DSS7116D/DR

All-in-one Security System for Enterprises



V8.8.0



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

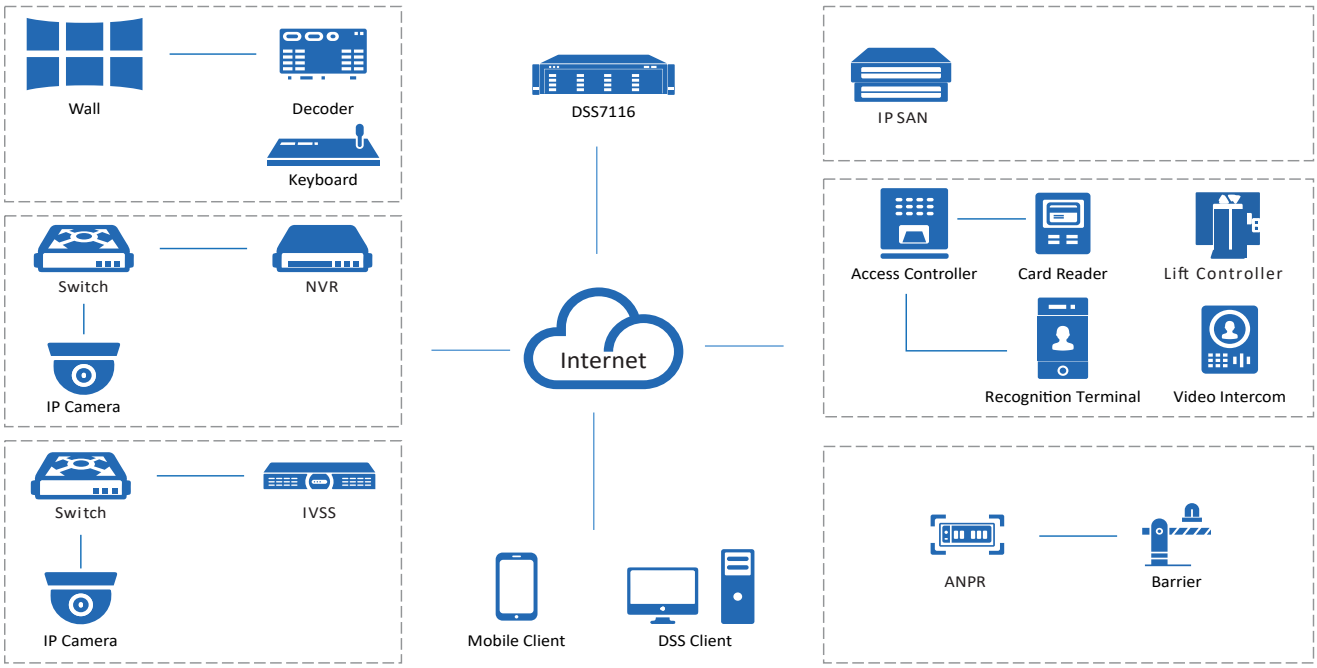
DSS7116D/DR integrates the AI capabilities of connected devices, such as face recognition, automatic number plate recognition, and video metadata analysis. When a person, vehicle, or other target of interest is detected, the system sends instant alarms, so you or security personnel can respond quickly and take appropriate action.



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 prioritize 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, operating IP speakers (talk, broadcast, play audio, and adjust the volume), viewing dewarped live view from fisheye cameras, and unlocking turnstiles to grant access.

Visual tracking lets you follow a target across different areas or locations, without losing sight of the target, as long as the places that the target passes through are covered by the associated cameras.

With the AcuPick capability of connected devices, the platform automatically recognizes different types of objects in the video, then you can select a target, and quickly locate it in DeepXplore.

If an emergency occurs, manual recording is just a click away, so that you can quickly save the relevant footage as evidence.

Playback

The playback function allows you to play recorded videos in multiple windows. Playback speed is highly flexible. You can play fast-forward up to 64X to skip irrelevant parts, or slow down to 1/64X to focus on important moments. You can also jump to the previous or next video clip of the most recent time to track the event with reduced effort.

To control the data in the videos, you can add tags to mark relevant content, and lock clips to prevent them from being overwritten when storage is full. The filtering function lets you narrow results by video type or target type, so you can quickly find and handle only the footage you need.

Video Wall

Video wall is used to display videos on a large screen that consists of many smaller screens. Highly customizable, it supports not only flexible layouts, but also display of live and recorded videos, so you can focus on important details in the video. Also, you can use tasks to schedule videos from different channels appear on the video wall at specified times or run on a continuous loop.

Map

The map provides an intuitive way to track devices and events by location. Device icons on the map flash red when an alarm is triggered, instantly showing the event location. You can add submaps for different areas. For example, a plan view of a public square can be added to a map to pinpoint the positions of people within that square.

DeepXplore

Powered by AI technology, you can easily search for targets, look for their historical records, and even generate movement tracks, so you can observe their whereabouts through setting simple search conditions. Also, the WizSeek function enhances precision by letting you combine text with search conditions, so you can pinpoint specific targets more efficiently.

Event Management

The event center supports monitoring and handling over 200 types of alarms while continuously generating statistics. To give you a clear picture of what is happening in your area, the alarm center also shows metrics like total alarms processed and the most frequently triggered alarm types. The system is flexible. You can choose from predefined alarm types, or create custom alarm types to match your workflows. You can also manually trigger alarms to take snapshots and send email notifications, so that important events get immediate attention.

Maintenance Center

A unified dashboard gives you a single-pane view of devices and channels, and more, so you can instantly spot issues like offline devices or 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

Access Control

Control doors and lifts across multiple zones using a zone-based management model. Each zone maintains a map for quick location of access points, and a unified access panel lets you monitor and operate door and lift channels across zones in real time. You can create flexible access rules to grant or deny access efficiently, allowing secure access control.

Video Intercom

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

Visitor

DSS7116D/DR offers a full visitor management process, covering from appointment and registration to access permission granting and automatic permission revocation once a visit ends. A complete, detailed record of all visits is available for your review at any time.

Intelligent Analysis

To boost your profitability and enhance your service offerings, the platform provides valuable insights into on-premises people information through advanced intelligent analysis and heat map generation. It allows you to track the number of people in an area at any given time, identify high-frequency hotspots, pinpoint the exact times when people counts reach the peak, empowering data-driven decisions to optimize operations.

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. The platform supports scenes without barriers to ensure smooth navigation for drivers, and it supports resetting available parking spaces to ensure accuracy of your parking occupancy information.

Hardware Specification

Item		Description
System	Main Processor	Intel i5-12400, 64-bit, 6-core processor
	Operation System	Lynxvision
	Memory	16 GB
	System Disk	Seagate 7200 RPM Enterprise Class HDD 4 TB or 6 TB
	Motherboard	Embedded board (7 × 24 operation)
	Hard Disk Hot Swap	Support hot swap and online replacement
	Hard Disk Compatibility	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	Supports 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

Client System Requirements

Item	Description	
	Recommended	**Minimum**
CPU	Intel® Core i7-11700 @2.50 GHz	Intel® Core i5-9500 @3.00 GHz
Memory	16 GB	
Graphics Card	NVIDIA® GeForce® RTX 3060	Intel® UHD Graphics 630
Hard Drive Capacity	200 GB free space for DSS Client	100 GB free space for DSS Client
Ethernet Port	1,000 Mbps	
Operating System	Microsoft® Windows 10 20H2 Pro (32-bit) Microsoft® Windows 10 20H2 Pro (64-bit) Microsoft® Windows 11 21H2 Pro (64-bit)	

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.

Server Specification

Parameter		Single Server	Multiple Servers
Sub Servers per System	Sub Servers	-	5 servers
Total Devices	Devices①	2,000 devices	6,000 devices
	Auto-registered Devices	1,000 devices	5,000 devices
Devices and Channels	Video Devices and Channels②	500 devices; 1,000 channels	2,500 devices; 5,000 channels
	P2P Devices	32 devices	
	Devices Added by ONVIF Protocol	500 devices; 1,000 channels	2,500 devices; 5,000 channels

Devices and Channels	Devices Added by Hikvision Protocol	500 devices; 1,000 channels	2,500 devices; 5,000 channels
	Devices Accessed via RTSP	500 devices; 1,000 channels	2,500 devices; 5,000 channels
	Face Recognition Channels	100 channels	500 channels
	ANPR Channels	100 channels (64 channels for entrance)	500 channels (64 channels for entrance)
	Video Metadata Channels	100 channels	500 channels
Intelligent Analysis	People Counting Channels	32 channels	160 channels
	Heat Map Channels	32 channels	160 channels
Access Control Devices	Access Control Devices and Lift Control Devices	200 devices; 500 channels	600 devices; 1,500 channels
	Total Access Control Devices	200 devices; 500 doors	600 devices; 1,500 doors
	Access Control Devices on the DSS Platform	200 devices; 500 doors	600 devices; 1,500 doors
	Lift Control Devices	100 devices; 200 channels	300 devices; 600 channels
	Video Intercom Devices	2,000 devices	
	Visitor Terminals	10 devices	
Alarm Devices	Alarm Controllers	64 devices; 640 zones	320 devices; 3,200 zones
	Emergency Phone Towers	20 devices; 40 channels	100 devices; 200 channels
IP Speaker	IP Speakers	100 devices	500 devices
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
	Video Storage Bandwidth	600 Mbps	3,000 Mbps
	Picture Storage Bandwidth	100 Mbps	500 Mbps
	Prerecording Bandwidth for Alarm Recordings	400 Mbps	2,000 Mbps
Central Storage	Maximum Storage Capacity	200 TB	1 PB
Event③	Storage of Events or Alarms without Pictures④	Average: 50 per second Peak: 240 per second (lasts 1 hour)	Average: 50 per second Peak: 480 per second (lasts 1 hour)
	Access Control Events	Average: 50 per second Peak: 240 per second (lasts 1 hour)	Average: 50 per second Peak: 480 per second (lasts 1 hour)
	Combined Events	Average: 20 per second Peak: 100 per second (lasts 1 hour)	

① The maximum number of devices that the platform supports, including IPC, NVR, and ITC.

② When adding video channels and video devices, such as IPC, NVR and ITC, to the platform, the maximum number of devices and channels that the platform supports.

③ 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.

④ For events with snapshots, you must take into account the ability for disks and servers to concurrently write images at the same time.

Performance Specification

The parameters below perform consistently whether running on a single server or across multiple servers.

Organization, Role and User	
Organizations	10 levels; 999 organizations in total
Roles (User Permission)	100
Users	200
Online Users (PC and Agile App)	50
Roles per User	32
User Groups	100
Users per User Group	200
DSS OnePass Users	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

Live View and Playback	
Total Public View Folders	999
Total Public Views	1,000
Total Private View Folders	999 per user
Total Private Views	1,000 per user
Favorites Level	10
Total Favorites	999 per user
Device Channels for Total Favorites	2,000 per user
Tags	10,000 per user
Locked Videos	10,000 per user
Linked Tracking Channels per Channel	8
Simultaneous Video Downloads per Client	5
Tours per User	20

Video Wall	
Video Walls	32
Public Video Wall Tasks	128
Private Video Wall Tasks per User	128

Public Video Wall Tour Tasks	128
Private Video Wall Tour Tasks per User	128
Touring Videos per Video Wall Window	512

Event	
Event Sources for Event Rules	3,000 event sources
Combined Events Rules	100
Combined Events	1,000
Generic Event Rules	500

DeepXplore	
Channels Searched at a Time	200

Map	
Hierarchies	8
Size of Offline GIS Map Package	1 GB
Maximum Size of Raster Map	50 MB
Raster Map Resolution	8,100 × 8,100
Raster Maps	256
Resources on GIS Map	Up to 300 (after merging) Up to 2,000 (before merging)
Resources per Raster Map	Up to 300 (after merging) Up to 1,000 (before merging)
Static Visual Range	1,000

Person and Vehicle Management	
Person and Vehicle Groups	999
Group Levels	10
Total Persons	100,000
Persons on the DSS Platform	100,000
Person Groups that a Person can Belong to	20
Cards	200,000
Faces	100,000
Fingerprints	200,000
Palm Veins	200,000
Vehicles	20,000

Arming Lists①	
Total Faces	100,000
Total Face Arming Groups	50
Face Comparison Databases	50
Faces per Face Comparison Database	50,000
People in Total Face Comparison Groups	100,000
Total Vehicle Arming Groups	16
Vehicles per Vehicle Arming Group	20,000
Vehicles in Total Vehicle Arming Groups	20,000
Total Text-Defined Alarms	10,000

① A face can belong to multiple face databases. All the devices together cannot contain more than 10 million faces when the number of faces in the arming lists are multiplied by the number of devices. For example, if a face arming list with 200,000 faces is sent to 40 devices, you can only send another face arming 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.

Access Control	
Zones	999
Zone Levels	10
Access Rules (Doors and Lifts)	200
Door Access Rules	200
Lift Access Rules	200
Persons for Access Rules (Doors and Lifts)	100,000
Persons for Door Access Rules	100,000 (1 password, 2 face images, 3 fingerprints, 2 palm veins, 1 Bluetooth card, and 5 cards for each person)
Persons for Lift Access Rules	100,000
Persons per Rule	1,000
Person Groups per Rule	100
Global Anti-passback Rules	16
Anti-passback Groups per Global Anti-passback Rule	2–4
Card Readers per Anti-passback Group for Global Anti-passback Rule (by Route)	64
Card Readers per Anti-passback Group for Global Anti-passback Rule (by Area)	64
Global Interlock Rules	16
Door Access Points per Group for the Rule of Global Interlock within Groups	2–4
Interlock Groups for the Rule of Global Interlock between Groups	2
Doors per Interlock Group for the Rule of Global Interlock between Groups	1–4
Total Public Passwords	1,500
Public Passwords per Device	500
Scheduled Verification Plans	64

Video Intercom	
Call Groups (Custom)	100
Rooms (Custom) per Call groups	2,000
Persons per Room	20
OnePass Accounts per Room	20

Visitor	
Appointments in Progress	50,000
Visitor Permission Groups	50

Intelligent Analysis	
People Counting Groups	8
People Counting Rules per Group	20
Channels for Extracting People Counting Data at a Time	100
Metadata Statistics Channels Searched at a Time	200
Crowd Distribution Statistics Groups	8
Rules per Crowd Distribution Statistics Group	20
Channels for Extracting Crowd Distribution Data at a Time	16
Vehicle Density Statistics Groups	8
Rules per Vehicle Density Distribution Statistics Group	20
Channels for Extracting Vehicle Density Data at a Time	16

Parking Lot	
Parking Lot Organization Level	10
Total Parking Lot Organizations	999
Vehicles	20,000
Vehicle Groups	256
Vehicle Groups per Parking Lot	16
Main Parking Lots	8
Sub Parking Lots per Main Parking Lot	16
Total Entrance/Exit Points	64
Total Entrances and Exits	64
Entrances	64
Exits	64
Parking Overtime Rules	128
Time Periods per Day for Each Overtime Parking Rule	6
Rules for Sending Scheduled Reports	32

Maintenance Center	
Alert Rules	3,000

Quick Commands	
Quick Commands per User	20
Commands per Quick Command	20

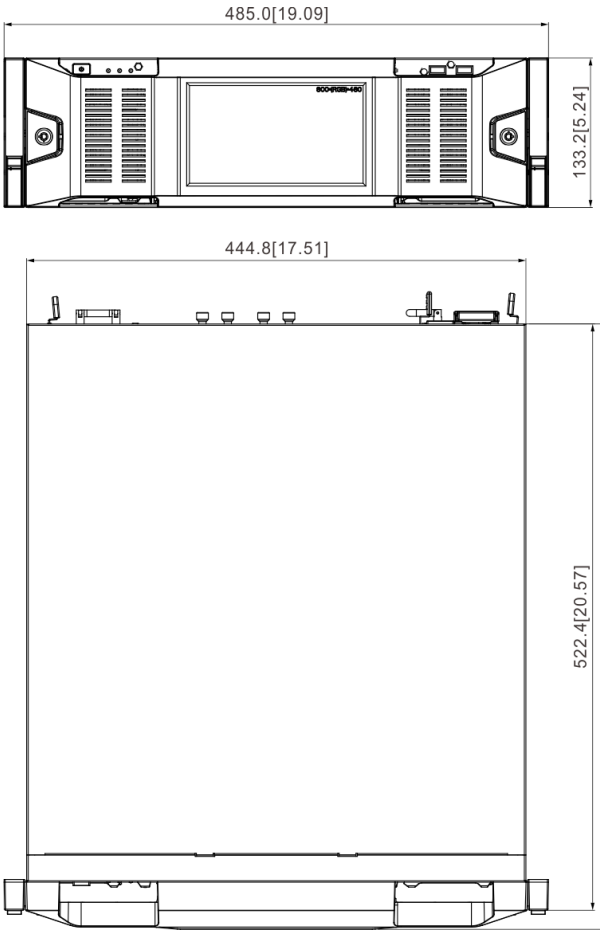
IP Speaker	
Broadcasting Channels	100
Customized IP Speaker Groups	20

Notification Center	
Messages	1,000

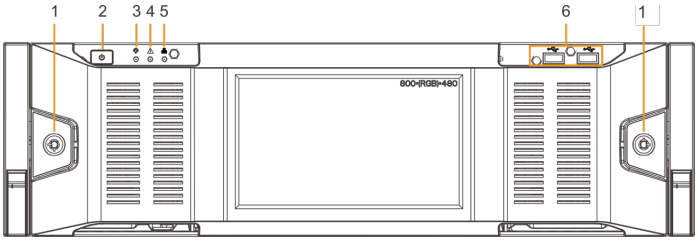
Data Storage	
Total Database Records	20,000,000
Event Records	5,000,000
Face Recognition Records	5,000,000
ANPR Records	5,000,000
Metadata Records	5,000,000
Access Records	5,000,000
Analysis Records for People Enter and Exit	5,000,000
Video Intercom Records	5,000,000
Visitor Records	5,000,000
Historical Count Records	5,000,000
In Area Statistical Records	5,000,000
Heat Map Records	5,000,000
Hourly/Daily/Monthly Face Statistics	5,000,000
Hourly/Daily/Monthly Human Body Statistics	5,000,000
Hourly/Daily/Monthly Motor Vehicle Statistics	5,000,000
Hourly/Daily/Monthly Non-motor Vehicle Statistics	5,000,000
Vehicle Enter Records	5,000,000
Vehicle Exit Records	5,000,000
Vehicle Forced Exit Records	5,000,000
Maintenance Alert Records	5,000,000
Maintenance Fault Records	5,000,000
Operator Logs	5,000,000
Service Logs	5,000,000

Dimensions and Panels

Dimensions (mm[inch])

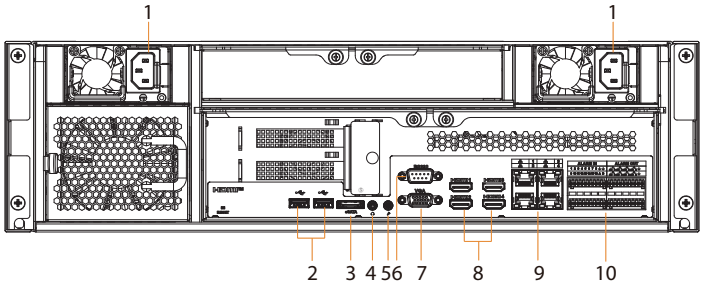


Front Panel

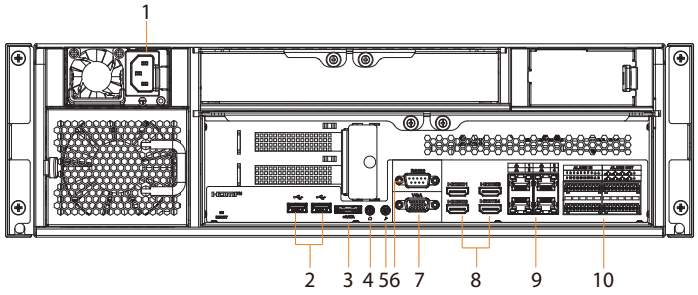


1- Front Panel Lock
2- Power
3- System Status Indicator
4- Alarm Indicator
5- Network Indicator
6- USB Port

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

Live View

Even when you are away from your computer, you can keep your premises secure with DSS Agile. You can view live videos from up to 16 channels simultaneously and choose among 3 stream types to suit your mobile network conditions. PTZ control lets you pan, tilt, and zoom to cover nearly every angle. When anything of interest occurs, you can take snapshots or recordings as evidence that stores on your phone, or send a voice message to deter unwanted activities.

Playback

In DSS Agile, videos stored on devices or the server can be played back at up to 8X speed or slowed down to 1/8X. You can also use manual recording to record important footage and save it directly to your phone.

Visitor Management

You can create visitor passes and grant access permissions with ease, while effortlessly tracking each visitor's status, from initial visit details through end of the visit. Automatic visit and leave can be set for unmatched convenience.

Access Control

With DSS Agile, you can remotely monitor and operate all access control devices, from remotely unlocking a door for someone with verified credentials, to setting a door to remain locked to prevent any entry.

Target Tracking

When suspicious activity occurs, DSS Agile lets you quickly locate persons of interest by searching face recognition records over a specified time range, uploading a face image to find matches, or searching captured records of people, non-motor vehicles, and motor vehicles by attributes.

Event

You can receive and manage a wide range of alarms, and subscribe to alarm notifications, so you will still get notified even when DSS Agile is not running.

Video Intercom

You can make and receive calls with 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 you never miss important messages.

Alarm Controller

You can remotely operate alarm controllers through DSS Agile to protect areas, such as arming and disarming areas, bypassing and isolating zones, viewing real-time area and zone status, and filtering displays to show only the information you care about.

File Management

You can manage snapshots and videos stored on devices or the server, including deleting them, exporting them to local albums, and more. Video downloads can be paused automatically or manually, saving you time and bandwidth from redownloading them when the download is interrupted.

DSS OnePass

Visitor Management

You can easily manage visitors by registering their details and generating visitor passes with the required access permissions. When they arrive, they can use the passes to gain access to where you are, and DSS OnePass logs when visitors begin and end their visits.

Intercom Monitoring

When guests arrive, they can call from the door station, or be verified through live video. Once you confirm their identity, you can remotely open the door in DSS OnePass. If you spot any unwanted activities, you can tap to call the management center to report an emergency.

Door Opening

You can open the door using Bluetooth, by scanning the QR code at the door station, or remotely through the app.

Message Center

The unlock records and alarm messages on the indoor monitor are fully accessible in DSS OnePass, allowing you to identify potential threats and keep your residence secure.

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, Bulgarian, Czech, English (United States), French, Japanese, Korean, Spanish (Latin America), Polish, Portuguese, Russian, Chinese (Simplified), Spanish (Europe), Chinese (Traditional), Turkish, Ukrainian, Vietnamese, Malay, Romanian, Indonesian, Italian, Slovak	

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