Huawei FusionServer

V5 Rack Server

HUAWEI TECHNOLOGIES CO., LTD.

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Huawei FusionServer
1288H V5 Server

1288H V5 (4-drive)

1288H V5 (8-drive)

1288H V5 (10-drive)

The Huawei FusionServer 1288H V5 is a 1U 2-socket rack server. It is ideal for high-density deployment to process workloads such as cloud computing virtualization, high-performance computing (HPC), and big data processing. It delivers superior performance and excellent scalability and at the same time improves space utilization in data centers, driving down overall expenditure for customers.

Feature Highlights

Superior Performance, Ultra-high Density

- Supports 2 Intel® Xeon® Scalable Processors in a 1U space. Its Ultra Path Interconnect (UPI) bus supports rates of up to 10.4 GT/s, and a single CPU supports up to 28 cores. The server supports the Intel® Turbo Boost, hyper-threading, and Advanced Vector Extensions (AVX-512). A single processor delivers up to 65% higher compute power than the previous-generation processor.
- Provides 24 DDR4 DIMM slots, and delivers memory speeds of up to 2,666 MT/s and memory capacities of up to 3 TB (with 128 GB DIMMs). This is ideal for application scenarios that require large-capacity memory.
- Supports heterogeneous computing acceleration, configurable with 2 single-slot half-height half-length (HHHL) GPU or FPGA accelerator cards.
- Supports two GE and two 10GE LAN on motherboard (LOM) ports, meeting networking requirements of 98% scenarios with streamlined configuration.

Note: According to the data released by SPEC as of July 13, 2017, the FusionServer 1288H V5 ranks No. 1 in the SPECint_base2006 performance test.

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.

High Manageability, Integration, and Openness

- Uses patented 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.
- Integrates fault diagnosis LEDs on the front panel to display error codes in real time, enabling maintenance personnel to rapidly locate a fault.
- Provides standardized open interfaces and development guides, facilitating seamless integration with third-party management software.

Technical Specifications

	1288H V5
Form factor	1U rack server
Processors	1 or 2 Intel® Xeon® Scalable Processors of up to 205 W
Chipset platform	Lewisburg-2
Memory	24 DDR4 DIMM slots, up to 2,666 MT/s
Internal storage	Three types of hard drive configurations supported: • 10 x 2.5-inch hard drives (6–8 NVMe SSDs and 2–4 SAS/SATA HDDs, total number of drives ≤ 10) (Note1), which can be: » 0–6 NVMe SSDs + 0–4 SAS/SATA HDDs, or » 0–7 NVMe SSDs + 0–3 SAS/SATA HDDs, or » 0–8 NVMe SSDs + 0–2 SAS/SATA HDDs • 8 x 2.5-inch SAS/SATA HDDs or SSDs (the NVMe model supports 4 NVMe SSDs) (Note2) • 4 x 3.5-inch SAS/SATA HDDs or SSDs Flash storage: • 2 M.2 SSDs(Note3)
RAID support	• RAID 0, 1, 10, 5, 50, 6, or 60 • Configured with a supercapacitor for cache power-off protection • Supports RAID state transition, RAID configuration memory, self-diagnosis, and web-based remote configuration
Network ports	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 5 PCIe slots: • 2 x16 slots for 2 HHHL PCIe 3.0 x16 standard cards • 1 x8 slot for 1 FHHL PCIe 3.0 x16 standard card • 1 PCIe slot dedicated for 1 RAID controller card • 1 PCIe slot for 1 flexible network interface card (NIC)
Heterogeneous accelerator cards	2 single-slot HHHL GPU or FPGA heterogeneous accelerator cards For details, visit http://support.huawei.com/onlinetoolsweb/ftca/indexEn?serise=2.
Fan modules	7 hot-swappable counter-rotating fan modules with support for N+1 redundancy
Power supply units	2 hot-swappable PSUs with support for 1+1 redundancy and the following configuration options(Note4): • 550 W AC Platinum PSUs • 900 W AC Platinum/Titanium PSUs • 1,500 W AC Platinum PSUs • 1,500 W 380 V HVDC PSUs • 1,200 W -48 V to -60 V DC PSUs
Management	• Based on the Huawei iBMC chip, provides comprehensive management features such as fault diagnosis, automated O&M, and hardware security hardening; supports mainstream standard interfaces such as Redfish, SNMP, and IPMI 2.0, facilitating integration with third-party management software; provides remote management interfaces based on HTML5 and VNC KVM; supports features such as Smart Provisioning and Agentless to simplify management. • Optionally configured with Huawei eSight management software; provides advanced management features such as stateless computing, batch OS deployment, and automated firmware upgrade, enabling smart and automated entire-lifecycle management.
Operating Systems	Microsoft Windows Server, Red Hat Enterprise Linux, SUSE Linux Enterprise Server, CentOS, Citrix XenServer, VMware ESXi For details, visit http://support.huawei.com/onlinetoolsweb/ftca/indexEn?serise=2.
Security	Supports Power-on password, Administrator password, Trusted Platform Module (TPM), Security front panel security features
Power supply	110 V/220 V AC or 240 V/380 V DC or -48 V DC
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	Guide rails and adjustable holding rails
Dimensions (H x W x D)	Chassis with 3.5-inch hard drives: 43 mm x 436 mm x 748 mm (1.70 in. x 17.17 in. x 29.45 in.) Chassis with 2.5-inch hard drives: 43 mm x 436 mm x 708 mm (1.70 in. x 17.17 in. x 27.87 in.)

Special Declaration:

*Last updated on December 5, 2017

Note 1: The 10-SFF drive model is planned for release in December 2017.
Note 2: The NVMe model is planned for release in December 2017.
Note 3: The 2-M.2 SSD feature is planned for release in December 2017.
Note 4: The Titanium PSU and 1,200 W and 1,500 W PSUs are planned for release in 2018.

Huawei FusionServer
2288H V5 Server

2288H V5 (8-drive)

2288H V5 (12-drive)

2288H V5 (25-drive)

The Huawei FusionServer 2288H V5 is a 2U 2-socket rack server. It supports configuration of over 100 types of resources by just one model, flexibly meeting the hardware resource requirements of diverse workloads. It is an ideal choice for application scenarios such as cloud computing virtualization, databases, high-performance computing (HPC), and big data processing.

Feature Highlights

Supreme Performance with Flexible Configurations

- Supports 2 Intel® Xeon® Scalable Processors in a 2U space. Its Ultra Path Interconnect (UPI) bus supports rates of up to 10.4 GT/s, and a single CPU supports up to 28 cores. The server supports the Intel® Turbo Boost, hyper-threading, and Advanced Vector Extensions (AVX-512). A single processor delivers up to 65% higher compute power than the previous-generation processor.
- Provides 24 DDR4 DIMM slots, and delivers memory speeds of up to 2,666 MT/s and memory capacities of up to 3 TB (with 128 GB DIMMs). 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 up to 20 x 3.5-inch or 31 x 2.5-inch local hard drives (configurable with 4, 8, 12, 24, or 28 NVMe SSDs), providing flexible configurations to meet diversified storage and performance demands.
- Supports two GE and two 10GE LAN on motherboard (LOM) ports, meeting networking requirements of 98% scenarios with streamlined configuration.

  Note: According to the data released by SPEC as of July 13, 2017, the FusionServer 2288H V5 ranks No. 1 in the SPECint_base2006, SPECint_rate_base2006, and SPECfp_rate_base2006 performance tests.

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.

  Note: According to the data released by SPEC as of July 13, 2017, the FusionServer 2288H V5 ranks No. 1 in the SPECpower_ssj2008 energy efficiency test.

High Manageability, Integration, and Openness

- Uses patented 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.
- Comes with a touchscreen LCD panel for fault diagnosis, allowing O&M personnel to quickly locate faults.
- Provides standardized open interfaces and development guides, facilitating seamless integration with third-party management software.

Technical Specifications

	2288H V5
Form factor	2U rack server
Processors	1 or 2 Intel® Xeon® Scalable Processors of up to 205 W
Chipset platform	Lewisburg-2
Memory	24 DDR4 DIMM slots, up to 2,666 MT/s
Internal storage	Supports the following hard drive configuration options: • 8 x 2.5-inch SAS/SATA HDDs or SSDs • 12/16/20 x 3.5-inch SAS/SATA HDDs(Note1) • 4, 8, 12, 24, or 28 NVMe SSDs (Note2) • 31 x 2.5-inch SAS/SATA HDDs or SSDs(Note1) Flash storage: • 2 M.2 SSDs(Note3)
RAID support	• RAID 0, 1, 10, 1E, 5, 50, 6, or 60 • Configured with a supercapacitor for cache power-off protection • Supports RAID state transition, RAID configuration memory, self-diagnosis, and web-based remote configuration
Network ports	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 slots: • 4 x8 slots for 4 FHFL PCIe 3.0 x16 standard cards • 3 x8 slots for 3 FHHL PCIe 3.0 x16 standard cards • 1 x8 slot for 1 FHHL PCIe 3.0 x8 standard card • 1 PCIe slot dedicated for 1 RAID controller card • 1 PCIe slot for 1 flexible network interface card (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	2 hot-swappable PSUs with support for 1+1 redundancy and the following configuration options(Note4): • 550 W AC Platinum PSUs • 900 W AC Platinum/Titanium PSUs • 1,500 W AC Platinum PSUs • 1,500 W 380 V HVDC PSUs • 1,200 W -48 V to -60 V DC PSUs
Management	• Based on the Huawei iBMC chip, provides comprehensive management features such as fault diagnosis, automated O&M, and hardware security hardening; supports mainstream standard interfaces such as Redfish, SNMP, and IPMI 2.0, facilitating integration with third-party management software; provides remote management interfaces based on HTML5 and VNC KVM; supports features such as Smart Provisioning and Agentless to simplify management. • Optionally configured with Huawei eSight management software; provides advanced management features such as stateless computing, batch OS deployment, and automated firmware upgrade, enabling smart and automated entire-lifecycle management.
Operating Systems	Microsoft Windows Server, Red Hat Enterprise Linux, SUSE Linux Enterprise Server, CentOS, Citrix XenServer, VMware ESXi For details, visit http://support.huawei.com/onlinetoolsweb/ftca/indexEn?serise=2.
Security	Supports Power-on password, Administrator password, Trusted Platform Module (TPM), Security front panel security features
Power supply	110 V/220 V AC or 240 V/380 V DC or -48 V DC
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	Guide rails and adjustable holding rails
Dimensions (H x W x D)	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.)

Special Declaration:

*Last updated on December 5, 2017

Note1: The 20-LFF drive model is planned for release in October 2017. The 31-SFF drive is planned for release in 2018.

Note2: The 4*NVMe model is planned for release in December 2017 (while the 12/24*NVMe models are planned for release in 2018Q1).

Note3: The 2-M.2 SSD feature is planned for release in December 2017.

Note4: The Titanium PSU and 1,200 W and 1,500 W PSUs are planned for release in 2018.

Huawei FusionServer
2488 V5 Server

2488 V5 (8-drive)

2488 V5 (25-drive)

2488 V5 (8-NVMe + 16-SAS/ SATA drive)

The FusionServer 2488 V5 is Huawei's latest 2U 4-socket rack server. It offers an ideal choice for compute-intensive scenarios such as cloud computing virtualization, high-performance computing (HPC), and databases. One FusionServer 2488 V5 saves about 32%* OPEX in the virtualization scenario compared with two traditional 2U 2S rack servers.

*Source: Test results from Huawei Global Computing Innovation OpenLab, Q2 2017

Feature Highlights

Superior Performance with Higher Efficiency

- Supports 4 Intel® Xeon® Scalable Processors (Platinum 8100, Gold 6100, or Gold 5100 series) in a 2U space. Its Ultra Path Interconnect (UPI) bus supports rates of up to 10.4 GT/s, and a single CPU supports up to 28 cores. The server supports the Intel® Turbo Boost, hyper-threading, and Advanced Vector Extensions (AVX-512). A single processor delivers up to 65% higher compute power than the previous-generation processor.
- Provides 32 DDR4 DIMM slots, and delivers memory speeds of up to 2,666 MT/s and memory capacities of up to 4 TB (with 128 GB DIMMs). This is ideal for application scenarios that require large-capacity memory.
- Supports two GE and two 10GE LAN on motherboard (LOM) ports, meeting networking requirements of 98% scenarios with streamlined configuration.
- Supports up to 25 x 2.5-inch local hard drives (configurable with 8 NVMe SSDs, delivering high speeds without compromising stability.
- One FusionServer 2488 V5 saves about 32%* OPEX in the virtualization scenario compared with two traditional 2U 2S rack servers.

  * Data is derived from Huawei lab tests; actual improvement depends on the real-world scenario.

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.
- Runs with 1,500 W Platinum AC PSUs, meeting ultra-high performance requirements; leverages the DC and high-voltage DC (HVDC) technologies to improve energy utilization.
- PSUs meet the requirements of ENERGY Star and China Environmental Labelling.

High Manageability, Integration, and Openness

- Uses patented 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.
- Integrates fault diagnosis LEDs on the front panel to display error codes in real time, enabling maintenance personnel to rapidly locate a fault.
- Provides standardized open interfaces and development guides, facilitating seamless integration with third-party management software.

| New Option for Distributed Deployment with Higher Computing Efficiency |

Technical Specifications

	2488 V5
Form factor	2U rack server
Processors	2 or 4 Intel® Xeon® Scalable Processors of up to 205W: Platinum 8100, Gold 6100, or Gold 5100 series
Chipset platform	Intel C622
Memory	32 DDR4 DIMM slots, up to 2,666 MT/s
Internal storage	Supports hot-swappable hard drives and the following configuration options: • 8 x 2.5-inch SAS/SATA HDDs on the front • 25 x 2.5-inch SAS/SATA HDDs on the front • 8 x 2.5-inch NVMe SSDs and 16 x 2.5-inch SAS/SATA HDDs on the front(Note1) Flash storage: • 2 M.2 SSDs(Note2)
RAID support	Supports Broadcom MegaRAID 9361-8i standard PCIe RAID controller card, 1 GB cache. Supports functions such as RAID state transition and RAID configuration memory. • The Broadcom MegaRAID 9361-8i standard PCIe RAID controller card supports RAID 0, 1, 5, 6, 10, 50, and 60, and provides a supercapacitor for cache power-off protection.
Network ports	Supports two GE and two 10GE LOM ports. The GE ports are RJ45 ports, and the 10GE ports are SFP+ ports.
PCIe expansion	Up to 9 PCIe 3.0 slots, 3 of which are built-in card slots and the other 6 external card slots: • Slots 1, 4, 7, and 9 are x16 ports, where slot 4 supports FHHL cards and the other 3 slots support HHHL cards. • Slots 2, 3, 5, 6, and 8 are x8 ports and support HHHL cards. The PCIe expansion slots fully support Huawei proprietary NVMe SSD cards, which bolster I/O performance for applications such as searching, caching, and download services.
Fan modules	4 hot-swappable fan modules, providing protection against single-fan failures
Power supply units	2 hot-swappable PSUs, with support for redundancy. The PSUs support the following rated power(Note3): 1,500 W AC Platinum PSUs: • 1,000 W (100–127 V AC input, NOT support 1+1 redundancy) • 1,500 W (200–240 V AC input) • 1,500 W (190–300 V DC input)
Management	• Based on the Huawei iBMC chip, provides comprehensive management features such as fault diagnosis, automated O&M, and hardware security hardening; supports mainstream standard interfaces such as Redfish, SNMP, and IPMI 2.0, facilitating integration with third-party management software; provides remote management interfaces based on HTML5 and VNC KVM; supports features such as Smart Provisioning and Agentless to simplify management. • Optionally configured with Huawei eSight management software; provides advanced management features such as stateless computing, batch OS deployment, and automated firmware upgrade, enabling smart and automated entire-lifecycle management.
Operating Systems	SUSE Linux Enterprise Server, Red Hat Enterprise Linux, Windows Server, Citrix, CentOS, Ubuntu For details, visit http://support.huawei.com/onlinetoolsweb/ftca/indexEn?serise=2.
Security	Supports Power-on password, Administrator password, Trusted Platform Module (TPM), Security front panel security features
GPU	Integrates an SM750 graphics card chip to the mainboard to provide a memory capacity of 32 MB and support a maximum resolution of 1600 x 1200 at 60 Hz with 16 M colors. Note: If a resolution higher than 1280 x 1024 is required, you need to install a dedicated graphics card driver.
Operating temperature	5°C to 45°C (41°F to 113°F), compliant with ASHRAE Classes A3 and A4
Certification	CE, ENERGY STAR, FCC, CCC, RoHS
Dimensions (H x W x D)	Chassis with 2.5-inch hard drives: 86.1 mm (2 U) x 447 mm x 748 mm (3.39 in. x 17.60 in. x 29.45 in.)

Special Declaration:
Note1: The 8-NVMe + 16-SAS/SATA drive model is planned for release in December 2017.
Note2: The 2-M.2 SSD feature is planned for release in December 2017.
Note3: The 2,000 W PSU is planned for release in 2018.

*Last updated on December 5, 2017

Huawei FusionServer

8100 V5 Rack Server

8100 V5

The FusionServer 8100 V5 is an 8U 8-socket rack server ideal for compute-intensive scenarios such as mission-critical services, virtualization consolidation, in-memory computing, and high-performance computing (HPC) fat nodes. The FusionServer 8100 V5 supports up to 8 Intel® Xeon® Scalable Processors, 96 DDR4 DIMM slots, and up to 48 2.5-inch SAS/SATA or 40 2.5-inch NVMe SSDs. The FusionServer 8100 V5 comes with various advanced Reliability, Availability, and Serviceability (RAS) features and security features, ensuring continuous and reliable service running. It also incorporates patented technologies such as Dynamic Energy Management Technology (DEMT) and Fault Diagnosis & Management (FDM), and integrates Huawei's eSight software for entire-lifecycle management, helping customers drive down OPEX and improve ROI.

Feature Highlights

Leading Performance and Rock-Solid Reliability

- Supports 8 Intel® Xeon® Platinum 8100 Scalable Processors in an 8U space. Its Ultra Path Interconnect (UPI) bus supports rates of up to 10.4 GT/s, and a single CPU supports up to 28 cores. The server supports the Intel Turbo Boost, hyper-threading, and Advanced Vector Extensions (AVX-512) technologies. A single processor delivers up to 65% higher compute power than the previous-generation processor.
- Provides 96 DDR4 DIMM slots, and delivers memory speeds of up to 2,666 MT/s and memory capacities of up to 12 TB (configured with 128 GB DIMMs*). This is ideal for application scenarios that require large-capacity memory.
- Supports 48 2.5-inch SAS/SATA or 40 2.5-inch NVMe SSDs for local storage, which deliver 2x and 5x improvement respectively compared with previous-generation products. Mixed configuration of NVMe and SAS/SATA hard drives is supported, meeting different requirements of diverse applications for storage capacity and performance.
- Supports the Huawei FusionPar physical partitioning technology. The server can be switched through one click on the iBMC interface to the Dual-System Mode. The two systems are electrically isolated to prevent fault propagation.
- Supports the Intel advanced RAS features, and provides the ADDDC-MR feature to improve the online correction capabilities for memory correctable errors. Leverages Huawei enhanced algorithms such as fault isolation re-examination and interrupt storm suppression, to improve the precision of memory fault isolation and mitigate the impact of the handling process on system performance.

  * Currently a single LRDIMM supports 64 GB; the feature supporting 128 GB per LRDIMM is planned for release in Q2 2018.

Smart Power Saving and Higher 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 PSU options including 2,000 W AC Titanium, 2,500 W DC Platinum, and 3,000 W AC Platinum, flexibly adapting to various power requirements. The Titanium PSU supports an up to 96% conversion efficiency.
- The PSUs meet the requirements of ENERGY STAR and China Environmental Labelling requirements.

High Manageability, Integration, and Openness

- Uses patented 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.
- Integrates fault diagnosis LEDs to display fault error codes in real time; also supports an optional touchscreen LCD fault diagnosis panel* to help maintenance personnel quickly locate faults.
- Provides standardized open interfaces and development guides, facilitating seamless integration with third-party management software.

  * The LCD fault diagnosis panel feature is planned for release in Q1 2018.

| 8S Server with Top-Rate Performance to Supercharge Your Business |

Technical Specifications

	8100 V5
Form factor	8U rack server
Processors	4 or 8 Intel® Xeon® Platinum 8100 Scalable Processors, with Thermal Design Power (TDP) of up to 205 W
Chipset platform	Intel C622
Memory	Supports up to 96 DDR4 DIMM slots (12 DDR4 DIMM slots per processor), with memory speeds of up to 2,666 MT/s; supports RDIMMs and LRDIMMs: • RDIMMs with memory of up to 3 TB • LRDIMMs with memory of up to 12 TB (Note 1)
Internal storage	Uses a fully modular design; supports 48 2.5-inch SAS/SATA or 40 x 2.5-inch NVMe SSDs; provides the following compute modules (CMs) and front I/O modules (FMs), which provide storage functions and support flexible combinations. • FM with storage function » The front I/O module of model B (FM-B) with storage-enhanced configuration. It supports up to 24 hot-swappable SAS/SATA hard drives, which require configuration of 1 or 2 RAID controller cards. » The front I/O module of model D (FM-D) with support for NVMe. It supports up to 8 U.2 hard drive connectors, which can be connected to SAS/SATA hard drives or NVMe SSDs. FM-D provides 2 built-in RAID slots. When FM-D is populated with NVMe SSDs, it does not require configuring RAID controller cards. • CM with storage function » Compute module of model B (CM-B) with SAS support. Each CM-B supports up to 4 SAS/SATA hard drives. A single server supports up to 6 CM-B modules, and each CM-B requires one RAID controller card. » Compute module of model C (CM-C) with NVMe support. Each CM-C supports up to 4 NVMe SSDs. A single server supports up to 8 CM-C modules, and the CM-C modules do not require RAID controller cards. The SAS/SATA hard drives are hot-swappable. The NVMe SSDs support scheduled hot swap (which requires coordination of the OS). Supports flash storage: • Each High-performance Fusion Console (HFC) provides 2 built-in M.2 slots (Note 2).
RAID support	• Supports RAID 0, 1, 10, 5, 50, 6, or 60 • Supports 2 GB or 4 GB cache; supports a supercapacitor for cache power-off protection • Provides RAID state migration, RAID configuration memory, self-diagnosis, and web-based remote configuration
LOM network ports	2 10GE SFP+ ports and 2 GE RJ45 network ports
PCIe expansion	Up to 18 PCIe 3.0 slots • Back I/O module supports 10 rear PCIe standard cards: » 2 hot-swappable x16 standard cards » 2 hot-swappable x8 standard cards » 6 non-hot-swappable x8 standard cards • Front I/O module: » The FM-B or FM-D supports up to 2 RAID controller card slots • Compute module » Each CM-B supports 1 RAID controller card slot (up to 6 CM-B modules supported by a single server)
Fan modules	8 hot-swappable counter-rotating fans that support N+1 redundancy and can be maintained without opening the chassis
Power supply units	4 hot-swappable PSUs with support for N+N redundancy and the following configuration options: • 2,000 W AC Titanium PSUs • 2,500 W DC Platinum PSUs • 3,000 W AC Platinum PSUs
Management	• Based on the Huawei iBMC chip, provides comprehensive management features such as fault diagnosis, automated O&M, and hardware security hardening; supports mainstream standard interfaces such as Redfish, SNMP, and IPMI 2.0, facilitating integration with third-party management software; provides remote management interfaces based on HTML5 and VNC KVM; supports features such as Smart Provisioning and Agentless to simplify management. • Optionally configured with Huawei eSight management software to provide advanced management features such as stateless computing, batch OS deployment, and automated firmware upgrade, enabling smart and automated entire-lifecycle management.
Operating systems	SUSE Linux, Red Hat Linux, Windows Server, VMware, Citrix For details, visit http://support.huawei.com/onlinetoolsweb/ftca/index?serise=2.
Security	• Power-on password • Administrator password • Trusted Platform Module (TPM)/Trusted Cryptography Module (TCM)
Power supply	• 2,000 W or 3,000 W AC PSUs, typical input voltage 220 V or 110 V AC • 2,500 W DC PSUs, typical input voltage -48 V DC
Operating temperature	5°C to 40°C (41°F to 104°F), compliant with ASHRAE Class A3 Remarks: Processors of TDP 150 W and below (including 8153, 8156, 8158, and 8164) support 45°C operating temperature (ASHRAE Class A4); when the server is configured with FM-B, the supported maximum operating temperature is 35°C.
Certification	CE, ENERGY STAR, FCC, RoHS
Installation suite	Uses the holding-rail-free design, and supports L-shaped guide rails
Dimensions (H x W x D)	352 mm x 447 mm x 855 mm (13.86 in. x 17.60 in. x 33.66 in.)

Remarks: Note 1: Currently LRDIMM supports up to 6 TB memory; the feature for supporting an up to 12 TB memory is planned for release in Q2 2018.
Note 2: The feature supporting M.2 is planned for release in Q2 2018.

*Last updated on December 5, 2017

For more information

To learn more about Huawei's Servers, contact Huawei sales representatives or business partners, or visit:

http://e.huawei.com/cn/products/cloud-computing-dc/servers

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Why Huawei servers?

Huawei is a world-leading server provider with a broad spectrum of server offerings including rack, high-density, blade servers and KunLun Mission Critical Servers. Huawei is the industry's only vendor that has the integrated capabilities of server R&D, manufacture, and delivery. Huawei servers have been recognized for their superior quality, rock-solid reliability, extraordinary performance, ease of management, energy efficiency, and security. Huawei servers have served over 5,000 customer accounts across various industries around the globe, including government, finance, electric power, Internet, telecom, energy, transportation, and education.