

# DSS Pro

## General Surveillance Management Center



### Introduction

DSS Pro is a flexible, scalable, high reliable and powerful central management system. With client-server Architecture that integrates with multiple surveillance systems, DSS Pro provides the central management, information sharing, convenient connection, and multi-service cooperation. It can provide user permission management, device management, alarm management, central storage, video wall, map and other advanced features such as People Counting, Business Analysis, Face Recognition, Radar Smart Track, Fisheye Smart Track, ANPR, Violation.

### Key Components

#### Service

- Central Management Service (CMS)
- Device Management Service(DMS)
- Storage Service (SS)
- Media Transmission Service (MTS)
- Auto Register Service (ARS)
- Alarm Dispatch Service(ADS)

#### Client

- PC Client
- DSS Mobile Client

### Running Environments

#### Operating System

- OS for Server:
  - Windows 7 Ultimate (64-bit)/Windows 10 Enterprise / Windows Server 2008 R2 Standard

- OS for Control Client:
  - Windows 7 / Windows 8.1 / Windows 10
- OS for DSS Mobile Client:
  - IOS: IOS8.0 and above
  - Android: Android 4.0 and above

### Hardware

- Hardware for Server

#### Recommended

CPU	E5-2640 v3@2.60GHz 8 Core Processor
Memory	16GB
System Disk	1TB, 500G free for DSS
Ethernet port	4 Ports@1000Mbps

#### Minimum

CPU	E3-1220 v5@2.60GHz 4 Core Processor
Memory	8GB
System Disk	1TB, 500G free for DSS
Ethernet port	2 Ports@1000Mbps

- Hardware for Control Client

#### Recommended

CPU	Intel Core i5, 64 bits 4 Core Processor
Memory	8GB
Graphics Card	NVIDIA® GeForce®GT 730
Hard Drive Capacity	200G free for DSS Control Client
Ethernet port	1000Mbps

#### Minimum

CPU	Intel Core i3, 64 bits 4 Core Processor
Memory	4GB
Graphics Card	Intel® HD Graphics 4400
Hard Drive Capacity	100G free for DSS Control Client
Ethernet port	1000Mbps

- Hardware for Control Client

iPhone	iPhone5 and above
Android	Resolution: 800×480 and above RAM: 2GB and above

## Browser Version

- Internet Explorer: 9/10/11
- Chrome: 40.0.2214.91 and above
- Firefox: 40.0.2 and above

## Features

### New Design, Easy to Use

- Based on Windows OS.
- New design interface, better experience.

### High Flexibility and Stability

- Easy performance upgrade through distributed hardware extension.
- Easy functionality upgrade via add-ons.
- Supports hot standby for master server

### High Compatibility

- Dahua's devices included: network camera, network speed dome, NVR, DVR, MNVR, ITC etc.
- Connects to third-party devices via standard ONVIF protocol.
- DSS Pro SDK for third-party platform or mobile development

## Main Functions

### 1. DSS Pro Web Manager

#### •Business Configuration

#### Organization Management

- Through organization to achieve device group management.

#### Device Management

- Device initialization: Initialize Dahua's device
- Add devices via auto search, IP, Domain, IP Segment, auto register(for 3G, 4G, DHCP device).
- Manage Dahua's devices such as network camera, network speed dome, NVR, DVR, MDVR, etc.
- Through the ONVIF protocol to add third-party devices to manage.
- Change IP address of Dahua's device.
- Modify the added device password.

#### Role and User Management

- Add, edit and delete the roles and users.
- Assign different roles with different permissions.
- User can be assigned with the roles to obtain the corresponding permissions.

- User can be restricted by the MAC and expiry data.
- Can set user PTZ permissions.
- User can be locked.
- Supports import domain user and assign roles to the user.

#### Event Management

- Detect the device exception, video events, alarm input and alarm host.
- Alarm Scheme: All day template, Weekday template, Weekend template and custom template.
- Alarm Priority: Low, Medium, High.
- Linkage: record, snapshot, live video, alarm output, PTZ, video wall, E-mail.
- Add, edit, delete, enable and disable alarm scheme.

#### Storage

- Central storage: Extend storage via iSCSI.
- Add, edit, delete, enable and disable the record plan.
- Supports edge storage and central storage for record plan.
- Backup the video from the edge storage, like EVS, NVR, DVR and etc. by schedule
- Backup the video from MDVR by WiFi.
- Disk Quota: Group the disk, and cameras can be allocated to different disk groups.

#### Map

- Google online map, Google offline map, raster map
- Main map and submaps.
- Up to 8-level submap.
- Add, edit and delete the submap on the map.
- Add, edit and delete the hot spots (camera, alarm input) on the map.

#### Video Wall

- Add and manage the video wall.
- Supports On/Off the screen ID.
- Supports combine screens to one screen.
- Bind the decode channel with the corresponding screen.

#### Bind Resource

- Bind IVS-F (Intelligent Video Server for Face Recognition) with the corresponding cameras.
- Bind POS channel with the corresponding cameras.

#### Target Management

- Face recognition library management
- Upload face picture and set person info.

#### Vehicle Blacklist

- Vehicle Blacklist management
- Vehicle blacklist arming and disarming

#### •System Maintenance

#### Statistic

- Overview and detail system information.

- Running Status: CPU, storage, bandwidth.
- Online information of service, device and user, device health report.
- Event Information Statistics: total events and processed events.
- Source Information: video channel, alarm channel.

### Log

- System log, web manager log, control client log.
- Search and export log.

### Backup and Restore

- Backup system data automatically (daily, week, month).
- Backup system data manually.
- Restore system data from server or local file.

### Other Functions

- Supports https
- Device time calibration, server time calibration

## 2. DSS Pro Control Client

### Live View

- Displays device tree. Show/hide offline device.
- Displays the device IP address or device name on the device tree
- View real-time video.
- Common layout and custom layout
- PTZ control
- Manual recording
- Snapshot
- Instant playback
- Digital zoom
- Fisheye dewarping
- Fisheye and speed dome smart tracking
- Audio talk
- Set alarm window.
- Decode the video to video wall quickly
- Turn on/off the audio in live view
- Region of Interest: Divide one window into 4 or 6 parts, one shows whole image, others show the detail.
- Save the current live view as a view.
- Supports 4 Live View tabs.
- Supports adding channel to favorite
- Video tour according to device, org, favorite or view.
- Quickly switch to playback.
- Supports NKB to control camera on Live View
- Fast switch to playback.
- POS transaction overlay
- Set POS overlay style
- View map via live view window

- Panoramic Smart Track: 1(fixed channel) +1(SD channel) mode, 2(fixed channel)+1(SD channel) mode.

### Playback

- Playback the record from the edge devices or central storage.
- Video filter: normal, motion, alarm, video loss, tampering video
- Sync play
- Reverse playback
- Slow and fast forward
- Playback frame-by-frame
- Lock or mark the important record for central storage.
- Download the assigned records, support AVI and DAV format.
- Decode the video to video wall.

### Download Center

- Download record from central storage or device.
- Download record by timeline, files or tags.
- Supports multi-task download.
- Supports DAV and AVI format.

### Event

- Display event alarm info including alarm time, alarm name, alarm status, etc.
- View the live video or pictures from related camera.
- Acknowledge the event alarm.
- Arming control for event alarm
- Forward the alarm to relevant user
- Send alarm e-mail.
- Process the alarm events.
- Search alarm events

### Video Wall

- Decode the real-time video to wall
- Decode the playback video to the video wall.
- Manually/automatically decode to wall.
- Control the video wall split
- Change the stream type of video channel.
- Adding box, on/off screen and back display.
- Tour the video channel.
- Schedule plan: Set the running task on timeline.
- Tour plan: Loop different task, can set loop time
- Supports NKB to control video wall.

### Map

- View the live video and playback on the map
- Zoom in and zoom out the map
- Decode the video to video wall quickly
- Supports the area or length calculating for GIS map
- Supports visible range and initial angle.
- Channel flash on map when alarm is occurring.

## Smart track

- Fisheye and speed dome

## People Counting

- People counting and heat map
- Statistic the count of enter and exit
- Search the people counting data via time
- Generate the daily, weekly, monthly report.
- Search the heat map
- Export the people counting and heatmap data.

## Face Recognition

- Automatically captures faces in the camera field of view
- Real-time capture of the faces and display recognition details
- Quick registration of unfamiliar faces into the database
- Similar Face Search
- Text Search
- Arm Records
- Trail Search: Generate trail based on the artificial screening of the captured faces

## ANPR

- Traffic video and real-time license plate recognition
- Search history license plate recognition result
- Search history vehicle track
- Trail Search: Generate trail based on license plate and time info.
- Arm Records

## Violation

- Search vehicle violation information
- Play violation video

## Radar Smart Track

- Bind radar and speed dome
- When radar detects the object, SD turn to the position.

## Business Analysis

- Overview: orders, sales, footfall, per custom transaction, KPI, sales and orders, entering rate, top 10 list.
- People Count: entrance people count, entering rate, district customer.
- Transaction Statistics: commodity price, sales growth, sales, orders.
- Sales Statistics: sales, sales year on year.
- Order Statistics: orders, orders year on year.

## 2. DSS Pro Mobile Client

### Login

- Login APP for the first time, need to fill in user name, password, IP address and Port number

### History Record

- Show recently viewed channels, you can open live video or playback via history records.
- Up to 20 history records, then replace the oldest operation record.

### Live View

- Open more than one channel at same time, up to 16 channels
- Three stream type: HD, SD, smooth
- Supports PTZ control
- Supports horizontal screen play
- One-key switch to playback
- Snapshot, local record

### Playback

- Supports searching device recording and center recording
- The calendar shows whether there is a video on that day
- Supports Snapshot
- Supports Local Record
- Supports 1X, 2X, 3X, 4X, 1/2X, 1/4X, 1/8X playback
- Different video type with different color.

### Alarm Centre

- Displays total alarm record and untreated alarm records, total alarm records up to 200.
- Alarm processing: solved, Ignore.
- Enable/disable refresh alarm
- Alarm video and alarm picture

### Map

- Supports Google map
- Displays the video channel on the map
- View video and do playback.

### Files Management

- Displays the recording and snapshot by time.
- Single/Batch export
- Single/Batch deletion

### Local Config

- Display the user name
- Check for new version
- Setup PTZ step length
- User Manual
- APP Version

**Performance Specification****Org, User and Role**

Organization	10 hierarchies, 999 organizations per hierarchy
Role( User Permission)	100
User	200 online users and unlimited users

**Device and Channel**

<b>Total device and channel</b>	<b>500 devices, 2000 channels</b>
Dahua	500 Devices, 2000 channels
ANPR device	200 devices (15 pic per second)
Auto-Register	200 devices, 500 video channels
ONVIF	200 devices 800 channels
POS	100 POS channels (30 POS data per second)

**Media Transmission Server**

Video input per server	600 Mbps
Video output per server	600 Mbps

**Playback, Storage and Download**

Playback bandwidth per server	100 Mbps
Video storage bandwidth per server	600 Mbps
Maximum capacity per storage server	200TB
Maximum storage device number per server	5
Download task	UP to 5 per client

**Alarm**

Number of alarm reception without pic	200 per second
Number of alarm reception without pic(Peak)	300 per second
Number of alarm reception with pic	5 per second

**Map**

Hierarchy of raster map	8 Hierarchies
Submap of raster map	32 per hierarchy
Map size of raster map	Up to 15MB
Channel number	Up to 200(GIS and Raster)

**Distributed System****Server Number**

Number of slave server	Up to 20
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**Device and Channel**

Total device and video channel for distribution	5000 devices 20000 channels
Dahua	5000 devices 20000 channels
ANPR device	800 devices
Auto-Register	4000devices, 10000 channels
ONVIF	500 devices 2000channels
POS	2000 devices