

DSS7016DR-S2

All-in-one Security System for Enterprises



■ Introduction

DSS7016DR-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

DSS7016DR-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 and redundant power design, DSS7016DR-S2 ensures that your business will not be interrupted.

■ 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 them 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 observe 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.

Access Management

◆ **Access Control**

Through the integrated access control system, you can control access within any area directly from DSS7016DR-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**

DSS7016DR-S2 offers a complete process to manage visitors, including 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

With DSS7016DR-S2, 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 2 TB
	Motherboard	Embedded board (7 × 24 operation)
	Hard Disk Hot Swap	Support hot swap and online replacement
	Hard Disk Compatibility	SAS/SATA disk
	Power Redundancy	1+1 redundant power
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

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

Person and Vehicle Management

Persons	100,000
Cards	200,000
Faces	100,000
Fingerprints	200,000
Vehicles	20,000

Face and Vehicle Watch Lists

Face Watch Lists	50
Vehicle Watch Lists	16
Total Faces ^①	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
Number of Entrances and Exits	16

Access Control

Persons per Permission Group	200
Access Permission Groups	10,000
Door Groups	200

Notification Center

Notification Center Message	1,000
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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

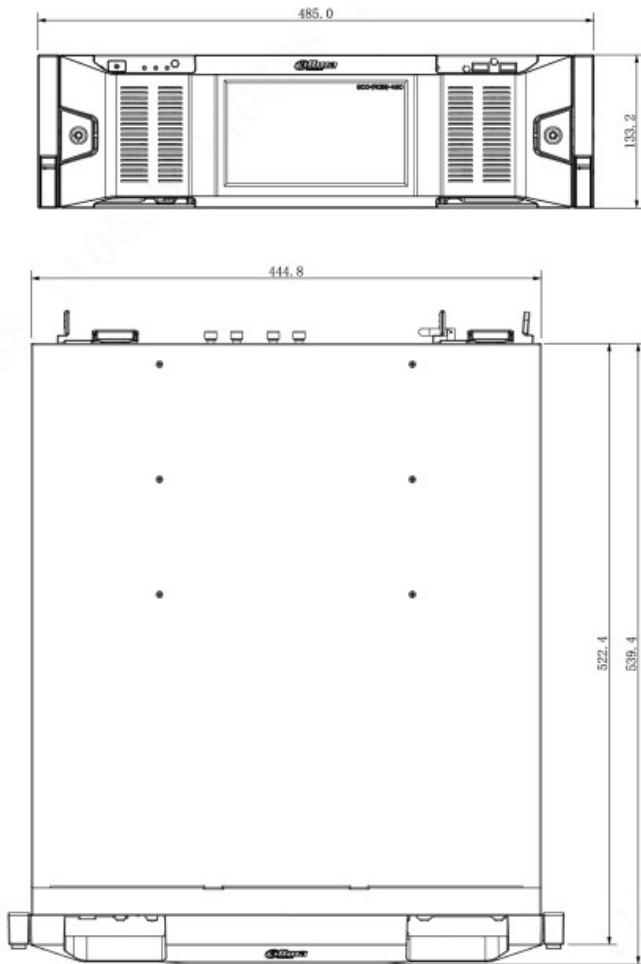
Server Specification

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

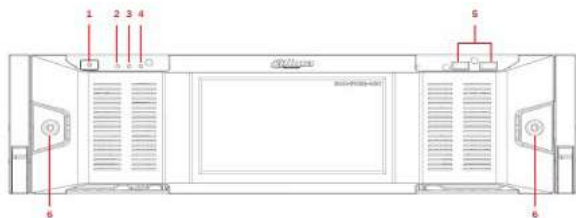
Events^④	Total Events ^⑤	240 per second	480 per second
	Storage of Events or Alarms with Pictures ^⑥	240 per second	480 per second
	Alarms with Snapshots (Stored on Devices)	240 per second	480 per second
	Access Control Events	240 per second	480 per second

- ① Number of face watch lists and devices: Number of faces × number of devices <10 million. For example, a face watch lists of 200 thousand faces can be sent to 50 face recognition devices including IVSS, NVR and face recognition cameras.
- ② The total number of devices must be larger than the total number of video devices, access control devices, video intercom devices and other devices.
- ③ The total number of video devices and channels must be larger than the total number of IPCs, NVRs, ITCs and other video devices and channels.
- ④ Event concurrency is peak concurrency: 20 minutes of peak concurrency test, 3 times a day, and 25% peak concurrency for the remaining time of the day.
- ④ Event concurrency: Event concurrency is in accordance with database concurrent writes. Concurrency of event with pictures must take picture write capacity of the disk into account.
- ⑤ Total event concurrency: The ability to write all events to system records concurrently.
- ⑥ For concurrency of events with pictures, picture write concurrency should also be taken into consideration. The picture write concurrency of an individual server is up to 200 Mbps, so the concurrency of events with pictures is limited by picture write capacity

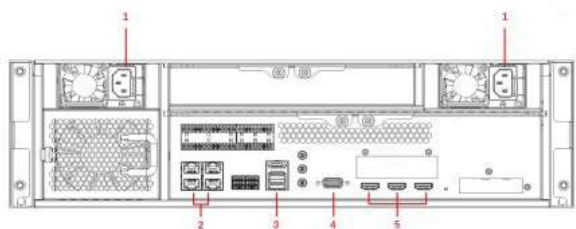
Dimensions (mm)



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

◆ *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 as you need, such as deleting them or exporting them to your album.

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	-	5 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	