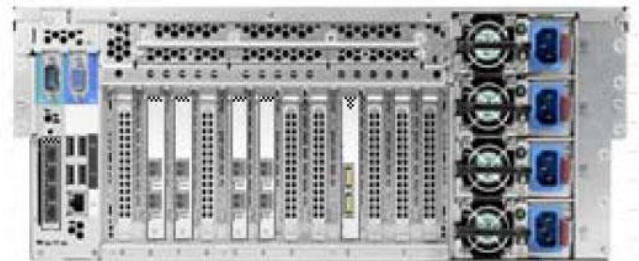
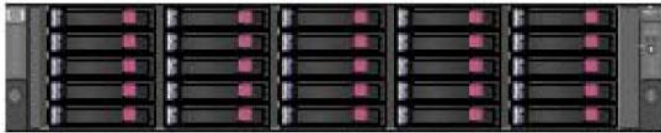


Overview

HP ConvergedSystem 500 for SAP HANA Scale-up Configurations with the Intel® Xeon® E7 v2 architecture (RETIRED)



1. HP ConvergedSystem 500 for SAP HANA 14TB Storage Block (Required only with 1 TB and 2TB Nodes)
2. HP ConvergedSystem 500 for SAP HANA Node (Available in 256 GB, 512 GB, 1 TB and 2 TB Node sizes)

At A Glance

HP ConvergedSystem 500 for SAP HANA Scale-up Configurations with the Intel® Xeon® E7 v2 architecture allows you to simplify IT with systems built on proven, trusted technology—not components. That means your staff has more time for innovation. With HP and SAP you can:

- **Make better, faster decisions:** SAP HANA is a completely re-imagined platform for real-time business. It converges database and application capabilities in-memory to transform transactions and analytics so you can operate in real time.
- **Get real-time, faster:** Only HP ConvergedSystem for SAP HANA dramatically simplifies IT through quick deployment, intuitive management, and system-level consulting and support. You can:
 - Order pre-configured solutions in minutes
 - Deploy quickly with seamless, turnkey, tested, and repeatable integration through HP Factory Express
 - Lessen administrative complexity with system-level management
 - Prevent and resolve problems with system-level, integrated support, and single point of accountability for the complete solution
- **Amplify performance:** Robust HP ConvergedSystems are purpose-built and optimized for SAP HANA with high availability and data protection available only from HP
 - Get proven performance with #1 SAP Netweaver BW-EML standard application benchmark results for HP scale-up and scale-out configurations (Certifications 2013020 and 2013037)
 - Prevent data loss and recover from outages in seconds with optional HP Serviceguard for SAP HANA, the industry's only unattended, automated failover and disaster tolerance solution for SAP HANA (for scale-up configurations)
- **Minimize risk:** HP remains committed to industry-standard x86 computing and a long-term SAP HANA roadmap.
 - Buy with confidence from HP, the only player with the architecture, expertise, and roadmap to meet your SAP HANA needs today and in the future
 - Leverage expertise built over 25 years of SAP partnership, 77,000+ joint SAP installations and 800 SAP HANA installations worldwide.

Overview

Take advantage of the expertise of thousands of HP professionals supporting more than 1.7 million SAP users in over 50 countries and our own experience as one of SAP's 10 largest global customers. If you want a trusted advisor and expert implementer of SAP solutions, turn to HP.

HP ConvergedSystem 500 for SAP HANA Scale-up Configurations are based on the latest Intel® Xeon® E7-4880v2 architecture, and are optimized for SAP HANA systems that are factory-integrated to give you the fastest time to value. The HP ConvergedSystem 500 for SAP HANA Scale-up Configurations are based on the following HP technologies and services:

- HP ProLiant DL580 Gen8 Server (Compute Node)
- HP D2700 Disk Enclosure
- HP Integrated Lights-Out
- Optional HP Serviceguard for SAP HANA software, for automated, unattended High Availability and Disaster Tolerance
- Optional virtualization use case configurations available with deployment services for setting up the virtualized configuration
- HP Factory Integration through HP Factory Express Deployment Services that provide hardware integration, validation, and on-site installation
- HP Proactive Care provides a single source support for the complete HP ConvergedSystem 500 for SAP HANA system, including the software
- HP ConvergedSystem 500 for SAP HANA Deployment Accelerator Service to get you up and running on SAP HANA quickly

For more information about the HP ConvergedSystem 500 for SAP HANA Scale-up Configurations, see:

<http://www.hp.com/go/sap/hana>

For information about HP services, see: <http://www.hp.com/services/sap>

For more information about HP ProLiant DL580 Gen8, see www.hp.com/servers/dl580-gen8

For more information about HP Serviceguard Software, see <http://www.hp.com/info/sglx>

For more information about HP Integrated Lights Out, see www.hp.com/go/ilo

For more information about HP Factory Express, see: <http://www.hp.com/go/factoryexpress>

For more information about HP support services, see: www.hp.com/go/supportservices

Standard Features

Hardware and Software HP ConvergedSystem 500 for SAP HANA Scale-up Configurations with the Intel® Xeon® E7 v2 architecture are available in configurations ranging from 256 GB to 2 TB.

Compute Nodes:

The HP ConvergedSystem 500 for SAP HANA Scale-up configurations are based on the HP ProLiant DL580 Gen8 Server with the Intel® Xeon® E7-4880v2 (2.5GHz/15-core/37.5MB/130W) processor. The HP ProLiant DL580 Gen8 Server is an enterprise-grade x86 server offering breakthrough performance, rock-solid reliability, and compelling consolidation and manageability efficiencies. It is ideal for mission-critical enterprise, business intelligence, and database applications.

Size	256 GB	512 GB	1 TB	2 TB Certified for use with SAP Suite on HANA only
HP Part Number	H6X82A	H6X83A	H6X84A	H6X85A
Server	HP ProLiant DL580 Gen8	HP ProLiant DL580 Gen8	HP ProLiant DL580 Gen8	HP ProLiant DL580 Gen8
Number of processors	2	2	4	4
Type of processor	Intel Xeon E7-4880V2	Intel Xeon E7-4880V2	Intel Xeon E7-4880V2	Intel Xeon E7-4880V2
Amount of memory	256 GB	512 GB	1 TB	2 TB
SAP HANA log file storage	Internal SAS storage	Internal SAS storage	Internal SSD storage	Internal SSD storage
RAID	5	5	1	1

External Storage:

External Storage is required for the 1 TB and the 2 TB scale-up configurations and is based on the HP D2700 SAS Storage Disk Enclosure with twenty-five 600 GB 10K rpm SAS drives. The Small Form Factor (SFF) HP D2700 Disk Enclosure with 25 drive bays offers modular solutions to simplify capacity expansion of HP ProLiant server environments.

Description	HP ConvergedSystem 500 for SAP HANA 14TB Storage Block
HP Part Number	H6X87A
Base product	HP D2700 SAS Storage Disk Enclosure
Number of disk drives	25
Type of disk drives	600 GB 10K rpm SAS
RAID	50

Included Software and Operating System

- **SAP HANA** (customer must obtain license to use from SAP)
- **Operating System:** A choice of either the SUSE Linux Enterprise Server for SAP Applications Operating System or the Red Hat Enterprise Linux for SAP HANA Operating System is available, both with either a 3 year or a 5 year subscription. Additionally, for virtualization use cases, a choice of 3 year or 5 year SUSE Linux Enterprise Server for SAP Applications Unlimited subscriptions are also available
- **HP Integrated Lights-Out Advanced:** A suite of embedded management technologies that supports the complete lifecycle of all HP ProLiant Gen8 servers, from initial deployment to

Standard Features

ongoing management and service alerting.

Rack

HP ConvergedSystem 500 for SAP HANA Scale-up Configurations are available with a rack based on the HP 642 1075mm Shock Intelligent Rack. The HP Intelligent Series Rack family is the next generation of enterprise-class racks designed to meet the current and future requirements of demanding datacenters. It offers innovative intelligence capabilities for asset management, unparalleled structural integrity, cooling and cable management advances, and a wide choice of power and switching options.

HP Services

Factory Integration

With HP Factory Express Deployment Services, the majority of the integration is performed in the HP factory so that deployment time is reduced with hardware built to customers' exact specifications, then shipped as a turn-key solution from the HP factory and on-site implementation services install hardware on-site. This includes:

- An engagement project manager and an integration engineer who are assigned to manage the solution from start to finish
- The project manager will serve as the single point of contact in the factory for integration status, and will coordinate delivery and on-site installation of the solution
- The integration engineer will work with your technical contact to capture the specific design parameters and prepare a detailed integration package to address your needs
- Custom racking, point-to-point cabling, OS and application software load and configuration
- Configuration of HP ConvergedSystem for SAP HANA with customer network information (IP addresses, virtual local area networks (vLANs), etc.)
- In addition to integration, configuration, and deployment activities, all solutions receive comprehensive testing and backup/recovery media (on request), as well as a complete documentation package that details the configuration and settings of the delivered solution
- Onsite installation and startup

NOTE: The factory integration services included in this solution require a Customer Intent Document (CID) to assist with the configuration and successful installation and implementation of the solution. The CID Reference ID# is required to be in place prior to sale. Before issuing a purchase order against this solution, please contact your HP sales representative to engage an HP Engagement Project Manager (EPM) who will manage the CID process.

HP SAP Deployment Accelerator Service

HP SAP HANA Deployment Accelerator Services simplify the process of implementing and configuring HP ConvergedSystem for SAP HANA by providing quick, easy implementation, expert configuration support, and knowledge sharing. The Deployment Accelerator Service includes the following:

- Prior to solution delivery, a simplified site readiness assessment will be performed to ensure that the customer has enough power, cooling, floor space to accommodate the requirements of the system.
- Integrate HANA server into customers environment, power, network cabling
- Configure and verify the network connections into the customer environment
- Conduct basic appliance level functionality testing
- Familiarize the customer with the equipment and with basic processes

Standard Features

- Perform knowledge sharing, including instruct you on how to place support calls

HP SAP HANA High Availability and Disaster Tolerance Services

For Serviceguard for SAP HANA High Availability Scenarios and Serviceguard for SAP HANA High Availability/Disaster Tolerance Scenarios, additional services will be included to ease the effort of Serviceguard and system replication implementation for SAP HANA. These services will accelerate your time to value and thus positively impact ROI and TCO.

The HP consultant will collect the necessary technical information and configure the HP ConvergedSystem for SAP HANA in a HA or HA/DT environment. Key core deliverables that set HP apart include:

- HP consultant acts as the Single Point of contact during the HA or HA/DT implementation of the HP CS500 for SAP HANA
- System Replication solution configured according to your requirements and in line with HP's and SAP's recommendations
- A Service Guard HA or HA/DT solution configured according to customer's requirements and in line with HP's and SAP's recommendations
- Correctly configured Highly Available SAP HANA appliance
- Customer knowledge sharing

NOTE: For HA or HA/DT configurations with dual purposing, additional services will be required. Please contact your sales representative for more information.

HP Support

HP Proactive Care or HP Proactive Care Advanced provide a single point of contact for the support of all components including SAP software and operating systems. HP Proactive Care in SAP environments helps customers identify and address IT issues before they cause performance problems. HP offers enhanced call experience with advanced technical expertise, and end-to-end case ownership, which improves availability and helps optimize IT infrastructure. Customers can customize their reactive support level by selecting either 6-hour call-to-repair or 24x7 with 4-hour onsite response. Only for non-production systems, Proactive Care with next-business day onsite response may be selected..

NOTE: While support for the SAP HANA software requires a separate support agreement with SAP, HP and SAP collaborate to resolve issues around SAP HANA, leveraging specially aligned collaborative processes between HP and SAP.

NOTE: Additional support options are available. See Step 3 of How to Order below.

Warranty Services

The HP ConvergedSystem 500 for SAP HANA is covered by a global limited warranty and supported by HP Services. Beyond the warranty, HP Proactive Care is the minimum support with a choice of reactive response of 24x7 4hr onsite response or 6 hour call-to-repair. See Step 3 in "How to Order" section.

NOTE: Warranty varies by component. Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Mandatory CSR parts are designed for easy replacement. A travel and labor charge will result when customers decline to replace a Mandatory CSR part; 2) Optional CSR parts are also designed for easy replacement but may involve added complexity. Customers may choose to have HP replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at:

Standard Features

<http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html>

HP Financial Services To support customers' transition, HP Financial Services (HPFS) can help in a way that you may not have considered. HPFS can help you invest in your business while preserving precious capital.

For more information, contact your local HP Financial Services Representative. In the United States, call 1-888-277-5942. In Canada, dial 1-800-HP-LEASE. For more information please visit: <http://www.hp.com/hpfinancialservices> for links to HP Financial Services around the world.

End-of-life management and recycling Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: <http://www.hp.com/go/green>. To recycle your product, please go to: <http://www.hp.com/go/green> or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: <http://www.hp.com/go/green>. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

How to Order

The HP ConvergedSystem 500 for SAP HANA Scale-up Configurations with the Intel® Xeon® E7 v2 architecture comprise of the following HP technologies and services that are included as part of the ordering process:

- **Hardware and software:** Includes all hardware components for the compute nodes, external storage if required, rack, and HP and third party software. For virtualization use cases, you can choose to buy your VMWare licenses from HP, or use your own. Note that if you choose not to buy your VMware licenses and associated support from HP, HP will not support the VMware software included in your configuration.
- **HP Factory Express:** For system integration, customer-specific customization, and comprehensive system quality assurance. Included as part of the ordering process.
- **HP Deployment Accelerator Service:** For on-site installation and deployment. Included as part of the ordering process.
- **HP Support Services:** Proactive Care Support is the minimum support level.

Step 1: Choose your scale-up size

HP ConvergedSystem 500 for SAP HANA

Select the Compute Node

HP ConvergedSystem 500 for SAP HANA 256 GB Node	H6X82A
HP ConvergedSystem 500 for SAP HANA 512 GB Node	H6X83A
HP ConvergedSystem 500 for SAP HANA 1 TB Node	H6X84A
HP ConvergedSystem 500 for SAP HANA 2 TB Node	H6X85A

Select the External Storage

When selecting either the 1 TB Node or the 2 TB Node, it is required to select external storage

HP ConvergedSystem 500 for SAP HANA 14TB Storage Block	H6X87A
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Select the Operating System

A choice of either the SUSE Linux Enterprise Server for SAP Applications Operating System or the Red Hat Enterprise Linux for SAP HANA Operating System is available, both with either a 3 year or a 5 year subscription. Additionally, for Virtualization use cases, a choice of either a 3 year or a 5 year SUSE Linux Enterprise Server for SAP Applications Unlimited Operating System is available.

For the 256GB and the 512GB Compute Nodes, the following Operating System choices are available:

SUSE Linux OS (3 Year Subscription) - SLES SAP 1-2 Sckt Phscl 3yr 24x7 LTU	G6F47A
SUSE Linux OS (5 Year Subscription) - SLES SAP 1-2 Sckt Phscl 5yr 24x7 LTU	J4H68A
SUSE Linux OS for Virtualization Use Cases (3 Year Subscription) - SLES SAP 1-2 Sckt Unltd 3yr 24x7 LTU	K5D37A
SUSE Linux OS for Virtualization Use Cases (5 Year Subscription) - SLES SAP 4 Sckt Unltd 3yr 24x7 LTU	K5D39A
Red Hat Enterprise Linux OS (3 Year Subscription) - RHEL SAP 1-2 Sckt Phscl 3yr 24x7 Flx LTU	L5P71A
Red Hat Enterprise Linux OS (5 Year Subscription) - RHEL SAP 1-2 Sckt Phscl 5yr 24x7 Flx LTU	L5P72A

For the 1TB and the 2TB Compute Nodes, the following Operating System choices are available:

SUSE Linux OS (3 Year Subscription) - SLES SAP 4 Sckt Physical 3yr 24x7 LTU	G6F48A
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How to Order

SUSE Linux OS (5 Year Subscription) - SLES SAP 4 Sckt Phscl 5yr 24x7 LTU	J4H69A
SUSE Linux OS for Virtualization Use Cases (3 Year Subscription) - SLES SAP 1-2 Sckt Unltd 5yr 24x7 LTU	K5D38A
SUSE Linux OS for Virtualization Use Cases (5 Year Subscription) - SLES SAP 4 Sckt Unltd 5yr 24x7 LTU	K5D40A
Red Hat Enterprise Linux OS (3 Year Subscription) - RHEL SAP 4 Sckt Phscl 3yr 24x7 Flx LTU	L5P73A
Red Hat Enterprise Linux OS (5 Year Subscription) - RHEL SAP 4 Sckt Phscl 5yr 24x7 Flx LTU	L5P74A

Select Optional VMWare licenses

For Virtualization use cases, you can choose to use your own VMWare licenses, or buy your licenses from HP.

- Select **four** VMWare vSphere licenses (HP Part Number: BD715A) and **one** VMWare vCenter license (HP Part Number: BD723A) for every HP ConvergedSystem 500 for SAP HANA 1 TB Node (HP Part Number: H6X84A) or HP ConvergedSystem 500 for SAP HANA 2 TB Node (HP Part Number: H6X85A)
- Select **two** VMWare vSphere licenses (HP Part Number: BD715A) and **one** VMWare vCenter license (HP Part Number: BD723A) for every HP ConvergedSystem 500 for SAP HANA 256 GB Node (HP Part Number: H6X82A) or HP ConvergedSystem 500 for SAP HANA 512 GB Node (HP Part Number: H6X83A)

NOTE: At this time, Virtualization on the HP ConvergedSystem 500 for SAP HANA Scale-up configurations is only available with the SUSE Linux Enterprise Server for SAP Applications Operating System installed on the

Select the Rack

HP ConvergedSystem 500 for SAP HANA Rack	H6X80A
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Select the Power Distribution Units for the Rack

Choose the HP Power Distribution Unit(s) for the HP CS 500 for SAP HANA Rack (HP Part Number H6X80A):

HP Intelligent Modular 24A North America/Japan Core PDU	H6X80A#001
HP Intelligent 40A North America/Japan Core PDU	H6X80A#002
HP Intelligent Modular 32A International Core PDU	H6X80A#003
HP Intelligent Modular 3PH 40A North America/Japan PDU	H6X80A#004
HP Intelligent Modular 3PH 24A North America/Japan Core PDU	H6X80A#005
HP Intelligent Modular 3PH 32A International Core PDU	H6X80A#006
HP Intelligent Modular 3PH 48A North America/Japan Core PDU	H6X80A#007
HP Intelligent Modular 24A North America/Japan Core Max PDU	H6X80A#008
HP Intelligent Modular 40A North America/Japan Core Max PDU	H6X80A#009
HP Intelligent Modular 32A International Core Max PDU	H6X80A#010
HP Intelligent Modular 3PH 40A North America/Japan Core Max PDU	H6X80A#011
HP Intelligent Modular 3PH 24A North America /Japan Core Max PDU	H6X80A#012
HP Intelligent Modular 3PH 32A International Core Max PDU	H6X80A#013
HP Intelligent Modular 3PH 48A North America/Japan Core Max PDU	H6X80A#014

How to Order

NOTE: While the HP ConvergedSystem 500 for SAP HANA Rack is the recommended rack, you may choose to rack the compute node (4U form factor) and optionally the external storage unit in a compatible rack. In this case, select the Virtual Rack and optionally, select the Power Distribution Units.

NOTE: If you choose not to order the HP ConvergedSystem 500 for SAP HANA Rack, your rack must be compatible with the HP ProLiant DL580 Gen8 server, and if you require external storage, should also be compatible with the HP D2700 External Storage.

Refer to the HP Infrastructure products page for more information on HP racks and rack options:

<http://h18004.www1.hp.com/products/servers/platforms/rackandpower.html>

If you choose to use your HP compatible rack, you must add the virtual rack to your order:

HP ConvergedSystem 500 for SAP HANA Virtual Rack	H6X81A
You can also choose optional PDUs	
HP Intelligent Modular 24A North America/Japan Core PDU	H6X81A#001
HP Intelligent 40A North America/Japan Core PDU	H6X81A#002
HP Intelligent Modular 32A International Core PDU	H6X81A#003
HP Intelligent Modular 3PH 40A North America/Japan PDU	H6X81A#004
HP Intelligent Modular 3PH 24A North America/Japan Core PDU	H6X81A#005
HP Intelligent Modular 3PH 32A International Core PDU	H6X81A#006
HP Intelligent Modular 3PH 48A North America/Japan Core PDU	H6X81A#007
HP Intelligent Modular 24A North America/Japan Core Max PDU	H6X81A#008
HP Intelligent Modular 40A North America/Japan Core Max PDU	H6X81A#009
HP Intelligent Modular 32A International Core Max PDU	H6X81A#010
HP Intelligent Modular 3PH 40A North America/Japan Core Max PDU	H6X81A#011
HP Intelligent Modular 3PH 24A North America /Japan Core Max PDU	H6X81A#012
HP Intelligent Modular 3PH 32A International Core Max PDU	H6X81A#013
HP Intelligent Modular 3PH 48A North America/Japan Core Max PDU	H6X81A#014

Step 2: Select optional Serviceguard Software and Hardware

HP Serviceguard for SAP HANA

HP Serviceguard for SAP HANA offers protection against unplanned downtime and automated, unattended failover for SAP HANA scale-up configurations. With HP Serviceguard for SAP HANA, you can protect against unplanned downtime and reduce planned downtime with the industry's only automated failover and disaster tolerant solution for SAP HANA.

NOTE: At this time, Serviceguard for automated and unattended High Availability and Disaster Tolerance for SAP HANA is only available with the SUSE Linux Enterprise Server for SAP Applications Operating System installed on the HP ConvergedSystem 500 for SAP HANA Scale-up configurations.

HP Serviceguard for SAP HANA is offered in two variants, depending on your needs:

- Local High Availability Scenarios

How to Order

- Disaster Tolerance Scenarios across data-centers

The Serviceguard solution for SAP HANA is comprised of the following HP technologies:

- **HP Serviceguard for SAP HANA software**
- **HP ConvergedSystem Quorum Server:** Based on the ProLiant DL320e Gen8 Server that enables powerful quad-core processor computing performance with larger memory and storage capacity, all in a small package.
- **HP ConvergedSystem 500 for SAP HANA Switch Block:** Based on the HP 2920 Switch series, which offers static and RIP routing, robust security and management, enterprise-class features, and is a cost-effective, scalable solution for building high-performance networks

Additionally, the HP ConvergedSystem Quorum Server comes preinstalled with SUSE Linux Enterprise Server for SAP Applications operating system, and HP Integrated Lights-Out Advanced software.

Serviceguard for SAP HANA High Availability Scenarios

- Order **two** licenses of HP Serviceguard for ConvergedSystem for SAP HANA Scale-Up HA Flex Software (HP Part Number: G2H71A) per 256 GB (H6X82A) or 512 GB (H6X83A) nodes
- Order **four** licenses of HP Serviceguard for ConvergedSystem for SAP HANA Scale-Up HA Flex Software (HP Part Number: G2H71A) per 1 TB (H6X84A) or 2 TB (H6X85A) nodes

Serviceguard for SAP HANA High Availability/Disaster Tolerance Scenarios

- Order **two** licenses of HP Serviceguard for ConvergedSystem for SAP HANA Scale-Up HA/DT Flex Software (HP Part Number: G2H72A) per 256 GB (H6X82A) or 512 GB (H6X83A) nodes
- Order **four** licenses of HP Serviceguard for ConvergedSystem for SAP HANA Scale-Up HA/DT Flex Software (HP Part Number: G2H72A) per 1 TB (H6X84A) or 2 TB (H6X85A) nodes

For both the Serviceguard for SAP HANA High Availability, and the Serviceguard for SAP HANA High Availability/Disaster Tolerance scenarios, the following required components need to be added to the scale-up order:

- **One** HP ConvergedSystem Quorum Server (HP Part Number H6X90A)
- **Two** HP ConvergedSystem 500 for SAP HANA Switch Block (HP Part Number H6X98A) if ordering Serviceguard for SAP HANA High Availability, or **Four** HP ConvergedSystem 500 for SAP HANA Switch Block (HP Part Number H6X98A) if ordering Serviceguard for SAP HANA High Availability/Disaster Tolerance.
- **One** SUSE Linux Enterprise Server SAP 1-2 Sockets Physical 3 Year Subscription 24x7 Support License (HP Part Number G6F47A)
- **One** HP iLO Advanced 1 Server with 3yr 24x7 Technical Support and Updates License (HP Part Number G6F49A)

NOTE: For HA or HA/DT configurations with dual purposing, additional services will be required. Please contact your sales representative for more information

NOTE: At this time, Serviceguard software is not available if you have chosen to virtualize your SAP HANA Scale-up system

How to Order

Step 3: Choose Support and Services

HP ConvergedSystem 500 for SAP HANA Scale-up orders will include Factory Express Deployment Services, HANA Deployment Accelerator Services and a choice of support services to meet your needs.

HP Factory Express Deployment Services HP ConvergedSystem 500 for SAP HANA Scale-up order will include FE Deployment Services covering the factory integration and onsite installation and startup services.

HP SAP Deployment Accelerator Service HP ConvergedSystem 500 for SAP HANA Scale-up order will include the HP SAP Deployment Accelerator Service providing quick, easy implementation, expert configuration support, and knowledge sharing.

For Serviceguard for SAP HANA High Availability Scenarios and Serviceguard for SAP HANA High Availability/Disaster Tolerance Scenarios, the following additional services to perform the Serviceguard and system replication implementation for SAP HANA will both be included:

- HP SAP HANA High Availability Services- Provides Service Guard Integration with SAP HANA.
- HP SAP HANA Disaster Tolerance Service (SAP HANA Replication) – Provides SAP HANA Replication service

HP Care Pack Support HP and SAP collaborate to resolve issues around SAP HANA. Customers get a dedicated, single point of contact for the whole solution-ConvergedSystem 500 for SAP HANA, Operating System, and SAP HANA. HP offers enhanced call experience with advanced technical expertise, and end-to-end case ownership, which improves availability and helps optimize their infrastructure. Support for the ConvergedSystem 500 for SAP HANA requires both support from HP from the choices outlined below and a separate software support agreement with SAP. The recommended HP support level is HP Proactive Care Advanced or the HP Proactive Care plus the HP Personalized Support Option. The minimum required support level is HP Proactive Care. In addition, customers may choose HP Critical Service.

NOTE: While support for the SAP HANA software requires a separate support agreement with SAP, HP and SAP collaborate to resolve issues around SAP HANA, leveraging specially aligned collaborative processes between HP and SAP.

NOTE: Each of these support levels include hardware and software reactive support and are available with DMR (defective media retention). Support for the SAP software has to be purchased separately from SAP.

NOTE: For Virtualization use cases, if you choose not to buy your VMware licenses and associated support from HP, HP will not support the VMware software included in your configuration.

HP Proactive Care Advanced – 3 or 5 Year

HP Proactive Care Advanced is the recommended support for SAP HANA environments. It builds on HP Proactive Care, providing additional benefits such as the assignment of a dedicated, local account support manager (ASM) for collaboration and best practices and critical event management that provides 24x7 fast response and IT service restoration with incident follow-up to prevent a repeat. All of this is designed to give you an incredibly personalized, high-touch support experience that keeps your system fully available and running at peak performance.

How to Order

HP Proactive Care -3 or 5 Year

HP Proactive Care in SAP environments begins with providing all of the benefits of proactive monitoring and reporting along with rapid reactive care to put in place the fundamentals needed for stability and availability of the SAP environment. Customers also receive enhanced reactive support for HP SAP issues, through access to HP's Center of Expertise and specially aligned, collaborative reactive processes between HP and SAP. Customers can customize their reactive support level by selecting either 6-hour call-to-repair or 24x7 with 4-hour onsite response. Only for non-production systems, Proactive Care with next-business day onsite response may be selected.

HP Proactive Care Personalized Support Option -3 or 5 Year

Adding the HP Personalized Support Option for HP Proactive Care is highly recommended. The HP Personalized Support option builds on the benefits of HP Proactive Care service by providing an assigned Account Support Manager who knows the environment and delivers support planning, regular reviews, and technical and operational advice specific to each environment. A one-time purchase covers the entire HP Proactive Care environment, and additional Personalized Support Days can be added to provide the appropriate service experience for the system or across the entire environment.

HP Proactive Select -3 or 5 Year

Addresses on-going operational and staffing needs of SAP HANA environments. The customers can buy HP Proactive Select credits upfront, and choose from around 100 services to consume the required level of expertise and resources throughout a year. A vast array of services—health checks, optimization, performance, and security—help customers address their skills and staffing requirements with flexibility. These credits may also be used for assistance in implementing HP HANA appliance updates.

HP Critical Service with the SAP option -3 or 5 Year

Provides direct access to HP's mission-critical call center and fast reactive and proactive deliverables for customers running mission-critical IT applications. Call-to-repair reactive support gives access to the HP Global Mission Critical Solution Center for quick resolution.

HP Datacenter Care

For large, complex environments where a more personalized, customized approach to support is needed. This is a contractual sale and provides one contract for all a customer's reactive and proactive needs.

Technical Specifications

Technical specifications for the major components for the HP ConvergedSystem 500 for SAP HANA Scale-up Configurations with the Intel® Xeon® E7 v2 architecture are provide below.

HP ProLiant DL580 Gen8 Compute Node	Dimensions (H x W x D) (with bezel)	6.94" x 19.0" x 27.55" (17.6cm x 48.3cm x 70.0cm)	
	Weight (approximate)	Maximum (all hard drives, power supplies, DIMMs and processors installed)	100.0 lb (45.4 kg)
		Minimum (one hard drive, two power supplies, four DIMMs, and two processors installed)	66.0 lb (30.0 kg)
Input Requirements (per power supply)	Input Requirements (per power supply)	Rated Line Voltage	100 - 127 VAC, 200 - 240 VAC
		Rated Input Current	12 A (at 100 VAC), 8 A (at 200 VAC)
		Rated Input Frequency	50 to 60 Hz
		Rated Input Power	1161 W (at 100 VAC), 1598 W (at 240 VAC)
BTU Rating	Maximum	3960 BTU/hr (at 100 VAC), 5450 BTU/hr (at 200 VAC)	
Power Specifications	NOTE: To review typical system power ratings use the HP Power Advisor which is available online located at url: http://www.hp.com/go/proliant-energy-efficient or www.hp.com/go/hppoweradvisor - Click on the system of interest. Example: DL580 Gen8 - Follow the instructions of the next screens.		
Power Supply Output (per power supply)	Rated Steady-State Power	910 W (low line), 1300 W (high line)	
	Maximum Peak Power	910 W (low line), 1300 W (high line)	
System Inlet Temperature	Operating	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 304.8 m (1.8°F per every 1000 ft) above sea level to a maximum of 3048 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 10°C/hr (18°F/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 30°C (86°F).	
	Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).	
Relative Humidity	Operating	10 to 90% relative humidity (Rh), 28°C (82.4°F)	

Technical Specifications

(non-condensing)		maximum wet bulb temperature, non-condensing.
	Non-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
Altitude	Operating	3048 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
Acoustic Noise		Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).
		Idle
	L WAd	6.4 B (with PCI-E)
	L pAm	NA dBA
		Operating
	L WAd	6.8 B (with PCI-E)
	L pAm	NA dBA
Emissions Classification (EMC)	FCC Rating	Class A
	Normative Standards	CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1

NOTE: Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.

Rack Airflow Requirements**(RACK) series cabinets**

The increasing power of new high-performance processor technology requires increased cooling efficiency for rack-mounted servers. The HP racks provide enhanced airflow for maximum cooling, allowing these racks to be fully loaded with servers using the latest processors.

- Front and rear doors: If your 42U server rack includes closing front and rear doors, you must allow 830 square inches (5,350 sq cm) of holes evenly distributed from top to bottom to permit adequate airflow (equivalent to a required 64 percent open area for ventilation).
- The clearance from face of rack to inside of the front door needs to be a minimum of 1.75".
- Side: The clearance between the installed rack component and the side panels of the rack needs to be a minimum of 2.75 inches (7 cm).

Technical Specifications

**Environment-friendly
Products and Approach****End-of-life management and recycling**

Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: <http://www.hp.com/go/green>. To recycle your product, please go to: <http://www.hp.com/go/green> or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: <http://www.hp.com/go/green>. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

QuickSpecs

HP ConvergedSystem 500 for SAP HANA Scale-up Configurations with the Intel® Xeon® E7 v2 architecture

Summary of Changes

Date	Version History	Action	Description of Change:
17-Jun-2016	From Version 8 to 9	Retire	Document Retired
01-Jun-2015	From Version 7 to 8	Changed	Changed the name for HP ConvergedSystem 500 for SAP HANA Scale-up Configurations with the Intel® Xeon® E7 v2 architecture
09-Feb-2015	From Version 6 to 7	Changed	Changes in the Standard Features and How to order Sections.
05-Dec-2014	From Version 5 to 6	Changed	Changes made throughout the QuickSpecs.
26-Sep-2014	From Version 4 to 5	Changed	Changes in the Standard Features and How to order Sections.
01-Aug-2014	From Version 3 to 4	Changed	Changed the How to Order Section
21-May-2014	From Version 2 to 3	Changed	Text in How to Order section was updated.
29-Apr-2014	From Version 1 to 2	Changed	Formatting changes were made throughout.

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