

DS-A81 Series Hybrid SAN

Introduction

The DS-A81 series is an economical controller-structure Hybrid SAN (Storage Area Network) product. Hikvision Hybrid SAN product creates a network with access to data storage servers, and it integrates Hikvision's unique video direct streaming technology as well as supports IPSAN. This flexible, cost-effective solution features ONVIF-support to third-party cameras such as BOSCH, AXIS, SONY, Samsung etc, support for RTSP, and SIP protocols, and extended data retention. With no recording server needed, Hikvision's Hybrid SAN systems truly make applications simple, flexible, and budget-friendly.



Features

Economical and Stable Hardware Platform

- Modular and no-cable design and SBB 2.0 structure.
- 64-bit multi-core processor.
- 4 GB high-speed cache.
- Four 1000M network interfaces.
- 12G SAS high-speed transmission channel.
- Redundant design for key modules.

HDD Detection and Repair/RAID Optimization

- Detection before operation.
- Detection in operation.
- Fault reparation.
- RAID 0, 1, 3, 5, 6, 10, 50, and VRAID.
- Global and local hot spare.
- Quick RAID building.
- Capability of cascading up to two storage enclosures behind a single SAS port.

Advanced Data Protection

- Synchronous backup of key information in system disk and HDD.
- RAID-based tamper-proof data technology.
- Auto data synchronization between devices.

Energy Efficient

- CPU load balance
- Auto fan tuning
- HDD sleeping

User-Friendly UI

- Quick configuration.
- Various alarm management.
- SADP protocol supported.
- SNMP supported.

Surveillance-Specialized Stream Media Direct Storage (Direct Streaming Mode)

- Space pre-allocation strategy.
- Direct storage for video and picture streams.
- Supports direct IP camera/DVR/NVR streaming and recording.
- Support H264,H264+,H265,H265+.
- Support N+1.
- Supports camera access through RTSP, ONVIF, and PSIA protocol.
- Supports alarm/scheduled/manual recording.
- Automatic network replenishment (ANR), timely uploading, and video loss alarm.
- Lock key videos.
- VRAID data protection.
- Supports both Direct Streaming Mode and IPSAN Mode.
- Search, play, and download videos by video type or video time.



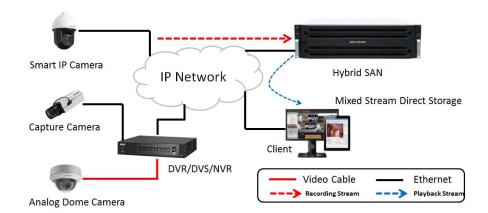


Specification

Direct Streaming Mode: video (2 Mbps) + picture	Model		DS-A81016S
IPSAN 180-ch recording + playback Controller Cache 4 GB (extendable to 32 GB)	Performance	Direct Streaming Mode:	320-ch recording + playback
Processor One controller (64-bit multi-core processor)		video (2 Mbps) + picture	
Controller Cache 4 GB (extendable to 32 GB) HDD slot 16 Interface/capacity SATA/1TB, 2TB, 3TB, 4TB, 6TB,8TB Hot-swapping Supported HDD support Single, RAID(Enterprise Hard Disk) RAID RAIDO, 1, 3, 5, 6, 10, 50, VRAID, JBOD, Hot-spare Disk management Disk inspection, alarm and repair Logical volume management Recording Management Searching mode Timing recording, manual recording, dual-stream recording, alarm recording Video protection Lock key video, N+1 service protection, ANR, video loss detection and alarm Searching mode Quick download, batch download, download by segment, download by merging Management Mode Sound, light, email, message, web page Log downloading Download no web page Network Protocol icScI, RTSP, ONVIF, PSIA Data network interface Management interface Management metwork interface Management interface Management metwork interface Management interface Management interface Management interface Management interface		IPSAN	180-ch recording + playback
Cache 4 GB (extendable to 32 GB)	Controller	Processor	One controller (64-bit multi-core processor)
HDD HDS wapping Supported HDD support Single, RAID(Enterprise Hard Disk) RAID RAIDO, 1, 3, 5, 6, 10, 50, VRAID, JBOD, Hot-spare Disk management Disk inspection, alarm and repair Logical volume management management Recording Management Management Management Management Device Maintenance Maintenance Network Protocol Device Management mode Network Protocol Data network interface MiniSAS interface MiniSAS interface MiniSAS interface MiniSAS interface Power supply Redundant Power supply Redundant Poworking: \$308 W (967 BTU with 16 HDDs) Rated: \$50 W Cath Time Interface 1 HDMI Poworking: \$5 °C to +40 °C (41 °F to 104 °F) Powor NAND NAND, VRAID, Paper Sungported Supported Supported Supported Network Power supply Redundant Poworking: \$308 W (967 BTU with 16 HDDs) Rated: \$550 W Environment Poworking: \$5 °C to +40 °C (41 °F to 104 °F)		Cache	4 GB (extendable to 32 GB)
HDD HDS support RAID RAID RAID RAID RAID RAID RAID RAID	HDD	HDD slot	16
HDD support RAID RAID RAIDO, 1, 3, 5, 6, 10, 50, VRAID, JBOD, Hot-spare Disk management Logical volume management Recording Management Management Management Management Recording Management Disk inspection, alarm and repair iSCSI volume, video volume management management Recording mode Video protection Lock key video, N+1 service protection, ANR, video loss detection and alarm Searching mode Search by time and event Downloading mode Quick download, batch download, download by segment, download by merging Management mode Alarm mode Log downloading Download no web page Network Protocol ISCSI, RTSP, ONVIF, PSIA Data network interface MiniSAS interface Supported COM 1 USB 3.0 2 Alarm interface HDMI 2 Power supply Redundant Consumption (with HDDs) Rated: \$ 550 W Environment • Working: +5 °C to +40 °C (41 °F to 104 °F)		Interface/capacity	SATA/1TB, 2TB, 3TB, 4TB, 6TB,8TB
RAID RAID RAIDO, 1, 3, 5, 6, 10, 50, VRAID, JBOD, Hot-spare		Hot-swapping	Supported
Disk management Disk inspection, alarm and repair		HDD support	Single, RAID(Enterprise Hard Disk)
Logical volume management ISCSI volume, video volume management ISCSI volume volume management ISCSI volume vertice protection, ANR, video volume management ISCSI volume vertice protection, ANR,		RAID	RAIDO, 1, 3, 5, 6, 10, 50, VRAID, JBOD, Hot-spare
Management SCSI volume, video volume management SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video loss detection and alarm SCSI video, N+1 service protection, ANR, video	_	Disk management	Disk inspection, alarm and repair
National Protection Search by time and event			iSCSI volume, video volume management
Management Searching mode Search by time and event Downloading mode Quick download, batch download, download by segment, download by merging Meb-based GUI, serial port CLI, centralized management of multiple devices Maintenance Sound, light, email, message, web page Log downloading Download no web page Network Protocol iSCSI, RTSP, ONVIF, PSIA Data network interface 3, 1000M Ethernet interface Management network interface 1, 1000M Ethernet interface MiniSAS interface Supported COM 1 USB 3.0 2 Alarm interface 1 HDMI 2 Power supply Redundant Consumption (with HDDs) Working: ≤308 W (967 BTU with 16 HDDs) Rated: ≤ 550 W Environment Working: +5 °C to +40 °C (41 °F to 104 °F)		Recording mode	Timing recording, manual recording, dual-stream recording, alarm recording
Downloading mode Device Maintenance Management mode Alarm mode Log downloading Download no web page Network Protocol Data network interface Management network interface MiniSAS interface MiniSAS interface COM 1 USB 3.0 2 Alarm interface Power supply Redundant Consumption (with HDDs) Environment Quick download, batch download, download by segment, download by merging Web-based GUI, serial port CLI, centralized management of multiple devices Sound, light, email, message, web page Download no web page ISCSI, RTSP, ONVIF, PSIA 3, 1000M Ethernet interface 1, 1000M Ethernet interface COM 1 USB 3.0 2 Alarm interface 1 HDMI 2 Power supply Redundant • Working: ≤308 W (967 BTU with 16 HDDs) Rated: ≤ 550 W Environment • Working: +5 °C to +40 °C (41 °F to 104 °F)		Video protection	Lock key video, N+1 service protection, ANR, video loss detection and alarm
Device Maintenance Management mode Web-based GUI, serial port CLI, centralized management of multiple devices Network Protocol Sound, light, email, message, web page Network Protocol iSCSI, RTSP, ONVIF, PSIA Data network interface 3, 1000M Ethernet interface Management network interface 1, 1000M Ethernet interface MiniSAS interface Supported COM 1 USB 3.0 2 Alarm interface 1 HDMI 2 Power supply Redundant Consumption (with HDDs) Working: ≤308 W (967 BTU with 16 HDDs) Rated: ≤550 W Environment Working: +5 °C to +40 °C (41 °F to 104 °F)		Searching mode	Search by time and event
Device Maintenance Maintenance Alarm mode Sound, light, email, message, web page Network Protocol iSCSI, RTSP, ONVIF, PSIA Interface Data network interface 3, 1000M Ethernet interface Management network interface 1, 1000M Ethernet interface MiniSAS interface Supported COM 1 USB 3.0 2 Alarm interface 1 HDMI 2 Power supply Redundant Consumption (with HDDs) • Working: ≤308 W (967 BTU with 16 HDDs) Rated: ≤ 550 W Environment • Working: +5 °C to +40 °C (41 °F to 104 °F)		Downloading mode	Quick download, batch download, download by segment, download by merging
Maintenance Alarm mode Sound, light, email, message, web page Network Protocol iSCSI, RTSP, ONVIF, PSIA Interface Data network interface 3, 1000M Ethernet interface Management network interface 1, 1000M Ethernet interface MinisAS interface Supported COM 1 USB 3.0 2 Alarm interface 1 HDMI 2 Power supply Redundant Consumption (with HDDs) Morking: ≤308 W (967 BTU with 16 HDDs) Rated: ≤ 550 W Environment Morking: +5 °C to +40 °C (41 °F to 104 °F)	5 .	Management mode	Web-based GUI, serial port CLI, centralized management of multiple devices
Log downloading Download no web page Network Protocol iSCSI, RTSP, ONVIF, PSIA Data network interface 3, 1000M Ethernet interface Management network interface 1, 1000M Ethernet interface MinisAS interface Supported COM 1 USB 3.0 2 Alarm interface 1 HDMI 2 Power supply Redundant Consumption (with HDDs) Rated: ≤ 550 W Environment • Working: +5 °C to +40 °C (41 °F to 104 °F)		Alarm mode	Sound, light, email, message, web page
Data network interface Management network interface Interfaces MiniSAS interface COM 1 USB 3.0 Alarm interface HDMI Power supply Consumption (with HDDs) Environment Data network interface 1, 1000M Ethernet interface 1, 1000M Ethernet interface 1, 1000M Ethernet interface 1, 1000M Ethernet interface 1 Power supported Supported 1 USB 3.0 2 Alarm interface 1 HDMI 2 Redundant Working: ≤308 W (967 BTU with 16 HDDs) Rated: ≤ 550 W Environment Working: +5 °C to +40 °C (41 °F to 104 °F)		Log downloading	Download no web page
Interfaces MiniSAS interface Supported COM 1 USB 3.0 2 Alarm interface 1 HDMI 2 Power supply Redundant Consumption (with HDDs) Rated: ≤ 550 W Environment • Working: +5 °C to +40 °C (41 °F to 104 °F)	Network	Protocol	iSCSI, RTSP, ONVIF, PSIA
Interfaces	Interfaces	Data network interface	3, 1000M Ethernet interface
Interfaces COM 1 USB 3.0 2 Alarm interface 1 HDMI 2 Power supply Redundant Consumption (with HDDs) • Working: ≤308 W (967 BTU with 16 HDDs) Rated: ≤ 550 W Environment • Working: +5 °C to +40 °C (41 °F to 104 °F)		_	1, 1000M Ethernet interface
COM 1 USB 3.0 2 Alarm interface 1 HDMI 2 Power supply Redundant Consumption (with HDDs) • Working: ≤308 W (967 BTU with 16 HDDs) Rated: ≤ 550 W Environment • Working: +5 °C to +40 °C (41 °F to 104 °F)		MiniSAS interface	Supported
Alarm interface 1 HDMI 2 Power supply Redundant Consumption (with HDDs) Working: ≤308 W (967 BTU with 16 HDDs) Rated: ≤ 550 W Environment • Working: +5 °C to +40 °C (41 °F to 104 °F)		СОМ	1
Power supply Redundant Consumption (with HDDs) Consumption (with HDDs) Rated: ≤ 550 W Environment Environment Power supply Working: ≤308 W (967 BTU with 16 HDDs) Rated: ≤ 550 W		USB 3.0	2
Power supply Redundant Onsumption (with HDDs) Rated: $\leq 550 \text{ W}$ Environment Redundant Working: $\leq 308 \text{ W} (967 \text{ BTU with } 16 \text{ HDDs})$ Rated: $\leq 550 \text{ W}$		Alarm interface	1
Consumption (with HDDs) • Working: $\leq 308 \text{ W}$ (967 BTU with 16 HDDs) Rated: $\leq 550 \text{ W}$ • Working: $+5 \text{ °C to } +40 \text{ °C } (41 \text{ °F to } 104 \text{ °F})$		HDMI	2
Consumption (with HDDs) Rated: ≤ 550 W Environment • Working: +5 °C to +40 °C (41 °F to 104 °F)	General	Power supply	Redundant
		Consumption (with HDDs)	-
temperature Storing: -20 °C to +70 °C (-4 °F to +158 °F)		Environment	• Working: +5 °C to +40 °C (41 °F to 104 °F)
		temperature	Storing: -20 °C to +70 °C (-4 °F to +158 °F)
 Working: 20% to 80%RH (non-condensing/frozen) Storing: 5% to 90%RH (non-condensing/frozen) 		Environment humidity	
Chassis 3U (19-inch height)		Chassis	
Dimensions (W × H × D) 440 x 132 x 495 mm (17.3 x 5.2 x 19.5 in)		Dimensions (W × H × D)	
Weight (without HDDs) $\leq 20 \text{ Kg } (44.1 \text{ lb})$			



Typical Application



Available Models

DS-A81016S

Available HDDs

Hikvision Tested and recommended HDDs

Seagate MAKARA Series (eg. ST8000NM0055) / Seagate MakaraBP Series (eg. ST6000NM0115) / WD RE series (eg. WD8002FRYZ-31) / HGST 7k6000 series (eg. HUH728080ALE600)

Note: Enterprise HDD strong recommended when used in RAID mode and ISCSI application due to more stability design features; if Surveillance HDD need to be Used, please consult with Hikvision Sales.

Distributed by

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