



# **HikCentral Professional V1.5 System Requirements & Performance**

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## Chapter 1 System Requirements

<b>OS for Server*</b>	<p>Microsoft® Windows 7 SP1 64-bit</p> <p>Microsoft® Windows 8.1 64-bit</p> <p>Microsoft® Windows 10 64-bit</p> <p>Microsoft® Windows Server 2008 R2 SP1 64-bit</p> <p>Microsoft® Windows Server 2012 64-bit</p> <p>Microsoft® Windows Server 2012 R2 64-bit</p> <p>Microsoft® Windows Server 2016 64-bit</p> <p>Microsoft® Windows Server 2019 64-bit</p> <p><i>*For Windows 8.1 and Windows Server 2012 R2, make sure it is installed with the rollup (KB2919355) undated in April, 2014.</i></p>
<b>OS for Control Client</b>	<p>Microsoft® Windows 7 SP1 32-bit/64-bit</p> <p>Microsoft® Windows 8.1 32-bit/64-bit</p> <p>Microsoft® Windows 10 64-bit</p> <p>Microsoft® Windows Server 2008 R2 SP1 64-bit</p> <p>Microsoft® Windows Server 2012 64-bit</p> <p>Microsoft® Windows Server 2012 R2 64-bit</p> <p>Microsoft® Windows Server 2016 64-bit</p> <p>Microsoft® Windows Server 2019 64-bit</p> <p><i>*For Windows 8.1 and Windows Server 2012 R2, make sure it is installed with the rollup (KB2919355) undated in April, 2014.</i></p>
<b>OS for Mobile Client</b>	<p>iOS 10.0 and later</p> <p>Android 5.0 and later</p>
<b>Database</b>	PostgreSQL V 9.6.13
<b>Browsers</b>	<p>Internet Explorer 10/11 and above</p> <p>Chrome 61 and above</p> <p>Firefox 57 and above</p> <p>Safari 11 and above (running on Mac OS X 10.3/10.4)</p>
<b>Virtual Machine (VSM)</b>	<p>VMware® ESXi™ 6.x</p> <p>Microsoft® Hyper-V with Windows Server 2012/2012 R2/2016 (64-bit)</p> <p><b>Note:</b> The Streaming Server and Control Client cannot run on the virtual machine.</p>
<b>Failover Cluster</b>	<p>Microsoft® Windows Server 2008 R2 SP1 64-bit</p> <p>Microsoft® Windows Server 2012 64-bit</p> <p>RoseReplicatorPlus_5.1.0_175-x64</p>

\*Server refers to SYS server in centralized deployment, and SYS as well as ADS server in distributed deployment.

## Chapter 2 Control Client Decoding Performance

**Notes:**

- The performance refers to maximum live view channels within up to 80% of CPU consumption (software decoding) or up to 80% of video engine load/decoding value (hardware decoding).
- You can switch to hardware decoding in **System -> Image**. If the OS of your PC is Windows 7, make sure DirectX (D3DX9\_43.dll and D3DCompiler\_43.dll) have been installed, or the hardware decoding will fail and it will switch to software decoding. To realize hardware decoding and reach the following maximum decoding performance, click [here](#) to download and install DirectX.

Configurations					
Feature	Low-End			High-End	
<b>CPU</b>	Intel® Core™ i5-4590 @ 3.3 GHz			Intel® Core™ i7-6700k @ 4 GHz	
<b>RAM</b>	8 GB			16 GB	
<b>NIC</b>	GbE Network Interface Card			GbE Network Interface Card	
<b>Graphics Card</b>	NVIDIA® GeForce GTX 970			NVIDIA GeForce GTX 1070	
<b>HDD Type</b>	SATA II Hard Drive or Better			SATA II Hard Drive or Better	
<b>HDD Capacity</b>	60 GB for OS and HikCentral Control Client			240 GB for OS and HikCentral Control Client	
<b>OS</b>	Microsoft® Windows 7 (64-bit)			Microsoft® Windows 7 (64-bit)	
Performance in Software Decoding					
Encoding Format	Frame Rate (fps)	Bit Rate (Mbps)	Resolution	Maximum Live View Channels	
				Low-End	High-End
<b>H.264</b>	30	0.5	CIF	132	164

	30	1	4CIF	53	78
	30	3	720p	21	34
	30	6	1080p	10	16
	30	8	3 MP	7	12
	30	12	8 MP	2	4
<b>H.264+</b>	30	1	720p	25	50
	30	3	1080p	14	22
	30	4	3 MP	9	18
<b>H.265</b>	30	1	720p	19	32
	30	3	1080p	7	15
	30	4	3 MP	4	8
	30	6	8 MP	2	3
<b>H.265+</b>	30	0.5	720p	22	36
	30	1	1080p	9	16
	30	2	3 MP	5	12
	30	3	8 MP	2	4
<b>Performance in Hardware Decoding</b>					
Encoding Format	Frame Rate (fps)	Bit Rate (Mbps)	Resolution	Maximum Live View Channels	
				Low-End	High-End

<b>H.264</b>	30	0.5	CIF	80	94
	30	1	4CIF	64	68
	30	3	720p	30	36
	30	6	1080p	14	22
	30	8	3 MP	12	13
	30	12	8 MP	3	4
<b>H.264+</b>	30	1	720p	30	36
	30	3	1080p	14	18
	30	4	3 MP	11	15
<b>H.265</b>	30	1	720p	This graphics card doesn't support H.265.	36
	30	3	1080p		18
	30	4	3 MP		15
	30	6	8 MP		4
<b>H.265+</b>	30	0.5	720p	This graphics card doesn't support H.265+.	36
	30	1	1080p		18
	30	2	3 MP		14

## Chapter 3 Server Performance

### 3.1 SYS Server (without RSM)

The following table shows:

- Performance of SYS server if the system is centralized deployed.
- Performance of SYS server together with ADS server if the system is distributed deployed.

SYS Configurations			
Feature	Low-End		High-End
<b>CPU</b>	Intel® Core™ i5-4590 @ 3.30 GHz 3.30 GHz		Intel® Xeon® E3-1220 V5 @ 3.00 GHz 3.00 GHz
<b>RAM</b>	8 GB		16 GB
<b>NIC</b>	GbE Network Interface Card		GbE Network Interface Card
<b>HDD for OS</b>	SATA-II 7200 RPM Enterprise Class HDD		SATA-II 7200 RPM Enterprise Class HDD
<b>HDD for Picture Storage</b>	Surveillance-class HDD or high performance network HDD. It should support 10 MB/s writing and 10 MB/s reading.		Enterprise-class HDD or high performance network HDD. It should support 20 MB/s writing and 20 MB/s reading.
<b>HDD Capacity</b>	At least 650 GB		At least 650 GB
<b>OS</b>	Microsoft® Windows 8.1 64-bit		Microsoft® Windows Server 2012 (R2) 64-bit
Maximum Performance			
Feature		Low-End	High-End
<b>Manageable Resources</b>	<b>Managed Device IP Addresses</b> <i>*Including Encoding Devices, Access Control Devices, and Security Control Devices</i>	128	1,024
	<b>Encoding Devices</b>	128	Centralized Deployment: 1,024 Distributed Deployment: 2,048
	<b>Cameras</b>	512	Centralized Deployment: 3,000 Distributed Deployment: 1,0000
	<b>Alarm Inputs</b> <i>*Including Alarm Inputs of Security Control</i>	512	3,000

<i>Devices</i>		
<b>Alarm Outputs</b>	512	3,000
<b>Recording Servers</b>	64	
<b>Streaming Servers</b>	64	
<b>ANPR Cameras</b>	512	3,000
<b>People Counting Cameras</b>	60 (recommended max. value)	300 (recommended max. value)
<b>Heat Map Cameras</b>	-	70 (recommended max. value)
<b>Thermal Cameras</b>	5 (recommended max. value)	20 (recommended max. value)
<b>Queue Management Cameras</b>	60 (recommended max. value)	300 (recommended max. value)
<b>Access Control Devices</b>	32	512
<b>Elevator Control Devices</b>	32	512
<b>Access Points (Doors + Floors)</b>	32	512
<b>Doors</b>	32	512
<b>Floors</b>	32	128
<b>DS-5600 Series Face Recognition Terminals</b> <i>*Applied with Hikvision Turnstiles</i>	32	*If DS-5600 series devices are applied with third-party turnstiles, they are regarded as access control devices.
<b>Security Control Devices</b>	4	16
<b>Radars</b>	10	
<b>Alarm Inputs of Security Control Devices</b>	512	2,048
<b>DeepinMind Servers</b>	64	
<b>Security Audit Servers</b>	8	
<b>Dock Stations</b>	16	1,500
<b>Resource Groups</b>	1,000	
<b>Resources in One Resource Group</b>	64	



	<b>Security Control Partitions in One Resource Group</b>	256	
<b>Area</b>	<b>Areas</b>	512	3,000
	<b>Area Hierarchies</b>	5	
	<b>Cameras in Each Area</b>	256	
	<b>Alarm Inputs in Each Area</b>	256	
	<b>Alarm Outputs in Each Area</b>	256	
<b>Event &amp; Alarm</b>	<b>Alarm Priorities</b>	255	
	<b>Alarm Categories</b>	25	
	<b>Event and Alarm Rules</b>	1,500	Centralized Deployment: 3,000 Distributed Deployment: 10,000
	<b>User-Defined Event Rules</b>	400	
	<b>Arming Schedule Templates</b>	200	
	<b>Events or Alarms Storage</b>	<ul style="list-style-type: none"> <li>● 30 events or alarms without picture per second.</li> <li>● 5 events or alarms with pictures (500 KB each, stored in SYS server) per second.</li> <li>● 20 events or alarms with pictures (500 KB each, stored in Recording Server) per second.</li> </ul>	<ul style="list-style-type: none"> <li>● 100 events or alarms without picture per second in centralized deployment.</li> <li>● 1,000 events or alarms without picture per second in distributed deployment.</li> <li>● 20 events or alarms with pictures (500 KB each, stored in SYS server) per second.</li> <li>● 80 events or alarms with pictures (500 KB each, stored in Recording Server) per second.</li> </ul>
	<b>Events or Alarms Sent to Clients</b>	<ul style="list-style-type: none"> <li>● 30 events or alarms/s</li> <li>● 30 Clients/s (Mobile Clients and Control Clients)</li> </ul>	<ul style="list-style-type: none"> <li>● 120 events or alarms/s</li> <li>● 100 Clients/s (Mobile Clients and Control Clients)</li> </ul>
<b>Event Triggered Capturing</b>	20 cameras can be triggered to capture pictures concurrently per second.		

	<b>Alarm Triggered Recording</b>		30 cameras can be triggered to record video concurrently per second.	128 cameras can be triggered to record video concurrently per second.
	<b>Alarm Triggered Actions (Excluding Recording)</b>		152 actions (excluding recording) can be triggered concurrently by alarms per second.	512 actions (excluding recording) can be triggered concurrently by alarms per second.
<b>Recording</b>	<b>Recording Schedules</b>		512	Centralized Deployment: 3,000 Distributed Deployment: 10,000
	<b>Recording Schedule Templates</b>		200	
<b>Map</b>	<b>Map</b>	<b>Maps Linked to Each Area</b>	64	
		<b>Resolution</b>	8192x8192	
		<b>Size for Each Map</b>	10 MB	
		<b>Total Size for Maps</b>	2 GB	15 GB
		<b>Maps</b>	128	1,024
		<b>Cameras on Each Map</b>	16	128
		<b>Alarm Inputs on Each Map</b>	16	128
		<b>Alarm Outputs on Each Map</b>	16	128
		<b>Labels on Each Map</b>	16	128
		<b>UVSS on Each Map</b>	4	4
		<b>Access Points on Each Map</b>	16	128
		<b>Hot Regions on Each Map</b>	8	64
		<b>Cameras on Maps in Total</b>	512	Centralized Deployment: 3,000 Distributed Deployment: 10,000
		<b>Alarm Inputs on Maps in Total</b>	512	3,000
		<b>Alarm Outputs on Maps in Total</b>	512	3,000
		<b>Labels on Maps in Total</b>	512	3,000
		<b>UVSS on Maps in Total</b>	4	4
		<b>Access Points on Maps in Total</b>	32	512
	<b>Hot Regions on Maps in Total</b>	128	1,024	
<b>GIS Map</b>	<b>Elements in Total</b>	3,000		

	<b>Sites</b>	3,000	
	<b>Hot Regions</b>	128	1,024
	<b>Cameras</b>	512	Centralized Deployment: 3,000 Distributed Deployment: 10,000
	<b>Alarm Inputs</b>	512	3,000
	<b>Alarm Outputs</b>	512	3,000
	<b>UVSS</b>	4	4
	<b>Access Points</b>	32	512
	<b>Tags</b>	512	3,000
<b>User &amp; Role</b>	<b>Roles</b>	400	3,000
	<b>Users</b>	1,250	3,000
	<b>Roles Assigned to One User</b>	<ul style="list-style-type: none"> <li>● 100 roles can be assigned to one user (Resources linked to one role &lt; 170);</li> <li>● 50 roles can be assigned to one user (Resources linked to one role &lt; 514).</li> </ul>	<ul style="list-style-type: none"> <li>● 100 roles can be assigned to one user (Resources linked to one role &lt; 1,000);</li> <li>● 50 roles can be assigned to one user (Resources linked to one role &lt; 3,000).</li> </ul>
	<b>Concurrent Accesses via Client</b>	<ul style="list-style-type: none"> <li>● 30 Control Clients, Web Clients, or OpenAPI Clients access the system concurrently;</li> <li>● 30 Mobile Clients or OpenAPI Clients access the system concurrently.</li> </ul>	<ul style="list-style-type: none"> <li>● 100 Control Clients, Web Clients, or OpenAPI Clients access the system concurrently;</li> <li>● 100 Mobile Clients or OpenAPI Clients access the system concurrently</li> </ul>
<b>Data Storage (BI Data and Data Recorded in System)</b>	<b>Data Retention Period</b>	Stored for 3 Years	
	<b>People Counting</b>	5 million	
	<b>Heat Map</b>	0.25 million	
	<b>ANPR</b>	60 million	
	<b>Events</b>	60 million	
	<b>Alarms</b>	60 million	
	<b>Access Records</b>	1.4 billion	
	<b>Attendance Records</b>	55 million	
<b>Visitor Records</b>	10 million		

	<b>Operation Logs</b>	5 million	
	<b>Service Information Logs</b>	5 million	
	<b>Service Error Logs</b>	5 million	
	<b>Recording Tags</b>	60 million	
<b>Person</b>	<b>Persons</b>	2,000	1,000,000
	<b>Profiles</b>	2,000	1,000,000
	<b>Cards</b>	10,000	250,000
	<b>Fingerprints</b>	8,000	200,000
	<b>Credentials (Cards + Fingerprints + Profiles)</b>	10,000	250,000
	<b>Size of Each Profile</b>	Recommended: 300 KB	
	<b>Total Size of Profiles</b>	500 MB	300 GB
<b>Access Control</b>	<b>Persons for Access Control</b>	2,000	50,000
	<b>Visitors</b>	10,000	
	<b>Anti-Passback Rules</b>	32	128
	<b>Access Points in One Anti-Passback Rule</b>	16	
	<b>Access Groups</b>	16	256
	<b>Persons in One Access Group</b>	10,000	
	<b>Access Levels</b>	32	128
	<b>Access Points in One Access Level</b>	32	512
	<b>Access Levels Assigned to One Access Group</b>	8	
	<b>Access Schedules</b>	32	
<b>Speed of Applying Persons' Credentials to Device</b>	<ul style="list-style-type: none"> <li>● Card: 50ms for one card</li> <li>● Fingerprint: 1.5s for one fingerprint</li> <li>● Face credential: 1s for one face picture</li> </ul>		
<b>Time and Attendance</b>	<b>Persons for Time and Attendance</b>	2,000	10,000
	<b>Attendance Groups</b>	16	256
	<b>Persons in One Attendance Group</b>	10,000	
	<b>Shift Schedules</b>	32	128
	<b>Holidays</b>	16	

<b>Face Comparison</b>	<b>Persons for Face Comparison</b>	2,000	1,000,000
	<b>Face Comparison Groups</b>	16	64
	<b>Storage of Face Matched/Mismatched Events</b>	<ul style="list-style-type: none"> <li>● 120/s without pictures</li> <li>● 20/s with pictures (each picture 500 KB, stored in Recording Server)</li> </ul>	<ul style="list-style-type: none"> <li>● 1000/s without pictures</li> <li>● 100/s with pictures (each picture 500 KB, stored in Recording Server)</li> </ul>
<b>Vehicle (ANPR)</b>	<b>UVSS (Under Vehicle Surveillance Systems)</b>	2	4
	<b>Vehicle Lists</b>	13	100
	<b>Vehicles</b>	60,000	500,000
	<b>Undercarriage Pictures (Each 10 MB)</b>	512	3,000
	<b>Storage of License Plate Matched/Mismatched Events</b>	<ul style="list-style-type: none"> <li>● 5/s with pictures (each picture 500 KB, stored in SYS server)</li> <li>● 20/s with pictures (each picture 500 KB, stored in Recording Server)</li> </ul>	<ul style="list-style-type: none"> <li>● 20/s with pictures (each picture 500 KB, stored in SYS server)</li> <li>● 100/s with pictures (each picture 500 KB, stored in Recording Server)</li> </ul>
<b>Report</b>	<b>Regular Report Rules</b>	100	
	<b>Event or Alarm Rules in One Event/Alarm Report</b>	32	
	<b>Records in One Sent Report</b>	10,000 or 10 MB	
	<b>Resources Selected for One Report</b>	<ul style="list-style-type: none"> <li>● 20 people counting cameras searched for one people counting report</li> <li>● 20 ANPR cameras searched for one vehicle analysis report</li> <li>● 20 queues searched for one queue analysis report</li> <li>● 20 presets searched for one temperature report</li> </ul> <p>*With this limitation, you can generate a neat and clear report via the Control Client and it costs less time.</p>	
<b>Smart Wall</b>	<b>Decoding Devices</b>	32	
	<b>Smart Walls</b>	32	
	<b>Views</b>	1,000	
	<b>Cameras in One View</b>	256	
	<b>View Groups</b>	100	
	<b>Views in One View Group</b>	10	

	<b>Views Auto-Switched Simultaneously</b>	1,000	
	<b>Concurrent Accesses via Control Client</b>	5 Control Clients access the system concurrently.	
	<b>Operation Logs Storage</b>	500,000	
	<b>Alarms Displayed on Smart Wall as Actions</b>	5 alarms per second (each alarm has 16 related cameras).	
<b>Others</b>	<b>Streaming Gateway</b>	50 cameras×2 Mbps input and 50 cameras×2 Mbps output	200 cameras×2 Mbps input and 200 cameras×2 Mbps output

### 3.2 SYS Server (with RSM)

The following table shows:

- Performance of SYS server if the system is centralized deployed.
- Performance of SYS server together with ADS server if the system is distributed deployed.

SYS Configurations				
Feature	Low-End		High-End	
<b>CPU</b>	Intel® Xeon® E3-1220 V5 @ 3.00 GHz 3.00 GHz		Intel® Xeon® E5-2620 V4 @ 2.40 GHz 2.40 GHz	
<b>RAM</b>	16 GB		16 GB	
<b>NIC</b>	GbE Network Interface Card		GbE Network Interface Card	
<b>HDD for OS</b>	SATA-II 7200 RPM Enterprise Class HDD		SATA-II 7200 RPM Enterprise Class HDD	
<b>HDD for Picture Storage</b>	Enterprise-class HDD or high performance network HDD It should support 20 MB/s writing and 20 MB/s reading.		Enterprise-class HDD or high performance network HDD It should support 20 MB/s writing and 20 MB/s reading.	
<b>HDD Capacity</b>	At least 650 GB		At least 650 GB	
<b>OS</b>	Microsoft® Windows Server 2012 (R2) 64-bit		Microsoft® Windows Server 2012 (R2) 64-bit	
Maximum Performance				
Feature		Low-End	High-End	
<b>Manageable Resources</b>	<b>Current Site</b>	<b>Cameras</b>	512	Centralized Deployment: 3,000 Distributed Deployment: 10,000
		<b>Encoding Devices</b>	128	Centralized Deployment: 1,024 Distributed Deployment: 2,048
		<b>Alarm Inputs</b> <i>*Including Alarm Inputs of Security Control Devices</i>	512	3,000
		<b>Alarm Outputs</b>	512	3,000
		<b>Recording Servers</b>	64	
		<b>Streaming Servers</b>	64	

		<b>ANPR Cameras</b>	512	3,000
		<b>People Counting Cameras</b>	60 (recommended max. value)	300 (recommended max. value)
		<b>Heat Map Cameras</b>	-	70 (recommended max. value)
		<b>Thermal Cameras</b>	5 (recommended max. value)	20 (recommended max. value)
		<b>Queue Management Cameras</b>	60 (recommended max. value)	300 (recommended max. value)
		<b>Access Control Devices</b>	32	512
		<b>Elevator Control Devices</b>	32	512
		<b>Access Points (Doors + Floors)</b>	32	512
		<b>Doors</b>	32	512
		<b>Floors</b>	32	128
		<b>DS-5600 Series Face Recognition Terminals</b> <i>*Applied with Hikvision Turnstiles</i>	32 <i>*If DS-5600 series devices are applied with third-party turnstiles, they are regarded as access control devices.</i>	
		<b>Security Control Devices</b>	4	16
		<b>Radars</b>	10	
		<b>Alarm Inputs of Security Control Devices</b>	512	2,048
		<b>DeepinMind Servers</b>	64	
		<b>Security Audit Servers</b>	8	
		<b>Dock Stations</b>	16	1500
		<b>Resource Groups</b>	1,000	
		<b>Resources in One Resource Group</b>	64	
		<b>Security Control Partitions in One Resource Group</b>	256	
	<b>Central System</b>	<b>Managed Device IP Addresses</b> <i>*Including Encoding Devices,</i>	128	1,024



		<i>Access Control Devices, Security Control Devices, and Remote Sites</i>		
		<b>Cameras</b>	18,000	100,000
<b>Area</b>	<b>Current Site</b>	<b>Areas</b>	512	3,000
		<b>Area Hierarchies</b>	5	
		<b>Cameras in Each Area</b>	256	
		<b>Alarm Inputs in Each Area</b>	256	
		<b>Alarm Outputs in Each Area</b>	256	
	<b>Central System</b>	<b>Areas from Remote Sites</b>	18,000	100,000
<b>Event &amp; Alarm</b>	<b>Alarm Priorities</b>		255	
	<b>Alarm Categories</b>		25	
	<b>Event or Alarm Rules</b>		<ul style="list-style-type: none"> <li>● 1,500 (Current Site)</li> <li>● 5,000 (Current Site and Remote Sites)</li> </ul>	<ul style="list-style-type: none"> <li>● 3,000 (Current Site in Centralized Deployment)</li> <li>● 10,000 (Current Site in Distributed Deployment)</li> <li>● 10,000 (Current Site and Remote Sites)</li> </ul>
	<b>User-Defined Event Rules</b>		400	
	<b>Arming Schedule Templates</b>		200	
	<b>Events or Alarms Storage</b>		<ul style="list-style-type: none"> <li>● 30 events or alarms without picture per second.</li> <li>● 5 events or alarms with pictures (500 KB each, stored in SYS server) per second.</li> <li>● 20 events or alarms with pictures (500 KB each, stored in Recording Server) per second.</li> </ul>	<ul style="list-style-type: none"> <li>● 100 events or alarms without picture per second in centralized deployment.</li> <li>● 1,000 events or alarms without picture per second in distributed deployment.</li> <li>● 20 events or alarms with pictures (500 KB each, stored in SYS server) per second.</li> <li>● 80 events or alarms with pictures (500 KB each, stored in Recording Server)</li> </ul>

			per second.	
	<b>Events or Alarms Sent to Clients</b>	<ul style="list-style-type: none"> <li>● 30 events or alarms/s</li> <li>● 30 Clients/s (Mobile Clients and Control Clients)</li> </ul>	<ul style="list-style-type: none"> <li>● 120 events or alarms/s</li> <li>● 100 Clients/s (Mobile Clients and Control Clients)</li> </ul>	
	<b>Event Triggered Capturing</b>	20 cameras can be triggered to capture pictures concurrently per second.		
	<b>Alarm Triggered Recording</b>	30 cameras can be triggered to record video concurrently per second.	128 cameras can be triggered to record video concurrently per second.	
	<b>Alarm Triggered Actions (Excluding Recording)</b>	152 actions (excluding recording) can be triggered concurrently by alarms per second.	512 actions (excluding recording) can be triggered concurrently by alarms per second.	
<b>Recording</b>	<b>Recording Schedules</b>	<ul style="list-style-type: none"> <li>● 512 (Current Site)</li> <li>● 21,000 (Current Site and Remote Sites)</li> </ul>	<ul style="list-style-type: none"> <li>● 3,000 (Current Site in Centralized Deployment)</li> <li>● 10,000 (Current Site in Distributed Deployment)</li> <li>● 30,000 (Current Site and Remote Sites)</li> </ul>	
	<b>Recording Schedule Templates</b>	200		
<b>Map</b>	<b>Map</b>	<b>Maps Linked to Each Area</b>	64	
		<b>Resolution</b>	8192×8192	
		<b>Size for Each Map</b>	10 MB	
		<b>Total Size for Maps</b>	2 GB	15 GB
		<b>Maps</b>	128	1,024
		<b>Cameras on Each Map</b>	16	128
		<b>Alarm Inputs on Each Map</b>	16	128
		<b>Alarm Outputs on Each Map</b>	16	128
		<b>Labels on Each Map</b>	16	128
<b>UVSS on Each Map</b>	2	4		

		<b>Access Points on Each Map</b>	16	128
		<b>Hot Regions on Each Map</b>	8	64
		<b>Cameras on Maps in Total</b>	512	Centralized Deployment: 3,000 Distributed Deployment: 10,000
		<b>Alarm Inputs on Maps in Total</b>	512	3,000
		<b>Alarm Outputs on Maps in Total</b>	512	3,000
		<b>Labels on Maps in Total</b>	512	3,000
		<b>UVSS on Maps in Total</b>	2	4
		<b>Access Points on Maps in Total</b>	32	512
		<b>Hot Regions on Maps in Total</b>	128	1,024
	<b>GIS Map</b>	<b>Elements in Total</b>	3,000	
		<b>Hot Regions</b>	128	1,024
		<b>Cameras</b>	512	Centralized Deployment: 3,000 Distributed Deployment: 10,000
		<b>Alarm Inputs</b>	512	3,000
		<b>Alarm Outputs</b>	512	3,000
		<b>UVSS</b>	2	4
<b>Access Points</b>		32	512	
	<b>Tags</b>	512	3,000	
<b>User &amp; Role</b>	<b>Roles</b>	400	3,000	
	<b>Users</b>	1,250	3,000	
	<b>Roles Assigned to One User</b>	<ul style="list-style-type: none"> <li>● 100 roles can be assigned to one user (Resources linked to one role &lt; 170);</li> <li>● 50 roles can be assigned to one user (Resources linked to one role &lt; 514).</li> </ul>	<ul style="list-style-type: none"> <li>● 100 roles can be assigned to one user (Resources linked to one role &lt; 1,000);</li> <li>● 50 roles can be assigned to one user (Resources linked to one role &lt; 3,000).</li> </ul>	
	<b>Concurrent Accesses via Client</b>	<ul style="list-style-type: none"> <li>● 30 Control Clients, Web Clients, or OpenAPI Clients access the system</li> </ul>	<ul style="list-style-type: none"> <li>● 100 Control Clients, Web Clients, or OpenAPI Clients access the system</li> </ul>	

		concurrently; ● 30 Mobile Clients or OpenAPI Clients access the system concurrently.	concurrently; ● 100 Mobile Clients or OpenAPI Clients access the system concurrently
<b>Data Storage (BI Data and Data Recorded in System)</b>	<b>Data Retention Period</b>	Stored for 3 Years	
	<b>People Counting</b>	5 million	
	<b>Heat Map</b>	0.25 million	
	<b>ANPR</b>	60 million	
	<b>Events</b>	60 million	
	<b>Alarms</b>	60 million	
	<b>Access Records</b>	1.4 billion	
	<b>Attendance Records</b>	55 million	
	<b>Visitor Records</b>	10 million	
	<b>Operation Logs</b>	5 million	
	<b>Service Information Logs</b>	5 million	
	<b>Service Error Logs</b>	5 million	
	<b>Recording Tags</b>	60 million	
<b>Person</b>	<b>Persons</b>	2,000	1,000,000
	<b>Profiles</b>	2,000	1,000,000
	<b>Cards</b>	10,000	250,000
	<b>Fingerprints</b>	8,000	200,000
	<b>Credentials (Cards + Fingerprints + Profiles)</b>	10,000	250,000
	<b>Size of Each Profile</b>	Recommended: 300 KB	
	<b>Total Size of Profiles</b>	500 MB	300 GB
<b>Access Control</b>	<b>Persons for Access Control</b>	2,000	50,000
	<b>Visitors</b>	10,000	
	<b>Anti-Passback Rules</b>	32	128
	<b>Access Points in One Anti-Passback Rule</b>	16	
	<b>Access Groups</b>	16	256

	<b>Persons in One Access Group</b>	10,000	
	<b>Access Levels</b>	32	128
	<b>Access Points in One Access Level</b>	32	512
	<b>Access Levels Assigned to One Access Group</b>	8	
	<b>Access Schedules</b>	32	
	<b>Speed of Applying Persons' Credentials to Device</b>	<ul style="list-style-type: none"> <li>● Card: 50ms for one card</li> <li>● Fingerprint: 1.5s for one fingerprint</li> <li>● Face credential: 1s for one face picture</li> </ul>	
<b>Time and Attendance</b>	<b>Persons for Time and Attendance</b>	2,000	10,000
	<b>Attendance Groups</b>	16	256
	<b>Persons in One Attendance Group</b>	10,000	
	<b>Shift Schedules</b>	32	128
	<b>Holidays</b>	16	
<b>Face Comparison</b>	<b>Persons for Face Comparison</b>	2,000	1,000,000
	<b>Face Comparison Groups</b>	16	64
	<b>Storage of Face Matched/Mismatched Events</b>	<ul style="list-style-type: none"> <li>● 120/s without pictures</li> <li>● 20/s with pictures (each picture 500 KB, stored in Recording Server)</li> </ul>	<ul style="list-style-type: none"> <li>● 1,000/s without pictures</li> <li>● 100/s with pictures (each picture 500 KB, stored in Recording Server)</li> </ul>
<b>Vehicle (ANPR)</b>	<b>UVSS (Under Vehicle Surveillance Systems)</b>	2	4
	<b>Vehicle Lists</b>	13	100
	<b>Vehicles</b>	60,000	500,000
	<b>Undercarriage Pictures (Each 10 MB)</b>	512	3,000
	<b>Storage of License Plate Matched/Mismatched Events</b>	<ul style="list-style-type: none"> <li>● 5/s with pictures (each picture 500 KB, stored in SYS server)</li> <li>● 20/s with pictures (each picture 500 KB, stored in Recording Server)</li> </ul>	<ul style="list-style-type: none"> <li>● 20/s with pictures (each picture 500 KB, stored in SYS server)</li> <li>● 120/s with pictures (each picture 500 KB, stored in Recording Server)</li> </ul>
<b>Report</b>	<b>Regular Report Rules</b>	100	
	<b>Event or Alarm Rules in One Event/Alarm Report</b>	32	
	<b>Records in One Sent Report</b>	10,000 or 10 MB	

	<b>Resources Selected for One Report</b>	<ul style="list-style-type: none"> <li>● 20 people counting cameras searched for one people counting report</li> <li>● 20 ANPR cameras searched for one vehicle analysis report</li> <li>● 20 queues searched for one queue analysis report</li> <li>● 20 presets searched for one temperature report</li> </ul> <p>*With this limitation, you can generate a neat and clear report via the Control Client and it costs less time.</p>	
<b>Smart Wall</b>	<b>Decoding Devices</b>	32	
	<b>Smart Walls</b>	32	
	<b>Views</b>	1,000	
	<b>Cameras in One View</b>	256	
	<b>View Groups</b>	100	
	<b>Views in One View Group</b>	10	
	<b>Views Auto-Switched Simultaneously</b>	1,000	
	<b>Concurrent Accesses via Control Client</b>	5 Control Clients access the system concurrently.	
	<b>Operation Logs Storage</b>	500,000	
	<b>Alarms Displayed on Smart Wall as Actions</b>	5 alarms per second (each alarm has 16 related cameras).	
<b>Others</b>	<b>Streaming Gateway</b>	50 cameras×2 Mbps input and 50 cameras×2 Mbps output	200 cameras×2 Mbps input and 200 cameras×2 Mbps output

### 3.3 Streaming Server

Configurations		
Feature	Low-End	High-End
<b>CPU</b>	Intel® Core™ i5-4590 @ 3.30 GHz	Intel® Xeon® E3-1220 V5 @ 3.00 GHz
<b>RAM</b>	8 GB	16 GB
<b>NIC</b>	GbE Network Interface Card	GbE Network Interface Card
<b>HDD Type</b>	SATA-II 7200 RPM Enterprise Class Hard Drives	SATA-II 7200 RPM Enterprise Class Hard Drives

<b>HDD Capacity</b>	10 GB for Streaming Server Log Files	10 GB for Streaming Server Log Files
<b>Maximum Performance</b>		
<b>Input and Output</b>	200 streams×2 Mbps input and 200 streams×2 Mbps output	300 streams×2 Mbps input and 300 streams×2 Mbps output



See Far, Go Further