


# DSS7116D/DR

All-in-one Security System for Enterprises

A person is shown from the side, sitting at a desk in a dimly lit room. They are talking on a mobile phone held to their ear with their right hand. In front of them are two computer monitors. The monitor on the left displays a grid of security camera feeds. The monitor on the right displays a software interface with a 2x4 grid of colored tiles (blue, red, blue, green in the top row; blue, blue, green, blue in the bottom row), each containing a small image or icon. The person's hands are visible on the desk, near the monitors.

V8.6.0



## ■ Introduction

DSS7116D/DR 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***

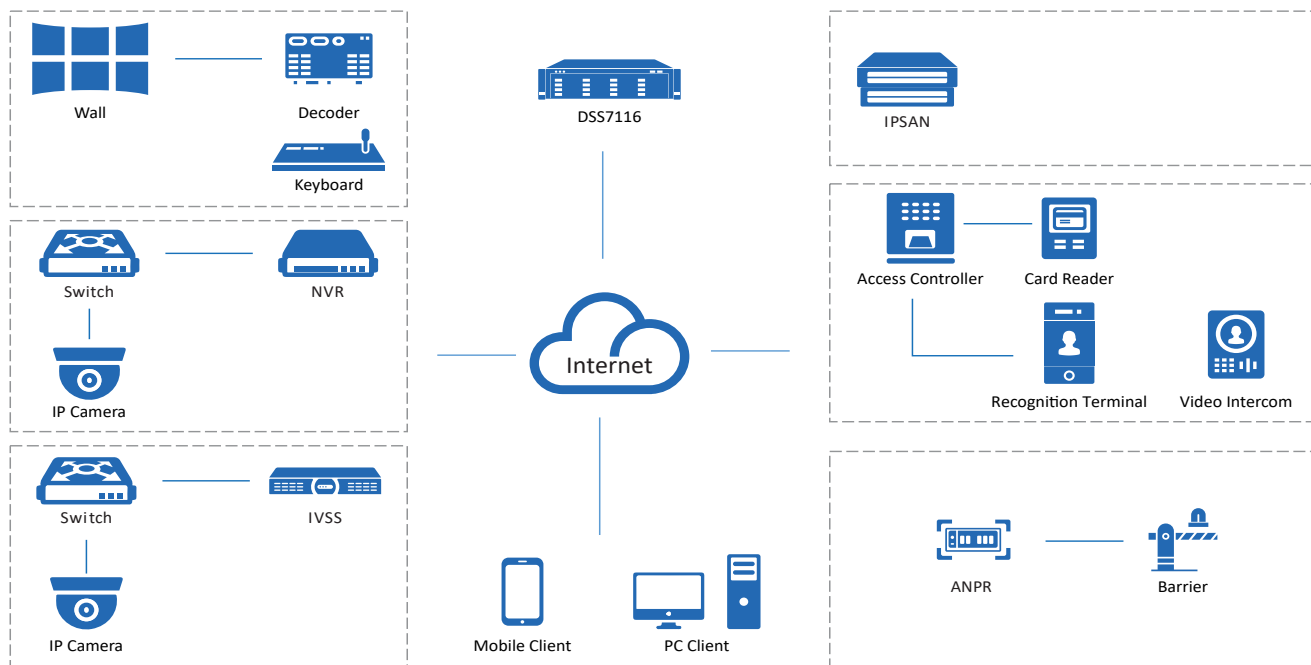
DSS7116D/DR integrates various AI capabilities that devices have, such as face recognition, automatic number plate recognition, and video metadata. You will be notified immediately when the target you are interested in appears, allowing you or security personnel to take necessary security measures.



### ***Highly Available Technology, More Stable***

With hot standby design, DSS7116D ensures that your business will not be interrupted. DSS7116DR supports redundant power.

## ■ 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 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 to skip parts that you are not interested in, slow them down to 1/64X to focus on important sections, or play the previous or next video clip of the most recent time to track the event easily. 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***

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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***

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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***

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By just visiting one page, you can stay up to date with information on alerts, devices, servers and more to instantly recognize issues such as offline devices and abnormal servers. Scheduled reports are also sent based on the information collected to give you a full picture of how your system is running.

### ***Access Management***

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#### ◆ *Access Control*

Doors in different zones can all be effectively controlled for added security. A zone-based management model is used, which maintains maps for each zone to make it easy for you to locate access points. Through the use of access rules, you can quickly grant and deny access to people with great efficiency, strengthening the security of each zone. From the access panel, you can also view and control door channels across different zones at the same time to manage access.

#### ◆ *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*

DSS7116D/DR 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 peak in numbers occur.

## 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 i5-12400, 64 bits 6 Core Processor
	Operation System	Lynxvision
	Memory	16 GB
	System Disk	Seagate 7200 RPM Enterprise Class HDD 4 TB/6 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 (only available for DSS7116DR)
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	4 HDMI ports
	VGA	1 VGA port
Storage	HDD Installation	Support 15 HDDs (3.5") for video or picture storage (Max 16 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)
	Dimensions	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
<b>CPU</b>	Intel® Core i7-11700 @2.50 GHz	Intel® Core i5-9500 @3.00 GHz
<b>Memory</b>	16 GB	
<b>Graphics Card</b>	NVIDIA® GeForce® RTX 3060	Intel® UHD Graphics 630
<b>Hard Drive Capacity</b>	200 GB free space for DSS Client	100 GB free space for DSS Client
<b>Ethernet Port</b>	1,000 Mbps	
<b>Operating System</b>	Microsoft® Windows 10 20H2 Pro (32-bit) Microsoft® Windows 10 20H2 Pro (64-bit) Microsoft® Windows 11 21H2 Pro (64-bit)	

① The platform supports using a maximum of 2 network cards at the same time. You can either use 1 network card for accessing devices on a local area network, and 1 network card for services on the Internet; or use both network cards for accessing devices on a local area network, and then map one of them to the Internet.

## ■ Performance Specification

Organization, Role and User	
Roles	100
Users (PC Client and DSS Agile 8)	50 online users and 200 total users
Roles per User	32
DSS Agile VDP Users	500 online users and 5,000 total users
User Groups	20
Users per User Group	200

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

Event	
Event Sources for Event Rules	3,000
Combined Event Rules	100
Combined Events	1,000
Generic Event Rules	50

## Map

Hierarchies	8
Maximum Size of Raster Map	15 MB
Raster Maps	256
Resources on GIS Map	300 (After merging) 2,000 (Before merging)
Resources per Raster Map	300 (After merging) 2,000 (Before merging)

## Person and Vehicle Management

Persons and Vehicle Groups	999
Group Levels	10
Persons	100,000
Cards	200,000
Faces	100,000
Fingerprints	200,000
Vehicles	20,000

## Face and Vehicle Watch Lists<sup>①</sup>

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

## Access Control

Persons for Door Access Rules	10,000 (1 password, 2 face images, 3 fingerprints, and 5 cards for each person)
Zones	256
Door Access Rules	200
Public Passwords	1,500

## Visitor

Appointments in Progress	10,000
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## Intelligent Analysis

People Counting Groups	8
People Counting Rules Per Group	20

## Parking Lot Management

Vehicles	20,000
Vehicle Groups	256
Vehicle Groups per Parking Lot	16
Main Parking Lots	8
Sub-Parking Lots per Main Parking Lot	16
Entrances	64
Exits	64
Total Entrances and Exits	64
Entrance/Exit Points	64
Rules of Sending Scheduled Reports	32

## Notification Center

Notification Center Message	1,000
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## Quick Commands

Quick Commands per User	20
Commands per Quick Command	20

## Data Storage

Event Records	5,000,000
Alert Records	5,000,000
Face Recognition Records	5,000,000
ANPR Records	5,000,000
Metadata Records	5,000,000
Access Records	5,000,000
Video Intercom Records	5,000,000
Historical Count Records	5,000,000
In Area Statistical Records	5,000,000
Heat Map Records	5,000,000



Visitor Records	5,000,000
Entrance Records	5,000,000
Exit Records	5,000,000
People Entering and Exit Records	5,000,000
Forced Exit Records	5,000,000
Operator Logs	5,000,000
Service Logs	5,000,000

## ■ Server Specification

Parameter		Single Server	Multiple Servers
<b>Number of sub servers per system</b>	Sub Servers	-	5 servers
<b>Total Devices</b>	Devices <sup>②</sup>	2,000 devices	6,000 devices
	Auto-registered Devices	1,000 devices	5,000 devices
<b>Video Devices and Channels</b>	Video Devices and Channels <sup>③</sup>	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 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
	Devices Accessed via RTSP	500 devices; 1,000 channels	2,500 devices; 5,000 channels
<b>Access Control Devices</b>	Access Control Devices	200 devices; 500 doors	600 devices; 1,500 doors
<b>VDP Devices</b>	Video Intercom Devices	2,000 devices	
<b>Alarm Devices</b>	Alarm Controllers	64 devices; 640 zones	320 devices; 3,200 zones
	Emergency Phone Towers	20 devices; 40 channels	100 devices; 200 channels
<b>Intelligent Analysis</b>	People Counting Channels	32 channels	160 channels
	Heat Map Channels	32 channels	160 channels
<b>Media Transmission Server</b>	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
	Video Storage Bandwidth	600 Mbps	3,000 Mbps
	Picture Storage Bandwidth	100 Mbps	500 Mbps
<b>Playback, Storage and Download</b>	Prerecording Bandwidth for Alarm Recordings	400 Mbps	2,000 Mbps
	Maximum Capacity per Storage Server (Local and IPSAN)	200 TB	1 PB

Events <sup>④</sup>	Storage of Events or Alarms without Pictures <sup>⑤</sup>	240 per second	480 per second
	Combined Events	100 per second	–
	Access Control Events	240 per second	480 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.

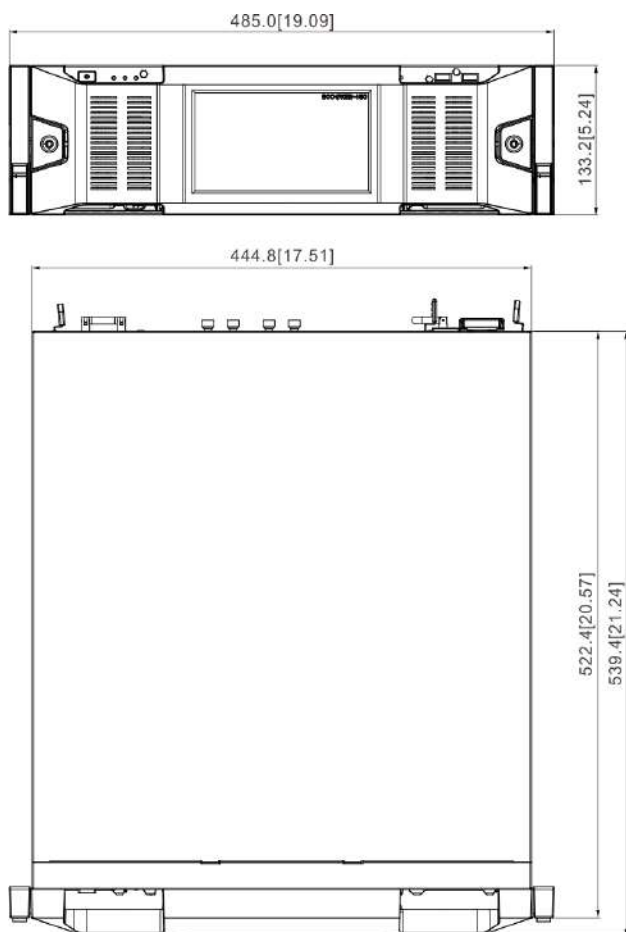
③ When adding video channels and video devices, such as IPC, NVR and ITC, to the platform, you cannot add more than 500 devices, 1,000 channels for a single server, and 2,500 devices, 5,000 channels for multiple servers.

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.

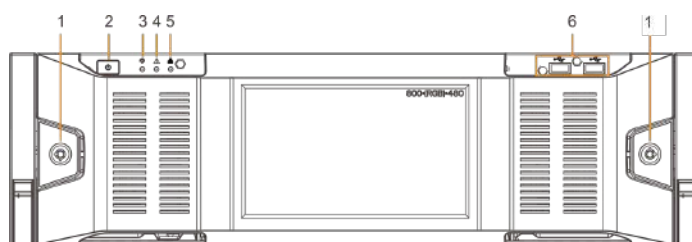
⑤ For events with snapshots, you must take into account the ability for disks and servers to concurrently write images at the same time. For servers it is 200 Mbps.

## Dimensions and Panels

### Dimensions (mm[inch])



### Front Panel



1- Front Panel Lock

2- Power

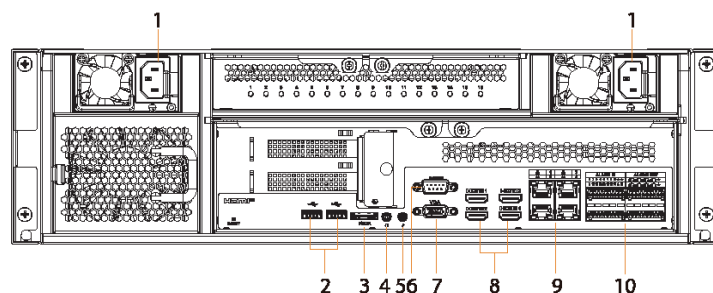
3- System Status Indicator

4- Alarm Indicator

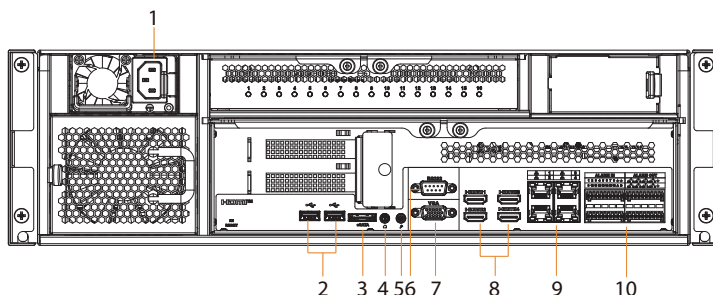
5- Network Indicator

6- USB Port

### DSS7116DR Rear Panel



### DSS7116D Rear Panel



1- Power Interface

2- USB Ports

3- eSATA Port

4- AUDIO OUT

5- AUDIO IN

6- RS-232 Port

7- VGA Port

8- HDMI Ports

9- Network Ports

10- Alarm In/Alarm Out

## ■ DSS Mobile Client Main Functions

### ***DSS Agile 8***

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#### ◆ **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.

#### ◆ **Visitor Management**

You can create visitor pass and grant access permissions for visitors, and effortlessly keep tabs on visitors' status, from visit information to end of the visit. Automatic visit and automatic leave can be set for unrivaled convenience.

#### ◆ **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 main 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 or more
Resolution	-	1280 × 720 or higher
Operating System	iOS 12.0 or later	Android 8.0 or later
Language	Arabic, Bulgaria, Czechish, English (United States), French, Japanese, Korean, Latin American Spanish, Poland, Portugal, Russian, Simplified Chinese, Spanish, Traditional Chinese, Turkish, Ukrainian, Vietnamese	