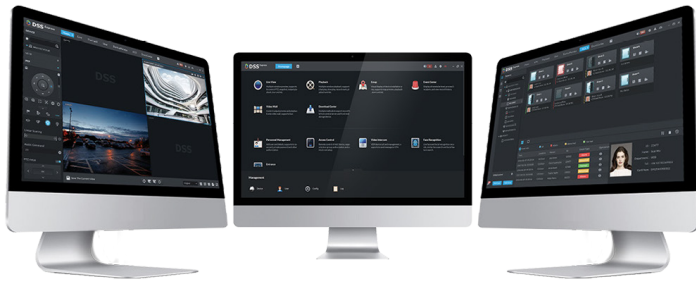


Digital Surveillance System

DSS Express Video Management System



- Supports 256 IP Cameras
- Supports 256 Video Intercom Devices
- Integrates All Management Functions into One Client
- Allows Device Initialization and Management
- Live Video Playback from Edge Device
- Supports Thermal and Flow Control Solutions
- Supports Access Control and Video Intercom Integration
- Offers Fisheye Camera Dewarping on Live View
- Offers Facial Recognition and Search on Live View

System Overview

The DSS Express Video Management System is a powerful, all-in-one video surveillance management software for system scalability and reliability. The DSS Express supports up to 256 network cameras and 256 Video Intercom devices, with the ability to integrate multiple access or video intercom devices.

DSS Express provides user rights management, device management, alarm management, and two-way audio. In addition to these VMS features, DSS Express offers advanced features, including support for real-time face recognition and robust event management controls.

Functions

Flexibility and Scalability

DSS Express supports 256 IP video channels, with support for eight (8) connected face recognition cameras. DSS Express also supports 256 Video Intercom Devices (SIP-enabled), and offers features to manage and control access control devices.

Compatibility

DSS Express is compatible with all Dahua IP-enabled devices: network cameras, NVRs, DVRs, video intercom devices, and access control devices. The server is also compatible with the ONVIF protocol, so it can connect to ONVIF-enabled third-party devices.

Fisheye Camera Support

The software features full support for Dahua Fisheye cameras. The software supports options for the Fisheye camera installation and offers dewarp modes. Dewarping solves the problem of distortion in the circular panoramic view in both live or playback modes.

Real-time Face Recognition

The DSS Express performs real-time facial recognition on up to eight (8) channels simultaneously. The software captures and analyzes facial features to determine gender, age, expression, glasses, moustache, and mask, and then can record the faces and store the associated structured data. The server also filters incoming video to display faces that match target features.

Access Control and Video Intercom

DSS Express offers full support and integration for access control and video intercom products to support a complete security and surveillance system. The server monitors door status and events, manages access rights, and support advanced rules management. In addition to access controls, the server supports two-way communication between intercom and control center.

Management Operations

The software manages the devices and the user accounts for an entire organization. Operators can assign different camera ranges, active use periods, and business roles for each user. The server also supports different schemes for various events, including IVS, to record and view all event history information.

System Features

General Functions

Organization and Group Management

Device Management

- Initialize Dahua devices
- Add devices via auto search and IP Address
- Supports IP, P2P, ONVIF
- Manage Dahua devices

Users Management

- Add, edit and delete users
- Assign appropriate permissions to specific users
- Restrict user access by MAC and expiration dates

Storage

- Central storage: local disk storage and extended storage via iSCSI
- Add, edit, delete, enable and disable the record plan
- Supports edge storage and central storage for record plan

Bind Access Control Channels

Playback

- Playback recording from edge devices
- Apply video filters: normal, motion, alarm, video loss, video tampering
- Sync play
- Reverse playback
- Playback frame-by-frame
- Slow and fast forward playback (1/64x to 64x speeds)
- Lock or mark important recording segments for central storage
- Supports Smart Search

Emap

- Use raster map, main map, and sub-maps
- Supports 8-level sub-map
- Add, edit, and delete hot spots (camera, alarm input) on the map
- View live video and playback on the map
- Zoom in and zoom out the map
- Supports visible range and initial angle
- Icon flashes on map when alarm occurs

Live View

- Displays device tree, device IP Address or device name
- Control PTZ cameras
- Set manual recording
- Take Snapshots
- Apply Fisheye dewarping
- Audio talk
- Set alarm window
- Set Region of Interest: divide one window into 4 or 6 parts, one shows whole image and others show details
- Supports Four (4) Live View tabs
- Save current split as a view
- Add channels as favorites
- Video tour according to device, organization, favorite or view.
- View map via live view window

Event Management

- Detect device exception, video events, alarm input, access control Events, etc.
- Set alarm scheme: all day, weekday, weekend, or custom template
- Set alarm priority: Low, Medium, High
- Link recordings, snapshots, live video, alarm output, PTZ actions, or e-mail
- Add, edit, delete, enable, and disable alarm schemes
- Display event info including alarm time, alarm name, alarm status, etc.
- View live video or pictures from a related camera
- Acknowledge events
- Arm control for events
- Forward alarm to relevant users
- Send e-mail when processing events
- Process events
- Search events

Download Center

- Download recordings from an edge device
- Download recordings by timeline, files, or tags
- Supports multi-task download
- Supports .dav, .mp4, .flv, .asf, and .avi video formats

Intelligent Building Functions

Personnel Management

- Add, edit, and delete people and departments
- Issue card credentials or fingerprint via USB reader or device
- Authorize by door or door group
- Issue private passwords and face authentications
- Manage guest, VIP, and normal personnel management

Access Control

- Monitor door status and events
- Group door access levels
- Manage access rights
- Lock/Unlock doors with one key
- Link fire detection devices
- Set advanced door rules: anti-passback, first card unlock, inter-door lock, multiple card unlock, remote verification

Video Intercom

- Supports Video Intercom devices based on SIP protocol or with command center
- Release text information to VTH series devices
- Release address book to VTO series devices

Vehicle Entrance/Exit Management

- Edit parking-lot, includes total and available spaces, parking name etc.
- Manage owners, vehicles and cards
- Bind LED screen with ITC or spot detector device
- Open the barriers via VTO with cards or remotely
- Force existing vehicles to leave
- Search and export the historical pass records
- Supports daily, weekly, monthly, and annual statistics of vehicle entrance

Analytics+

Face Recognition

- Perform face recognition
- Search for faces in live video using similar face or feature search
- Prepare structured reports of gender and age
- Manage face library

System Maintenance

Logs

- View operator log and door log in control client
- Search and export logs

Backup and Restore

- Backup system data automatically (daily, weekly, monthly)
- Backup system data manually
- Restore system data from server or local file

Other Functions

- FTP for alarm pictures
- Calibrate device time and server time

Technical Specification

Hardware- Server

| | | |
|--------------------|-------------|---|
| Operating System | | Windows Server 2008 Standard Windows Server 2012 R2 Standard Windows Server 2016 Standard VMware ESXI 6.0 (Windows Server 2008 Standard) VMware ESXI 6.0 (Windows Server 2012 R2 Standard) VMware ESXI 6.0 (Windows Server 2019 Standard) Windows 7 (64-bit) Windows 10 (64-bit) |
| CPU | Recommended | Intel® Xeon® CPU E3-1220 v5 @3.00 GHz |
| | Minimum | Intel® Core™ i3-2120 |
| Memory | | 8 GB |
| Storage | Recommended | at least 500 GB |
| | Minimum | at least 200 GB |
| Network Connection | Recommended | Four (4) 1000 Mbps Ethernet Ports |
| | Minimum | Two (2) 1000 Mbps Ethernet Ports |

Hardware- Control Client

| | | |
|--------------------|-------------|---|
| Operating System | | Windows Server 2008 Standard Windows Server 2012 R2 Standard Windows Server 2016 Standard VMware ESXI 6.0 (Windows Server 2008 Standard) VMware ESXI 6.0 (Windows Server 2012 R2 Standard) VMware ESXI 6.0 (Windows Server 2019 Standard) Windows 7 (32-/64-bit) Windows 8.1 (64-bit) Windows 10 (64-bit) |
| CPU | Recommended | Intel® Core™ i5-6500 @ 3.20 GHz |
| | Minimum | Intel® Core™ i3-2120 @ 3.20 GHz |
| Memory | Recommended | 8 GB |
| | Minimum | 4 GB |
| Graphics Card | Recommended | Intel® HD Graphics 530 |
| | Minimum | Intel® HD Sandbridge Desktop Graphics |
| Storage | Recommended | 100 GB free space |
| | Minimum | 50 GB free space |
| Network Connection | | One (1) 1000 Mbps Ethernet Port |

Management Functions

| | | |
|------------------------------------|-------------------------------------|--|
| Organization and User | Organization | 10 Hierarchies, 999 organizations per hierarchy |
| | User Groups | Three (3) Levels |
| | Users | 10 online users / unlimited users |
| Devices (single point performance) | Video ¹ | 256 Channels |
| | Access Control ¹ | 64 IP Devices, 64 Doors |
| | Video Intercom ¹ | 256 Devices (No more than 32 VTO devices) |
| | Face Recognition Cameras | 8 Channels |
| | License Plate Capture/Recognition | 8 Channels |
| Media Transmission Server | Video Input, per server | 350 Mbps |
| | Video Output, per sever | 350 Mbps |
| Record | Playback Bandwidth per Server | 150 Mbps |
| | Video Storage Bandwidth per Server | 150 Mbps |
| | Maximum Capacity per Storage Server | 100 TB |
| | Download Task | up to five (5) per Client |
| Event | Number of events without pictures | 80 per second |
| | Number of events with pictures | Five (5) per second |
| Emap | Raster Map Hierarchies | Eight (8) |
| | Photos per Raster Map | Up to 64 |
| | Raster Map Size | Up to 14.7 MB |
| | Channels | Up to 200 |
| Personnel Management | Persons | 512 |
| | Cards | 512 |
| | Fingerprints | 512 |

1. The maximum number of video, access control, or video intercom devices listed assumes that no other type of device is connected to the DSS.

Thermal Temperature Monitoring Solution Function

| | |
|---------------------------|---|
| Number of Thermal Cameras | 16 |
| Supported Functions | <ul style="list-style-type: none"> • Online License Activation • Picture Storage/Snapshot • Record/Playback • Human Body Temperature Alarm • Blackbody Error Alarm • Retrieve Body Temperature Alarm and Blackbody Alarm from IVSS7008 and NVR5216 • Human Body Temperature Preview • Preview Daily Human Body Temperature Report • Export Report of Total Detection Results • Search and Export Human Body Temperature Alarm Report • Face Mask Detection |

SafetyTemp Thermal Temperature Station Functions

| | |
|-----------------------------|--|
| Number of Kiosks | 16 |
| Face Capture Access Control | 16 |
| Supported Functions | <ul style="list-style-type: none"> • Online License Activation • Personnel Management (stores up to two pictures per individual) • Access Control Device Authorization • Human Body Temperature Preview • Real-time Human Body Temperature Display in Live View • Search and Export Human Body Temperature Alarm Report • Face Mask Detection |

Flow Control Functions

| | |
|-----------------------------------|--|
| Number of People Counting Cameras | 16 |
| Supported Functions | <ul style="list-style-type: none"> • Online License Activation • People Flow Control Preview • Provide URL for Display Devices • People Flow Control Preview |

Ordering Information

| License Name | Description | Number of Channels per License |
|--------------|------------------|--------------------------------|
| DEX-Base | Video | 64 |
| | LPC | 2 |
| | Face Recognition | 2 |
| | Access Control | 64 doors |
| | Alarm Controller | 2 devices |
| | Video Intercom | 128 devices |
| DEX-Video | Video License | 1 |
| DEX-LPR | LPC License | 1 |
| DEX-FR | Face Recognition | 1 |
| DEX-Door | Access Control | 1 |
| DEX-VDP | Video Intercom | 1 device |
| DEX-Alarm | Alarm Control | 1 device |

| Capability Matrix | DSS Express (License) |
|---|-----------------------|
| Deployment | |
| OS | Windows |
| Form | Software |
| International Language | √ |
| Type of deployment | Single-server |
| Internal and external network deployment | √ |
| Cascade As Subordinate Level | √ |
| System | |
| PC Control Client | √ |
| DSS Mobile | √ |
| Licensing | |
| Licensing | Perpetual |
| Performance | |
| Supported Video Channels Per Server | 256 |
| Maximum Video Input Bandwidth Per Server | 350Mbps |
| Maximum Video Output Bandwidth Per Server | 350Mbps |
| Maximum Number of Sub Servers Per Main Server | × |
| Maximum Write Bandwidth Per Server | 150Mbps |
| Maximum Read Bandwidth Per Server | 150Mbps |
| Maximum Numbers of Online Users | 100 |
| Device support | |
| ONVIF | 64chs |

| | |
|---|---|
| Management | |
| Add devices by P2P server | √ |
| IP Address | √ |
| Automatic Camera Discovery | √ |
| Automatic Camera Time Synchronization | √ |
| Built-in Backup-Restore Support | √ |
| Offline License Activation | √ |
| Device Stream Configuration | √ |
| UI Switching | √ |
| User authentication and rights management | |
| User | √ |
| Time schedule controlled user access to devices and functions | √ |
| Restrict user access by limit MAC address | √ |
| Events | |
| Device status | √ |
| Video detection | √ |
| Intelligent detection | √ |
| Face recognition arming | √ |
| Thermal camera temperature measurement | √ |
| Alarm in | √ |
| Access control | √ |
| Alarm manager | |
| Schedule | √ |

| | |
|--|---|
| Acknowledge | √ |
| Reassign | √ |
| Alarm description with work instructions | √ |
| Number of alarm priority levels | 3 |
| Log | √ |
| Pop-up video | √ |
| Custom the alarm audio | √ |
| Mail notification Automatically | √ |
| Mail Manually | √ |
| Linkage action (Preset, access control, alarm out, records, snap) | √ |
| Storage | |
| Schedule | √ |
| Pre-record | √ |
| Multi stream | √ |
| Evidence lock | √ |
| Records bookmark | √ |
| ISCSI | √ |
| Map | |
| Raster image | √ |
| Hot zone | √ |
| Visual field | √ |
| Resource icon flash when alarm | √ |

| | |
|----------------------------------|---|
| Analytics | |
| People counting | √ |
| Heat map | √ |
| Face recognition | √ |
| Face feature search | √ |
| Search face by image | √ |
| Face attribute report | √ |
| License Plate Capture | √ |
| Live view | |
| Custom split | √ |
| Multi-screen | √ |
| ROI (Region Of Interest) | √ |
| Image configuration | √ |
| Quick change to playback | √ |
| GPU decode | √ |
| Set the widow as alarm attribute | √ |
| Alarm Output Control | √ |
| Region Zoom In | √ |
| Video Tour | √ |
| Playback | |
| Thumbnail search | × |
| Search by record type | √ |
| Smart Search | √ |

| | |
|--|--------|
| Download | |
| Multi-task download | √ |
| Supports AVI, DAV, MP4 | √ |
| Download by time, file, bookmark | √ |
| Cut and download the records | √ |
| PTZ | |
| Preset | √ |
| Preset Linkage | √ |
| Multi Presets Tour | √ |
| Scanning/transition speed | √ |
| Linkage | |
| Bullet and PTZ Linkage | √ |
| Fisheye and PTZ Linkage | √ |
| Audio | |
| One-way audio - live and recording support | √ |
| Two-way audio - live support | √ |
| Personnel Management | |
| Batch Import/Export for personnel info | √ |
| Batch Import for authentication method | √ |
| Extract personnel info from A&C device | √ |
| Persons | 10,000 |
| Cards | 10,000 |
| Fingerprints | 10,000 |

| | |
|--|--------|
| Face Images | 10,000 |
| Access Control | |
| Batch access card | √ |
| Door group management | √ |
| Unlock in different time periods | √ |
| Get record from device | √ |
| Holiday plan | √ |
| First card unlock | √ |
| Multiple card unlock | √ |
| Inter-lock | √ |
| Anti-passback | √ |
| Remote Verification | √ |
| Remote unlock the door | √ |
| Fire linkage | √ |
| Generate the track | √ |
| Video Intercom | |
| SIP-based two-way video intercom between VDP Devices | √ |
| SIP-based two-way video intercom between VDP Devices with control center | √ |
| Send information to the indoor unit | √ |
| DSS Mobile VDP | √ |
| Entrance | |
| Binding ordinary camera | √ |
| White List | √ |

| | |
|------------------|---|
| Alarm Controller | |
| Arm/Disarm | √ |