

# Digital Surveillance System

## DSS Express Video Management System Server



- Embedded Linux Operating System with Pre-installed DSS Express Software
- Live Video Playback
- Supports Access Control and Video Intercom Integration
- Configure Video Wall Layout and Scheme
- Configure NVR Recording
- Offers Fisheye Camera Dewarping on Live View and Playback Images
- Intelligent Video System with Face Recognition, People Counting and Heat Map
- Five-year Warranty\*

### System Overview

The DSS4004-S2 Express Video Management System is a powerful, all-in-one video surveillance management system pre-loaded with Linux-optimized DSS Express software for system scalability and reliability. The server integrates multiple access or video intercom devices with surveillance cameras. The server supports 3 hard disk drives for video and snapshot storage and supports edge storage and extended storage via iSCSI.

The server provides user rights management, device management, alarm management, center storage, TV wall output and, two-way audio. In addition to these VMS features, the server offers advanced features, including support for real-time face recognition and robust event management controls, features not found on many other VMS servers.

### Functions

#### Compatibility

The VMS server is compatible with all Dahua IP-enabled devices: network cameras, NVRs, DVRs, and access control devices plus many more. The server is also compatible with the ONVIF protocol, so it can connect to ONVIF-enabled third-party devices. The server offers an SDK for further support of third-party platforms and mobile operating systems.

#### Fisheye Camera Support

DSS features full support for Dahua Fisheye cameras. The software supports options for the Fisheye camera installation and eight (8) dewarp modes. Dewarping solves the problem of distortion in the circular panoramic view in both live or playback modes.

#### Real-time Face Recognition

The DSS4004-S2 performs real-time facial recognition simultaneously on several channels. The server 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

The DSS4004-S2 server 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.

#### Video Wall

DSS offers settings to configure all aspects of a video wall application. The application supports video wall layout, live preview, scheme configuration, and tour setup. In addition, the application supports video wall splicing and roaming.

#### Management Operations

The server 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, IP
- Manage Dahua devices

##### Users and Authority

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

##### Storage

- Set central storage: local disk storage and extend storage via ISCSI
- Add, edit, delete, enable and disable recording plan
- Support edge storage and central storage recording plan

#### Bind Access Control Channels

##### Playback

- Playback recording from edge devices or central storage
- Apply video filters: normal, motion, alarm, video loss, video tampering
- Sync play
- Reverse playback
- Playback frame-by-frame
- Supports 1x, 2x, 4x, 8x, 16x, 32x, 64x, 1/2x, 1/4x, 1/8x, 1/16x, 1/32x, 1/64x playback speeds
- Lock or mark important recording segments for central storage

##### 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

##### Video Wall

- Add and manage the video wall (decoder hardware is required to setup a video wall)
- Supports On/Off screen ID
- Combine multiple screens into one screen
- Bind the decode channel with the corresponding screen
- Decode the real-time video to the video wall
- Decode the playback video to the video wall
- Manually or automatically decode to wall
- Control the video wall split
- Change the stream type of video channel
- Add box, on/off screen, and back display
- Tour the video channel in a single window
- Schedule plan: Set the running task on timeline
- Tour plan: Loop different tasks, set loop times
- Supports NKB1000 to control video wall

##### Live View

- Offers Common layout and customized layout
- Control PTZ cameras
- Set manual recording
- Take Snapshots
- Apply Fisheye dewarping
- Audio talk
- Set alarm window
- Turn on/off the audio in live view
- Set Region of Interest: divide one window into 4 or 6 parts, one shows whole image and others show details.
- 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 central storage or 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 VDP devices based on SIP protocol or with command center
- Release text information to VTH series devices
- Release address book to VTO series devices

### Artificial Intelligence

#### Face Recognition

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

#### Flow Analysis

- Search and export people counting report
- Search and export heat map report

### 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

#### System

Main Processor	Intel® Core™ i3-6100, 64-bit, 4-core Processor
Operating System	Embedded Linux
Memory	8 GB
Power Supply	Hot-swappable Power Supply

#### Interface

Network Ports	Four (4) RJ-45 Ports (10/100/1000 Mbps)
RS232	Reserved
RS485	Reserved
USB	Front Panel: Two (2) USB 3.0 Ports Rear Panel: Two (2) USB 3.0 Ports On-board Panel: One (1) USB 2.0 Port
VGA	One (1) VGA Port, as Network Configuration

#### Storage

HDD Installation	Built-in 1 TB HDD (2.5-in.) for Operating System Supports 3 HDD (2.5-in.) for video and picture storage
Storage	8 TB per HDD

#### Video Management

Client	PC	10 Online
	DSS Mobile 2	10 Online
	DSS Mobile for VDP	200 Online, 2000 Total
Organization and Users	Organization	10 Hierarchies 999 Organizations per Hierarchy
	User Group	Three (3) Levels
	User	10 Online User, 50 Users
Devices (Single Point Performance)	Video	256 Channels
	Access Control	64 IP Devices, 64 Doors
	VDP Devices	1000 Devices (no more than 64 VTO devices)
	Face Recognition	32 Channels
	License Plate Capture/Recognition	32 Channels
	Alarm Host	64
Media Transmission Server	Video Input Server	350 Mbps
	Video Output Server	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	Hierarchy of Raster Map	8 Hierarchies
	Hierarchy of Raster Map	8 Hierarchies
	Photos of Raster Map	up to 64 Photos
	Raster Map Size	up to 14.70 MB
	Channels	up to 2000
Personnel Management	Persons	2000
	Cards	2000
	Fingerprints	2000

#### Electrical

Power Supply	100 VAC to 240 VAC, 47 to 63 Hz
Power Consumption	70 W to 120 W, with HDD

#### Environmental

Operating Conditions	0° C to +45° C (+32° F to +113° F), 5% to 90% RH, non-condensing
Storage Conditions	-20° C to +70° C (-4° F to +158° F), 5% to 90% RH, non-condensing
Operating Altitude	-60.0 m to 3000.0 m (-196.85 ft to 9842.52 ft)

#### Construction

Dimensions	1U, 440.0 mm x 398.60 mm x 43.65 mm (17.32 in. x 15.69 in. x 1.72 in.)
Net Weight	6.0 kg (13.23 lbs)
Material	1.0 mm SGCC Steel Plate
Installation	Standard 19-in. Rack Installation

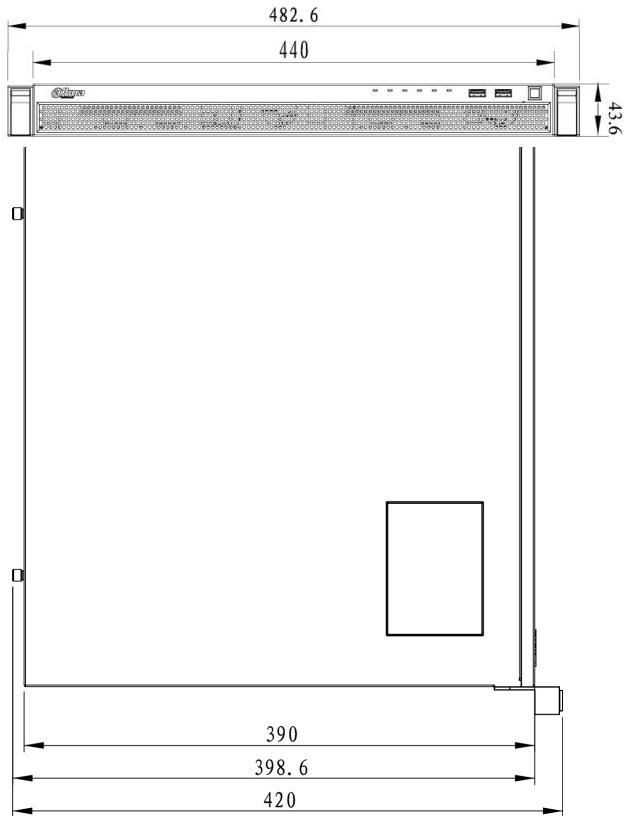
#### Certifications

Safety	EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013
Electromagnetic Compatibility (EMC)	FCC 47 CFR Part 15 Subpart B EN 55032:2015 EN 55024:2010+A1:2015 EN 50130-4:2011+A1:2014 EN 61000-3-2:2014 EN 61000-3-3:2013

### Ordering Information

Type	Part Number	Description
Digital Surveillance System	DHI-DSS4004-S2	DSS Express, 3 HDD Bays

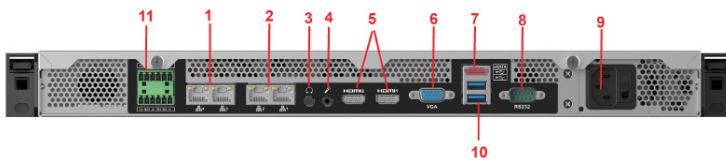
**Dimensions (mm)**



**Physical Interfaces**



1	Power Button	4	HDD Status
2	USB 3.0 Port	5	Alarm Status
3	USB 3.0 Port	6	Network Status



1	Gigabit Network Ports 3 and 4	7	eSATA
2	Gigabit Network Ports 1 and 2	8	N/A
3	Audio OUT	9	Power Connection
4	Audio IN	10	USB 3.0 Ports x 2
5	N/A	11	N/A
6	VGA OUT		