DSS Express System Requirements & Performance

V8.2.0

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1 System Requirements

Feature	Description
OS for DSS Express Server	Microsoft® Windows 10 20H2 Pro (32-bit) Microsoft® Windows 10 20H2 Pro (64-bit) Microsoft® Windows 11 21H2 Pro (64-bit)
OS for DSS PC Client	Microsoft® Windows 10 20H2 Pro (32-bit) Microsoft® Windows 10 20H2 Pro (64-bit) Microsoft® Windows 11 21H2 pro (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® Core(TM) I5-9400 CPU@2.90 GHZ	Intel® Core(TM) I7-9700K CPU@3.60 GHZ
Memory	8 GB	8 GB
System Disk	7200 RPM Enterprise Class HDD 1 TB, 200 G free space for DSS	7200 RPM Enterprise Class HDD 1 TB, 500 G free space for DSS
Storage Disk	7200 RPM Enterprise Class HDD	7200 RPM Enterprise Class HDD
Ethernet Port	Ethernet ports@1000 Mbps	Ethernet ports@1000 Mbps

2.2 Maximum Performance

Contents		Minimum	Recommended
Organizaton, User and Role	Organizations	10 levels; 999 organizations in total	
	Roles (User Permission)	20	
	Roles for a User	32	
	DSS Agile VDP User	5 online users and 50 total users	10 online users and 50 total users
	Users for VDP Mobile APP	25 online users and 500 total users	50 online users and 500 total users
Event Plan	Event Rules	64 event sources	256 event sources
	Combined Event Rules	100	100
	Combined Events	128	128
Map	Hierarchies	8	
	Raster Maps	32	
	Submaps per Map	32	
	Maximum Size of Raster Map	15 MB	
	Raster Map Resoluton	8,100 × 8,100	
	Resources per Raster Map	300	
Recording Plan	General Recording Plans	64	256
	Motion Detection Recording Plans	64	256

Contents		Minimum	Recommended
Person and Vehicle Management	Number of Person and Vehicle Groups	999	999
	Number of Sub Groups per Level (Main Group Included)	10	10
	Persons	5,000	
	Cards	10,000	
	Faces	5,000	
	Fingerprints	10,000	
	Vehicles	5,000	
Face and Vehicle Watch Lists	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	Total Persons	30,000	
	Access Permision Groups	50	
	Door Groups	50	
	Public Passwords	1,500	
Video Intercom	VDP Accounts	5	

Contents		Minimum	Recommended
Parking Lot Management	Vehicles	5,000	
	Vehicle Groups	8	
	Parking Lots	1	
	Entrances and Exits	4	
	Entrance and Exit Points	4	
Intelligent Analysis	People Counting Groups	4	
	People Counting Rules	20	
Data Info	Event Records	2,000,000	
	Face Recogniton Records	2,000,000	
	ANPR Records	2,000,000	
	Video Metadata Records	2,000,000	
	Access Control Records	2,000,000	
	Video Intercom Records	2,000,000	
	Visitor Records	2,000,000	
	Entrance Records	2,000,000	
	Exit Records	2,000,000	
	Forced Exit Records	2,000,000	

Contents		Minimum	Recommended
Data Info	In Area Statistical Records	2,000,000	2,000,000
	Heat Map Records	2,000,000	
	Operator Logs	2,000,000	
	Service Logs	2,000,000	
Notification Center Messages		1,000	
Total Devices	Devices	128	512
	Auto-registered Devices	32	
Video Devices and Channels	Total Video Devices and Channels	64 devices; 64 channels	256 devices; 256 channels
	P2P Video Devices	32	
	Devices Added by ONVIF Protocol	64 devices; 64 channels	256 devices; 256 channels
	ANPR Channels	8 channels (4 channels for entrance)	
	Face Recognition Channels	8 channels	
	Video Metadata Channels	8 channels	
ACS Devices	Access Control Devices	16 devices; 16 doors	64 devices; 64 doors
	VDP	64	256
Alarm Devices	Alarm Controller	4 devices; 40 zones	16 devices; 160 zones

Contents		Minimum	Recommended
Intelligent Analysis	People Counting Channels	16 channels	
	Heat Map Records	16 channels	
Media Transmission Server	Video Input per Server	200 Mbps	
	Video Output per Server	200 Mbps	
Playback, Storage and Download	Storage Bandwidth per Server	100 Mbps	
	Prerecording Bandwidth for Alarm Recordings	50 Mbps	
	Maximum Capacity per Storage Server(Local)	2TB	
Pictures	Picture Bandwidth *Including event/alarm	50 Mbps	
Events	Storage of Events or Alarms without Pictures	30 per second	60 per second
	Access Control Events	30 per second	60 per second
	Number of Combined Events	20 per second	

3 Decoding Performance

3.1 Hardware for DSS PC Client

Feature	Minumun	High
CPU	Intel® Core™ i5-9500 CPU @3.00GHz	Intel® Core™ i7-11700 CPU @2.50GHz
Memory	16.0GB	16.0GB
Graphic Card	Intel® UHD Graphics 630	NVIDIA® GeForce® RTX 3060
OS	Win10 64bit	Win10 64bit

3.2 Performance in Software Decoding

Encoding Format	Frame Rate (fps)	Bit Rate (Mbps)	Resolution		
				Minumun	High
H.264H	30	0.5	CIF (352 × 288)	128	138
	30	1	D1 (704 × 576)	56	78
	30	4	720p (1280 × 720)	44	40
	30	1	1080p (1920 × 1080)	22	23
	30	4	4 MP (2688 × 1520)	10	11
	30	8	8 MP (3840 × 2160)	5	5
H.265	30	0.25	CIF (352 × 288)	128	112
	30	1	720p (1280 × 720)	30	28
	30	2	1080p (1920 × 1080)	15	13
	30	2	4 MP (2688 × 1520)	7	6
	30	4	8 MP (3840 × 2160)	3	3
Smart H.265+	30	1	720p (1280 × 720)	30	25
	30	2	1080p (1920 × 1080)	14	13
	30	2	4 MP (2688 × 1520)	7	6
	30	4	8 MP (3840 × 2160)	4	3

3.3 Performance in Hardware Decoding

Encoding Format	Frame Rate (fps)	Bit Rate (Mbps)	Resolution		
				Minumun	High
H.264H	30	0.5	CIF (352 × 288)	109	156
	30	1	D1 (704 × 576)	109	94
	30	4	720p (1280 × 720)	62	51
	30	1	1080p (1920 × 1080)	28	25
	30	4	4 MP (2688 × 1520)	14	13
	30	8	8 MP (3840 × 2160)	7	5
H.265	30	0.25	CIF (352 × 288)	109	150
	30	1	720p (1280 × 720)	64	72
	30	2	1080p (1920 × 1080)	24	46
	30	2	4 MP (2688 × 1520)	16	25
	30	4	8 MP (3840 × 2160)	8	12
Smart H.265+	30	1	720p (1280 × 720)	64	76
	30	2	1080p (1920 × 1080)	31	46
	30	2	4 MP (2688 × 1520)	16	26
	30	4	8 MP (3840 × 2160)	8	7

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