

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 Management¹

- 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

NOTE: Video and image recordings cannot be on the same physical hard drive. Separate physical drives are required for video and image storage. System hard drives are only for DSS software installation.

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

1. A remote client login to a DSS server is supported only via an IP address. DSS does not support remote login via DDNS.

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 ¹	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