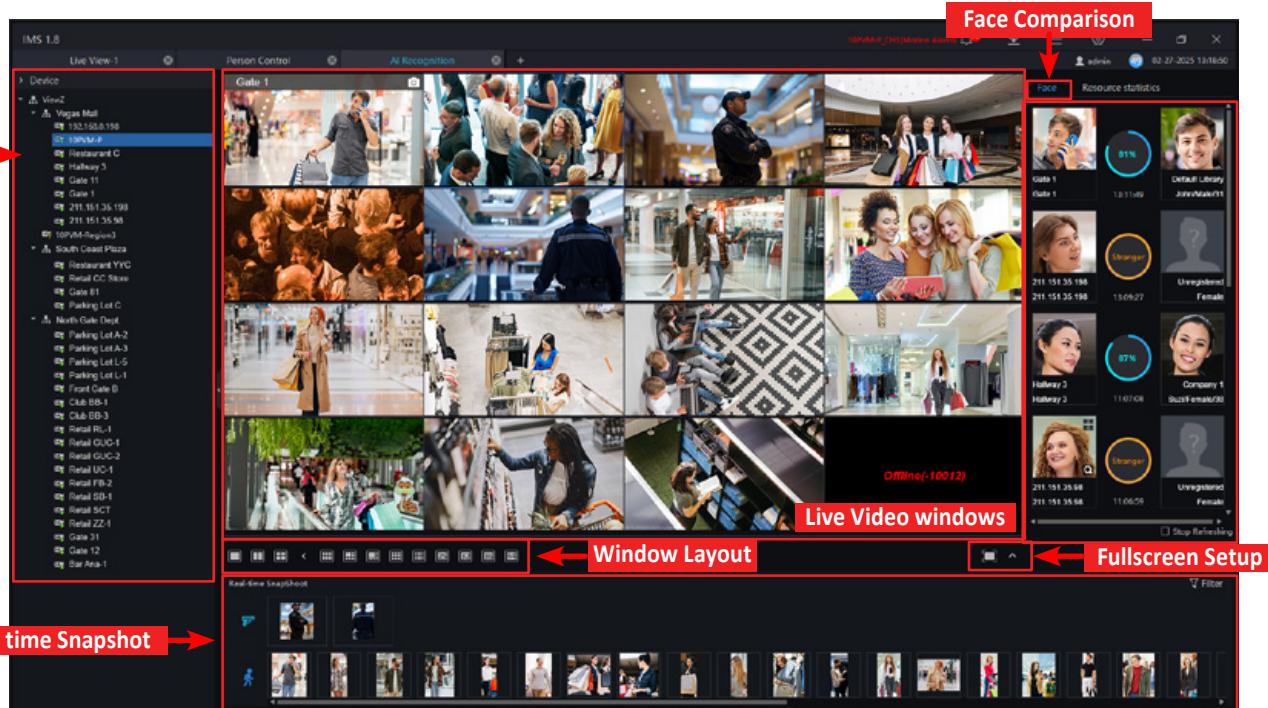


Figure 4-1 AI Recognition window

 **Step 1** Click  **AI Recognition** icon on **Common Functions / All Features**. Then, user can see & setup parameters of **AI Recognition** as shown in Figure 4-1.

 **Step 2** Setup the default **AI Recognition** parameters as shown in Table 4-1



Note

- This search result of classification query comes from all captured images, under the period

FEATURES

MULTI-TARGET RECOGNITION / AI RECOGNITION

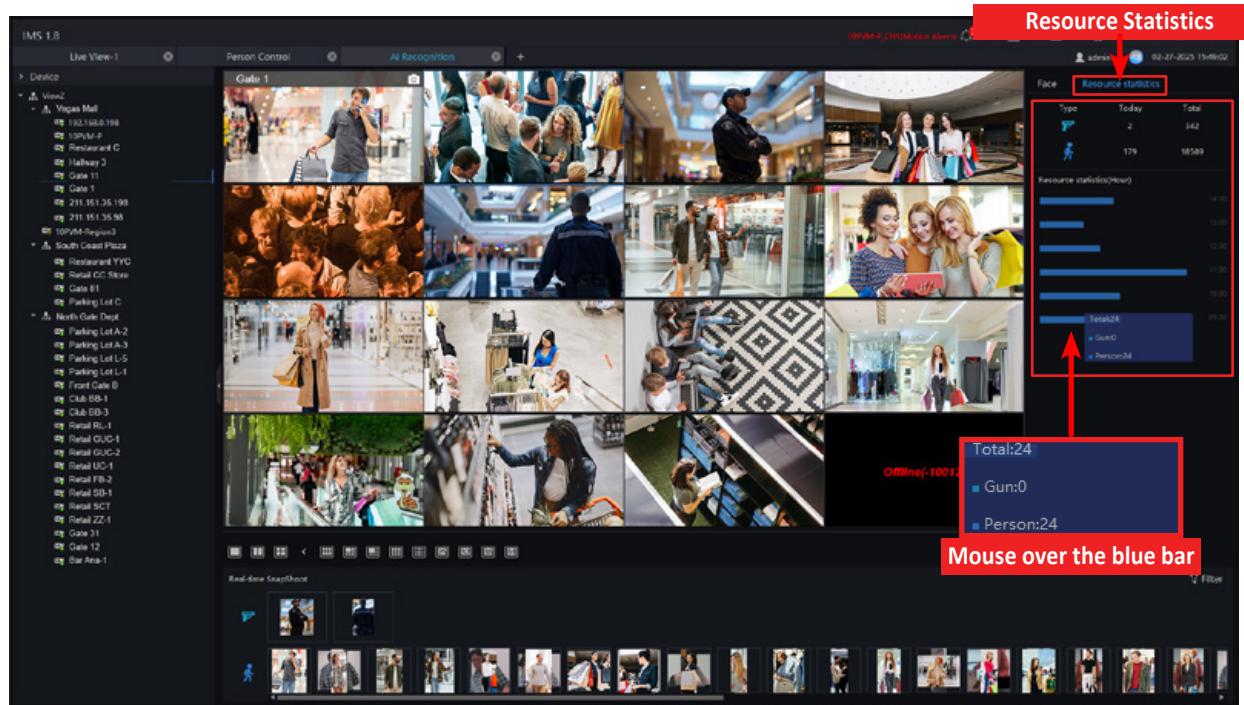


Figure 4-1 AI Recognition window

Table 4-1 AI Recognition parameters

Parameter	DESCRIPTION	Setting
DEVICE LIST	List of registered devices	
LIVE VIDEO	Display live videos based on the layout	
WINDOW LAYOUT	Select a layout among 1, 2, 4, 6, 8, 9, 16, 25, 32, 36 & 64 windows	Default: Single
FULLSCREEN SETUP	Setup the fullscreen or switching layout between fullscreen & selected layout per 5/10/15 seconds	Default: Disable fullscreen
REALTIME SNAPSHOT	Display the sequential snapshots of gun & personnel	
FILTER	Select options for which devices, gun and personnel will be displayed in the area of realtime snapshot	
FACE (COMPARISON)	Display the result of face comparison based on the Face Library	
RESOURCE STATISTICS	Display the detection number of gun & personnel based on the time table. When mouse over the graph, user can see the detection number at that time	

FEATURES

MULTI-TARGET RECOGNITION / WEAPON SEARCH

Description

On the **Weapon Search** window, user (admin) can search snapshots of person or gun by IP-PVM's AI cameras

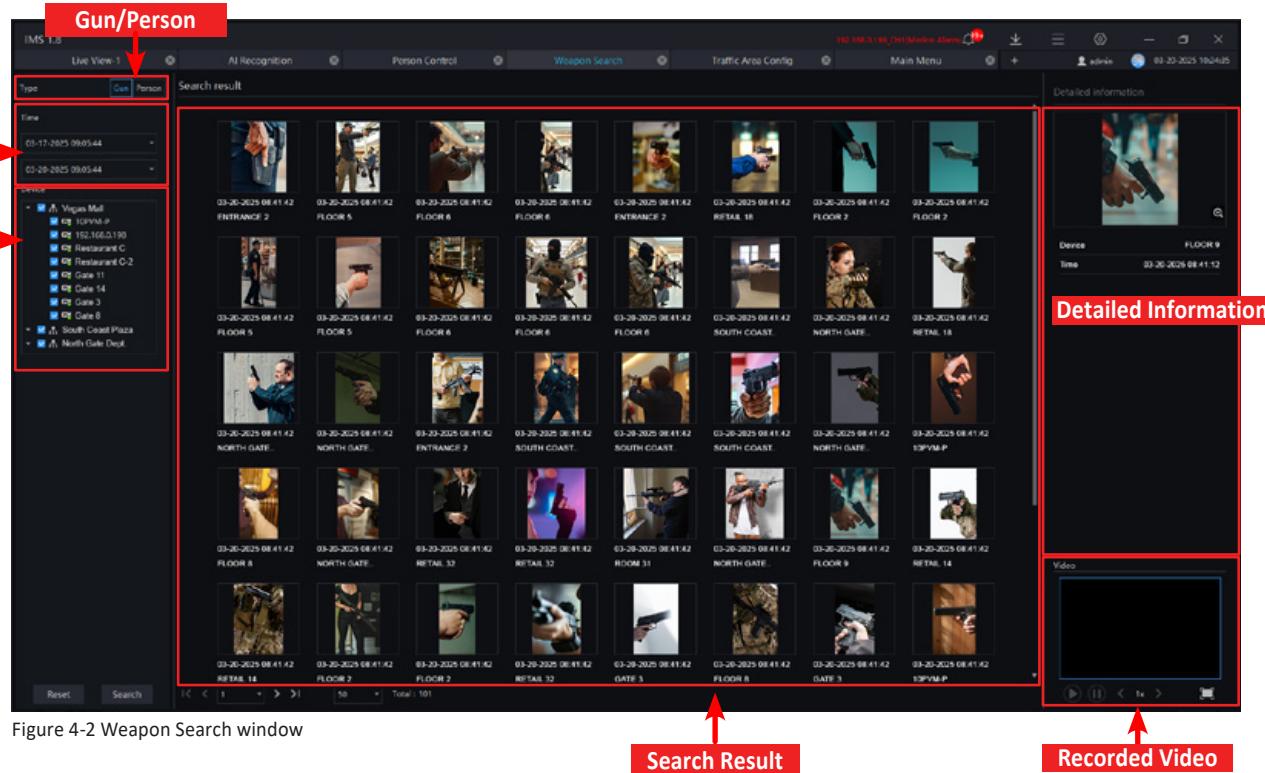


Figure 4-2 Weapon Search window

Step 1 Click  **Weapon Search** icon on **Common Functions / All Features**. Then, user can see & manage parameters of **Weapon Search** as shown in Figure 4-2.

Step 2 Setup the default **Weapon Search** parameters as shown in Table 4-2

FEATURES

MULTI-TARGET RECOGNITION / WEAPON SEARCH

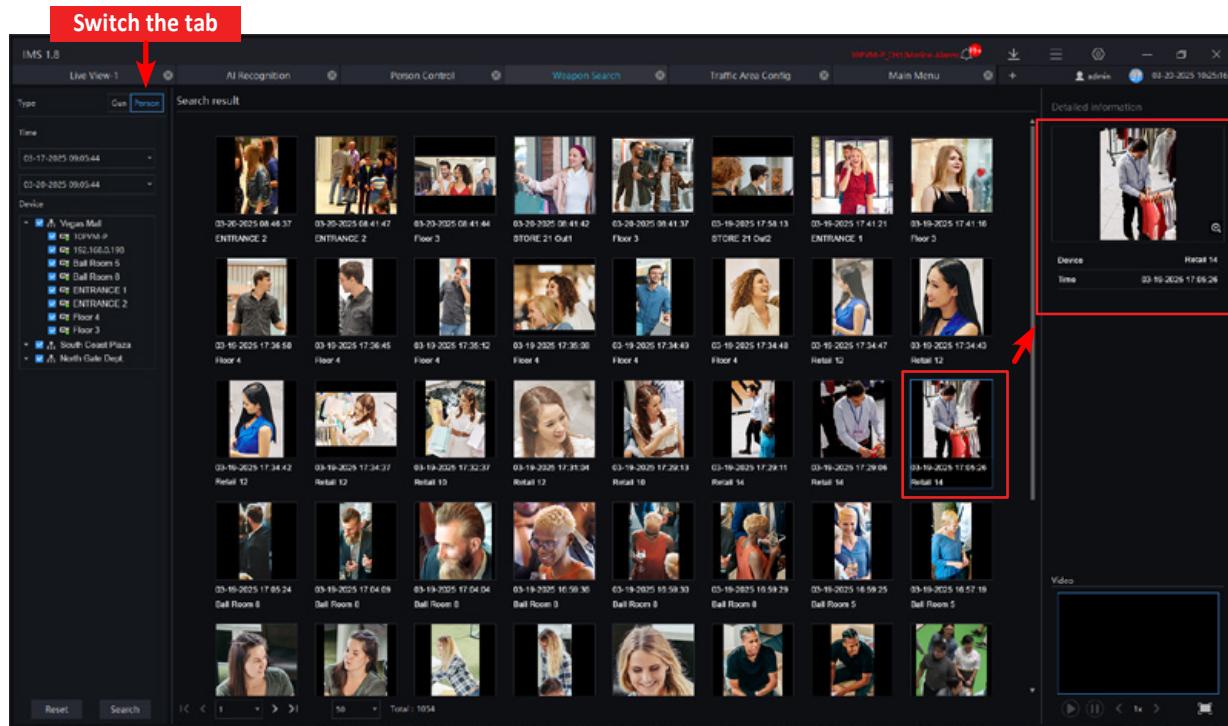


Figure 4-2 Weapon Search window

Table 4-2 Weapon Search parameters

Parameter	DESCRIPTION	Setting
GUN / PERSON	Select which type will be searched from recorded data	
DATE	Set the duration of time to search snapshots	Default: Current Time
DEVICE LIST	List of registered devices which will be searched	
SEARCH RESULT	Display the search result based on the option	



Note

- User can search the snapshot of gun from all recorded snapshot data.

FEATURES

MULTI-TARGET RECOGNITION / PERSON CONTROL

Description

On the **Person Control** window, this feature is to display human flow-related data in an intuitive way. There are three display modes: administrator, preview and traffic light, as shown in Figure 4-3.

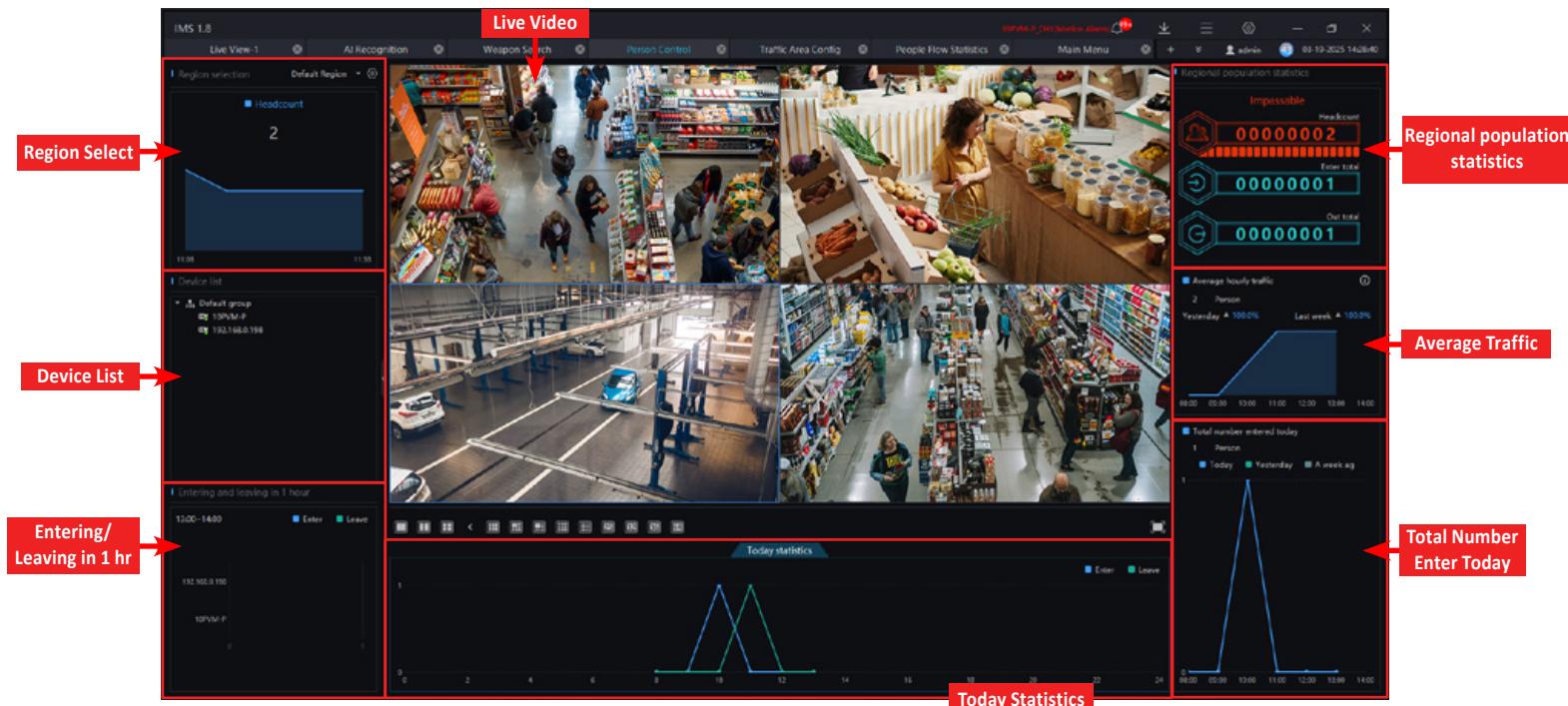


Figure 4-3 Person Control - Admin Display Mode window

Step 1 Click  **Person Control** icon on **Common Functions / All Features**. Then, user can see & setup parameters of **Person Control** as shown in Figure x-xxx.

Step 2 Setup the default **Person Control** parameters as shown in Table 4-3



Note

- The **Person Control** data is shown by the value of **Traffic Area Configuration** in priority. Without setup of **Traffic Area Configuration**, user cannot see the data of **Person Control**.

FEATURES

MULTI-TARGET RECOGNITION / PERSON CONTROL

Table 4-3 Person Control parameters

Parameter	DESCRIPTION	Setting
REGIONAL SELECTION	Select the setting area and real-time display of the number of people in the area	
DEVICE LIST	List of devices in the area	
ENTERING/LEAVING IN 1 HR	Set the enter & exit the comparison at the same time, on different cameras	
LIVE VIDEO PLAY	Display camera streaming videos from the device list	
TODAY STATISTICS	Count the number of people per 1 hour	
REGIONAL POPULATION STATISTICS	Display the number of leaving & entering people. The number of people is shown as different color - orange color means warning value and red color means threshold value.	
AVERAGE HOURLY TRAFFIC	Display the average number of people staying in the region during the most recent hour Yesterday: the number of people stranded in the region between a day, at the same time period Last Week: the number of people stranded in the region between a week, at the same time period	
TOTAL NUMBER ENTERED TODAY	Display the total number of people entering & leaving on today, yesterday & a week ago	

FEATURES

MULTI-TARGET RECOGNITION / PERSON CONTROL

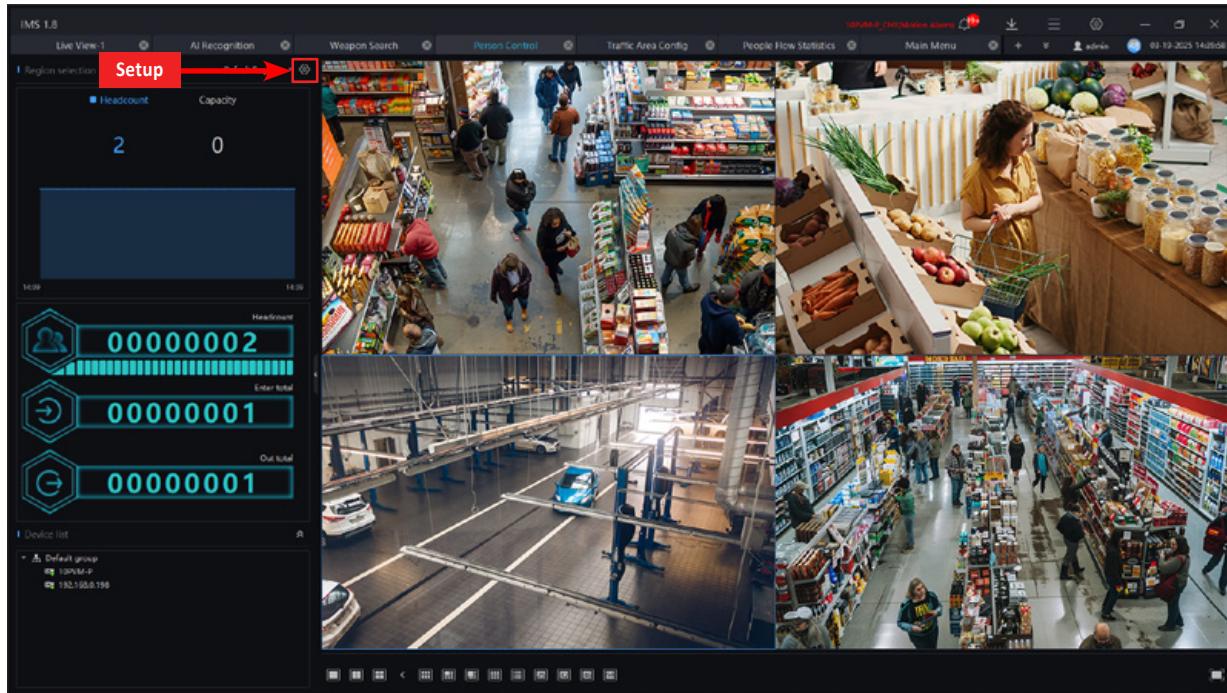


Figure 4-3 Person Control - Preview Display Mode window

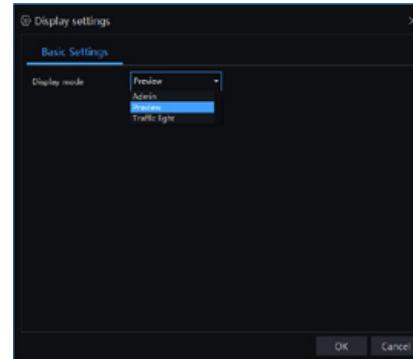


Figure 4-4 Person Control - Display Settings window

 **Step 3** Click  button to switch the window among Admin, Preview or Traffic Light.

FEATURES

MULTI-TARGET RECOGNITION / PERSON CONTROL

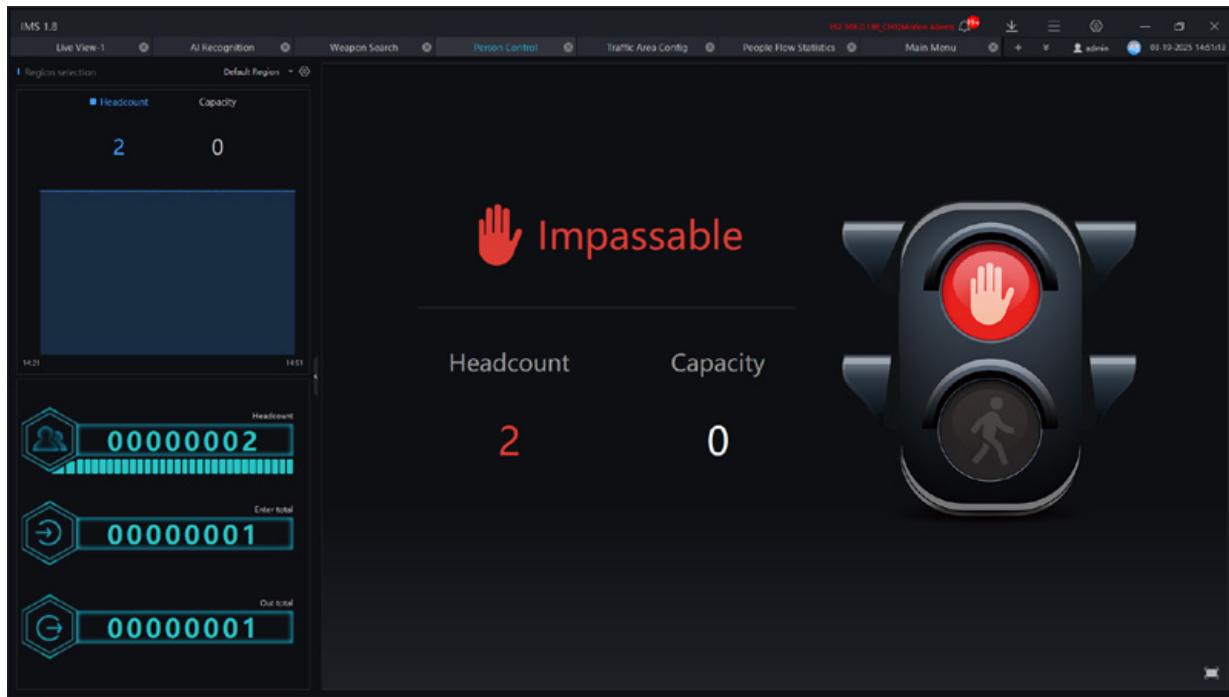


Figure 4-5 Person Control - Traffic Light Display Mode window

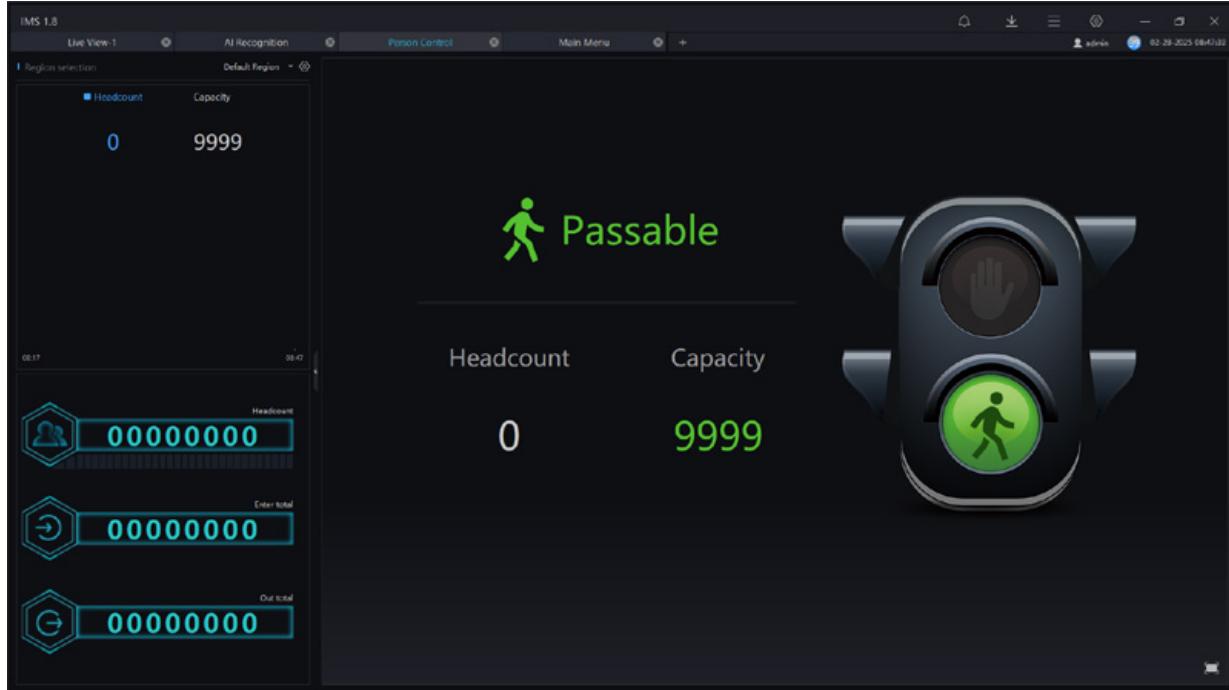


Figure 4-5 Person Control - Traffic Light Display Mode window

FEATURES

MULTI-TARGET RECOGNITION / TRAFFIC AREA CONFIG

Description

On the **Traffic Area Config**, user can setup the regional capacity & flow direction of people monitoring by each AI PVM's camera. To use the feature of **Person Flow Statistics & Person Control**, user should setup the value of **Traffic Area Config** in priority.

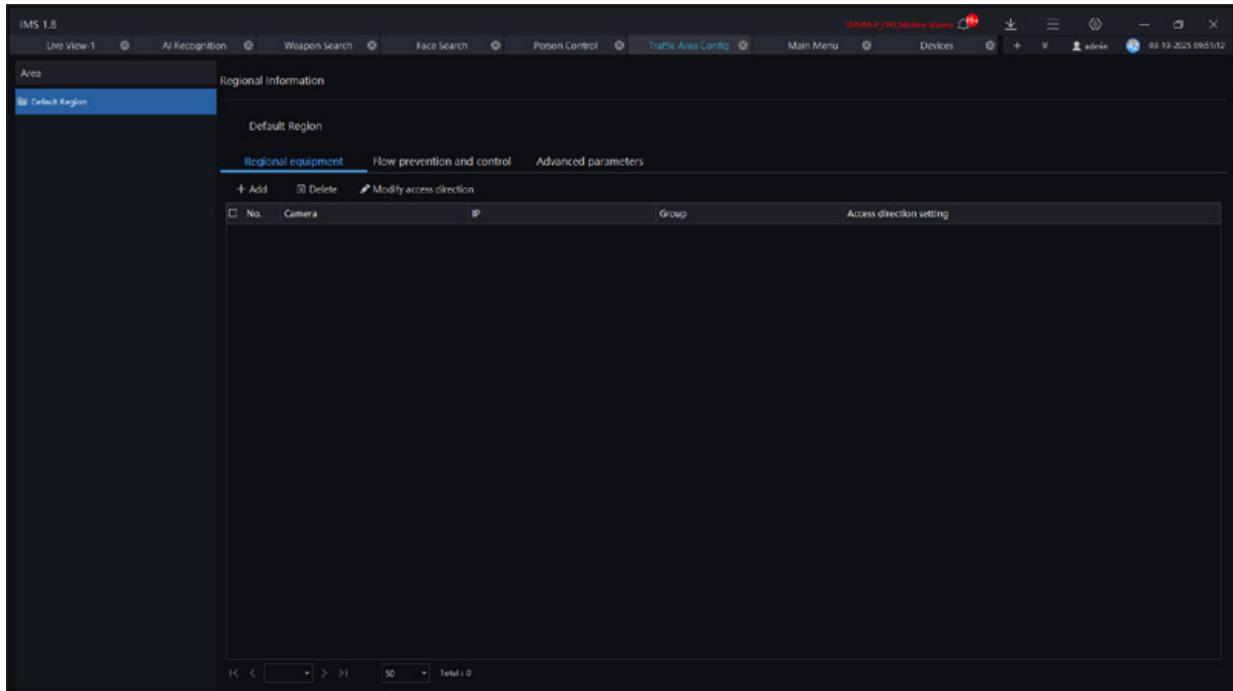


Figure 4-6 Traffic Area Config window

Step 1 Click  **Traffic Area Config** icon on **Common Functions / All Features**. Then, user can see & setup parameters of **Traffic Area Config** as shown in Figure 4-6.

Step 2 Click  **+ Add** button to add new area (of device) to manage/config, as shown in Figure 4-6 , and choose the devices (ViewZ AI PVM's cameras should enable the personnel count function at first). When the device is successfully added, the added device will be listed on the window.

FEATURES

MULTI-TARGET RECOGNITION / TRAFFIC AREA CONFIG

Table 4-1 Main Layout

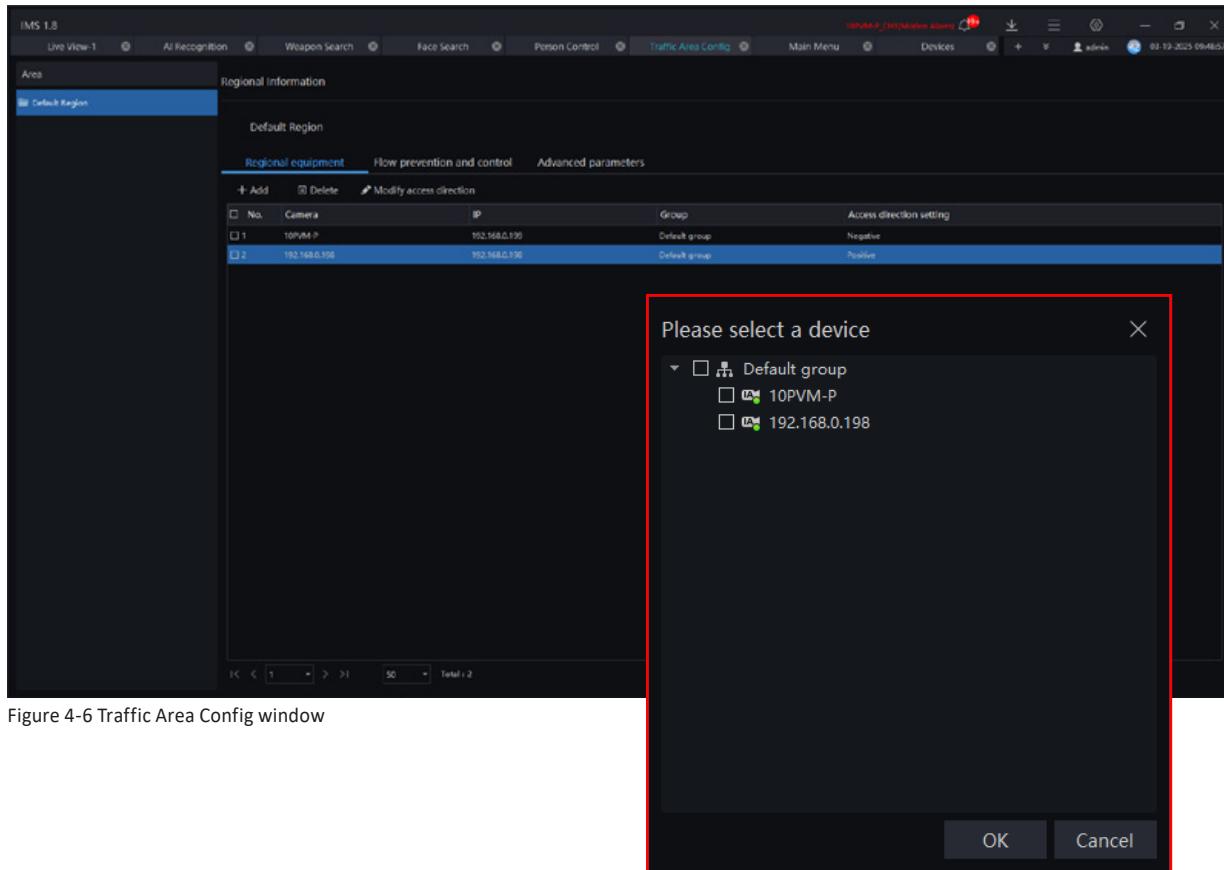


Figure 4-6 Traffic Area Config window

Step 3 After adding cameras, user needs to define the direction of flow. Double click a device, on listed devices ,or click **Modify access direction** button to setup.

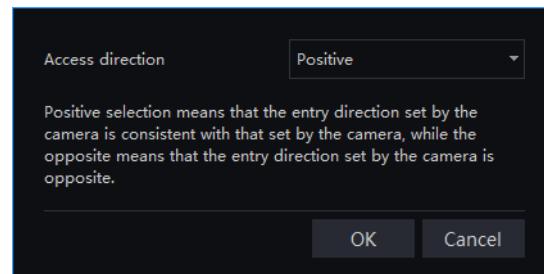


Figure 4-7 Modify Access Direction window

FEATURES

MULTI-TARGET RECOGNITION / TRAFFIC AREA CONFIG

 **Step 4** Setup the **Flow Prevention and Control** of pedestrian. User can config the max number of people on the area and flow alarm. Thus, user can also set the alarm linkage to reminder the user/admin. Please refer the parameter of **Traffic Area Config** as shown in table 4-4.

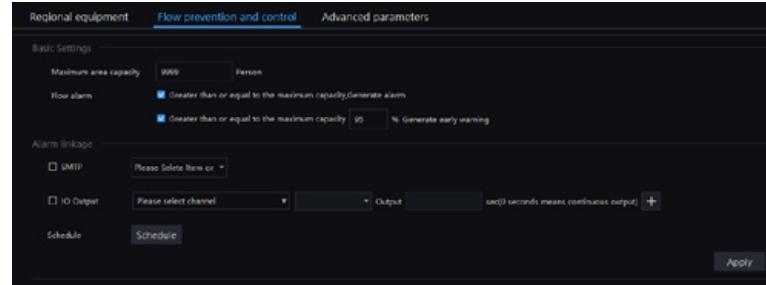


Figure 4-8 Flow Prevention & Control window

 **Step 5** Set the **Advanced Parameters** of statistical calibration, clear regional population and regional population linkage. Please refer the parameter of **Traffic Area Config** as shown in table 4-4.

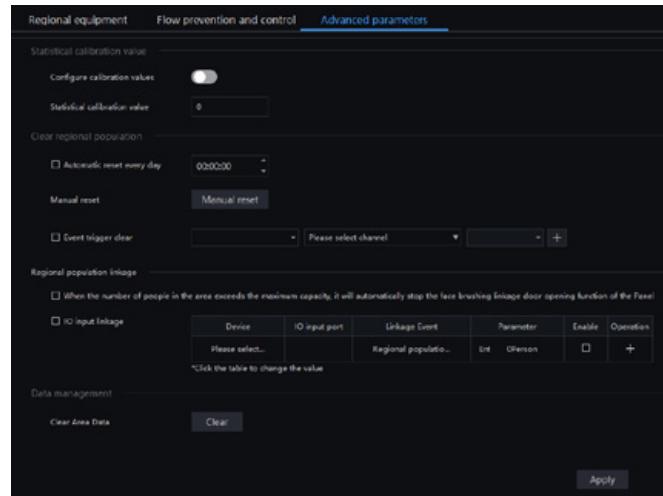


Figure 4-9 Advanced Parameters window



Note

- This search result of classification query comes from all captured images, under the period

FEATURES

MULTI-TARGET RECOGNITION / TRAFFIC AREA CONFIG

Table 4-4 Traffic Area Config parameters

Parameter	DESCRIPTION	Setting
REGIONAL EQUIPMENT	List of registered devices. User can add devices by	
ADD / DELETE	Click Add / Delete button to add devices to setup regional configuration	
MODIFY ACCESS	Click Modify Access Direction button to setup	
DIRECTION	the direction of pedestrian flow	
FLOW PREVENTION & CONTROL	Setup the maximum number of people on the area of AI PVM's camera, and the alarm linkage of SMTP & IO Output	
BASIC SETTINGS	Type the max number of people on the area of IP PVM's camera	Default: 99 person
MAX AREA CAPACITY & FLOW ALARM	Setup the alarm notification based on different cases; ① Alarm to Admin/User when greater or equal to the max number, on the regional area of AI PVM's AI PVM's camera ② Alarm to Admin/User when greater or equal to the user-defined percentage of max number, on the regional area of AI PVM's AI PVM's camera	
ALARM LINKAGE	Setup the alarm notification via SMTP or IO output.  NOTE SMTP is using for sending the email notification IO Output is using for sending IO signal. But, AI PVM does not support this feature.	
SCHEDULE	Setup the schedule of basic settings & alarm linkage	

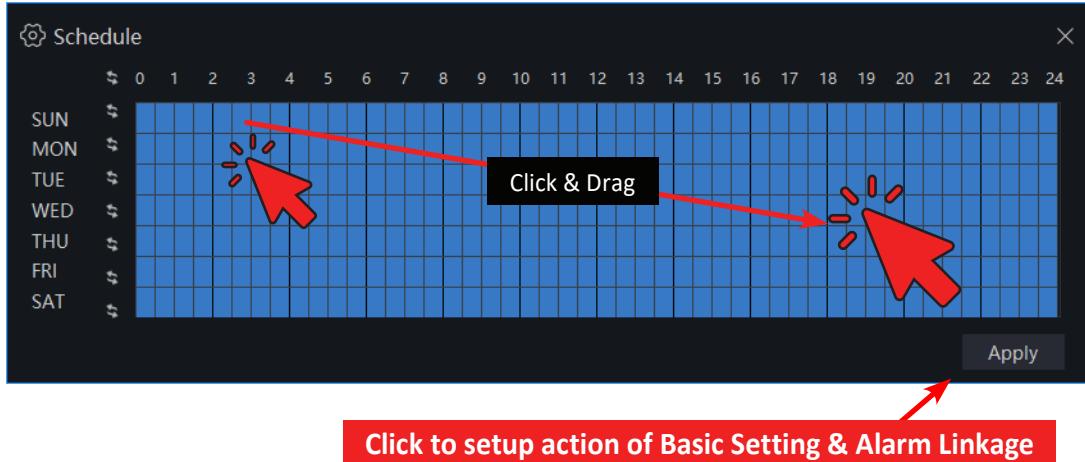
FEATURES

MULTI-TARGET RECOGNITION / TRAFFIC AREA CONFIG

Table 4-4 Traffic Area Config parameters

Parameter	DESCRIPTION	Setting
ADVANCED PARAMETERS	Setup the statistical calibration value, reset the data of regional population and set the population linkage action for each AI PVM	
STATISTICAL CALIBRATION VALUE	Click On/Off button to apply statistical calibration value	Default: Off
CLEAR REGIONAL POPULATION	Setup the automatic / manual reset of data	Default: Off
REGIONAL POPULATION LINKAGE	Setup the action of IO INPUT Linkage when the number of people in the area, exceeds the max capacity.	Default: On
CLEAR AREA DATA	Click to clear the area data	

 Step 4 Setup the **Schedule** of Flow Prevention & Control to make a time table on **Schedule**.



- On the schedule, hold down the left mouse button, drag and release mouse to select the deployment time within 0:00-24:00 from Monday to Sunday.
- User can setup a specific time range & delete a day schedule by clicking the blue bar on time table

FEATURES

MULTI-TARGET RECOGNITION / PEOPLE FLOW STATISTICS

Description

On the **People Flow Statistics** window, people flow statistics can be based on passenger flow statistics and regional statistics. Passenger flow statistics are mainly to count the incoming and outgoing flow of people, and support single-point, multi-point, and regional statistics.

Passenger flow statistics: select the statistical method, set the date, select the statistical type and equipment, and click "Search" to view the statistical results. The results can be displayed in three ways, as shown in Figure 4-10.



Figure 4-10 People Flow Statistics window

- Step 1** Click **People Flow Statistics** icon on **Common Functions / All Features**. Then, user can see & setup parameters of **People Flow Statistics** as shown in Figure 4-10.
- Step 2** Setup the default **People Flow Statistics / Passenger Flow Statistics** parameters as shown in Table 4-5

FEATURES

MULTI-TARGET RECOGNITION / PEOPLE FLOW STATISTICS

Table 4-5 Passenger Flow Statistics / Regional Statistics parameters

Parameter	DESCRIPTION	Setting
PASSENGER FLOW STATISTICS	Display the information of incoming & outgoing flow of people	
STATISTICAL METHODS	Set the date, statistical type & devices to search data	
DATE SELECTION	Set the periodical date	Default: Day, Week, Month
STATISTICAL TYPE	Select the statistical type and equipment	Default: Statistics by equipment
DEVICE	Select devices to show the people flow data	
CHART	Click one of buttons to switch the graph - bar, line and list	Default: Bar
EXPORT	Export a current statistic data as an excel file	
REGIONAL STATISTICS	Display the statistical data which counts the number of people staying in the selected device's area	
STATISTICAL METHODS	Set the date, statistical type & devices to search data	
DATE SELECTION	Set the periodical date	Default: Day, Week, Month
DAILY STATISTICAL	Set the periodical hour	Default: 00:00 ~ 24:00
TIME PERIOD		
CHART	Click one of buttons to switch the graph - line and list	Default: Line
EXPORT	Export a current statistic data as an excel file	



Note

- This statistical data comes from all captured data of selected AI PVMs.

NOTE

For more information, contact the Office of the Vice President for Research and Economic Development at 505-274-3000 or research@unm.edu.