Huawei OceanStor F V5 Flash Storage Configuration and Quotation Guide

Contents

OceanStor F V5 series specifications

Product Name	5300F V5	5500F V5	5600F V5	5800F V5	6800F V5
Hardware specifications					
Controller enclosure form	2 U disk and controller integration		3 U independent engine	3 U independent engine	6 U independent engine
Supported disk quantity	500	500	1000	1200	1500
Max. number of controllers	8	8	8	8	8
Cache capacity (dual-controller)	64 GB / 128 GB	128 GB/256 GB	256 GB/512 GB	512 GB/ 1 TB	512 GB/1 TB/2 TB
Max. number of front-end host ports (dual-controller)	24	24	56	56	40
Software specifications					
Base software	Basic software license for block (including Device Management,SmartThin,SmartMulti-tenant,SmartMigration,SmartErase)				
	Upgrade license from block to unified storage (including SmartQuota, NFS, CIFS, NDMP)				
File	SmartQuota (intelligent quota) HyperLock (WORM) HyperVault(integrated backup)				
Block	HyperCopy (LUN copy) **HyperClone (cloning)** HyperMirror (volume mirroring) **HyperSnap (snapshot)** **HyperReplication (remote replication) HyperMetro (Active-Active)**				
	SmartQoS (intelligent service quality control) **SmartPartition (intelligent cache partitioning), SmartDedupe (intelligent data deduplication),SmartCompression (compression)** SystemReporter (system report software) SmartVirtualization (intelligent heterogeneous virtualization), **SmartMotion (intelligent data migration)**				

Blue for SAN and NAS

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2 U controller (5300F V5/5500F V5)
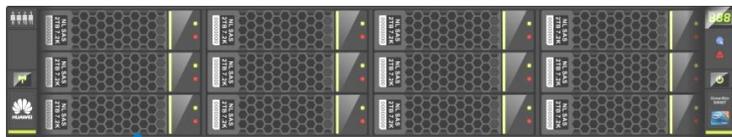
12 x 3.5'' HDD

25 x 2.5'' HDD
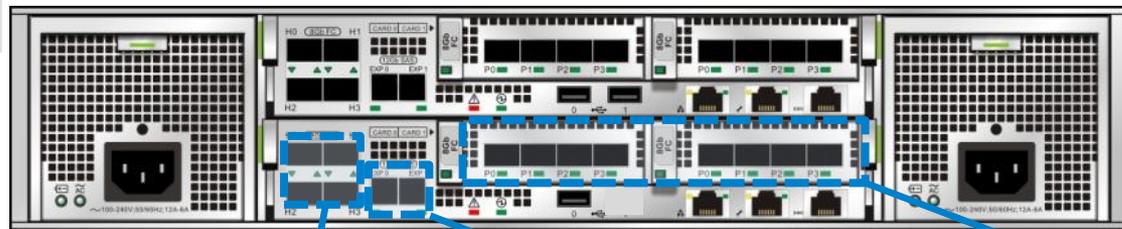
Power-BBU-Fan modules
- 1+1 redundancy
- Up to 94% platinum power conversion efficiency
- –48 V DC and 240 V DC

Onboard interface
- 5300F V5: 6 x 1 Gbps Ethernet ports per controller
- 5500F V5: 4 x Smart IO ports per controller

SAS expansion interface
- Two SAS expansion ports per controller

Expansion interface modules
- 2 slots, hot-swappable
- Port types: 8 or 16 Gbps Fibre Channel, GE, 10GE TOE, 10GE FCoE, 12 Gbps SAS, 56Gb IB, SmartIO card, ACC card

3 U controller (5600F V5/5800F V5)

BBU modules
- 5600F V5: 1+1 redundancy; 5800F V5: 2+1 redundancy
- Power failure protection

Controller modules
- Dual controllers
- Automatic frequency adjustment for reduced power consumption
- Built-in fan modules (fan modules are integrated in controller modules, and can be maintained independently)

Management modules
- 1+1 redundancy
- Hot-swappable

Power modules
- 1+1 redundancy
- Up to 94% platinum power conversion efficiency
- 110 to 220 V AC, 240 V DC

Expansion interface modules
- 16 slots, hot-swappable
- Port types: 8 or 16 Gbps Fibre Channel, GE, 10GE TOE, 10GE FCoE, and 12 Gbps SAS, 12 Gbps SAS, 56Gb IB, SmartIO card, ACC card
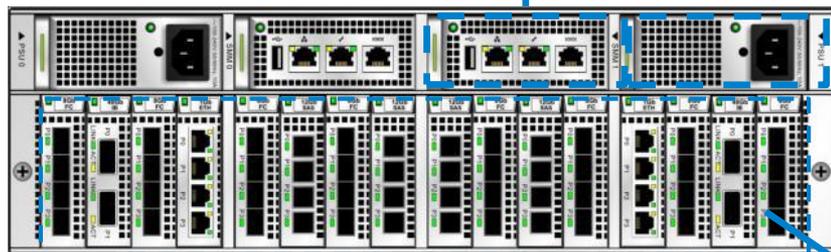
6 U controller (6800F V5)

BBU modules
- 3+1 redundancy
- AC power failure protection

Controller modules
- A minimum of two controllers
- Automatic frequency adjustment for reduced power consumption
- Built-in fan modules (11+1 redundancy, with fan modules integrated in control modules but can be maintained independently)

Power modules
- 2+2 redundancy, with support for 220 V single-phase AC, 380 V three-phase AC, 240 V high-voltage DC, and North America 110 V AC
- Up to 94% of power conversion efficiency

Management modules
- 1+1 redundancy
- Multi-controller scale-out interconnection for heartbeat communication

Interface modules
- Dual controllers support a maximum of 8 front-end interface modules and 4 SAS back-end interface modules.
- Four controllers support a maximum of 16 front-end interface modules and 4 SAS back-end interface modules.
- Port types: 8 Gbit/s FC, 16 Gbit/s FC, 1/10GE, 10GE TOE, 10GE FCoE, 56 Gbit/s IB, 12 Gbit/s SAS.
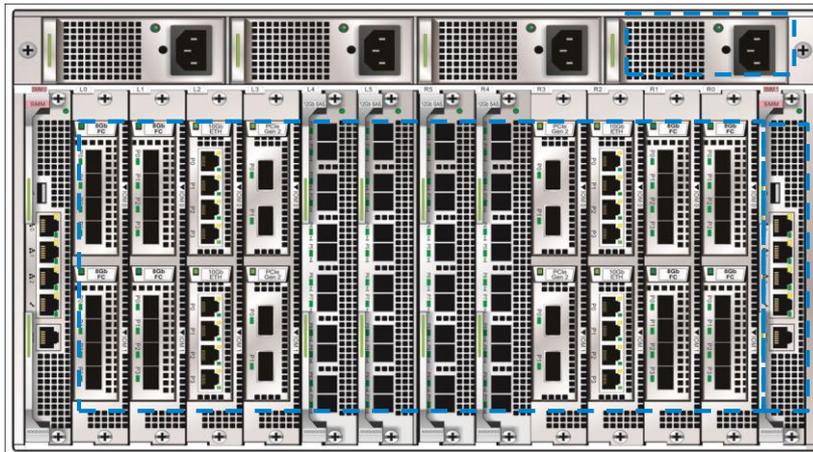
Disk enclosures

2 U disk enclosure: 25 x 2.5" disks

Disk module

Power module

Expansion module

OceanStor F V5 software overview

OceanStor OS

Data acceleration	Data protection	O&M management

Simple management

OceanStor
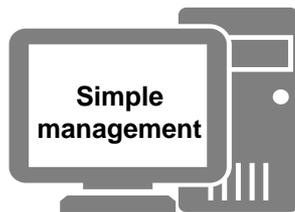
- **Intelligent and high-end features (QoS and cache partitioning) of Smart series software** accelerate critical service responses. The integration of SAN and NAS enables storage spaces to be intelligently allocated on demand.

- **Hyper series security features provide comprehensive data protection** for local, remote, and other sites, effectively ensuring high data reliability and security.

- **Easy-to-configure management software** helps users operate and maintain multi-brand and cross-field devices in a unified manner and provides GUI-based end-to-end management, significantly promoting the BYOD management efficiency.

Multi-level Convergence
✓**Convergence of flash storage, SAN&NAS, and heterogeneous storage systems**
✓**Gateway-free converged active-active solution, 99.9999% HA**

Excellent Performance
✓**Scalable to support 6 million IOPS@1 ms**
✓**Proprietary SSDs and excellent performance reduce latency to 1 ms**

Intelligent Services
✓**Supporting intelligent cloud services throughout the entire lifecycle (plan, design, and O&M)**
✓**Future-oriented, supporting cloud transformation**

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V5 software– SAN

Efficiency software suite

SmartVirtualization
Data movement across systems

IBM
HDS
EMC
HW
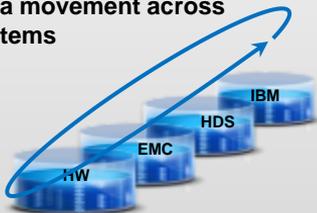
SmartMotion
Horizontal data movement

SmartThin
Thin provisioning

SmartQoS
Intelligent service quality control

SmartPartition
Intelligent cache partitioning

| Partition 1 |
| Partition 2 | Partition 3 |
| Partition 4 | Partition 5 | Partition N |

SmartDedupe & SmartCompression
Intelligent data deduplication and compression

APP   APP   APP
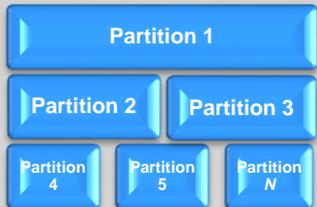
SmartErase
Data destruction

SmartMigration
LUN relocation
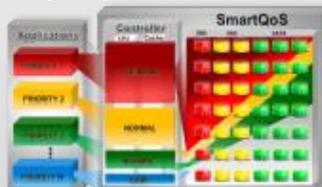
SmartMulti-Tenant
Multi-tenant

Data protection software suite

HyperSnap: Protects local data based on increments.

HyperClone: Protects local data based on full copies.

HyperCopy: Protect data between devices.

HyperReplication: Implements DR protection between data centers.

HyperMetro: Active-active data protect solution

Simple management software suite

DeviceManager: Manages single devices.

eSight: Manages multiple cross-field devices in data centers.

ReplicationDirector: Implements DR between data centers.

V5 software – NAS

NAS service features

CIFS	NFS	NDMP
Common Internet File System	Network File System	Network Data Management Protocol
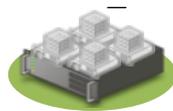
SmartThin	SmartQoS	SmartPartition	
Thin provisioning	Intelligent service quality control	Intelligent cache partitioning	

SmartDedupe	SmartCompression	SmartQuota	SmartMulti-tenant
Intelligent data deduplication	Online compression	Quota management	Tenant management

HyperSnap	HyperReplication	HyperLock	HyperVault	HyperMetro	HyperClone
Snapshot	Remote replication	WORM	Integrated backup	A-A solution	Clone

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1 Configuration

2 Quotation

3 Configuration instances

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Quotation elements for the V5 series

Storage form	→	SAN or SAN + NAS integration
Controller enclosure	→	Controller enclosure specifications (AC, DC, and cache size)
Storage unit	→	Disk unit (SSD)
		Disk enclosure
Auxiliary device	→	Cabinet
Value-added software	→	Value-added storage software
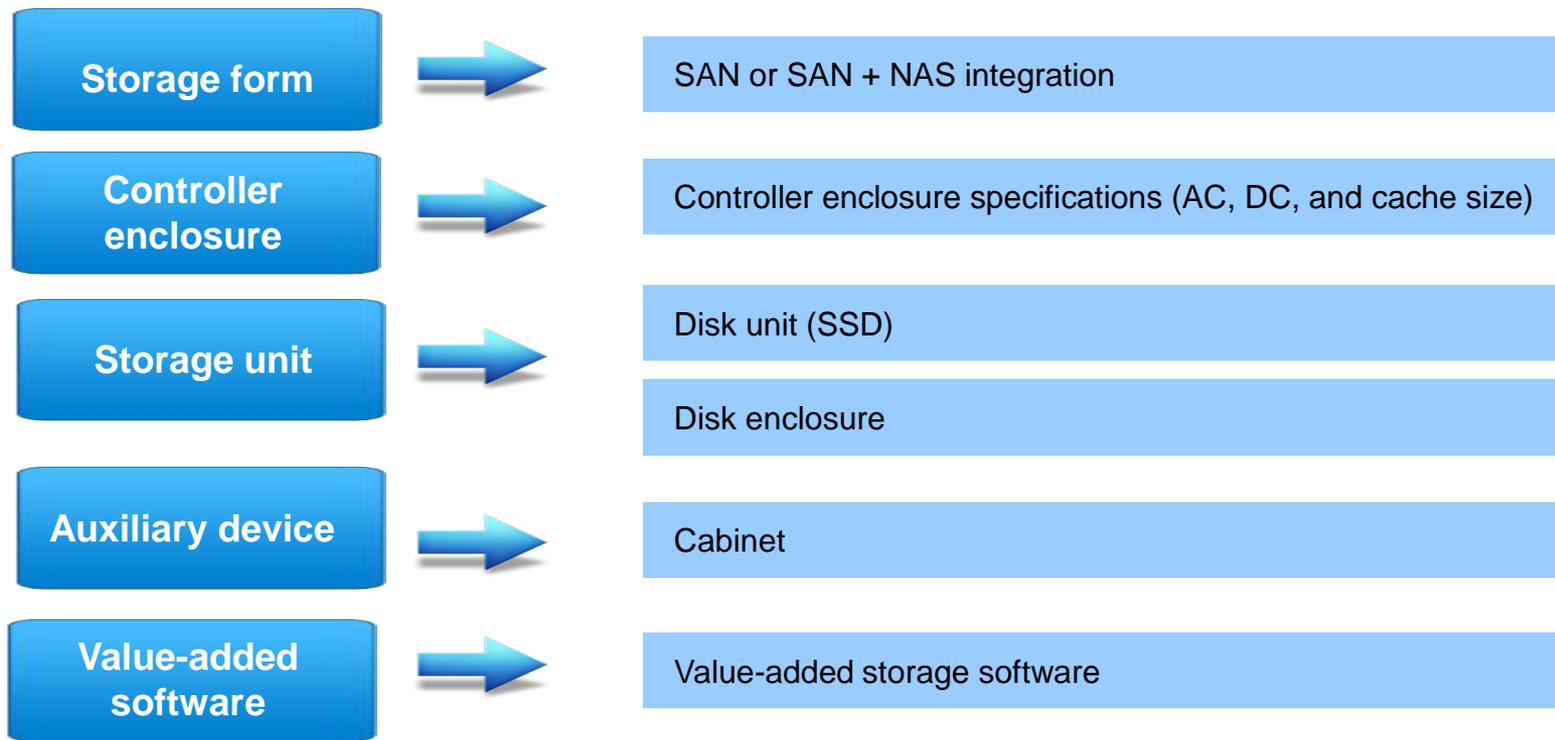
Procedure for configuring the V5 series storage products

UniStar eCFG /SCT

[   ] (Optional)

Select a product model.
→ Select an appropriate product model (5300F V5, 5500F V5, 5600F V5, 5800F V5, 6800F V5).

Select SAN or SAN + NAS integration.
→ You can choose SAN or NAS feature

Select number of controllers.
→ 2,4 and 8 controllers → 5300F V5, 5500F V5, 5600F V5, or 5800F V5

2,4,6 and 8 controllers → 6800F V5

Seclect the scale-out connectivity method
→ Direct-attach connectivity or Switch-attach connectivity

Select a controller enclosure.

Select specifications.
→ Cache specifications → Select front-end I/O expansion modules. → Select back-end I/O expansion modules. → Select the disk type and quantity. → Select installation materials and auxiliary devices. → Select value-added software functions.

Select the disk type and quantity.

(Items in red are mandatory for 5600/5800/6800F V5)

Note:
➢ You must pay attention to the maximum number of interface modules and disks supported by each product model based on the specification list.
➢ Since 5600F V5/5800F V5/6800F V5 products do not have on board modules, you must configure front-end and back-end interface modules for them.
➢ Select the controller enclosure directly connected, only between two control enclosures; select switch network can expand more control enclosures

Select optical fibers .

Select value-added software functions.

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Precautions on configuration and quotation of product software and value-added functions

	Software and Value-added Function	Description
Base software	Basic software license for block (including Device Management, SmartThin, SmartMulti-tenant, SmartMigration, SmartErase)	Required for SAN
	Upgrade license from block to unified storage (including SmartQuota, NFS, CIFS, NDMP)	Configured during SAN storage upgrade to unified storage or SAN+NAS integrated storage
File	CIFS NFS NDMP license SmartQuota (intelligent quota)，HyperVault HyperLock (intelligent WORM) HyperVault(intelligent backup)，HyperMetro	Quotation of the file engine software is described as follows: 1. Select file functions. The four items in red are included in the base software package. 2. Other NAS value-added functions are optional.
Block	HyperCopy (LUN copy) HyperClone (cloning) HyperMirror (volume mirroring) **HyperSnap (snapshot)** **HyperReplication (remote replication)** HyperMetro(Active-Active)	Value-added functions (optional)
	SmartQoS (intelligent service quality control), SmartPartition (intelligent cache partitioning), SmartDedupe & SmartCompression (intelligent data deduplication and compression) SystemReporter (system report software), SmartVirtualization (intelligent heterogeneous virtualization), SmartMotion (intelligent data migration)	Value-added functions (optional)
	OceanStor UltraPath license	must
	eService (remote maintenance and management)	Non-configuration items, provided after Hi-Care services are provided

Note: Functions that are supported by both SAN and NAS are indicated in bold.

Configuration Quote Description of Encryption

Encryption scheme:

1, Encrypted disk/encryption machine is a controlled sales component. SCT is not visible and it is a non-saleable country.

2, Support built-in dense pipe (no quote, no license control, optional encryption disk can support) and external encryption machine.

3, First configure the encryption disk, and then determine the encryption scheme.

Configuration steps:

1, Select the encrypted disk --- "2, Select the encryption.

===Disk===		Highly Recommended	All
Show Disk by recommended level		Highly Recommended	All
600GB SSD SAS Disk Unit(2.5")		0	0
960GB SSD SAS Disk Unit(2.5")(Recommended)		0	0
1.92TB SSD SAS Disk Unit(2.5")(Recommended)		0	0
3.84TB SSD SAS Disk Unit(2.5")(Highly Recommended)		0	0
7.68TB SSD SAS Disk Unit(2.5")		0	0
960GB SSD SAS Disk Unit(2.5",Encryption Disk Unit)		0	25
1.92TB SSD SAS Disk Unit(2.5",Encryption Disk Unit)		0	0

===Auxiliary Equipment===			
KMIP KeyAuthority Server Type	?	Entry-level	**Entry-level**
The standard delivery period is 90 days, please pay attention! By suppli...			Entry-level / None
Number of KMIP KeyAuthority Server	?	2	
Number of Endpoint License	?	1	1
Duration (years) of Each KMIP KeyAuthority's Premium Support	?	3	3
Duration (years) of Each Endpoint License's Premium Support	?	3	3
Whether the customer is aware of and has accepted the server vendor'...	?	No	No
Please choose the Cabinet type	?	None	None

1, Enter the number of encrypted hard disks.

2. Select the built-in None or Entry-level.

Quotation Description of SafeNet HSMs

Configuration methods:

1. First configure the encryption disk, then increase the encryption model and maintenance services. The configuration rules of the encryption machine are as follows:

Function	Quotation Description	Configuration Rules
Key management server	K250 KeySecure, V8.5, Perpetual	It is advised to configure two key management servers for each site by considering the active-standby mode. One server is acceptable.
Warranty service of key management servers	Plus Maintenance Support - K250 KeySecure-1 Year-7*24	Configure warranty quantity based on the server quantities. Warranty quantity = Required warranty period x Number of key management servers
Client license	GEMALTO KMIP Connector, Perpetual License	Number of clients = Number of storage arrays
Client license warranty service	Plus Maintenance Support - KMIP Connector- 1 Year-7*24	Warranty period of client licenses = Number of clients x Required warranty period. For example, when three storage arrays need a 3-year warranty, enter "9" in the SCT.

Vender/Model	Security Level	Max. Number of Keys(Number of encrypted hard disks)	Ma. Number of Clients(Management array number)	Cost
Thales: KA	FIPS 140-2 Level 3	25,000,000	1024	High
SafeNet: K250	FIPS 140-2 Level 1	25,000	100	Low

Installation materials and auxiliary devices

Installation Material	Description
3m/10m Patch Cord-OM1	Automatically configured based on the number of Fibre Channel ports on the host. By default, the cable length is 3 m. If additional cables are required, select your desired quantity separately.
3m/10m/30m/50m Patch Cord-OM3	
High Speed Cable,Mini SAS HD Cable,3m	Automatically configured based on the number of disk enclosures. If additional cables are required, select your desired quantity separately.
High Speed Cable,Mini SAS HD Cable,5m	
High Speed Cable,Mini SAS HD Cable,3m,(SFF 8644 Plug),(28AWG*4P*2B(S)),(SFF 8644 Plug),Indoor use	

Cabinet	Description
46U AC Cabinet / 42U AC Cabinet / 42U DC Cabinet	Optionally configured based on site requirements
Power Cable & Grouding Cable For Rack	Automatically configured when a cabinet is selected. The number of cables can be adjusted based on site requirements. The IT production line requires that major cabinet cables be quoted to ensure high delivery quality.
Installation Suite For Rack(eg. Rack Door)	Automatically configured when a cabinet is selected. The IT production line requires that major cabinet accessories be quoted to ensure high delivery quality.

Optical module:

- The 8 Gbit/s Fibre Channel, FoE, 10GE, and 16 Gbit/s Fibre Channel interface cards are delivered with optical modules and require no extra configuration.

Optical fiber:

- For 8 Gbit/s Fibre Channel, FoE, and 10GE interface cards, select OM1 optical fibers when the required cable length is shorter than 10 m and select OM3 optical fibers when the required cable length is longer than 10 m.
- For 16 Gbit/s Fibre Channel interface cards, select OM3 optical fibers.

Disk enclosure loop description on the Production Parameter page

❑To help users understand how disk enclosures are networked in the system, V5 introduces several suggestive parameters such as the number of disk enclosure loops.

❑Use default values unless otherwise specified.

❑The background calculation logic is as follows:

　1) Calculate the required number of disk enclosures automatically based on the type and number of the selected controller enclosures and disk units, and display it in 2.

　2) Calculate the number of disk enclosure loops based on the number of disk enclosures in a single loop and the number of disk enclosures.

　3) Calculate the number of back-end SAS cards automatically based on the number of disk enclosure loops.

1. Number of disk enclosures in a single loop: Users can either use the default values or set values based on site requirements.

4. Number of back-end SAS cards: The system automatically calculates the number of back-end SAS cards based on the number of disk enclosures in a single loop. Users can either use the calculated value or change it based on site requirements.

2. Number of disk enclosures: The system automatically calculates the number of disk enclosures based on the number of disks.

3. Number of loops: The value is calculated based on the number of disk enclosures and the number of disk enclosures in a single loop.

Configuration precautions

1. RAID level
  – Supported RAID levels include RAID 0,1, 5, 6, 10, and 50.

2. Members disk configuration for a RAID group
  – The optimal number of member disks for RAID 5 or RAID 6 ranges from 8 to 11. One RAID10 group contains a maximum of 16 disks.
  – Before selecting a RAID level, consider disk utilization, bad disk rate, reconstruction time, and performance.

3. Mixing of different types of disk
  – Mixing high-speed disks and low-speed disks in one enclosure is not recommended.
  – Configure a separate hot spare disk for each type of disks.

4. Disk quantity
  The required minimum number of SSDs are 6 and 4 respectively. The required minimum number of disks with the same specifications is 4.

5. FCoE
  The 2-port FCoE card supports direct connection, lossless Ethernet switches, but does not support FCoE switches.
  The 4-port FCoE card must connect to FCoE switches and does not support direct connection or lossless Ethernet switches.

Service quotation policy: installation + hardware warranty + software warranty (mandatory)

Quotation Item	Description	Optional or Mandatory
Installation Service-OceanStor V5-controller enclosure-install, expansion, reconstruction, upgrade-set	Quoted based on the number of actually configured controller enclosures	Optional
Installation Service-OceanStor V5-disk enclosure-install, expansion, reconstruction, upgrade-set	Quoted based on the number of actually configured disk enclosures	
Hardware Warranty Upgrade To Hi-Care Onsite Premier 24x7x4H Engineer Onsite Service(3 Years/enclosure)	Upgrade to higher hardware service level	Optional
Hardware Hi-Care Onsite Standard 9x5xNBD Engineer Onsite Service(year/enclosure)	Warranty extension quotation for the fourth and fifth year (hardware provides three-year warranty)	Optional
Hardware Hi-Care Onsite Premier 24x7x4H Engineer Onsite Service(year/enclosure)		

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Service quotation policy: installation + hardware warranty + software warranty (mandatory)

| Quotation Item	Description	Optional or Mandatory
Data & Device Retention Service(disk/year)	If a disk or SSD needs to be replaced during the warranty period, the faulty disk can be kept by the customer. Disk quotation is determined by the disk type, quantity, and service life. The service duration of media reservation service and hardware service is the same (the service duration can be 3 years, 4 years, or 5 years).	Optional
Hi-Care Application Software Upgrade Support Service-Basic Software(license/Year) Hi-Care Application Software Upgrade Support Service- value-added Software(license/Year)	1. There is 90-day media replacement(like CD-ROM) warranty for software. 2. In the same project, **the software service duration must be the same as the hardware service duration** (the service duration can be 3 years, 4 years, or 5 years). By default, the software service duration is at least 3 years. 3. Software service is authenticated in the same way as software license.	**Mandatory**

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Procedure of Configuring Capacity Expansion

☐ Set **Project Configuration Scene** to **Extended Project**.
☐ Set the existing device version, power type, AC type, storage mode (SAN or unified), whether to expand the controller enclosure, scale-out networking mode, and cache specifications.

Parameter	Preference	Suggestion	Setting	
Configuration Scenario		New Project	New Project	**1**
Power Mode		AC	AC	**2**
C13 AC Power Mode	?	Australia	Australia	**3**
Software Version		V500R007	V500R007	**4**
Need OceanStor unified storage or Block storage?(Multi device management pleas...	?	SAN	SAN	**5**
Controller Enclosure Type	?	Dual-Controller	Dual-Controller	**6**
Please choose the type of each Dual-Controller Unit configuration		None	256GB Cache,25*2.5"	**7**
Please choose the protocol type of the controller enclosure's build-in I/O module		SmartIO(8Gb FC)	SmartIO(16Gb FC)	
The number of standard disk enclosure in a single-loop(Between 1 and 4, if you do...	?	1	1	

1. Expansion scenario
2. AC or DC
3. Contry
4. Version of existing devices
5. Storage device type
6. Expand controller or not
7. Cache specifications

Set interface cards, disks, and software in the same way as in new construction scenarios.

Contents

1. Configuration

2. Quotation

3. Configuration instances

OceanStor 5500F V5 configuration instance

- **Customer requirements:**
  - AC power supply for the equipment room; cache =128 GB
  - SAN storage systems
  - 15 TB (raw capacity) for database, 25 x 600 GB 2.5" SSD disks
  - Front-end port type: 8 x 16 Gbit/s FC and 16 x GE ISCSI
  - Storage snapshot and clone software
  - Thin provisioning
  - Heterogeneous virtualization
  - Installation service and 5-year standard warranty

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4.1 Selecting controller enclosures and interface cards

Product Parameter	Service Parameter	Config Result	Attribute					Reset	Check	Verify&Save	Export

Parameter	Preference ⓘ	Suggestion	Setting
Configuration Scenario		New Project	New Project ▼
Power Mode		AC	AC ▼
C13 AC Power Mode	❓	Australia	Australia ▼
Software Version		V500R007	V500R007 ▼
Need OceanStor unified storage or Block storage?(Multi device management pleas...	❓	SAN	SAN ▼
Controller Enclosure Type	❓	Dual-Controller	Dual-Controller ▼
Please choose the type of each Dual-Controller Unit configuration		None	256GB Cache,25*2.5" ▼
Please choose the protocol type of the controller enclosure's build-in I/O module		SmartIO(8Gb FC)	SmartIO(16Gb FC) ▼
The number of standard disk enclosure in a single-loop(Between 1 and 4, if you do...	❓	1	1
▼===The Front-End Host Expand Interface Module(pai...			
4 port 1Gb ETH I/O module(Base-T)	0	2	
4 port 10Gb ETH I/O module(Base-T)	0	0	
2 port 10Gb FCoE I/O module(optical SFP+)	0	0	
4 port 10Gb FCoE I/O module(optical SFP+)	0	0	
4 port 10Gb TOE I/O module(optical SFP+)	0	0	
4 port 8Gb FC I/O module	0	0	
2 port 16Gb FC I/O module	0	0	

Select SAN and dual controllers.

Select controller specifications.

Users can select the number of disk enclosures in the single loop. The system provides a default value. They can change the default value based on site requirements.

Configure interface cards and disks for each controller enclosure. After the configuration, errors automatically disappear.

Select interface cards. You only need to configure GE cards because the OceanStor 5500F V5 has been equipped with 8 Gbit/s Fibre Channel ports.

4.2 Selecting disk units

▼ ===Disk===			
Show Disk by recommended level		Highly Recommended	All ▼
600GB SSD SAS Disk Unit(2.5")		0	25
960GB SSD SAS Disk Unit(2.5")(Recommended)		0	0
1.92TB SSD SAS Disk Unit(2.5")(Recommended)		0	0
3.84TB SSD SAS Disk Unit(2.5")(Highly Recommended)		0	0
7.68TB SSD SAS Disk Unit(2.5")		0	0
▼ ===The Back-End Disk Expand Interface Module(pair)===			
4 port 4*12Gb SAS I/O module(MiniSAS HD)	?	0	0

▼ ===The Back-End Disk Expand Interface Module(pair)===			
4 port 4*12Gb SAS I/O module(MiniSAS HD)	?	0	0
▼ ===The Disk Enclosure===			
The quantity of 2.5" standard disk enclosure(Dual-Controller Unit 1)	?	0	0
The number of loops(standard disk enclosure in Dual-Controller Unit 1)		0	0
▼ ===Installation Material===			
(Required) Optical Fibre Length (meter)		3m	3m ▼
(Optional) Extra Optical Fibre/SAS Cable		No	No ▼
▼ ===Auxiliary Equipment===			
Please choose the Cabinet type	?	None	None ▼

Select disk units based on project requirements. The OceanStor F V5 support both 2.5" and 3.5" disks.

OceanStor F V5 introduces 4 U high-density enclosures, each of which contains 75 disks. Two types of disk are available for such enclosures.

This part shows the number of disk enclosures automatically calculated based on the number of disks, and the number of loops automatically calculated based on the total number of enclosures and the number of enclosures in a single loop.

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4.3 Selecting accessories and software

===Installation Material===			
Please choose the Fibre Length(Required)		3m	3m ▼
Need additional Fibre/SAS Cable or not?(Optional)		No	No ▼
===Auxiliary Equipment===			
Please choose the MODEM type		None	None ▼
Please choose the Cabinet type	?	None	None ▼

Select installation materials based on project requirements. The number of optical fibers is automatically calculated based on the number of selected optical interfaces. The number of SAS cables is automatically calculated based on the number of disk enclosures.

HyperMirror		No	No ▼
HyperSnap		No	No ▼
HyperCopy		No	No ▼
HyperClone(for FS&LUNs)		No	No ▼
HyperReplication		No	No ▼
SmartQos		No	No ▼
SmartPartition		No	No ▼
SmartVirtualization	?	No	No ▼
SmartDedupe License (for FS&LUNs)		No	No ▼
SmartCompression License (for FS&LUNs)		No	No ▼
(SAN) HyperMetro License (for LUNs)	?	No	No ▼

Select software based on site requirements. After selecting SAN or SAN+NAS, the basic software package is automatically generated. Thin provisioning is included in the basic software package.

4.4 Selecting engineering service: installation + hardware warranty + software warranty (mandatory)

Product Parameter	**Service Parameter**	Config Result	Attribute

Check Save Export

Parameter	Setting
Product EOS Date	2025-12-31
If the current version has been used for more than three years, purchase the upgrade service together. Typically, the lifecycle of storage software from release to end of service (EOS) is three years. After the software reaches EOS, no more technical support is provided, including troubleshooting and debugging.	
Need technical support service (maintenance service) ?	Yes
Need installation service?	Yes

OceanStor V3/V5 Series Software Technical Support Service

Software Technical Support Service

Type	Hi-Care
Level	Hi-Care Application Software Upgrade Support Service
Duration(Year(s))	5
Duration(Month(s))	0

Storage Technical Support Service (including Co-care)

Technical Support Service

Type	Hi-Care
Level	Hi-Care Onsite Premier 24x7x4H Engineer Onsite Service
Duration(Year(s))	5
Duration(Month(s))	0

Storage Outsourcing server Technical Support Service

Technical Support Service

Type	Hi-Care
Level	Hi-Care Onsite Standard 9x5xNBD Engineer Onsite Service
Duration(Year(s))	0
Duration(Month(s))	0

Unified Storage Installation Service

Installation Type	Installation Service - Engineering

Select engineering service based on project requirements. If engineering service is selected, Huawei sends engineers to the site to perform supervision or commissioning and Huawei technical support only provide remote assistance.

Devices have 3-year warranty by default. Other options can be selected based on project requirements.

Note: The software service warrant is at least 3 years (because hardware has at least 3-year warranty).

The effective duration of software service and hardware service must be both 3 years, 4 years, or 5 years.

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