

DSS4004-S2

All-in-one Security System for SMB

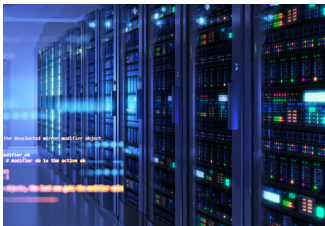


■ Introduction

DSS4004-S2 is a Plug & Play security management platform based on Linux OS and pre-installed DSS software. It provides higher performance in the low-end and mid-end market, offering a reasonably low price for a highly efficient and carefully designed system. 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

- One-time payment for hardware and whole software capacity.
- Lower price per channel.



High Capacity

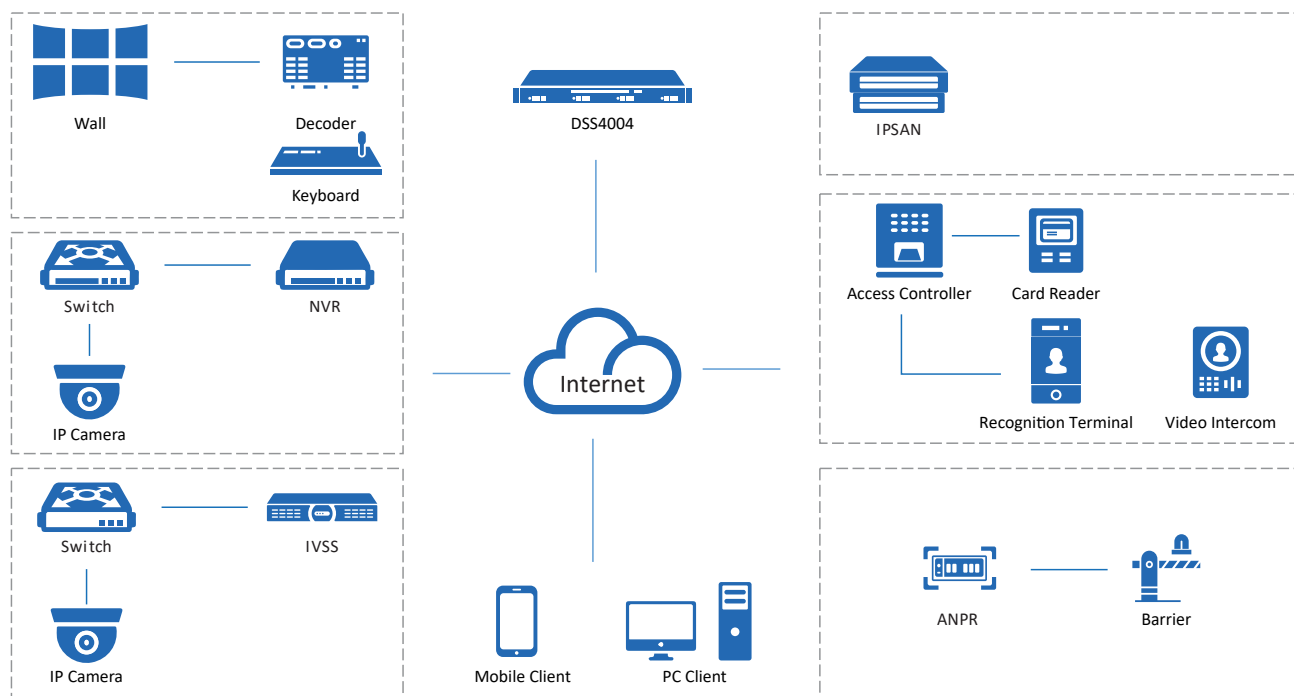
Up to 256 cameras, 64 doors, 1,000 video intercoms and 100 TB storage capacity per server.



Unified Platform

All your needs can be addressed directly in DSS4004-S2 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 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, 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 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 can be manually triggered to take snapshots, send emails, and more for important events.

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 door channels across different zones at the same time 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**

DSS4004-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 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 | X86 Processor Core i3-6100 |
| | Operation System | Embedded Linux |
| | Memory | 8 GB |
| | System Disk | Seagate 7200 RPM Enterprise Class HDD 2 TB |
| | Motherboard | Embedded board (7 x 24) |
| | Hard Disk Compatibility | SAS/SATA disk |
| Interface | Network Ports | 4 Ethernet ports (10/100/1000 Mbps) |
| | USB | 1 × USB 2.0 on front panel; 2 × USB 3.0 on rear panel |
| | HDMI | 2 HDMI ports |
| | VGA | 1 VGA port |
| Storage | HDD Installation | Supports 2 HDDs (2.5") for video or picture storage |
| | Storage | Up to 100 TB per server |
| | HDD Mode | Single |
| | Bandwidth of Video Storage per Server | 350 Mbps |
| Other | Power | 100 V–240 V, 47–63 Hz |
| | Consumption | 70 W–120 W (with HDD) |
| | Working Environment Temperature | 0 °C–45 °C (32 °F to +113 °F) |
| | Working Environment Humidity | 5%–90% (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 | –60 m to 3,000 m (–196.85 ft to 9,842.52 ft) |
| | Weight (Without Package) | 6.0 kg (13.23 lb) |
| | Dimension | 1U, 440 mm × 398.6 mm × 43.65 mm (17.32" × 15.69" × 1.72") |
| | Installation Method | Standard 19-inch pallet mount |

■ PC 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 | 100 GB Free | 50 GB Free |
| Ethernet Port | 1,000 Mbps | |

■ Performance Specification

Organization, Role and User

| | |
|-----------------------------------|--|
| Roles | 20 |
| Users (PC Client and DSS Agile 8) | 10 online users and 50 total users |
| Roles per User | 32 |
| DSS Agile VDP Users | 200 online users and 2,000 total users |

Recording Plan

| | |
|----------------------------------|-----|
| General Recording Plans | 256 |
| Motion Detection Recording Plans | 256 |

Event

| | |
|-------------------------------|-----|
| Event Sources for Event Rules | 256 |
| Combined Event Rules | 100 |
| Combined Events | 128 |

Map

| | |
|----------------------------|---|
| Hierarchies | 8 |
| Maximum Size of Raster Map | 15 MB |
| Raster Maps | 32 |
| Resources per Raster Map | 300 (After merging) 2,000 (Before merging) |

Person and Vehicle Management

| | |
|----------------------------|--------|
| Persons and Vehicle Groups | 999 |
| Group Levels | 10 |
| Persons | 5,000 |
| Cards | 10,000 |
| Faces | 5,000 |
| Fingerprints | 10,000 |
| Vehicles | 5,000 |

Face and Vehicle Watch Lists^①

| | |
|---------------------------------|-------|
| Total Faces | 5,000 |
| Face Watch Lists | 50 |
| Vehicle Watch Lists | 8 |
| Faces per Face Watch List | 5,000 |
| Vehicles per Vehicle Watch List | 5,000 |

Intelligent Analysis

| | |
|---------------------------------|----|
| People Counting Groups | 4 |
| People Counting Rules per Group | 20 |

Parking Lot Management

| | |
|---------------------------|-------|
| Vehicles | 5,000 |
| Vehicle Groups | 8 |
| Parking Lots | 1 |
| Entrances | 6 |
| Exits | 6 |
| Total Entrances and Exits | 6 |
| Entrance/Exit Points | 6 |

Access Control

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

Visitor

| | |
|----------------------------------|--------|
| Appointments Set and in Progress | 10,000 |
|----------------------------------|--------|

Notification Center

| | |
|------------------------------|-------|
| Notification Center Messages | 1,000 |
|------------------------------|-------|

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 |
| Video Intercom Records | 2,000,000 |
| Historical Count Records | 2,000,000 |
| In Area Statistical Records | 2,000,000 |
| Heat Map Records | 2,000,000 |
| Visitor Records | 2,000,000 |
| Entrance Records | 2,000,000 |
| Exit Records | 2,000,000 |

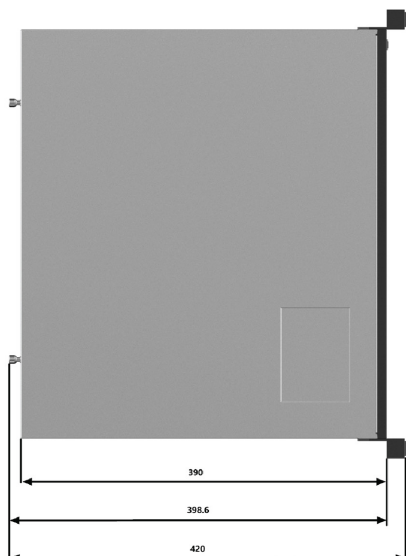
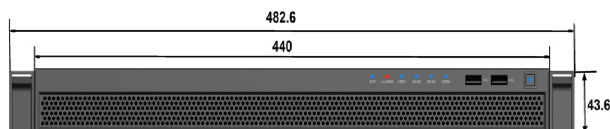
| | |
|----------------------------------|-----------|
| People Entering and Exit Records | 2,000,000 |
| Forced Exit Records | 2,000,000 |
| Operator Logs | 2,000,000 |
| Service Logs | 2,000,000 |

■ Server Specification

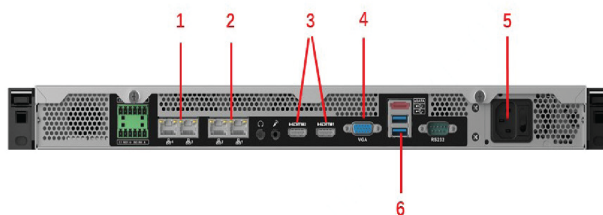
| Parameter | | Single Server |
|--------------------------------|---|---------------------------|
| Total Devices | Devices ^② | 1,000 devices |
| | Auto-registered Devices | 1,000 devices |
| Video Devices and Channels | Video Devices and Channels ^③ | 256 devices; 256 channels |
| | P2P Devices | 32 devices |
| | Add Devices by ONVIF | 256 devices; 256 channels |
| | Face Recognition Devices and Channels | 8 devices; 32 channels |
| | ANPR Channels | 32 channels |
| | Video Metadata Channels | 32 channels |
| | | |
| Access Control Devices | Access Control Devices | 64 devices; 64 doors |
| | Video Intercom Devices | 1,000 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 | 350 Mbps |
| | Incoming Video Bandwidth | 350 Mbps |
| | Incoming Picture Bandwidth | 50 Mbps |
| | Total Outgoing Bandwidth | 350 Mbps |
| | Outgoing Video Bandwidth | 350 Mbps |
| | Outgoing Picture Bandwidth | 50 Mbps |
| | Total Storage Bandwidth | 350 Mbps |
| | Video Storage Bandwidth | 350 Mbps |
| | Picture Storage Bandwidth | 50 Mbps |
| Playback, Storage and Download | Prerecording Bandwidth for Alarm Recordings | 150 Mbps |
| | Maximum Capacity of Central Storage (Local) | 2 TB |
| | Maximum Capacity of Central Storage (IPSAN) | 100 TB |
| Events ^④ | Storage of Events or Alarms without Pictures ^⑥ | 60 per second |
| | Combined Events | 20 per second |
| | Access Control Events | 60 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 1,000 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 200 Mbps.

■ Dimensions (mm) and Panels



- | | |
|-----------------|----------------------|
| 1- Power Button | 4- HDD Status |
| 2- USB 3.0 | 5- Alarm Indicator |
| 3- USB 3.0 | 6- Network Indicator |



- | | |
|-------------------------|--------------------|
| 1- Gigabit LAN Port 3-4 | 4- VGA |
| 2- Gigabit LAN Port 1-2 | 5- Power Interface |
| 3- HDMI Port1/Port2 | 6- USB3.0 Port |

■ 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 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 | - | 2 GB and above |
| Resolution | - | 1280 × 720 or higher |
| Operating System | iOS 10.0 or later | Android 8.0 or later |
| Language | Arabic, English (United States), French, Russian, Simplified Chinese | |