DSS7016D-S2

All-in-one Security System for Enterprises

V8.2.0

Introduction

DSS7016D-S2 is a high-performance security management platform based on Linux OS and pre-installed DSS software. It enhances hardware performance and provides centralized video monitoring, access control, video intercom, alarm controller, and AI features, such as face recognition, automatic number plate recognition, and video metadata.

It is suitable for medium and large scenes, such as residential areas and casinos.

Features

Scalable Design, Easy to Grow

With distributed deployment, you can easily expand the supported channels to 5,000 and central storage capacity to 1 PB. You can access live and recorded videos, real-time and historical events, and more.

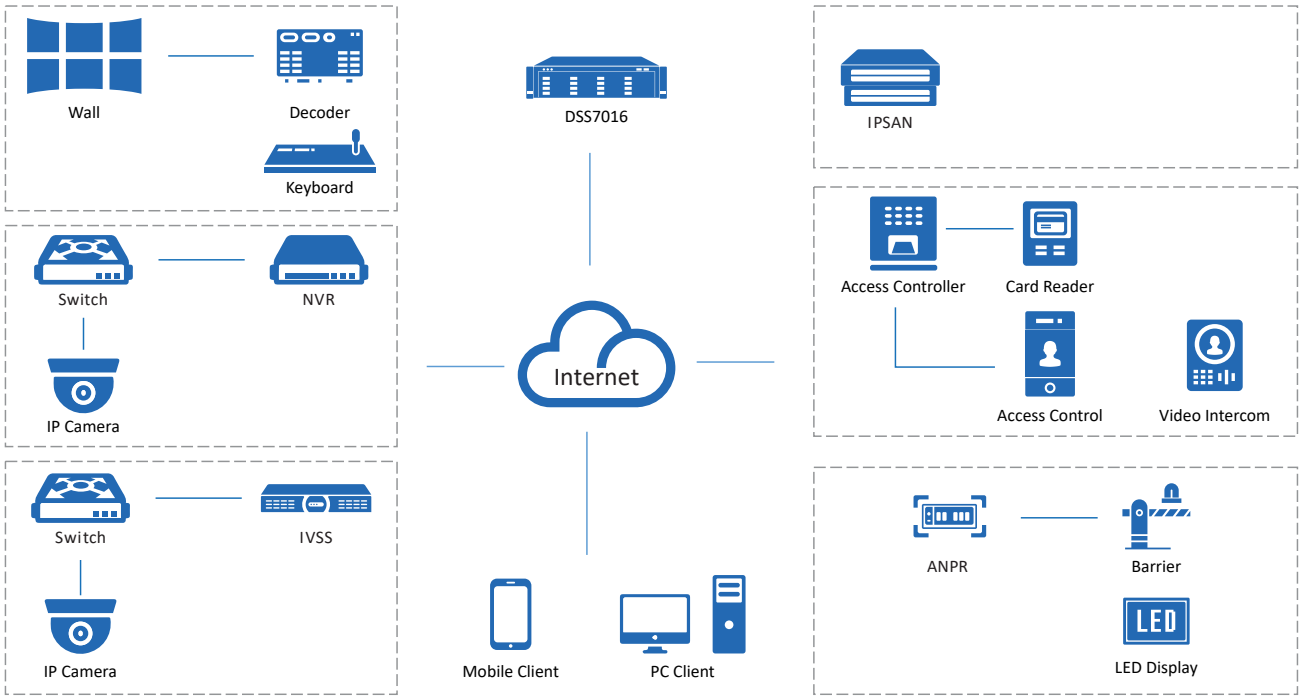
AI-Powered Applications, Proactive Security

DSS7016D-S2 integrates various AI capabilities that devices have, such as face recognition, automatic number plate recognition, and video metadata. You will be notified immediately when the target you are interested in appears, allowing you or security personnel to take necessary security measures.

Highly Available Technology, More Stable

With hot standby design, DSS7016D-S2 ensures that your business will not be interrupted.

System Architecture



Main Functions

Monitoring Center

Live View

With its easy to use live view, you can both customize and control how you view videos in real time. The layout can also be configured to display videos in different sizes, enabling you to give priority to important areas by placing then in larger windows. You can also remotely control certain devices to perform various actions such as talking to people through the camera, and unlocking the barrier of a turnstile to grant access to people. If an emergency occurs, manual recording is just a click away, so that you can quickly save that particular part of the video for evidence.

Playback

The playback function allows you to play recorded videos stored on the server and devices in multiple windows. To help you efficiently wade through tons of videos, you can play them 64X faster than the normal speed, skipping parts that you are not interested in, or you can slow them down to 1/64X, to focus on important sections. To control the data in the videos, you can add tags to mark relevant content, and you can even lock them to prevent them from being overwritten when the disk space is full. The filter function can also be very helpful when you only need to deal with a specific type of video, or a type of target that appeared in one or more areas.

Video Wall

Video wall is used to display videos on a large screen that consists of many smaller screens. Highly customizable, you can not only configure the layout of the video wall, but you can also display recorded videos and real-time videos to zero in on important details in the video. With the task function, you can schedule videos from different channels to be displayed on the video wall at specified times or in a loop.

Map

The map is a very useful function that allows you to keep track of devices and events through their location information. With it, you can mark a device and immediately know the location of an event when the device triggers an alarm and flashes red on the map. You can also add submaps to different areas. For example, a plan view of a public square can be added to a map to reveal the exact location of people who are inside the public square.

DeepXplore

Powered by AI technology, you can easily search for targets, look for records on them and even generate tracks on their movement to observer their whereabouts through setting simple search conditions.

Event Management

You can monitor and process over 200 types of alarms right from the event center. In addition to a selection of predefined alarm types that are triggered by devices, you have the option to create your own alarm, which are manually triggered to take snapshots, send emails, and more for important events.

Maintenance Center

On a single page, you can get to know the full status of channels, devices and servers, and information on faults to instantly recognize which channels are offline, whether the server has stopped working, and much more. Scheduled reports are also sent based on the information collected to give you a full picture of how your system is running.

Access Management

Access Control

Through the integrated access control system, you can control access within any area directly from DSS7016D-S2 by utilizing the access control devices on the platform. You can use it to lock doors remotely, monitor the area around doors, set advanced authentication rules to protect classified areas, and more. To keep you up to date, the system also keeps complete records of all access control activities.

Video Intercom

All video intercom devices can be managed directly through one easy-to-use interface that offers two-way communication and remote access control. Through the interface, you can secure access to your premises, and receive calls and emergency reports directly from people on-site. Building management is also very convenient, as you can send group notices to all the indoor monitors, keeping people informed of important events, such as scheduled power outages.

Visitor

DSS7016D-S2 offers a complete process to manage visitors, including appointment, registration, access permission authorization, and ending visit with all permissions canceled. A complete, detailed record of all visits is available for your review at any time.

Intelligent Analysis

To help build your profits and strengthen your services, the platform provides invaluable information on people on your premises through performing a variety of intelligent analysis and generating heat maps. Through it, you can know the number of people in an area at any given time, where they frequent the most, and precisely when the highest peaks in numbers occurs.

Parking Lot Management

You can remotely manage your parking lot by customizing the passing rules and monitoring the real-time video from the entrance or exit. Complete records with detailed information of vehicles are generated for your review.

Hardware Specification

Item		Description
System	Main Processor	Intel i5-6600, 64 bits 4 Core Processor
	Operation System	Embedded Linux
	Memory	8 GB
	System Disk	Seagate 7200 RPM Enterprise Class HDD 1 TB
	Motherboard	Embedded board (7 × 24 operation)
	Hard Disk Hot Swap	Support hot swap and online replacement
	Hard Disk Compatibility	SAS/SATA disk
Interface	Number of Network Ports	4 Ethernet ports (100/1000 Mbps)
	USB	2 × USB 2.0 on front panel; 2 × USB 3.0 on rear panel
	HDMI	3 HDMI ports
	VGA	1 VGA port
Storage	HDD Installation	Support 15 HDDs (3.5") for video or picture storage (8 TB per HDD)
	Storage	Up to 200 TB per server
	HDD Mode	Single
	Bandwidth of Video Storage per Server	600 Mbps
Other	Power	Maximum power 315 W; stable power 210 W
	Working Environment Temperature	0 °C to 40 °C (32 °F to +104 °F)
	Working Environment Humidity	10%–80% (RH), non-condensing
	Storage Environment Temperature	–20°C to +70°C (–4 °F to +158 °F)
	Storage Environment Humidity	5%–90% (RH), non-condensing
	Working Altitude	0 m–5000 m (0 ft–16,404.20 ft)
	Weight (Without Package)	19.1 kg (42.11 lb)
	Dimension	444.8 mm × 133.2 mm × 522.2 mm (17.51" × 5.24" × 20.56")
	Installation Method	Standard 19-inch pallet mount
	Secondary Development	Platform SDK provided

PC Client System Requirements

Item	Description	
	Recommended	**Minimum**
CPU	Intel Core i7, 64 bits 4 Core Processor	Intel Core i3, 64 bits 4 Core Processor
Memory	16 GB	4 GB
Graphics Card	GeForce® GTX 1060 3 GB (Discrete Graphics Card)	Intel® HD Graphics 530 (Integrated Graphics)
Hard Drive Capacity	200 GB free space for DSS Client	100 GB free space for DSS Client
Ethernet Port	1,000 Mbps	

Performance Specification

Organization, Role and User	
Organizations	10 levels; 999 organizations in total
Roles (User Permission)	100
Users	50 online users and 200 total users
Users for VDP Mobile APP	500 online users and 5,000 total users

Recording Plan	
General Recording Plans	3,000
Motion Detection Recording Plans	3,000
Video Retrieval Plans	3,000

Event	
Event Rules	3,000
Combined Event Rules	100
Combined Events	200

Map	
Hierarchies	8
Size of Offline GIS Map Package	500
Raster Maps	256
Submaps per Map	32
Maximum Size of Raster Map	15 MB
Raster Map Resolution	8100 × 8100
Resources on GIS Map	300
Resources per Raster Map	300

Person and Vehicle Management	
Persons and Vehicle Groups	999
Sub Groups per Level (Main Group Included)	10
Persons	100,000
Cards	200,000
Faces	100,000
Fingerprints	200,000
Vehicles	20,000

Face and Vehicle Watch Lists①	
Face Watch Lists	50
Vehicle Watch Lists	16
Total Faces	100,000
Faces per Face Watch List	50,000
Vehicles per Vehicle Watch List	20,000

Intelligent Analysis	
People Counting Groups	8
People Counting Rules per Group	20

Parking Lot Management	
Vehicles	20,000
Vehicle Groups	16
Parking Lots	8
Entrances and Exits	16

Access Control	
Persons per Permission Group	10,000
Access Permission Groups	200
Door Groups	200
Public Passwords	1,500

Notification Center	
Notification Center Message	1,000

Data Storage	
Event Records	5,000,000
Face Recognition Records	5,000,000

ANPR Records	5,000,000
Metadata Records	5,000,000
Access Control Records	5,000,000
Video Intercom Records	5,000,000
Visitor Records	5,000,000
Entrance Records	5,000,000
Exit Records	5,000,000
Forced Exit Records	5,000,000
Historical Counting Records	5,000,000
In Area Statistical Records	5,000,000
Heat Map Records	5,000,000
Operator Logs	5,000,000
Service Logs	5,000,000

Server Specification

Parameter		Single Server	Multiple Servers
Number of sub servers per system	Sub Servers	-	5 servers
Total Devices	Devices②	2,000 devices	6,000 devices
	Auto-Registered Devices	1,000 devices	5,000 devices
Video Devices and Channels	Video Devices and Channels③	500 devices; 1,000 channels	2,500 devices; 5,000 channels
	P2P Devices	32 devices	
	Add devices by ONVIF	500 devices; 1,000 channels	2,500 devices; 5,000 channels
	Face Recoginition Devices and Channels	20 devices; 100 channels	100 devices; 500 channels
	ANPR Channels	100 channels	500 channels
	Video Metadata Channels	100 channels	500 channels
Access Control Devices	Access Control Devices	200 devices; 500 doors	600 devices; 1,500 doors
	VDP	2,000 devices	
Alarm Devices	Alarm Controllers	64 devices; 320 zones	320 devices; 1,600 zones
	Emergency Phone Towers	20 devices; 40 channels	100 devices; 200 channels
Intelligent Analysis	People Counting Channels	32 channels	160 channels
	Heat Map Channels	32 channels	160 channels
Media Transmission Server	Total Incoming Bandwidth	600 Mbps	3,000 Mbps
	Incoming Video Bandwidth	600 Mbps	3,000 Mbps
	incoming Picture Bandwidth	100 Mbps	500 Mbps
	Total Outgoing Bandwidth	600 Mbps	3,000 Mbps
	Outgoing Video Bandwidth	600 Mbps	3,000 Mbps
	Outgoing Picture Bandwidth	100 Mbps	500 Mbps
	Total Storage Bandwidth	600 Mbps	3,000 Mbps

Media Transmission Server	Video Storage Bandwidth	600 Mbps	3,000 Mbps
	Picture Storage Bandwidth	100 Mbps	500 Mbps
Playback, Storage and Download	Prerecording Bandwidth for Alarm Recordings	400 Mbps	2000 Mbps
	Maximum Capacity per Storage Server(IPSAN)	200 TB	1 PB
Events④	Total Events⑤	240 per second	480 per second
	Storage of Events or Alarms with Pictures⑥	240 per second	480 per second
	Alarms with Snapshots (Stored on Devices)	240 per second	480 per second
	Access Control Events	240 per second	480 per second
	Number of Combined Events	100 per second	

① All the devices together cannot contain more than 10 million faces when the number of faces in the watch lists are multiplied by the number of devices. For example, if a face watch list with 200,000 faces is sent to 40 devices, you can only send another face watch list with 100,000 faces to 20 devices. Or, you can send a list with 50,000 faces to 20 devices and another list with 100,000 faces to 10 devices.

② The maximum number of devices, including IPC, NVR, and ITC, cannot exceed 2,000 for a single server, and 6,000 for multiple servers.

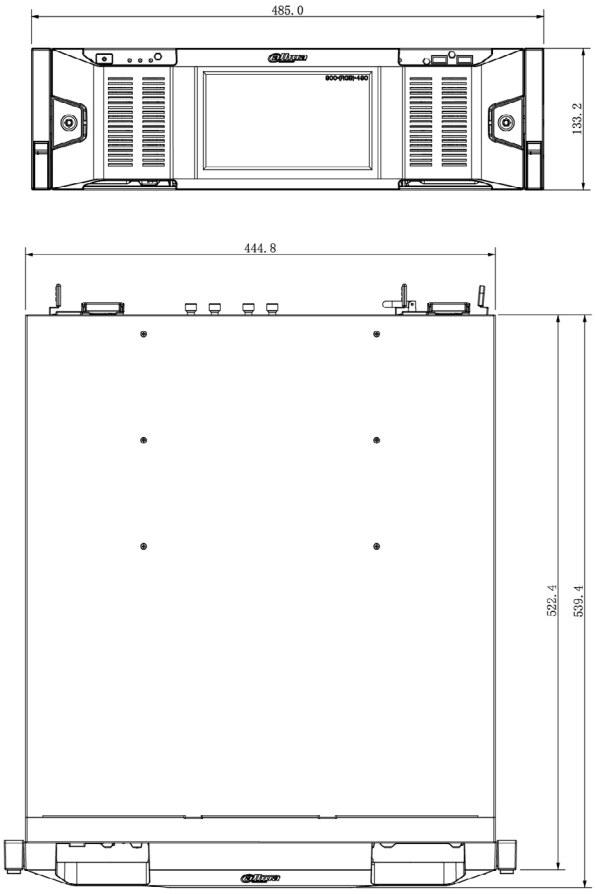
③ When adding video channels and video devices, such as IPC, NVR and ITC, to the platform, you cannot add more than 500 devices, 1,000 channels for a single server, and 2,500 devices, 5,000 channels for multiple servers.

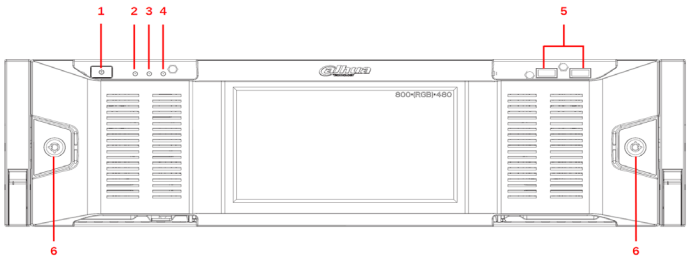
④ These values represent the maximum number of events that can be triggered at the same time. The numbers are measured based on the peak concurrency tests that were carried out 3 times a day. Each test lasted 20 minutes, with 30% of the peak concurrency being applied to the remaining day.

⑤ The maximum number of events that can be triggered at the same time largely depends on the concurrent write capability of the database.

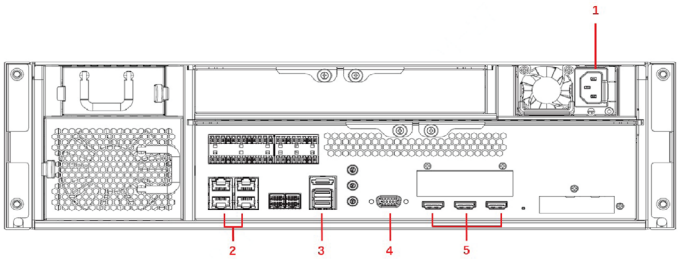
⑥ For events with snapshots, you must take into account the ability for disks and servers to concurrently write images at the same time. For servers it is 200 Mbps.

Dimensions (mm) and Panels





1- Power Button
2- Hard Device Indicator
3- Alarm Indicator
4- Network Indicator
5- USB 2.0
6- Lock



1- Power Interface
2- Gigabit LAN Port 1-4
3- USB 3.0
4- VGA
5- HDMI Port 1-3

DSS Mobile Client Main Functions

DSS Agile 8

Live View

Even when you are away from your computer, you can also ensure the safety of your area right on DSS Agile. You can watch the real-time videos remotely from up to 16 channels at the same time with 3 stream types for you to choose according to the status of your mobile network. PTZ control is also supported so that you can cover most of the area. When anything of interest happens, you can take snapshots or recordings as evidence that stores on your phone, or send a voice message to deter unwanted activities.

Playback

Videos stored on devices or the server can both be played up to 8X faster or 1/8X slower on DSS Agile. You can also use the manual recording function to record important content and save it to your phone.

Access Control

With DSS Agile, you can remotely monitor and operate all access control devices. For example, you can open a door for someone who has a proven identity, or set a door to be always closed so that no one can access.

Target Tracking

For suspicious activities, you can locate targets directly in DSS Agile by searching for face recognition records from a period, uploading a face image of a specific target, or searching for capture records of people, non-motor vehicles, and motor vehicles by features.

Event

You can receive and process various types of alarms. You can also receive alarms when DSS Agile is not running with a subscription button.

Video Intercom

You can make calls to and receive calls from master stations, indoor monitors and door stations. After subscribing to offline calls, you will still receive calls even when the App is not running. Also, a complete record of incoming and outgoing calls ensure that you will not miss any important message.

File Management

Snapshots and videos stored on devices or the server can be managed by deleting them, exporting them to albums, and more. Video downloads can be automatically and manually paused, saving you time from redownloading them when there are connection issues.

DSS Agile VDP

Visitor Management

You can easily manage visitors by registering their information and generating visitor passes with necessary access permissions. When they arrive, they can use the passes to gain access to where you are. DSS Agile VDP will log when visitors begin and end their visits.

Intercom Monitoring

When guests arrive, they can call you on the door station or you can verify their identities through the live video. After confirming they are who you are expecting, you can remotely open the door for them directly on DSS Agile VDP. If you spot any unwanted activities, tap and call the management center to report an emergency.

Message Center

The unlock records and alarm messages on the indoor monitor are fully accessible on DSS Agile VDP, allowing you to identify potential threats and ensure the safety of your residence.

DSS Mobile Client Requirements

	iOS	Android
Model	iPhone 5S or later	-
RAM	-	2 GB and above
Resolution	-	1280 × 720 or higher
Operating System	iOS 10.0 or later	Android 5.0 or later
Language	Arabic, English (United States), French, Russian, Simplified Chinese	