



Huawei FusionServer 2288H V5 Server

Flexible Configurations for Diverse Workloads



2288H V5 (8-drive)



2288H V5 (12-drive)



2288H V5 (25-drive)



2288H V5 (24-drive)

- 2 Intel® Xeon® Scalable Processors in 2U space, with 24DDR4 DIMMs
- 2 10GE and 2 GE LOM ports, and 10PCIe expansion slots
- Leverages intelligent energy saving to improve performance per watt by 16%; combines intelligent management features to enable up to 93% accuracy for fault locating

Supports flexible configuration, which is especially suitable for scenarios such as virtualization, database, HPC, and big data analytics; supports large-capacity local storage resources.

Overview

Communications service providers are seeking to change the economics and service deployment agility of their networks by embracing network functions virtualization (NFV)-based services. This network revolution provides the agility and flexibility to support new high-bandwidth applications like 5G and new high device-count services such as internet of things (IoT).

NFV replaces fixed-function appliances with virtual network functions (VNFs) that run on general-purpose Intel® architecture-based servers. With an NFV server in place, a CommSP can remotely turn up or turn down services in a very short time. Networks can be lower cost through the general-purpose nature of the server as well as the ability to use the server for multiple services.



Huawei has partnered with Intel to verify its Huawei FusionServer 2288H V5 Server as an Intel Select Solution for NFVI. This lets users benefit from both Huawei's and Intel's experience in the NFV market and get workload-optimized performance from the Intel® Xeon® Scalable processors.

Feature Highlights

Supreme Performance with Flexible Configurations

- Supports 2 Intel® Xeon® Scalable Processors in a 2U space. Intel® Ultra Path Interconnect (Intel® UPI) bus supports rates of up to 10.4 GT/s, and a single CPU supports up to 28 cores. The server supports Intel® Turbo Boost Technology, Intel® Hyper-Threading Technology, and Intel® Advanced Vector Extensions 512 (Intel® AVX-512).
- Provides 24 DDR4 DIMM slots, and delivers memory speeds of up to 2,666 MT/s. This is ideal for application scenarios that require large-capacity memory.
- Supports heterogeneous computing acceleration, configurable with 2 dual-slot full-height full-length (FHFL) GPU or FPGA accelerator cards.
- Supports 20 3.5-inch or 31 2.5-inch hard drives for local storage (configurable with 4, 8, 12, 24, or 28 NVMe SSD disks).
- Supports two GE and two 10GE LAN on motherboard (LOM) ports, meeting networking requirements of 98% scenarios with streamlined configuration.

Smart Power Saving and Better Energy Efficiency

- Leverages patented Dynamic Energy Management Technology (DEMT), and multiple power-saving measures such as component hibernation, proportional-integral-derivative (PID) algorithm based fan speed tuning, and active-standby power supplies, driving down overall equipment power consumption by up to 16% without compromising workload performance.
 - Supports 80 Plus® Titanium power supply units (PSUs), with up to 96% conversion efficiency and compliant with ENERGY STAR and China Environmental Labelling.
 - Supports 550 W, 900 W, 1,200 W, and 1,500 W PSU options, flexibly adapting to different power requirements. The 1,200 W and 1,500 W PSUs support DC and high-voltage DC (HVDC) technologies, enabling better energy utilization.
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Unmatched Intelligent Manageability, Integration, and Openness

- Uses patented intelligent Fault Diagnosis & Management (FDM) technology, delivering up to 93% accuracy in diagnosing core component faults.
- Integrates eSight for smart entire-lifecycle O&M, boosting deployment and O&M efficiency.
 - ✓ Supports batch OS installation, slashing the average OS installation time of each server from hours to minutes.
 - ✓ Supports automated firmware upgrade, with flexible and configurable upgrade policies for different components and drivers.
 - ✓ Supports stateless computing, allowing for rapid replication of live-network configuration and swift failover.
- 2288H V5 comes with a touchscreen LCD panel for fault diagnosis, allowing O&M personnel to quickly locate faults(supported only by the 2288H V5 8-drive model).
- Provides standardized open interfaces and development guides, facilitating seamless integration with third-party management software.

Key Benefits

Key benefits of investing in Huawei's Intel Select Solution for NFVI include the following:

Faster evaluation: Intel Select Solutions for NFVI tight hardware and software specifications eliminate guesswork and speed decision-making. IT managers can focus their search on key value-added elements and select an optimal solution quickly.

Fast and easy deployment: Intel Select Solutions for NFVI feature pre-defined settings and rigorous system-wide tuning for efficient pre-deployment testing. IT staff know what to expect up front, which speeds time to service delivery and increases confidence in solution performance.

Workload-optimized performance: Intel Select Solution for NFVI configurations are designed by Intel and its partners to deliver to a performance threshold for the workload and are built on the latest Intel architecture technology, including Intel Xeon Scalable platforms.

Technical Specifications



Item	2288H V5
Form factor	2U rack server
Processors	Intel® Xeon® Gold Processor 6138/6138T SKU, 2.0 GHz, 20C, 125W or higher number Gold/Platinum SKU
Chipset platform	Intel® C622
Memory	24 DDR4 DIMM slots, up to 2,666 MT/s
Internal storage	Supports the following hard drive configuration options: <ul style="list-style-type: none">• 4, 8, 12, 24, or 28 NVMe SSDs• 31 x 2.5-inch SAS/SATA hard drives Flash storage: 2 M.2 SSDs
RAID support	<ul style="list-style-type: none">• RAID 0, 1, 10, 1E, 5, 50, 6, or 60• Configured with a supercapacitor for cache power-off protection• Supports RAID level migration, drive roaming, self-diagnosis, and web-based remote configuration
Network ports	<ul style="list-style-type: none">• LOM: 2 x 10GE + 2 x GE ports• Flexible NIC: 2 x GE, 4 x GE, 2 x 10GE, or 1/2 x 56G FDR IB ports
PCIe expansion	Up to 10 PCIe 3.0 slots, including 1 for a RAID controller card and 1 for a flexible NIC.
Heterogeneous accelerator cards	2 dual-slot FHFL GPU or FPGA heterogeneous accelerator cards For details, visit http://support.huawei.com/onlinetoolsweb/ftca/indexEn?serise=2 .
Fan modules	4 hot-swappable counter-rotating fan modules with support for N+1 redundancy



Power supply units	<p>2 hot-swappable PSUs with support for 1+1 redundancy and the following configuration options (Note 1):</p> <ul style="list-style-type: none">• 550 W AC Platinum PSUs (input: 100 V to 240 V AC, or 192 V to 288 V DC)• 900 W AC Platinum/Titanium PSUs (input: 100 V to 240 V AC, or 192 V to 288 V DC)• 1500 W AC Platinum PSUs<ul style="list-style-type: none">– 1000 W (input: 100 V to 127 V AC)– 1500 W (input: 200 V to 240 V AC, or 192 V to 288 V DC)• 1500 W 380 V HVDC PSUs (input: 260 V to 400 V DC)• 1200 W -48 V to -60 V DC PSUs (input: -38.4 V to -72 V DC)
Management	<ul style="list-style-type: none">• Provides management features such as fault diagnosis, dynamic energy management technology (DEMT), and hardware security hardening based on Huawei iBMC chips; provides mainstream interfaces, such as Redfish interfaces, enabling easy integration.• Optionally configured with the Huawei eSight management software to provide advanced management features such as batch OS deployment and automated firmware upgrade, enabling automated entire-lifecycle management.
Host Operating System	<ul style="list-style-type: none">• FusionSphere 6.3
Guest Operating Systems (Recommended)	<ul style="list-style-type: none">• Ubuntu 16.04 LTS• CentOS 7.2• Red Hat Enterprise Linux 7.4 <p>https://www.intel.com/content/www/us/en/products/solutions/select-solutions/network/nfvi.html</p> <p>For details, visit http://support.huawei.com/online/toolsweb/ftca/indexEn?serise=2.</p>
Security	<ul style="list-style-type: none">• Intel® Boot Guard• Power-on password• Administrator password• Trusted Platform Module (TPM)• Security front panel
Operating temperature	5°C to 45°C (41°F to 113°F), compliant with ASHRAE A3 and A4



Certification	CE, UL, FCC, CCC, and RoHS
Installation suite	L-shaped guide rails, adjustable guide rails, and holding rails
Dimensions (H x W x D)	<ul style="list-style-type: none">• Chassis with 3.5-inch hard drives: 86.1 mm x 436 mm x 748 mm (3.39 in. x 17.17 in. x 29.45 in.)• Chassis with 2.5-inch hard drives: 86.1 mm x 436 mm x 708 mm (3.39 in. x 17.17 in. x 27.87 in.)
Remarks: Note 1: The Titanium PSU and 1,200 W and 1,500 W PSUs are planned for release in 2018Q3.	

**Last updated on August 10, 2018*

Learn More

To find out more about the Huawei FusionServer 2288H V5 Server, visit <https://e.huawei.com/us/products/cloud-computing-dc/servers/rh-series/2288h-v5>

Intel Select Solutions: intel.com/selectsolutions

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