

# CloudIVS 3000S

## CloudIVS Storage Node



### Features

Uses the embedded Linux operating system to ensure 24/7 stable operations, protecting the system from hacker attacks and viruses.

- Hyper convergence and high performance
  - Supports direct storage of video and images in mixed mode and embedded with the streaming media forwarding service, free from a storage or forwarding server used in the traditional video surveillance architecture, which is energy-saving.
  - Supports 10 TB hard disks and up to 40 disks on a single node, providing ultra-large capacity.
  - Supports 512-channel 4 Mbit/s video storage and 256-channel 4 Mbit/s concurrent forwarding.
  - Supports media block storage technology, eliminating disk fragments and enhancing disk writing performance.
- High service data reliability
  - Supports the disk bad sector repair technology, ensuring the disk service life and reducing the annualized failure rate (AFR) to 1%, which is much lower than the 5% AFR in the industry.
  - Supports recording backup and dual backup of key data.
  - Supports video buffering technology, ensuring service data integrity.
  - Supports permanent media storage technology. If a RAID group fails, all data in the remaining disks can still be read and written, ensuring service data availability.
  - Supports inter-RAID service balancing technology. If a RAID group is faulty, services on the faulty RAID group will be intelligently switched to other RAID groups, ensuring service continuity.
  - Supports N+0 cloud-based cluster networking to implement load balancing of video access among devices and implement device failover, ensuring system load balancing and service continuity.
  - Supports Data Safe technology to quickly restore system configurations and service data after a system disk fault occurs.
- Open ecosystem
  - Complies with industry standards and specifications, such as ONVIF, GB/T 28181, SIP, and RTP/RTSP, and supports PUs provided by mainstream vendors.
  - Supports quick IPC access based on templates. Users can add and dynamically update various IPC templates. The template updates take effect immediately.
- Intelligent storage and decoding
  - Embedded with diagnosis functions for nine types of video quality issues, with no need of a stand-alone server.
  - Supports hardware decoding on clients; supports decoding and display of up to 16 channels of 1080p video on a single client.

### Technical Specifications

Product Model	CloudIVS 3000S
<b>Device Performance</b>	
Network video storage	512-channel 4 Mbit/s video
Live video forwarding	256-channel 4 Mbit/s video
Recording playback	128-channel 8 Mbit/s video
Image storage	Mixed storage of face images, vehicle images, and video
<b>Platform Performance</b>	
Client	A single domain supports up to 5000 registered users, 2000 users logged in to the system at the same time, and 200 users performing service operations at the same time.
Platform device access	The entire network supports up to 200 upper-level and lower-level domains. A single domain can connect to up to 300,000 cameras (including those in the local and lower-level domains) and manage up to 300,000 cameras in external domains.
NAT networking	Supports NAT in single-level domain, two-level domain, and multi-level domain networks.
<b>Controller</b>	
Processor	64-bit 8-core processor, 2.0 GHz clock speed
Memory	48 GB DDR4 (supporting expansion)
<b>Storage Capacity</b>	
Disk quantity	40 SATA disks
System disk	Two 1.2 TB SAS disks
Disk interface	Supports intermixing of SAS and SATA disks and hot swap
Disk capacity	Maximum: 10 TB
RAID level	System disk: RAID 1; Data disk: RAID 5, SafeVideo+, supporting global hot spare
<b>Recording Management</b>	
Recording mode	Manual recording, scheduled recording, PU-based recording, and alarm-triggered recording
Recording policy	Allocates space to a specified recording stream based on the storage period; stops recording or overwrites earliest recording data when the storage space is used up; supports recording lock
Recording backup	Manual, scheduled, and alarm-triggered recording backup, and video buffering
Recording protection	SafeVideo+
Query mode	By time, alarm event, recording segment, or bookmark
Download mode	High-speed download, batch download, download by time segment, and PU-based recording download
<b>Device Management</b>	
PU management	Batch device configuration, device plug and play, dynamic camera access based on templates, and smart tracking
<b>Security Features</b>	
Watermark	Adds digital watermarks to the video from cameras and generates alarms when the watermarks are tampered with.
<b>Reliability</b>	
Media transmission	Bandwidth adaptation, SEC, FEC, multicast, level-by-level forwarding, and iPCA
Cluster	N+0 cluster that supports dynamic load balancing and fault migration
Two-node cluster	Deployment of the management plane in two-node cluster mode
Data Safe	Backs up key data in system disks and automatically restores service data in system disks.
<b>Compatibility</b>	
Video format	H.264, H.265, SVAC, and MJPEG
Device access	Supports connection to devices that comply with the Huawei SDK, Hikvision SDK, Dahua SDK, China Mobile TEYES, GB/T 28181, ONVIF 2.4, or ONVIF Profile S protocol.
Supported protocols	TCP, UDP, IPv4, HTTP, HTTPS, RTP, RTSP, RTCP, SIP, ARP, SSL, NTP, and SMTP
Platform access	Supports connection to other platforms that comply with various protocols such as GB/T 28181 and GAT 669 to implement diverse functions such as live video viewing, recording playback, PTZ control, and alarm reporting.
<b>Service Management</b>	
Management mode	B/S and C/S
Management functions	Live video viewing, recording playback, video wall management, voice broadcast/intercom, PTZ controls, electronic map, user management, keyboard control...
<b>External Interfaces</b>	
Network adapter	2 x GE + 2 x 10GE network ports
Other ports	Rear panel: USB3.0 x 2, 1000Base management port x 1, VGA x 1, and UART x 1 Front panel: USB2.0 x 2
<b>Others</b>	
Environmental requirements	Operating temperature: 5°C to 40°C; storage temperature: -40°C to +65°C Operating humidity: 8%~90% (non-condensing); storage humidity: 5%~95% (non-condensing)
Power consumption (including disks)	Maximum: < 870 W
Input voltage	100-240 V AC, 50/60 Hz
Dimensions (H x W x D)	175 mm x 447 mm x 748 mm
Chassis	Standard 19-inch 4 U chassis
Weight	65 kg (fully configured)
<b>Certification</b>	
China	CCC, CQC, check report issued by the Ministry of Public Security, and GB/T 28181 check report
Outside China	CE, FCC&IC, UL, CB, RCM, and VCCI

# CloudIVS 3000SC

## CloudIVS Storage and Compute Node



### Features

Uses the embedded Linux operating system to ensure 24/7 stable operations, protecting the system from hacker attacks and viruses.

- Hyper convergence and high performance
  - Supports convergence of storage and compute, and direct storage of video and images in mixed mode; embedded with the streaming media forwarding service and GPU compute resource pool; free from a storage, forwarding, or GPU server used in the traditional video surveillance architecture, which is energy-saving.
  - Supports 10 TB hard disks and up to 36 data disks on a single node, providing ultra-large capacity.
  - Supports 512-channel 4 Mbit/s video storage and 256-channel 4 Mbit/s concurrent forwarding.
  - Supports media block storage technology, eliminating disk fragments and enhancing disk writing performance.
  - Supports integration of multiple algorithms. A single node can execute four deep learning algorithms of facial analysis, person analysis, vehicle analysis, and video structuring at the same time.
  - Supports facial analysis of up to 64-channel 1080p video or 400 face images per second (no alert).
  - Supports intelligent analysis task scheduling to implement load balancing, making full use of GPU resources.
- Algorithm decoupling and on-demand deployment of algorithm services
  - Algorithms are decoupled from hardware, reusing compute resources.
  - Algorithms are decoupled from applications, ensuring application continuity despite of algorithm replacement.
  - Facial analysis, person analysis, vehicle analysis, and video structuring application components are deployed on demand and combined flexibly.
- High service data reliability
  - Supports the disk bad sector repair technology, ensuring the disk service life and reducing the annualized failure rate (AFR) to 1%, which is much lower than the 5% AFR in the industry.
  - Supports recording backup and dual backup of key data.
  - Supports video buffering technology, ensuring service data integrity.
  - Supports permanent media storage technology. If a RAID group fails, all data in the remaining disks can still be read and written, ensuring service data availability.
  - Supports inter-RAID service balancing technology. If a RAID group is faulty, services on the faulty RAID group will be intelligently switched to other RAID groups, ensuring service continuity.
  - Supports N+0 cloud-based cluster networking to implement load balancing of video access and analysis tasks among devices and implement device failover, ensuring system load balancing and service continuity.
  - Supports Data Safe technology to quickly restore system configurations and service data after a system disk fault occurs.
- Open ecosystem
  - Complies with industry standards and specifications, such as ONVIF, GB/T 28181, SIP, and RTP/RTSP, and supports PUs provided by mainstream vendors.
  - Supports quick IPC access based on templates. Users can add and dynamically update various IPC templates. The template updates take effect immediately.
- Intelligent storage and decoding
  - Embedded with diagnosis functions for nine types of video quality issues, with no need of a stand-alone server.
  - Supports hardware decoding on clients; supports decoding and display of up to 16 channels of 1080p video on a single client.

### Technical Specifications

Product Model	CloudIVS 3000SC	
<b>Device Performance</b>		
Network video storage	512-channel 4 Mbit/s video	
Live video forwarding	256-channel 4 Mbit/s video	
Recording playback	128-channel 8 Mbit/s video	
Image storage	Mixed storage of face images, vehicle images, and video	
<b>Platform Performance</b>		
Client	Video management: A single domain supports up to 5000 registered users, 2000 users logged in to the system at the same time, and 200 users performing service operations at the same time.	
Platform device access performance	The entire network supports up to 200 upper-level and lower-level video management domains. A single domain can connect to up to 300,000 cameras (including those in the local and lower-level domains) and manage up to 300,000 cameras in external domains.	
Algorithm collaboration	Allows lower-level domains to download the latest algorithms from the upper-level domain (CloudIVS 9000).	
NAT networking	Supports NAT in single-level domain, two-level domain, and multi-level domain networks.	
<b>Controller</b>		
Processor	64-bit 14-core processor, 2.2 GHz clock speed	
Memory	96 GB DDR4 (supporting expansion)	
<b>Storage Capacity</b>		
Disk quantity	36 SATA disks	
System disk	Two 960G SSD disks	
Disk interface	Supports intermixing of SAS and SATA disks and hot swap	
Disk capacity	Maximum: 10 TB	
RAID level	System disk: RAID 1; Data disk: RAID 5, SafeVideo+, supporting global hot spare	
<b>Recording Management</b>		
Recording mode	Manual recording, scheduled recording, PU-based recording, and alarm-triggered recording	
Recording policy	Allocates space to a specified recording stream based on the storage period; stops recording or overwrites earliest recording data when the storage space is used up; supports recording lock	
Recording backup	Manual, scheduled, and alarm-triggered recording backup, and video buffering	
Recording protection	SafeVideo+	
Query mode	By time, alarm event, recording segment, or bookmark	
Download mode	High-speed download, batch download, download by time segment, and PU-based recording download	
<b>Device Management</b>		
PU management	Batch device configuration, device plug and play, dynamic camera access based on templates, and smart tracking	
<b>Intelligent Analysis</b>		
Algorithm management	Algorithm plug-in enabling/disabling	
GPU card quantity	Four GPU cards	
Analysis performance	Video-based facial feature extraction	1080p: 64 channels
	Image-based facial feature extraction (alert deployment based on 300,000 records)	1080p: 280 images/second
	Video-based personal feature extraction	64 channels (1080p)
<b>Security Features</b>		
Watermark	Adds digital watermarks to the video from cameras and generates alarms when the watermarks are tampered with.	
<b>Reliability</b>		
Media transmission	Bandwidth adaptation, SEC, FEC, multicast, level-by-level forwarding, and iPCA	
Cluster	N+0 cluster that supports dynamic load balancing and fault migration	
Two-node cluster	Deployment of the management plane in two-node cluster mode	
Data Safe	Backs up key data in system disks and automatically restores service data in system disks.	
<b>Compatibility</b>		
Video format	H.264, H.265, SVAC, and MJPEG	
Device access	Supports connection to devices that comply with the Huawei SDK, Hikvision SDK, Dahua SDK, China Mobile TEYES, GB/T 28181, ONVIF 2.4, or ONVIF Profile S protocol.	
Supported protocols	TCP, UDP, IPv4, HTTP, HTTPS, RTP, RTSP, RTCP, SIP, ARP, SSL, NTP, and SMTP	
Platform access	Supports connection to other platforms that comply with various protocols such as GB/T 28181 and GAT 669 to implement diverse functions such as live video viewing, recording playback, PTZ control, and alarm reporting.	
<b>Service Management</b>		
Management mode	B/S and C/S	
Management functions	Live video viewing, recording playback, video wall management, voice broadcast/intercom, PTZ controls, electronic map, user management, keyboard control...	
<b>External Interfaces</b>		
Network adapter	2 x GE + 2 x 10GE network ports	
Other ports	Rear panel: USB3.0 x 2, 1000Base management port x 1, VGA x 1, and UART x 1 Front panel: USB2.0 x 2	

Product Model	CloudIVS 3000SC
<b>Others</b>	
Environmental requirements	Operating temperature: 5°C to 40°C; storage temperature: -40°C to +65°C Operating humidity: 8%–90% (non-condensing); storage humidity: 5%–95% (non-condensing)
Power consumption (including disks)	Maximum: < 1050W
Input voltage	100-240 V AC, 50/60 Hz
Dimensions (H x W x D)	175 mm x 447 mm x 748 mm
Chassis	Standard 19-inch 4 U chassis
Weight	65 kg (fully configured)
<b>Certification</b>	
China	CCC, CQC, check report issued by the Ministry of Public Security, and GB/T 28181 check report
Outside China	CE, FCC&IC, UL, CB, RCM, and VCCI

# CloudIVS 3000SCR

## CloudIVS Storage, Compute, and Retrieval Node



### Features

Uses the embedded Linux operating system to ensure 24/7 stable operations, protecting the system from hacker attacks and viruses.

- Hyper convergence and high performance
  - Supports convergence of storage, analysis, and search, and direct storage of video and images in mixed mode; embedded with the streaming media forwarding service; integrated deployment of facial analysis, person analysis, and vehicle analysis algorithms and corresponding reverse image search services. The storage, forwarding, GPU, and search servers used in the traditional video surveillance architecture are not required, which is energy-saving.
  - Supports 10 TB hard disks and up to 38 data disks on a single node, providing ultra-large capacity.
  - Supports 512-channel 4 Mbit/s video storage and 256-channel 4 Mbit/s concurrent forwarding.
  - Supports media block storage technology, eliminating disk fragments and enhancing disk writing performance.
  - Supports integration of multiple algorithms. A single node can execute four deep learning algorithms of facial analysis, person analysis, vehicle analysis, and video structuring at the same time.
  - Supports facial analysis of up to 64-channel 1080p video or 400 face images per second (no alert).
  - Supports intelligent analysis task scheduling to implement load balancing, making full use of GPU resources.
  - Supports precise scheduling of distributed search tasks (face, person, and vehicle search by image). The search efficiency remains unchanged even when data linearly increases.
- Algorithm decoupling and on-demand deployment of algorithm services
  - Algorithms are decoupled from hardware, reusing compute resources.
  - Algorithms are decoupled from applications, ensuring application continuity despite of algorithm replacement.
  - Facial analysis, person analysis, vehicle analysis, and video structuring application components are deployed on demand and combined flexibly.
- High service data reliability
  - Supports the disk bad sector repair technology, ensuring the disk service life and reducing the annualized failure rate (AFR) to 1%, which is much lower than the 5% AFR in the industry.
  - Supports recording backup and dual backup of key data.
- Supports video buffering technology, ensuring service data integrity.
  - Supports permanent media storage technology. If a RAID group fails, all data in the remaining disks can still be read and written, ensuring service data availability.
  - Supports inter-RAID service balancing technology. If a RAID group is faulty, services on the faulty RAID group will be intelligently switched to other RAID groups, ensuring service continuity.
  - Supports N+0 cloud-based cluster networking to implement load balancing of video access and analysis tasks among devices and implement device failover, ensuring system load balancing and service continuity.
  - Supports Data Safe technology to quickly restore system configurations and service data after a system disk fault occurs.
- Open ecosystem
  - Complies with industry standards and specifications, such as ONVIF, GB/T 28181, SIP, and RTP/RTSP, and supports PUs provided by mainstream vendors.
  - Supports quick IPC access based on templates. Users can add and dynamically update various IPC templates. The template updates take effect immediately.
- Intelligent storage and decoding
  - Embedded with diagnosis functions for nine types of video quality issues, with no need of a stand-alone server.
  - Supports hardware decoding on clients; supports decoding and display of up to 16 channels of 1080p video on a single client.

Others	
Environmental requirements	Operating temperature: 5°C to 40°C; storage temperature: -40°C to +65°C Operating humidity: 8%–90% (non-condensing); storage humidity: 5%–95% (non-condensing)
Power consumption (including disks)	Maximum: < 1100W
Input voltage	100-240 V AC, 50/60 Hz
Dimensions (H x W x D)	175 mm x 447 mm x 748 mm
Chassis	Standard 19-inch 4 U chassis
Weight	65 kg (fully configured)
Certification	
China	CCC, CQC, check report issued by the Ministry of Public Security, and GB/T 28181 check report
Outside China	CE, FCC&I, UL, CB, RCM, and VCCI

Product Model	CloudIVS 3000SCR	
Device Performance		
Network video storage	512-channel 4 Mbit/s video	
Live video forwarding	256-channel 4 Mbit/s video	
Recording playback	128-channel 8 Mbit/s video	
Image storage	Mixed storage of face images, vehicle images, and video	
Platform Performance		
Client	Video management: A single domain supports up to 5000 registered users, 2000 users logged in to the system at the same time, and 200 users performing service operations at the same time. Intelligent analysis: A single domain supports up to 5000 registered users, 1000 users logged in to the system at the same time, and 80 users performing service operations at the same time.	
Platform device access performance	The entire network supports up to 200 upper-level and lower-level video management domains. A single domain can connect to up to 300,000 cameras (including those in the local and lower-level domains) and manage up to 300,000 cameras in external domains.	
Algorithm collaboration	Allows lower-level domains to download the latest algorithms from the upper-level domain (CloudIVS 9000).	
Video Data System	Supports connection to third-party video and image information database through GAT 1400.1-2017 interface A standard	
Task collaboration	Distributed alert deployment and distributed search	
NAT networking	Supports NAT in single-level domain, two-level domain, and multi-level domain networks.	
Controller		
Processor	64-bit 16-core processor, 2.1 GHz clock speed	
Memory	192 GB DDR4 (supporting expansion)	
Storage Capacity		
Disk quantity	36 SATA disks and 2 SAS disks	
System disk	Two 960G SSD disks	
Disk interface	Supports intermixing of SAS and SATA disks and hot swap	
Disk capacity	Maximum: 10 TB	
RAID level	System disk: RAID 1; Data disk: RAID 5, SafeVideo+, supporting global hot spare	
Recording Management		
Recording mode	Manual recording, scheduled recording, PU-based recording, and alarm-triggered recording	
Recording policy	Allocates space to a specified recording stream based on the storage period; stops recording or overwrites earliest recording data when the storage space is used up; supports recording lock	
Recording backup	Manual, scheduled, and alarm-triggered recording backup, and video buffering	
Recording protection	SafeVideo+	
Query mode	By time, alarm event, recording segment, or bookmark	
Download mode	High-speed download, batch download, download by time segment, and PU-based recording download	
Device Management		
PU management	Batch device configuration, device plug and play, dynamic camera access based on templates, and smart tracking	
Intelligent Analysis		
Algorithm management	Algorithm plug-in enabling/disabling	
GPU card quantity	Four GPU cards	
Analysis performance	Video-based facial feature extraction	1080p: 64 channels
	Image-based facial feature extraction (alert deployment based on 300,000 records)	1080p: 280 images/second
Search function	Video-based personal feature extraction	64 channels (1080p)
	Face search by image	40 million records: result returned within seconds
	Facial feature storage	240 million records
Other functions	Person search by image	400,000 records: result returned within seconds
	Personal feature storage	30 million records
	Static library	20 million records
	Blacklist-based face and vehicle alert deployment	Supported
Security Features		
Watermark	Adds digital watermarks to the video from cameras and generates alarms when the watermarks are tampered with.	
Reliability		
Media transmission	Bandwidth adaptation, SEC, FEC, multicast, level-by-level forwarding, and IPCA	
Cluster	N+0 cluster that supports dynamic load balancing and fault migration	
Two-node cluster	Deployment of the management plane in two-node cluster mode	
Data Safe	Backs up key data in system disks and automatically restores service data in system disks.	
Compatibility		
Video format	H.264, H.265, SVAC, and MJPEG	
Device access	Supports connection to devices that comply with the Huawei SDK, Hikvision SDK, Dahua SDK, China Mobile TEYES, GB/T 28181, ONVIF 2.4, or ONVIF Profile S protocol.	
Supported protocols	TCP, UDP, IPv4, HTTP, HTTPS, RTP, RTSP, RTCP, SIP, ARP, SSL, NTP, and SMTP	
Platform access	Supports connection to other platforms that comply with various protocols such as GB/T 28181 and GAT 669 to implement diverse functions such as live video viewing, recording playback, PTZ control, and alarm reporting.	
Service Management		
Management mode	B/S and C/S	
Management functions	Live video viewing, recording playback, video wall management, voice broadcast/intercom, PTZ controls, electronic map, user management, keyboard control, statistical analysis...	
External Interfaces		
Network adapter	2 x GE + 2 x 10GE network ports	
Other ports	Rear panel: USB3.0 x 2, 1000Base management port x 1, VGA x 1, and UART x 1 Front panel: USB2.0 x 2	



# CloudIVS 3000CR

## CloudIVS Compute and Retrieval Node



### Features

Uses the embedded Linux operating system to ensure 24/7 stable operations, protecting the system from hacker attacks and viruses.

- Hyper convergence and high performance
  - Supports convergence of storage, analysis, and search, and direct storage of video and images in mixed mode; embedded with the streaming media forwarding service; integrated deployment of facial analysis, person analysis, and vehicle analysis algorithms and corresponding reverse image search services. The storage, forwarding, GPU, and search servers used in the traditional video surveillance architecture are not required, which is energy-saving.
  - Supports 10 TB hard disks and high-density storage.
  - Supports media block storage technology, eliminating disk fragments and enhancing disk writing performance.
  - Supports integration of multiple algorithms. A single node can execute four deep learning algorithms of facial analysis, person analysis, vehicle analysis, and video structuring at the same time.
  - Supports facial analysis of up to 96-channel 1080p video or 600 face images per second (no alert).
  - Supports intelligent analysis task scheduling to implement load balancing, making full use of GPU resources.
  - Supports precise scheduling of distributed search tasks (face, person, and vehicle search by image). The search efficiency remains unchanged even when data linearly increases.
- Algorithm decoupling and on-demand deployment of algorithm services
  - Algorithms are decoupled from hardware, reusing compute resources.
  - Algorithms are decoupled from applications, ensuring application continuity despite of algorithm replacement.
  - Facial analysis, person analysis, vehicle analysis, and video structuring application components are deployed on demand and combined flexibly.
- High service data reliability
  - Supports the disk bad sector repair technology, ensuring the disk service life and reducing the annualized failure rate (AFR) to 1%, which is much lower than the 5% AFR in the industry.
  - Supports recording backup and dual backup of key data.
  - Supports video buffering technology, ensuring service data integrity.
  - Supports permanent media storage technology. If a RAID group fails, all data in the remaining disks can still be read and written, ensuring service data availability.
  - Supports N+0 cloud-based cluster networking to implement load balancing of video access and analysis tasks among devices and implement device failover, ensuring system load balancing and service continuity.
  - Supports Data Safe technology to quickly restore system configurations and service data after a system disk fault occurs.
- Open ecosystem
  - Complies with industry standards and specifications, such as ONVIF, GB/T 28181, SIP, and RTP/RTSP, and supports PUs provided by mainstream vendors.
  - Supports quick IPC access based on templates. Users can add and dynamically update various IPC templates. The template updates take effect immediately.
- Intelligent storage, decoding, and display
  - Embedded with diagnosis functions for nine types of video quality issues, with no need of a stand-alone server.
  - Supports hardware decoding on clients; supports decoding and display of up to 16 channels of 1080p video on a single client.

Others	
Environmental requirements	Operating temperature: 5°C to 40°C; storage temperature: -40°C to +65°C Operating humidity: 8%–90% (non-condensing); storage humidity: 5%–95% (non-condensing)
Power consumption (including disks)	Maximum: < 1100W
Input voltage	100-240 V AC, 50/60 Hz
Dimensions (H x W x D)	86.1 mm x 447 mm x 748 mm
Chassis	Standard 19-inch 2 U chassis
Weight	29.1 kg (fully configured)
Certification	
China	CCC, CQC, check report issued by the Ministry of Public Security, and GB/T 28181 check report
Outside China	CE, FCC&IC, UL, CB, RCM, and VCCI

Product Model	CloudIVS 3000CR	
<b>Device Performance</b>		
Network video storage	128-channel 4 Mbit/s video	
Live video forwarding	64-channel 4 Mbit/s video	
Recording playback	32-channel 8 Mbit/s video	
Image storage	Mixed storage of face images, vehicle images, and video	
<b>Platform Performance</b>		
Client	Video management: A single domain supports up to 5000 registered users, 2000 users logged in to the system at the same time, and 200 users performing service operations at the same time. Intelligent analysis: A single domain supports up to 5000 registered users, 1000 users logged in to the system at the same time, and 80 users performing service operations at the same time.	
Platform device access performance	The entire network supports a maximum of 200 upper-level and lower-level video management domains. A single domain can connect to up to 300,000 cameras (including those in the local and lower-level domains) and manage up to 300,000 cameras in external domains.	
Algorithm collaboration	Allows lower-level domains to download the latest algorithms from the upper-level domain (CloudIVS 9000).	
Video Data System	Supports connection to third-party video and image information database through GAT/1400.1-2017 interface A standard	
Task collaboration	Distributed alert deployment and distributed search	
NAT networking	Supports NAT in single-level domain, two-level domain, and multi-level domain networks.	
<b>Controller</b>		
Processor	64-bit 16-core processor, 2.1 GHz clock speed	
Memory	256 GB DDR4 (supporting expansion)	
<b>Storage Capacity</b>		
Disk quantity	Eight SATA disks and two SAS disks	
System disk	Two 1.2 TB SAS disks	
Disk interface	Supports intermixing of SAS and SATA disks and hot swap	
Disk capacity	Maximum: 10 TB	
RAID level	System disk: RAID 1; Data disk: RAID 5, SafeVideo+, supporting global hot spare	
<b>Recording Management</b>		
Recording mode	Manual recording, scheduled recording, PU-based recording, and alarm-triggered recording	
Recording policy	Allocates space to a specified recording stream based on the storage period; stops recording or overwrites earliest recording data when the storage space is used up; supports recording lock	
Recording backup	Manual, scheduled, and alarm-triggered recording backup, and video buffering	
Recording protection	SafeVideo+	
Query mode	By time, alarm event, recording segment, or bookmark	
Download mode	High-speed download, batch download, download by time segment, and PU-based recording download	
<b>Device Management</b>		
PU management	Batch device configuration, device plug and play, dynamic camera access based on templates, and smart tracking	
<b>Intelligent Analysis</b>		
Algorithm management	Algorithm plug-in enabling/disabling	
GPU card quantity	Six GPU cards	
Analysis performance	Video-based facial feature extraction	1080p: 96 channels
	Image-based facial feature extraction (alert deployment based on 300,000 records)	1080p: 420 images/second
	Video-based personal feature extraction	96 channels (1080p)
Search function	Face search by image	40 million records: result returned within seconds
	Facial feature storage	240 million records
	Person search by image	400,000 records: result returned within seconds
Other functions	Personal feature storage	30 million records
	Static library	20 million records
Security Features	Watermark	Blacklist-based face and vehicle alert deployment
	Watermark	Supported
<b>Reliability</b>		
Media transmission	Bandwidth adaptation, SEC, FEC, multicast, level-by-level forwarding, and iPCA	
Cluster	N+0 cluster that supports dynamic load balancing and fault migration	
Two-node cluster	Deployment of the management plane in two-node cluster mode	
Data Safe	Backs up key data in system disks and automatically restores service data in system disks.	
<b>Compatibility</b>		
Video format	H.264, H.265, SVAC, and MJPEG	
Device access	Supports connection to devices that comply with the Huawei SDK, Hikvision SDK, Dahua SDK, China Mobile TEYES, GB/T 28181, ONVIF 2.4, or ONVIF Profile S protocol.	
Supported protocols	TCP, UDP, IPv4, HTTP, HTTPS, RTP, RTSP, RTCP, SIP, ARP, SSL, NTP, and SMTP	
Platform access	Supports connection to other platforms that comply with various protocols such as GB/T 28181 and GAT/669 to implement diverse functions such as live video viewing, recording playback, PTZ control, and alarm reporting.	
<b>Service Management</b>		
Management mode	B/S and C/S	
Management functions	Live video viewing, recording playback, video wall management, voice broadcast/intercom, PTZ controls, electronic map, user management, keyboard control, statistical analysis...	
<b>External Interfaces</b>		
Network adapter	2 x GE + 2 x 10GE network ports	
Other ports	Rear panel: USB3.0 x 2, 1000Base management port x 1, VGA x 1, and UART x 1 Front panel: USB2.0 x 2	

# CloudIVS 3000C

## CloudIVS Compute Node



### Features

Uses the embedded Linux operating system to ensure 24/7 stable operations, protecting the system from hacker attacks and viruses.

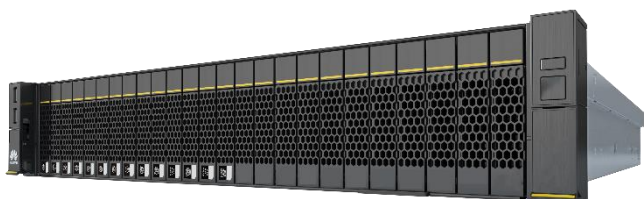
- Hyper convergence and high performance
  - Supports integration of multiple algorithms. A single node can perform behavior analysis, video search, and video synopsis at the same time.
  - Supports up to 42-channel video synopsis, video search, or behavior analysis.
  - Supports video upload and local storage of analyzed images, records, and synopsis recordings.
  - Supports media block storage technology, eliminating disk fragments and enhancing disk writing performance.
- Algorithm decoupling and on-demand deployment of algorithm services
  - Algorithms are decoupled from hardware, reusing compute resources.
  - Behavior analysis, video search, and video synopsis application components are deployed on demand and combined flexibly.
- High service data reliability
  - Supports the disk bad sector repair technology, ensuring the disk service life and reducing the annualized failure rate (AFR) to 1%, which is much lower than the 5% AFR in the industry.
  - Supports N+0 cloud-based cluster networking to implement load balancing of analysis tasks among devices and implement device failover, ensuring system load balancing and service continuity.
  - Supports Data Safe technology to quickly restore system configurations and service data after a system disk fault occurs.

### Technical Specifications

Product Model	CloudIVS 3000C	
<b>Device Performance</b>		
Image storage	Mixed storage of video and images after analysis	
<b>Platform Performance</b>		
Client	Intelligent analysis: A single domain supports up to 5000 registered users, 1000 users logged in to the system at the same time, and 80 users performing service operations at the same time.	
<b>Controller</b>		
Processor	64-bit 14-core processor, 2.2 GHz clock speed	
Memory	160 GB DDR4 (supporting expansion)	
<b>Storage Capacity</b>		
Disk quantity	12 SATA disks	
System disk	Two 1.2 TB SAS disks	
Disk interface	Supports intermixing of SAS and SATA disks and hot swap	
Disk capacity	Maximum: 4 TB	
RAID level	System disk: RAID 1; Data disk: RAID 5, supporting global hot spare	
<b>Intelligent Analysis</b>		
<b>Algorithm management</b>		
	Algorithm plug-in enabling/disabling	
Analysis performance (non-parallel)	Behavior analysis	42-channel 1080p
	Video synopsis	42-channel 1080p
	Video search	42-channel 1080p
	Plate recognition	21-channel 1080p
Search function	Alarm query	
<b>Video file management</b>		
	Video upload, transcoding, and playing	
<b>Behavior analysis</b>		
	Intrusion detection, tripwire crossing detection, loitering detection, abandoned object detection, removed object detection, direction detection, head counting, crowd density detection, speed estimation, and route detection	
<b>Reliability</b>		
Cluster	N+0 cluster that supports dynamic load balancing and fault migration	
Data Safe	Backs up key data in system disks and automatically restores service data in system disks.	
<b>External Interfaces</b>		
Network adapter	2 x GE + 2 x 10GE network ports	
Other ports	Rear panel: USB3.0 x 2, 1000Base management port x 1, VGA x 1, and UART x 1 Front panel: USB2.0 x 2	
<b>Service Management</b>		
Management mode	B/S	
Management functions	User management, log management, statistical analysis, and search	
<b>Others</b>		
Environmental requirements	Operating temperature: 5°C to 40°C; storage temperature: -40°C to +65°C	
	Operating humidity: 8%–90% (non-condensing); storage humidity: 5%–95% (non-condensing)	
Power consumption (including disks)	Maximum: < 700W	
Input voltage	100-240 V AC, 50/60 Hz	
Dimensions (H x W x D)	86.1 mm x 447 mm x 748 mm	
Chassis	Standard 19-inch 2 U chassis	
Weight	32.7 kg (fully configured)	
<b>Certification</b>		
China	CCC, CQC, check report issued by the Ministry of Public Security, and GB/T 28181 check report	
Outside China	CE, FCC&IC, UL, CB, RCM, and VCCI	

# CloudIVS 3000R

## CloudIVS Retrieval Node



### Features

Uses the embedded Linux operating system to ensure 24/7 stable operations, protecting the system from hacker attacks and viruses.

- Hyper convergence and high performance
  - Integrated deployment of face, person, and vehicle search by image services.
  - Supports precise scheduling of distributed search tasks (face, person, and vehicle search by image). The search efficiency remains unchanged even when data linearly increases.
  - Tiered storage of hot and cold data, storage of hot data in the resident memory, and storage of all cold data on NVMe SSDs at high speed.
- On-demand deployment of search services
  - Face, person, and vehicle search by image service components are deployed on demand and combined flexibly.
- High service data reliability
  - Supports the disk bad sector repair technology, ensuring the disk service life and reducing the annualized failure rate (AFR) to 1%, which is much lower than the 5% AFR in the industry.
  - Creates copies of key metadata to ensure high data reliability.
  - Supports Data Safe technology to quickly restore system configurations and service data after a system disk fault occurs.

### Technical Specifications

Product Model	CloudIVS 3000R	
<b>Platform Performance</b>		
Client	Intelligent analysis: A single domain supports up to 5000 registered users, 1000 users logged in to the system at the same time, and 80 users performing service operations at the same time.	
Video Data System	Supports connection to third-party video and image information database through GA/T 1400.1-2017 interface A standard	
Task collaboration	Distributed alert deployment and distributed search	
NAT networking	Supports NAT in single-level domain, two-level domain, and multi-level domain networks.	
<b>Controller</b>		
Processor	64-bit 14-core processor, 2.2 GHz clock speed	
Memory	256 GB DDR4 (supporting expansion)	
<b>Storage Capacity</b>		
Disk quantity	Six NVMe SSDs and six SAS disks	
System disk	Two 1.2 TB SAS disks	
Disk interface	Hot swap	
RAID level	System disk: RAID 1; Data disk: RAID 5, supporting global hot spare	
<b>Intelligent Analysis</b>		
Search function	Face search by image	160 million records: result returned within seconds
	Facial feature storage	810 million records
	Person search by image	6 million records: result returned within seconds
	Personal feature storage	450 million records
Other functions	Vehicle feature storage	810 million records
	Static library	100 million records
	Blacklist-based face and vehicle alert deployment	Supported
<b>Reliability</b>		
Cluster	N+0 cluster that supports dynamic load balancing and fault migration	
Data Safe	Backs up key data in system disks and automatically restores service data in system disks.	
<b>Service Management</b>		
Management mode	B/S	
Management functions	User management, log management, statistical analysis, GIS map interconnection, search, and alert deployment	
<b>External Interfaces</b>		
Network adapter	2 x GE + 2 x 10GE network ports	
Other ports	Rear panel: USB3.0 x 2, 1000Base management port x 1, VGA x 1, and UART x 1 Front panel: USB2.0 x 2	
<b>Others</b>		
Environmental requirements	Operating temperature: 5°C to 40°C; storage temperature: -40°C to +65°C Operating humidity: 8%–90% (non-condensing); storage humidity: 5%–95% (non-condensing)	
Power consumption (including disks)	Maximum: < 720W	
Input voltage	100-240 V AC, 50/60 Hz	
Dimensions (H x W x D)	86.1 mm x 447 mm x 748 mm	
Chassis	Standard 19-inch 2 U chassis	
Weight	29.1 kg (fully configured)	
<b>Certification</b>		
China	CCC, CQC, check report issued by the Ministry of Public Security, and GB/T 28181 check report	
Outside China	CE, FCC&IC, UL, CB, RCM, and VCCI	