Huawei OceanProtect X3000/X6000/X8000/X9000 Backup Storage Data Sheet

Huawei Technologies Co., Ltd.

Data Sheet

Huawei OceanProtect X3000/X6000/X8000/X9000 Backup Storage

Overview

Huawei OceanProtect Backup Storage adopts end-to-end (E2E) acceleration and an active-active high-reliability architecture and features rapid backup and recovery, efficient reduction, and solid resilience. It simplifies backup and recovery, slashes TCO, and excels in governments, finance, carriers, healthcare, manufacturing, and other fields.

Highlights

Rapid Backup, Rapid Recovery

- **E2E acceleration:** The front-end network protocol offload technology releases the CPU resources, whereas the back-end parallel scheduling of multiple CPU cores implements core grouping and task partitioning, to improve processing performance of nodes.
- **High bandwidth**: Built with backup features, multiple sequential data streams are aggregated to greatly improve bandwidth performance. Source deduplication reduces the amount of data transmitted over the network and shortens the backup time.
- **Instance access:** The system provides high IOPS and works with mainstream backup software to offer instant access to data in backup images, enabling quick utilization of backup data.

Efficient Reduction

- **Multilayer deduplication and feature-based reduction:** Precise chunking of backup data streams, aggregation preprocessing of backup data, and multi-layer inline variable-length deduplication are supported. Data stream features are identified. Combining compression, high-performance predictive coding, and byte-level compaction increase data reduction to an industry-leading ratio of up to 72:1.
- **E2E data reduction:** Source deduplication, global deduplication, and deduplicated replication reduce network bandwidth costs.
- **High-density design for energy savings: Advanced hardware** and all-flash high-capacity disks deliver four times higher capacity density, 37% lower power consumption, and optimal TCO.

Solid Resilience

- **Data resilience:** Link and array encryption, secure snapshot, write once read many (WORM), Air Gap, and detection and analysis technologies ensure secure and available copies.
- **Architecture resilience:** The active-active redundant hardware architecture ensures failover within seconds, without affecting backup services. The whole system can deliver up to 99.9999% reliability.

Data Sheet

Huawei OceanProtect X3000/X6000/X8000/X9000 Backup Storage

Technical Specifications

Model	OceanProtect X3000	OceanProtect X6000	OceanProtect X8000	OceanProtect X9000
Hardware Specifications				
Data Reduction Ratio*	Up to 72:1*			
CPU	24 cores, 2.6 GHz	64 cores, 2.6 GHz	64 cores, 2.6 GHz, 1 TB memory 128 (2 × 64) cores, 2.6 GHz, 2 TB memory	192 (4 × 48) cores, 2.6 GHz
Physical Backup Bandwidth (per Node)	Up to 6.2 TB/hour	Up to 19 TB/hour	Up to 30 TB/hour (1 TB memory) Up to 55 TB/hour (2 TB memory)	Up to 94 TB/hour
Physical Backup Bandwidth (per System)	Up to 6.2 TB/hour	Up to 19 TB/hour	Up to 55 TB/hour (1 TB memory) Up to 90 TB/hour (2 TB memory)	Up to 155 TB/hour
Logical Backup Bandwidth (per Node)	Up to 18.5 TB/hour	Up to 45 TB/hour	Up to 70 TB/hour (1 TB memory) Up to 110 TB/hour (2 TB memory)	Up to 188 TB/hour
Logical Backup Bandwidth (per System)	Up to 18.5 TB/hour	Up to 45 TB/hour	Up to 117 TB/hour (1 TB memory) Up to 183 TB/hour (2 TB memory)	Up to 310 TB/hour
Recovery Bandwidth (per Node)	Up to 5.9 TB/hour (all-flash storage) Up to 1 TB/hour (hybrid flash storage)	Up to 22 TB/hour (all-flash storage) Up to 8 TB/hour (hybrid flash storage)	Up to 36 TB/hour (1 TB memory, all-flash storage) Up to 46 TB/hour (2 TB memory, all-flash storage) Up to 12 TB/hour (1 TB memory, hybrid flash storage) Up to 15 TB/hour (2 TB memory, hybrid flash storage)	Up to 108 TB/hour (all-flash storage) Up to 24 TB/hour (hybrid flash storage)
Recovery Bandwidth (per System)	Up to 5.9 TB/hour (all-flash storage) Up to 1 TB/hour (hybrid flash storage)	Up to 22 TB/hour (all-flash storage) Up to 8 TB/hour (hybrid flash storage)	Up to 57 TB/hour (1 TB memory, all-flash storage) Up to 72 TB/hour (2 TB memory, all-flash storage) Up to 24 TB/hour (1 TB memory, hybrid flash storage) Up to 30 TB/hour (2 TB memory, hybrid flash storage)	Up to 172 TB/hour (all-flash) Up to 48 TB/hour (hybrid flash)
Number of Controllers per Node	2	2	2	4
Maximum Number of Nodes	1	1	2	2
System Usable Capacity	16 TB–300 TB	16 TB–800 TB	16 TB–2 PB (1 TB memory) 16 TB–4 PB (2 TB memory)	16 TB–6 PB
Data Disk Types	3.84/7.68 TB SAS SSD 8/16/20/24 TB NL-SAS disk	7.68/15.36/30.72/61.44 TB NVMe SSD 3.84/7.68 TB SAS SSD 8/10/16/20/24 TB NL-SAS disk 16/20/24 TB high-density disk		7.68/15.36/30.72/61.44 TB NVMe SSD 7.68 TB SAS SSD 8/10/16/20/24 TB NL-SAS disk 16/20/24 TB high-density disk
Front-End Port Types	16/32/64 Gbit/s Fibre Channel; 1/10/25/40/100GE			
Front-End Storage Protocols	NFS, SMB/CIFS, FC, iSCSI, S3, NDMP	NFS, SMB/CIFS, FC, iSCSI, S3, FTP/SFTP, NDMP		
Software Specifications				
RAID Type	RAID 2.0+			
RAID Levels	RAID 6 (default), RAID 5, and RAID-TP (tolerating simultaneous failure of three disks)			
Main Software Functions	Inline deduplication and compression, source deduplication and compression, multi-tenancy, quota management, snapshot, secure snapshot, remote replication, log audit, intelligent service quality control, data destruction, WORM, data encryption, detection and analysis**, and continuous data protection			
System Management	Device management (DeviceManager) and remote O&M and management (DME IQ)			
Electrical Specifications				
Power supply	Controller enclosure: 200 V to 240 V AC±10%; 192 V to 288 V DC; SAS SSD enclosure: 100 V to 240 V AC±10%; 192 V to 288 V DC; HDD enclosure: 100 V to 240 V AC±10%; 192 V to 288 V DC	Controller enclosure: 200 V to 240 V AC±10%; 192 V to 288 V DC; NVMe SSD enclosure: 200 V to 240 V AC±10%; 192 V to 288 V DC; SAS SSD enclosure: 100 V to 240 V AC±10%; 192 V to 288 V DC; HDD enclosure: 100 V to 240 V AC±10%; 192 V to 288 V DC; High-density HDD enclosure: 100 V to 240 V AC±10%; –38.4 V to –72 V DC		
Dimensions (H × W × D)	Controller enclosure: 86.1 mm × 447 mm × 488 mm	NVMe controller enclosure: 86.1 mm × 447 mm × 920 mm; Controller enclosure: 86.1 mm × 447 mm × 820 mm		Controller enclosure: 175 mm × 447 mm × 865 mm
	SSD enclosure: 86.1 mm × 447 mm × 410 mm; HDD enclosure: 175 mm × 447 mm × 488 mm	SSD enclosure: 86.1 mm × 447 mm × 410 mm; NVMe enclosure: 86.1 mm × 447 mm × 620 mm; HDD enclosure: 175 mm × 447 mm × 488 mm; High-density HDD enclosure: 176.5 mm × 446 mm × 790 mm		
Weight (Incl. Disk Units)	Controller enclosure: ≤ 24 kg	Controller enclosure: ≤ 45 kg		Controller enclosure: ≤ 89 kg
	SSD enclosure: ≤ 20 kg; HDD enclosure: ≤ 44 kg	SSD enclosure: ≤ 20 kg; NVMe SSD enclosure: ≤ 35 kg; HDD enclosure: ≤ 44 kg; high-density HDD enclosure: ≤ 92 kg		
Operating Temperature	–60 m to +1800 m altitude: 5°C to 35°C (cabinet) or 40°C (enclosure); 1800 m to 3000 m altitude: The max. temperature threshold decreases by 1°C for every altitude increase of 220 m.			
Operating Humidity	10% to 90% RH			

*The data reduction ratio depends on the application type and backup policy.

** The detection and analysis function of the OceanProtect X3000 requires an external security appliance.

Data Sheet

Huawei OceanProtect X3000 Backup Storage

Overview

Huawei OceanProtect X3000 Backup Storage adopts end-to-end (E2E) acceleration and an active-active high-reliability architecture and features high efficiency, reliability, and ease of use. It simplifies backup and recovery, slashes TCO, and excels in IT environments like small and medium-sized enterprises (SMEs) and remote and branch offices.

Highlights

Efficient

- **Industry-leading performance:** All I/O paths are optimized end-to-end, with max. physical and logical backup bandwidths of 6 TB/hour and 18 TB/hour, respectively, 40% higher than the industry benchmark.
- **Industry-leading data reduction ratio**: Multilayer inline variable-length deduplication and feature-based compression help achieve a data reduction ratio of up to 72:1, 30% higher than the industry benchmark.
- **Up to 98% replication bandwidth saved**: Deduplication helps save replication bandwidth between sites by up to 98%.

Reliable

- **Unique active-active reliable architecture:** The active-active architecture enables failover in seconds in the event of a faulty controller, ensuring uninterrupted backup tasks.
- **Multi-disk failure protection**: RAID 5, RAID 6, and RAID-TP are supported and simultaneous failures of up to three disks can be tolerated.
- **Secure and available data copies:** Multiple ransomware protection technologies, such as data encryption, secure snapshot, write once read many (WORM), and Air Gap, are supported to ensure secure and available data copies.

Easy to Use

- **Compact and simple:** The 2 U enclosure is only 488 mm long. The cabinet space and weight are 30% less than the industry benchmark and the cabinet only requires one person to carry.
- **Fast deployment:** Initial configuration can be completed in three steps, greatly improving resource allocation efficiency.
- **Intelligent O&M:** Intelligent recommendation of configuration parameters, global search, one-click export of log files, prediction of performance and capacity trends and disk failures, AI-based performance fluctuation detection, OTA upgrade, and remote O&M using DME IQ app are supported.

Huawei OceanProtect X3000 Backup Storage

Technical Specifications

Model	OceanProtect X3000
Hardware Specifications	
CPU	24 cores, 2.6 GHz
Data Reduction Ratio*	Up to 72:1
System Physical Backup Bandwidth	Up to 6.2 TB/hour
System Logical Backup Bandwidth	Up to 18.5 TB/hour
System Recovery Bandwidth	Up to 5.9 TB/hour (all-flash storage) Up to 1 TB/hour (hybrid flash storage)
Number of Controllers per Node	2
Maximum Number of Nodes	1
System Usable Capacity	16 TB–300 TB
Data Disk Types	3.84/7.68 TB SAS SSD 8/16/20/24 TB NL-SAS HDD
Front-End Port Types	16/32/64 Gbit/s Fibre Channel; 1/10/25/40/100GE
Front-End Storage Protocols	NFS, SMB/CIFS, FC, iSCSI, NDMP, S3
Software Specifications	
RAID Type	RAID 2.0+
RAID Levels	RAID 6 (default), RAID 5, and RAID-TP (tolerating simultaneous failure of three disks)
Main Software Functions	Inline deduplication and compression, source deduplication and compression, multi-tenancy, quota management, snapshot, secure snapshot, remote replication, log audit, intelligent service quality control, data destruction, WORM, data encryption, detection and analysis**, and continuous data protection
System Management	Device management (DeviceManager) and remote O&M and management (DME IQ)
Electrical Specifications	
Power supply	Controller enclosure: 200 V to 240 V AC±10%; 192 V to 288 V DC; SAS SSD enclosure: 100 V to 240 V AC±10%; 192 V to 288 V DC; HDD enclosure: 100 V to 240 V AC±10%; 192 V to 288 V DC
Dimensions (H × W × D)	Controller enclosure: 86.1 mm × 447 mm × 488 mm
	SSD enclosure: 86.1 mm × 447 mm × 410 mm; HDD enclosure: 175 mm × 447 mm × 488 mm
Weight (Incl. Disk Units)	Controller enclosure: ≤ 24 kg
	SSD enclosure: ≤ 20 kg; HDD enclosure: ≤ 44 kg
Operating Temperature	–60 m to +1800 m altitude: 5°C to 35°C (cabinet) or 40°C (enclosure); 1800 m to 3000 m altitude: The max. temperature threshold decreases by 1°C for every altitude increase of 220 m.
Operating Humidity	10% to 90% RH

*The data reduction ratio depends on the application type and backup policy.

**The detection and analysis function requires an external security appliance.

Data Sheet

Huawei OceanProtect X6000 Backup Storage

Overview

Huawei OceanProtect Backup Storage adopts end-to-end (E2E) acceleration and an active-active high-reliability architecture and features rapid backup and recovery, efficient reduction, and solid resilience. It simplifies backup and recovery, slashes TCO, and excels in governments, finance, carriers, healthcare, manufacturing, and other fields.

Highlights

Rapid Backup, Rapid Recovery

- **E2E acceleration:** The front-end network protocol offload technology releases the CPU resources, whereas the back-end parallel scheduling of multiple CPU cores implements core grouping and task partitioning, to improve processing performance of nodes.
- **High bandwidth:** Built with backup features, multiple sequential data streams are aggregated to greatly improve bandwidth performance. Source deduplication reduces the amount of data transmitted over the network and shortens the backup time.
- **Instance access:** The system provides high IOPS and works with mainstream backup software to offer instant access to data in backup images, enabling quick utilization of backup data.

Efficient Reduction

- **Multilayer deduplication and feature-based reduction:** Precise chunking of backup data streams, aggregation preprocessing of backup data, and multi-layer inline variable-length deduplication are supported. Data stream features are identified. Combining compression, high-performance predictive coding, and byte-level compaction increase data reduction to an industry-leading ratio of up to 72:1.
- **E2E data reduction:** Source deduplication, global deduplication, and deduplicated replication reduce network bandwidth costs.
- **High-density design for energy savings: Advanced hardware** and all-flash high-capacity disks deliver four times higher capacity density, 37% lower power consumption, and optimal TCO.

Solid Resilience

- **Data resilience:** Link and array encryption, secure snapshot, write once read many (WORM), Air Gap, and detection and analysis technologies ensure secure and available copies.
- **Architecture resilience:** The active-active redundant hardware architecture ensures failover within seconds, without affecting backup services. The whole system can deliver up to 99.9999% reliability.

Huawei OceanProtect X6000 Backup Storage

Technical Specifications

Model	OceanProtect X6000
Hardware Specifications	
CPU	64 cores, 2.6 GHz
Data Reduction Ratio*	Up to 72:1*
System Physical Backup Bandwidth	Up to 19 TB/hour
System Logical Backup Bandwidth	Up to 45 TB/hour
System Recovery Bandwidth	Up to 22 TB/hour (all-flash storage) Up to 8 TB/hour (hybrid flash storage)
Number of Controllers per Node	2
Maximum Number of Nodes	1
System Usable Capacity	16 TB–800 TB
Data Disk Types	7.68/15.36/30.72/61.44 TB NVMe SSD 3.84/7.68 TB SAS SSD 8/10/16/20/24 TB NL-SAS disk 16/20/24 TB high-density disk
Front-End Port Types	16/32/64 Gbit/s Fibre Channel; 1/10/25/40/100GE
Front-End Storage Protocols	NFS, SMB/CIFS, FC, iSCSI, S3, FTP/SFTP, NDMP
Software Specifications	
RAID Type	RAID 2.0+
RAID Levels	RAID 6 (default), RAID 5, and RAID-TP (tolerating simultaneous failure of three disks)
Main Software Functions	Inline deduplication and compression, source deduplication and compression, multi-tenancy, quota management, snapshot, secure snapshot, remote replication, log audit, intelligent service quality control, data destruction, WORM, data encryption, detection and analysis, and continuous data protection
System Management	Device management (DeviceManager) and remote O&M and management (DME IQ)
Electrical Specifications	
Power supply	Controller enclosure: 200 V to 240 V AC±10%; 192 V to 288 V DC; NVMe SSD enclosure: 200 V to 240 V AC±10%; 192 V to 288 V DC; SAS SSD enclosure: 100 V to 240 V AC±10%; 192 V to 288 V DC; HDD enclosure: 100 V to 240 V AC±10%; 192 V to 288 V DC; High-density HDD enclosure: 100 V to 240 V AC±10%; –38.4 V to –72 V DC
Dimensions (H × W × D)	NVMe controller enclosure: 86.1 mm × 447 mm × 920 mm; Controller enclosure: 86.1 mm × 447 mm × 820 mm
	SSD enclosure: 86.1 mm × 447 mm × 410 mm; NVMe enclosure: 86.1 mm × 447 mm × 620 mm; HDD enclosure: 175 mm × 447 mm × 488 mm; High-density HDD enclosure: 176.5 mm × 446 mm × 790 mm
Weight (Incl. Disk Units)	Controller enclosure: ≤ 45 kg
	SSD enclosure: ≤ 20 kg; NVMe SSD enclosure: ≤ 35 kg; HDD enclosure: ≤ 44 kg; high-density HDD enclosure: ≤ 92 kg
Operating Temperature	–60 m to +1800 m altitude: 5°C to 35°C (cabinet) or 40°C (enclosure); 1800 m to 3000 m altitude: The max. temperature threshold decreases by 1°C for every altitude increase of 220 m.
Operating Humidity	10% to 90% RH

*The data reduction ratio depends on the application type and backup policy.

Data Sheet

Huawei OceanProtect X8000 Backup Storage

Overview

Huawei OceanProtect Backup Storage adopts end-to-end (E2E) acceleration and an active-active high-reliability architecture and features rapid backup and recovery, efficient reduction, and solid resilience. It simplifies backup and recovery, slashes TCO, and excels in governments, finance, carriers, healthcare, manufacturing, and other fields.

Highlights

Rapid Backup, Rapid Recovery

- **E2E acceleration**: The front-end network protocol offload technology releases the CPU resources, whereas the back-end parallel scheduling of multiple CPU cores implements core grouping and task partitioning, to improve processing performance of nodes.
- **High bandwidth:** Built with backup features, multiple sequential data streams are aggregated to greatly improve bandwidth performance. Source deduplication reduces the amount of data transmitted over the network and shortens the backup time.
- **Instance access:** The system provides high IOPS and works with mainstream backup software to offer instant access to data in backup images, enabling quick utilization of backup data.

Efficient Reduction

- **Multilayer deduplication and feature-based reduction:** Precise chunking of backup data streams, aggregation preprocessing of backup data, and multi-layer inline variable-length deduplication are supported. Data stream features are identified. Combining compression, high-performance predictive coding, and byte-level compaction increase data reduction to an industry-leading ratio of up to 72:1.
- **E2E data reduction:** Source deduplication, global deduplication, and deduplicated replication reduce network bandwidth costs.
- **High-density design for energy savings:** Advanced hardware and all-flash high-capacity disks deliver four times higher capacity density, 37% lower power consumption, and optimal TCO.

Solid Resilience

- **Data resilience:** Link and array encryption, secure snapshot, write once read many (WORM), Air Gap, and detection and analysis technologies ensure secure and available copies.
- **Architecture resilience:** The active-active redundant hardware architecture ensures failover within seconds, without affecting backup services. The whole system can deliver up to 99.9999% reliability.

Huawei OceanProtect X8000 Backup Storage

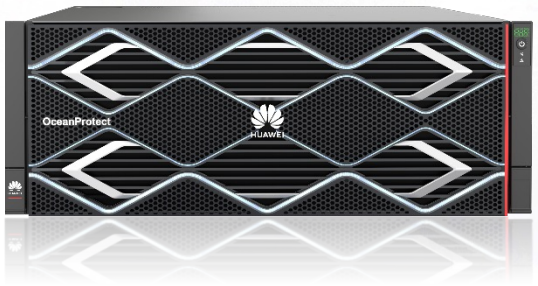
Technical Specifications

Model	OceanProtect X8000
Hardware Specifications	
CPU	64 cores, 2.6 GHz, 1 TB memory 128 (2 × 64) cores, 2.6 GHz, 2 TB memory
Data Reduction Ratio*	Up to 72:1*
Physical Backup Bandwidth (per Node)	Up to 30 TB/hour (1 TB memory) or 55 TB/hour (2 TB memory)
Physical Backup Bandwidth (per System)	Up to 55 TB/hour (1 TB memory) or 90 TB/hour (2 TB memory)
Logical Backup Bandwidth (per Node)	Up to 70 TB/hour (1 TB memory) or 110 TB/hour (2 TB memory)
Logical Backup Bandwidth (per System)	Up to 117 TB/hour (1 TB memory) or 183 TB/hour (2 TB memory)
Recovery Bandwidth (per Node)	Up to 36 TB/hour (1 TB memory, all-flash) or 46 TB/hour (2 TB memory, all-flash) Up to 12 TB/hour (1 TB memory, hybrid flash) or 15 TB/hour (2 TB memory, hybrid flash)
Recovery Bandwidth (per System)	Up to 57 TB/hour (1 TB memory, all-flash) or 72 TB/hour (2 TB memory, all-flash) Up to 24 TB/hour (1 TB memory, hybrid flash) or 30 TB/hour (2 TB memory, hybrid flash)
Maximum Number of Nodes	2
System Usable Capacity	16 TB to 2 PB (1 TB memory) 16 TB to 4 PB (2 TB memory)
Data Disk Types	7.68/15.36/30.72/61.44 TB NVMe SSD 3.84/7.68 TB SAS SSD 8/10/16/20/24 TB NL-SAS disk 16/20/24 TB high-density disk
Front-End Port Types	16/32/64 Gbit/s Fibre Channel; 1/10/25/40/100GE
Front-End Storage Protocols	NFS, SMB/CIFS, FC, iSCSI, S3, FTP/SFTP, NDMP
Software Specifications	
RAID Type	RAID 2.0+
RAID Levels	RAID 6 (default), RAID 5, and RAID-TP (tolerating simultaneous failure of three disks)
Main Software Functions	Inline deduplication and compression, source deduplication and compression, multi-tenancy, quota management, snapshot, secure snapshot, remote replication, log audit, intelligent service quality control, data destruction, WORM, data encryption, detection and analysis, and continuous data protection
System Management	Device management (DeviceManager) and remote O&M and management (DME IQ)
Electrical Specifications	
Power Supply	Controller enclosure: 200 V to 240 V AC±10%; 192 V to 288 V DC; NVMe SSD enclosure: 200 V to 240 V AC±10%; 192 V to 288 V DC; SAS SSD enclosure: 100 V to 240 V AC±10%; 192 V to 288 V DC; HDD enclosure: 100 V to 240 V AC±10%; 192 V to 288 V DC; High-density HDD enclosure: 100 V to 240 V AC±10%; –38.4 V to –72 V DC
Dimensions (H × W × D)	NVMe controller enclosure: 86.1 mm × 447 mm × 920 mm; Controller enclosure: 86.1 mm × 447 mm × 820 mm
	SSD enclosure: 86.1 mm × 447 mm × 410 mm; NVMe enclosure: 86.1 mm × 447 mm × 620 mm; HDD enclosure: 175 mm × 447 mm × 488 mm; High-density HDD enclosure: 176.5 mm × 446 mm × 790 mm
Weight (Incl. Disk Units)	Controller enclosure: ≤ 45 kg
	SSD enclosure: ≤ 20 kg; NVMe SSD enclosure: ≤ 35 kg; HDD enclosure: ≤ 44 kg; high-density HDD enclosure: ≤ 92 kg
Operating Temperature	–60 m to +1800 m altitude: 5°C to 35°C (cabinet) or 40°C (enclosure); 1800 m to 3000 m altitude: The max. temperature threshold decreases by 1°C for every altitude increase of 220 m.
Operating Humidity	10% to 90% RH

*The data reduction ratio depends on the application type and backup policy.

Data Sheet

Huawei OceanProtect X9000 Backup Storage



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- **High bandwidth:** Built with backup features, multiple sequential data streams are aggregated to greatly improve bandwidth performance. Source deduplication reduces the amount of data transmitted over the network and shortens the backup time.
- **Instance access:** The system provides high IOPS and works with mainstream backup software to offer instant access to data in backup images, enabling quick utilization of backup data.

Efficient Reduction

- **Multilayer deduplication and feature-based reduction:** Precise chunking of backup data streams, aggregation preprocessing of backup data, and multi-layer inline variable-length deduplication are supported. Data stream features are identified. Combining compression, high-performance predictive coding, and byte-level compaction increase data reduction to an industry-leading ratio of up to 72:1.
- **E2E data reduction:** Source deduplication, global deduplication, and deduplicated replication reduce network bandwidth costs.
- **High-density design for energy savings:** Advanced hardware and all-flash high-capacity disks deliver four times higher capacity density, 37% lower power consumption, and optimal TCO.

Solid Resilience

- **Data resilience:** Link and array encryption, secure snapshot, write once read many (WORM), Air Gap, and detection and analysis technologies ensure secure and available copies.
- **Architecture resilience:** The active-active redundant hardware architecture ensures failover within seconds, without affecting backup services. The whole system can deliver up to 99.9999% reliability.

Huawei OceanProtect X9000 Backup Storage

Technical Specifications

Model	OceanProtect X9000
Hardware Specifications	
CPU	192 (4 × 48) cores, 2.6 GHz
Data Reduction Ratio*	Up to 72:1
Physical Backup Bandwidth (per Node)	Up to 94 TB/hour
Physical Backup Bandwidth (per System)	Up to 155 TB/hour
Logical Backup Bandwidth (per Node)	Up to 188 TB/hour
Logical Backup Bandwidth (per System)	Up to 310 TB/hour
Recovery Bandwidth (per Node)	Up to 108 TB/hour (all-flash) or 24 TB/hour (hybrid flash)
Recovery Bandwidth (per System)	Up to 172 TB/hour (all-flash) or 48 TB/hour (hybrid flash)
Number of Controllers per Node	4
Maximum Number of Nodes	2
System Usable Capacity	16 TB to 6 PB
Data Disk Types	7.68/15.36/30.72/61.44 TB NVMe SSD 7.68 TB SAS SSD 8/10/16/20/24 TB NL-SAS disk 16/20/24 TB high-density disk
Front-End Port Types	16/32/64 Gbit/s Fibre Channel; 1/10/25/40/100GE
Front-End Storage Protocols	NFS, SMB/CIFS, FC, iSCSI, S3, FTP/SFTP, NDMP
Software Specifications	
RAID Type	RAID 2.0+
RAID Levels	RAID 6 (default), RAID 5, and RAID-TP (tolerating simultaneous failure of three disks)
Main Software Functions	Inline deduplication and compression, source deduplication and compression, multi-tenancy, quota management, snapshot, secure snapshot, remote replication, log audit, intelligent service quality control, data destruction, WORM, data encryption, detection and analysis, and continuous data protection
System Management	Device management (DeviceManager) and remote O&M and management (DME IQ)
Electrical Specifications	
Power Supply	Controller enclosure: 200 V to 240 V AC±10%; 192 V to 288 V DC; NVMe SSD enclosure: 200 V to 240 V AC±10%; 192 V to 288 V DC; SAS SSD enclosure: 100 V to 240 V AC±10%; 192 V to 288 V DC; HDD enclosure: 100 V to 240 V AC±10%; 192 V to 288 V DC; High-density HDD enclosure: 100 V to 240 V AC±10%; –38.4 V to –72 V DC
Dimensions (H × W × D)	Controller enclosure: 175 mm × 447 mm × 865 mm
	SSD enclosure: 86.1 mm × 447 mm × 410 mm; NVMe enclosure: 86.1 mm × 447 mm × 620 mm; HDD enclosure: 175 mm × 447 mm × 488 mm; High-density HDD enclosure: 176.5 mm × 446 mm × 790 mm
Weight (Incl. Disk Units)	Controller enclosure: ≤ 89 kg
	SSD enclosure: ≤ 20 kg; NVMe SSD enclosure: ≤ 35 kg; HDD enclosure: ≤ 44 kg; high-density HDD enclosure: ≤ 92 kg
Operating Temperature	–60 m to +1800 m altitude: 5°C to 35°C (cabinet) or 40°C (enclosure); 1800 m to 3000 m altitude: The max. temperature threshold decreases by 1°C for every altitude increase of 220 m.
Operating Humidity	10% to 90% RH

*The data reduction ratio depends on the application type and backup policy.

To learn more about Huawei storage, please contact your local Huawei office or visit the Huawei Enterprise website: http://e.huawei.com/en/.

Huawei Enterprise APP

Huawei IT

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