



# **DSS Professional System Requirements & Performance**



V8.1.0

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## 1 System Requirements

Feature	Description
OS for DSS Professional Server	Microsoft® Windows server 2012(64-bit) Microsoft® Windows server 2016(64-bit) Microsoft® Windows server 2019(64-bit) Microsoft® Windows 10 20H2(64-bit)
OS for DSS PC Client	Microsoft® Windows 7 (32-bit) Microsoft® Windows 7 (64-bit) Microsoft® Windows 10 20H2(32-bit) Microsoft® Windows 10 20H2(64-bit) Microsoft® Windows server 2008(64-bit) Microsoft® Windows server 2012(64-bit) Microsoft® Windows server 2016(64-bit) Microsoft® Windows server 2019(64-bit) Microsoft® Windows 11(64-bit)
OS for DSS Mobile Client	IOS 10.0 and above Android 5.0 and above

## 2 Performance

### 2.1 Hardware for Server

Feature	Minimum	Recommended
CPU	Intel Xeon E-2224 3.4GHz, 8M cache	Intel Xeon Silver 4114@ 2.2GHz 10 Core Processor
Memory	8GB	16 GB
System Disk	7200 RPM Enterprise Class HDD 1TB, 500G free space for DSS	7200 RPM Enterprise Class HDD 1TB, 500 GB free for DSS
Storage Disk	7200 RPM Enterprise Class HDD	7200 RPM Enterprise Class HDD
Ethernet Port	2 Ports@1000 Mbps	4 Ports@1000 Mbps

2.2 Maximum Performance

Contents		Minimum	Recommended
Organizatons, User and Role	Organizations	10 levels; 999 organizatons in total	
	Role(User Permission)	500 roles	
	User	10 online users and 2,500 total users	200 online users and 2,500 total users
	Roles per User	32	
	DSS Agile VDP User	50 online users and 5,000 total users	500 online users and 5,000 total users
Recording Plan	General Recording Plans	256	3,000
	Motion Detection Recording Plans	256	3,000
	Video Retrieval Plans	256	3,000
	File Retrieval Plans	256	3,000
Event	Event Rules	256	3,000
Map	Hierarchies	8 Hierarchies	
	Size of Offline GIS Map Package	500 MB	
	Number of Raster Maps	32	256
	Number of Submaps per Map	32	
	Maximum Size of Raster Map	15 MB	
	Raster Map Resoluton	8,100 × 8,100	
	Number of Resources on GIS Map	300	
	Number of Resources per Raster Map	300	

Contents		Minimum	Recommended
Person and Vehicle Management	Persons	5,000	300,000
	Cards	10,000	600,000
	Faces	5,000	300,000
	Fingerprints	10,000	600,000
	Vehicles	5,000	50,000
Face and Vehicle Watch Lists	Number of Face Watch Lists	50	
	Total Faces for Face Watch List	5,000	300,000
	Faces per Face Watch List	5,000	50,000
	Number of Vehicle Watch Lists	32	
	Total Vehicles for Vehicle Watch List	5,000	50,000
Access Control	Total Persons	5,000	30,000
	Access Permission Groups	50	500
	Door Groups	50	500
Video Intercom	Rooms	5,000	
	Persons per Room	10	
	VDP Accounts per Room	5	

Contents		Minimum	Recommended
Attendance Data	Attendance Terminals	64	
	Attendance Periods	64	
	Attendance Shifts	100	
Intelligent Analysis	People Counting Groups	30	30
	People Counting Rules	20	20
Parking Lot Management	Vehicles	5,000	50,000
	Vehicle Groups	32	32
	Parking Lots	4	16
	Number of Entrances and Exites	12	60
	Entrance and Exit Points	12	60
	Number of Entrances	6	30
	Number of Exits	6	30
	License Plates per Reserve Parking Space	10,000	10,000
	Parking Space Detectors per Parking Lot	100	500
	Parking Spaces per Parking Lot	300	1,500
	Parking Spacse Available Displays per Parking Lot	10	30
Image Size per Layer	15 MB	15 MB	

Contents		Minimum	Recommended
Parking Lot Management	Resolution per layer	8,100 × 8,100	
	Total Layers	32	128
	Layers for per Parking Lot	16	
	Resources for per Layer (parking spaces not included)	200	600
	Parking Spaces for per Layer	300	1,000
Group Talk	Groups	10	30
	User in a Group	20	100
Synthesis	Bridges	5	
	Incoming Trigger Event	100	
	Incoming Trigger Source	500	
Data Info	Event Records	5,000,000	20,000,000
	Face Recogniton Records	5,000,000	20,000,000
	ANPR Records	5,000,000	
	Video Metadata Records	5,000,000	
	Access Control Records	5,000,000	
	Atendance Records	5,000,000	
	Video Intercom Records	5,000,000	

Contents		Minimum	Recommended
Data Info	Visitor Records		5,000,000
	Lift Control Records		5,000,000
	Entrance Records		5,000,000
	Exit Records		5,000,000
	Parking Records		5,000,000
	Forced Exit Records		5,000,000
	Historical People Counting Records		5,000,000
	In Area Statistical Records		5,000,000
	Heat Map Records		5,000,000
	MPT Records		5,000,000
	Operator Logs		5,000,000
	Service Logs		5,000,000
	<b>Independent database deployment</b>		
	Event Records	NA	30,000,000
	Face Recognition	NA	30,000,000
ANPR records	NA	30,000,000	
Metadata Records	NA	30,000,000	
Notification Center Message			1,000



Contents		Minimum	Recommended
Single Server			
Total Devices	Devices	512 devices	2,000 devices
	Auto-Registered Devices	1,000 devices	1,000 devices
Video Devices and Channels	Total Video Devices and Channels	256 devices; 256 channels	1,000 devices; 2,000 channels
	P2P Video Devices	32 devices	32 devices
	Add devices by ONVIF	256 devices; 256 channels	1,000 devices; 2,000 channels
	ANPR Channels	64 channels	500 channels
	Face Recognition Channels	64 devices; 64 channels	100 devices; 500 channels
	Video Metadata Channels	64 channels	500 channels
	People Counting Channels	16 channels	100 channels
	Heat Map Channels	16 channels	100 channels
	POS Channels	16 channels	100 channels
	MPT Devices	32 devices; 32 channels	100 devices; 100 channels
	EEC Devices	8 devices	64 devices
ACS Devices	Access Control Devices and Lift Control Devices	64 devices; 64 channels	500 devices; 1,000 channels
	Access Control Devices	64 devices; 64 doors	500 devices; 1,000 doors
	Lift Control Devices	64 devices; 64 channels	500 devices; 1,000 channels
	Video Intercom Devices	256 devices	2,000 devices

Contents		Minimum	Recommended
Single Server			
Alarm Devices	Alarm Controllers	16 devices; 160 zones	100 devices; 1,000 zones
	Emergency Phone Towers	256 devices; 256 channels	1,000 devices; 2,000 channels
Security Screening Devices	Security Screening Machine	10 devices	20 devices
	Walk-through Metal Detector	10 devices	60 devices
Parking Lot Devices	Parking Space Detectors	100 devices; 300 parking spaces	500 devices; 1,500 parking spaces
	Parking Space Available Displays	50 displays	150 displays
Intelligent Analysis	People Counting Channels	16 channels	100 channels
	Heat Map Channels	16 channels	100 channels
Multi-site	Sites	100 sites	
	Total Devices in Multi-site	512 devices; 1,000 channels	10,000 devices, 20,000 channels
Media Transmission Server	Video Input per Server	350 Mbps	600 Mbps
	Video Output per Server	350 Mbps	600 Mbps
Playback, Storage and Download	Storage Bandwidth per Server	350 Mbps	600 Mbps
	Prerecording Bandwidth for Alarm Recordings	150 Mbps	400 Mbps
	Maximum Capacity per Storage Server	100 TB	400 TB

Contents		Minimum	Recommended
Single Server			
Pictures	Picture Bandwidth	100 Mbps	200 Mbps
Events	Storage of Events or Alarms without Pictures	60 per second	300 per second
	Access Control Events	60 per second	300 per second
Multi-Servers			
Number of sub servers per system	Sub Server	NA	Up to 10
Total Devices	Devices	NA	20,000 devices
	Auto-Registered Devices	NA	10,000 devices
Video Devices and Channels	Total Video Devices and Channels	NA	10,000 devices; 20,000 channels
	P2P Video Devices	NA	32 devices
	ANPR Devices	NA	5,000 channels
	Face Recognition Channels	NA	1,000 devices; 5,000 channels
	Video Metadata Channels	NA	5,000 channels
	People Counting Channels	NA	300 channels
	Heat Map Channels	NA	300 channels
	POS Channels	NA	300 channels
	MPT Devices	NA	300 devices; 300 channels

Contents		Minimum	Recommended
Multi-Servers			
Video Devices and Channels	EEC Devices	NA	64 devices
ACS Devices	Access Control Devices and Lift Control Devices	NA	1,500 devices; 3,000 channels
	Access Control Devices	NA	1,500 devices; 3,000 doors
	Lift Control	NA	1,500 devices; 3,000 channels
	Video Intercom Devices	NA	2,000 devices
Alarm Devices	Alarm Controllers	NA	500 devices; 5,000 zones
	Emergency Phone Towers	NA	10,000 devices; 20,000 channels
Security Screening Devices	Security Screening Machine	NA	200 devices
	Walk-through Metal Detector	NA	600 devices
Parking Lot Devices	Parking Space Detectors	NA	2,000 devices; 6,000 parking spaces
	Parking Space Available Displays	NA	600 displays
Security Screening Devices	Security Screening Machine	NA	200 devices
	Walk-through Metal Detector	NA	600 devices
Intelligent Analysis	People Counting Channels	NA	300 channels
	Heat Map Channels	NA	300 channels
Media Transmission Server	Video Input per Server	NA	6,000 Mbps
	Video Output per Server	NA	6,000 Mbps

Contents		Minimum	Recommended
Multi-Servers			
Playback, Storage and Download	Storage Bandwidth per Server	NA	6,000 Mbps
	Prerecording Bandwidth for Alarm Recordings	NA	4,000 Mbps
	Maximum Capacity per Storage Server	NA	4PB
Pictures	Picture Bandwidth	NA	2,000 Mbps
Events	Storage of Events or Alarms without Pictures	NA	600 per second
	Access Control Events	NA	600 per second

## 3 Decoding Performance

### 3.1 Hardware for DSS PC Client

Feature	Minimum	Middle	High
CPU	Intel® Core™ i3-4160 CPU @3.60GHz	Intel® Core™ i5-9500 CPU @3.00GHz	Intel® Core™ i7-11700@ 2.50GHz
Memory	8.0GB	16.0GB	16.0GB
Graphic Card	Intel(R) HD Graphics 530 (Integrated Graphics)	HUD Graphics 630 (Integrated Graphics)	NVIDIA GeForce RTX 3060 (Discrete Graphics Card)
OS	Win10 64bit	Win10 64bit	Win10 64bit

### 3.2 Performance in Software Decoding

Encoding Format	Frame Rate (fps)	Bit Rate (Mbps)	Resolution	Maximum Live View Channels		
				Minimum	Middle	High
H.264H	30	0.5	CIF(352*288)	60	128	129
	30	1	D1(704*576)	24	55	90
	30	4	720P(1280*720)	16	50	71
	30	1	1080P(1920*1080)	8	21	33
	30	4	4MP(2688*1520)	4	16	18
	30	8	8MP(3840*2160)	1	8	4
H.265	30	0.25	CIF(352*288)	47	128	148
	30	1	720P(1280*720)	12	40	48
	30	2	1080P(1920*1080)	5	18	19
	30	2	4MP(2688*1520)	2	7	11
	30	4	8MP(3840*2160)	1	4	5
Smart H.265+	30	1	720P(1280*720)	14	30	54
	30	2	1080P(1920*1080)	5	17	19
	30	2	4MP(2688*1520)	3	7	9
	30	4	8MP(3840*2160)	1	6	6

### 3.3 Performance in Hardware Decoding

Encoding Format	Frame Rate (fps)	Bit Rate (Mbps)	Resolution	Maximum Live View Channels		
				Minimum	Middle	High
H.264H	30	0.5	CIF(352*288)	90	110	144
	30	1	D1(704*576)	56	109	95
	30	1	720P(1280*720)	41	65	50
	30	1	1080P(1920*1080)	20	28	23
	30	4	4MP(2688*1520)	11	18	11
	30	8	8MP(3840*2160)	6	7	5
H.265	30	0.25	CIF(352*288)	NA	110	140
	30	1	720P(1280*720)	NA	64	80
	30	2	1080P(1920*1080)	NA	26	45
	30	2	4MP(2688*1520)	NA	18	30
	30	4	8MP(3840*2160)	NA	8	12
Smart H.265+	30	1	720P(1280*720)	NA	65	82
	30	2	1080P(1920*1080)	NA	31	45
	30	2	4MP(2688*1520)	NA	18	22
	30	4	8MP(3840*2160)	NA	9	13



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