DSS Express

Pay-as-you-go Security System for SMB



V8.6.0

Introduction

DSS Express can be used with 64 cameras for free and supports up to 256 cameras with license. In addition, it is easy to be integrated with access control, video intercoms and AI features such as facial recognition, ANPR, and video metadata. It is suitable for retail stores, vehicle entrance management, and office buildings.

Features



Lower Investment

The free version of DSS Express provides 64 video channels and requires more affordable hardware. As your needs increase, you only need to pay for a new license and get extra performance.



Pay-as-you-go

DSS Express is flexibly scalable. You can purchase different licenses to increase the devices you can connect to the platform. DSS Express supports up to 256 video channels, 64 doors, and 256 video intercoms.



Easy Upgrade

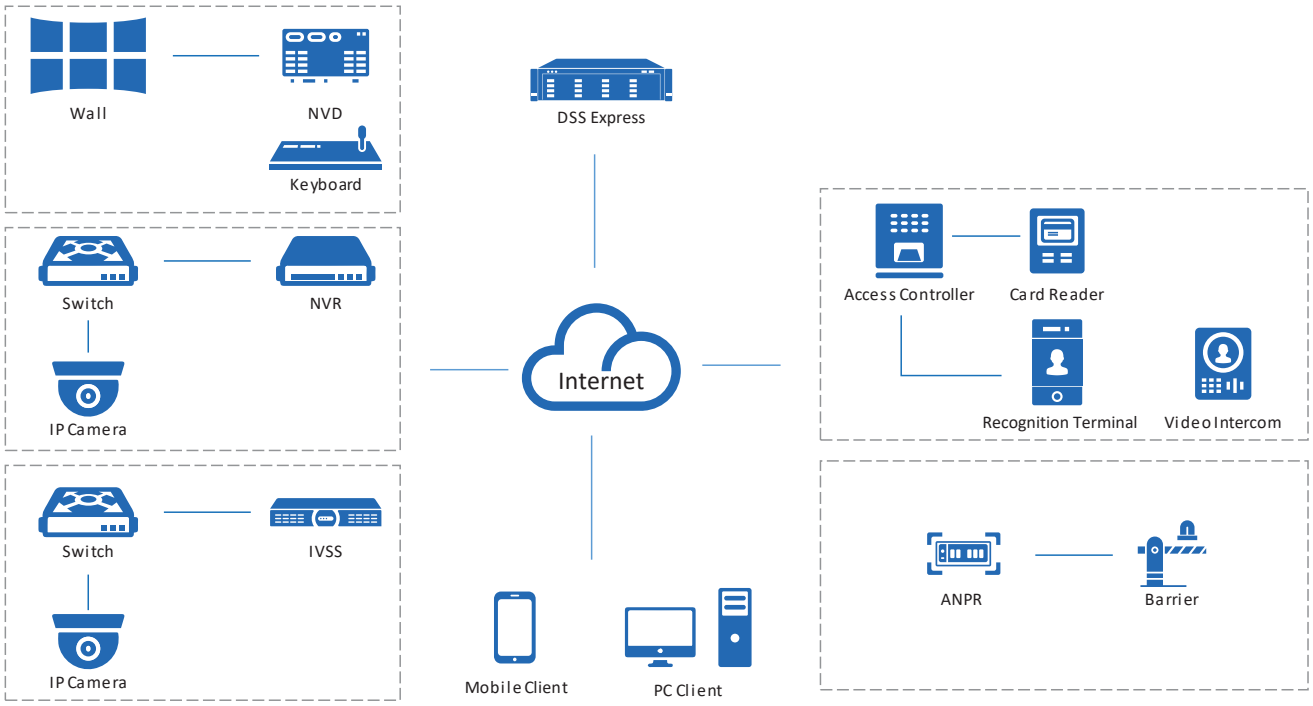
For more functions and capacity, simply upgrade to the professional version with just a license and a few simple steps.



Unified Platform

All your needs can be addressed directly in DSS Express with the comprehensive applications it can provide, including video surveillance, access control, video intercom, face recognition, and ANPR.

System Architecture



Main Functions

Monitoring Center

Live View

With the highly customizable live view function, you can view real-time videos in any way you want. Additionally, the layout can be arranged to display different videos in different sizes, so that areas that are more important can be displayed in a more visible way. On special occasions, you can directly operate on devices, such as talking to nearby people through a camera, or unlocking the barrier of a turnstile to let people in. When something important happens, such as a robbery, the manual recording is only one click away to save that particular part of the video as 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

Powered by AI technology, you can easily search for targets, and look for records on them with simple search conditions. Detailed information is displayed for you to keep track of a target.

Event Management

You can monitor and process over 200 types of alarms right in the event center. In addition to predefined alarm types that are triggered by devices, DIY alarm types that are manually triggered are available for situations such as taking a snapshot or sending an email to the administrator when you see something important.

Access Management

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 the channels of doors at the same time across different zones to manage access.

Video Intercom

All video intercom devices can be managed based on different in one single interface. With two-way communication and remote access control, you have the ability to secure access to your premises. Also, residents will be able to call and report emergencies quickly, allowing you to take immediate actions. To make building management easier, messages that a lot of people should know, such as the electricity will be out for a few hours for maintenance purposes, can be sent to their indoor monitors with only a few steps.

Visitor

DSS Express 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 improve services and profitability, understanding how many people are in an area at any time, where people go to the most, and when peak numbers occur with people number analytics and heat maps can provide valuable and actionable insights.

Parking Lot Management

With DSS Express, 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 helps keep your parking occupancy information up-to-date with the function of resetting available parking spaces.

System Requirements①

	Server		PC Client	
	Recommended	**Minimum**	**Recommended**	**Minimum**
CPU	Intel® Core(TM) I7-9700K CPU @3.60 GHz	Intel® Core(TM) I5-9400 CPU @2.90 GHz	Intel® Core i7-11700 @2.50 GHz	Intel® Core i5-9500 @3.00 GHz
Memory	16 GB	8 GB	16 GB	
System Disk	7200 RPM Enterprise Class HDD 1 TB, 500 GB free space for DSS	7200 RPM Enterprise Class HDD 1 TB, 200 GB free space for DSS	-	
Storage Disk	7200 RPM Enterprise Class HDD		100 GB free space for DSS Client	50 GB free space for DSS Client
Graphics Card	-		NVIDIA® GeForce® RTX 3060	Intel® UHD Graphics 630
Ethernet Port	1000 Mbps		1000 Mbps	
Operating System	Microsoft® Windows 10 20H2 Pro (32-bit) Microsoft® Windows 10 20H2 Pro (64-bit) Microsoft® Windows 11 21H2 Pro (64-bit) VMware®ESXi™ 7.x Microsoft® Hyper-V with Windows Server 2019		Microsoft® Windows 10 20H2 Pro (32-bit) Microsoft® Windows 10 20H2 Pro (64-bit) Microsoft® Windows 11 21H2 pro (64-bit) VMware®ESXi™ 7.x Microsoft® Hyper-V with Windows Server 2019	
Languages	Arabic, Bulgarian, Czech, Danish, English (United States), Finnish, French, German, Hebrew, Hungarian, Italian, Japanese, Korean, Macedonian, Polish, Brazilian Portuguese, Russian, Simplified Chinese, Spanish, Thai, Traditional Chinese, Turkish, Ukrainian, Vietnamese.			

① We recommend that you install an operating system on a physical server and directly deploy the DSS platform on the server to achieve optimal and reliable performance. If you have to deploy the DSS platform on a virtual server, please see the deployment manual for more instructions.
② 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	
Organizations	10 levels; 999 organizations in total
Roles	20
Users	10 online users and 50 total users
User Groups	20
Users per User Group	50
DSS Agile VDP Users	50 online users and 500 total users

Recording Plan	
General Recording Plans	256
Motion Detection Recording Plans	256

Live View and Playback	
Total Public View Folders	999
Total Public Views	1,000

Event	
Event Sources for Event Rules	256
Combined Event Rules	100
Combined Events	128
Generic Event Rules	50

Map	
Hierarchies	8
Raster Maps	32
Maximum Size of Raster Map	15 MB
Raster Map Resolution	8,100 × 8,100
Resources per Raster Map	300 (after merging) 2,000 (before merging)
Static Visual Range	256 channels

Person and Vehicle Management	
Person and Vehicle Groups	999
Group Levels	10
Persons	5,000
Persons on the DSS Platform	5,000
Person Groups that a Person can Belong to	20
Cards	10,000
Faces	5,000
Fingerprints	10,000
Vehicles	5,000

Face and Vehicle Watch Lists①	
Face Watch Lists	50
Total Faces	5,000
Faces per Face Watch List	5,000
Vehicle Watch Lists	8
Vehicles per Vehicle Watch List	5,000

Access Control	
Zones	256
Door Access Rules	50
Persons for Door Access Rules	5,000 (1 password, 2 face images, 3 fingerprints, and 5 cards for each person)
Public Passwords	1,500
Public Passwords per Device	500

Visitor	
Appointments in Progress	50,000
Visitor Permission Groups	50

Video Intercom	
VDP Accounts per Room	5

Intelligent Analysis	
People Counting Groups	4
People Counting Rules per Group	20
Channels for Extracting People Counting Data at a Time	16
Metadata Statistics Channels Searched at a Time	16

Parking Lot Management	
Vehicles	5,000
Vehicle Groups	8
Parking Lots	1
Entrances	4
Exits	4
Total Entrances and Exits	4
Entrance and Exit Points	4
Parking Overtime Rules	128
Time Periods per Day for Each Overtime Parking Rule	6

Notification Center	
Messages	1,000

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

Data Storage	
Event Records	2,000,000
Face Recognition Records	2,000,000
ANPR Records	2,000,000
Metadata Records	2,000,000
Access Records	2,000,000

Analysis Records for People Enter and Exit	2,000,000
Video Intercom Records	2,000,000
Visitor Records	2,000,000
Historical People Counting Records	2,000,000
In Area Statistical Records	2,000,000
Heat Map Records	2,000,000
Hourly/Daily/Monthly Face Statistics	2,000,000
Hourly/Daily/Monthly Human Body Statistics	2,000,000
Hourly/Daily/Monthly Motor Vehicle Statistics	2,000,000
Hourly/Daily/Monthly Non-motor Vehicle Statistics	2,000,000
Vehicle Enter Records	2,000,000
Vehicle Exit Records	2,000,000
Vehicle Forced Exit records	2,000,000
Operator Logs	2,000,000
Service Logs	2,000,000

Server Specification

The following specifications are obtained in a server with recommended system requirements.

Parameter		Single Server
Total Devices	Devices②	512 devices
	Auto-registered Devices	512 devices
Video Devices and Channels③	Video Devices and Channels	256 devices; 256 channels
	P2P Devices	32 devices
Video Devices and Channels③	Devices Added by ONVIF Protocol	256 devices; 256 channels
	ANPR Channels	8 channels (4 channels for entrance)
	Face Recognition Devices and Channels	8 devices; 8 channels
	Video Metadata Channels	8 channels
	Devices Accessed via RTSP	256 devices; 256 channels
Access Control Devices	Total Access Control Devices	64 devices; 64 doors
	Access Control Devices on the Platform	64 devices; 64 doors
	Visitor Terminals	10 devices
VDP Devices	Video Intercom Devices	256 devices
Alarm Devices	Alarm Controllers	16 devices; 160 zones
Intelligent Analysis	People Counting Channels	16 channels
	Heat Map Channels	16 channels

Media Transmission Server	Total Incoming Bandwidth per Server	200 Mbps
	Incoming Video Bandwidth per Server	200 Mbps
	Incoming Picture Bandwidth per Server	50 Mbps
	Total Outgoing Bandwidth per Server	200 Mbps
	Outgoing Video Bandwidth per Server	200 Mbps
	Outgoing Picture Bandwidth per Server	50 Mbps
	Total Storage Bandwidth per Server	200 Mbps
	Video Storage Bandwidth per Server	200 Mbps
	Picture Storage Bandwidth per Server	50 Mbps
	Prerecording Bandwidth for Alarm Recordings	50 Mbps
Central Storage	Central Storage Position	Local Server
	Maximum Capacity per Storage Server	2 TB
Event④	Total Events⑤	60 per second
	Storage of Events or Alarms without Pictures⑥	60 per second
	Alarms with Snapshots (Stored on Devices)	60 per second
	Access Control Events	60 per second
	Combined Events	20 per second

① A face can belong to multiple face database. 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 512 for a single server.

③ When adding video channels and video devices, such as IPC, NVR and ITC, to the platform, you cannot add more than 256 devices, and 256 channels for a single server.

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 50 Mbps.

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.

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	

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