



## Rack-Scale Server FusionPoD

New Benchmark for Commercial Liquid-cooled Servers  
New Flagship of High-Density Computing Power



xFusion Digital Technologies Co., Ltd.

# Rack-Scale Server

## FusionPoD

### Introduction



FusionPoD 720



DH122E V6



DH120E V7

The FusionPoD 720 rack-scale server (FusionPoD 720) adopts the leading integrated cabinet design, including the centralized N+1 power supply system, three-bus design of power, network, and liquid cooling, and blind mating of nodes. It achieves easy O&M benefiting from cable-free deployment in a cabinet and is expected to support unmanned O&M in the coming years. The FusionPoD 720 features high density, powerful performance, high energy efficiency, robust reliability, integrated delivery, and simplified O&M. It is applicable to cloud computing, virtualization, big data, scientific computing, and other applications, and can be widely deployed in enterprise business, Internet data centers (IDCs), telecom, Internet, and other data centers.

### Highlights



#### High-Density Computing Power Enhanced by 8 Times

- Power supply: industry-leading N+1 centralized power supply technology and unique CQC level-6 (Ultra-Titanium) PSUs, delivering up to 96.5% conversion efficiency
- Heat dissipation: high-density shovel-tooth cold plates, meeting heat dissipation requirements of high-power chips
- Data communication: high-speed passive cable backplane



#### Three-Bus Full Blind Mating and Cable-Free Design with Ultimate Intelligence

- Industry-unique three-bus blind mating (power, network, and liquid cooling) design, with 0 cables in the cabinet
- Blind node mating for efficient O&M: blind mating of nodes, supporting unmanned O&M in the future
- Integrated delivery without onsite installation: installation and commissioning of the rack-scale server on the production line, realizing the integrated delivery to the customer's equipment room and improving rollout efficiency by times
- RoT-based secure boot ensures security everywhere



#### Native Liquid Cooling Design with pPUE as Low as 1.06, for Commercial Use

- Native liquid cooling: non-porous riveting and retaining wall design in the node, high-efficiency cold plates and passive rear door heat exchanger (RDHx), and pPUE as low as 1.06, with TÜV SÜD pPUE certificate
- Ten years of reliability certified by TÜV Rheinland: reliability design of the rack-scale server, ensuring 10+ years of service life, with the industry's first TÜV Rheinland liquid cooling leakage-free certificate
- Large-scale commercial use, over 50,000 nodes deployed on the live network



<b>Number of Slots</b>	<p>Up to 46 slots</p> <p>Notes:</p> <ul style="list-style-type: none"> <li>- Slots 1–16 and 22–41: standard 1U height, for housing server nodes</li> <li>- Slots 17–21: 1.2U height, for housing switches</li> <li>- Slots 42–43: standard 1U height, for housing PDUs</li> <li>- Slots 44–46: standard 1U height, for housing PSUs</li> </ul>
<b>Server Node</b>	36 x 1U nodes
<b>pPUE</b>	<ul style="list-style-type: none"> <li>- Cabinet with RDHx: pPUE as low as 1.06</li> <li>- Cabinet without RDHx: pPUE &lt; 1.2</li> </ul>
<b>Management Module</b>	<p>Cabinet management module</p> <ul style="list-style-type: none"> <li>- PSU, sensor, and asset management in the cabinet, cabinet-level liquid leakage monitoring</li> </ul>
<b>Environmental Specifications</b>	<ul style="list-style-type: none"> <li>- Operating temperature: 5°C to 45°C (41°F to 113°F), compliant with ASHRAE Classes A1 to A4</li> <li>- Storage temperature: <ul style="list-style-type: none"> <li>Short-term storage temperature (≤ 72 hours): -40°C to +70°C (-40°F to +158°F)</li> <li>Long-term storage temperature (&gt; 72 hours): 21°C to 27°C (69.8°F to 80.6°F)</li> </ul> </li> <li>- Maximum temperature change: 20°C (68 °F) per hour</li> </ul>
<b>Relative Humidity (Non-Condensing)</b>	<ul style="list-style-type: none"> <li>- Operating humidity: 8% to 90%</li> <li>- Short-term storage humidity (≤ 72 hours): 5% to 95%</li> <li>- Long-term storage humidity (&gt; 72 hours): 30% to 69%</li> <li>- Maximum humidity change rate: 20% per hour</li> </ul>
<b>Switching Slot</b>	<p>Up to 5 x switch slots</p> <ul style="list-style-type: none"> <li>- Slot 19 supports a maximum of three customized switches (including two customized service switches and one customized out-of-band management switch).</li> <li>- Each slot from slots 17/18/20/21 supports one 1U standard third-party 10GE/25GE/100GE switch or two customized service switches.</li> </ul>
<b>Power Distribution</b>	<ul style="list-style-type: none"> <li>- 2N power supply system</li> <li>- Centralized power supply</li> <li>- 12 x PSUs (3 kW per PSU)</li> <li>- PSUs in N+1 or N+2 backup power supply</li> <li>- 2+2 three-phase AC power inputs</li> <li>- Voltage range: 346 V AC to 415 V AC</li> </ul>
<b>Product Certification</b>	CE and UL
<b>Max. Weight in Full Configuration</b>	1225 Kg (2700.66 lb)
<b>Dimensions (W x H x D)</b>	<ul style="list-style-type: none"> <li>- Cabinet with RDHx and without casters: 600 mm x 2200 mm x 1225 mm (23.62 in. x 86.61 in. x 48.23 in.)</li> <li>- Cabinet with RDHx and casters: 600 mm x 2250 mm x 1225 mm (23.62 in. x 88.58 in. x 48.23 in.)</li> <li>- Cabinet without RDHx and casters: 600 mm x 2200 mm x 1175 mm (23.62 in. x 86.61 in. x 46.26 in.)</li> <li>- Cabinet without RDHx and with casters: 600 mm x 2250 mm x 1175 mm (23.62 in. x 88.58 in. x 46.26 in.)</li> </ul>

# Rack-Scale Server

## DH122E V6

### Introduction



DH122E V6

The DH122E V6 is a 1U liquid-cooled server. The server is designed for improving the system computing density, featuring high computing performance, high liquid cooling ratio, and easy O&M. The DH122E V6 is ideal for high-density application scenarios, such as data centers, cloud computing, big data, and Internet applications.

### Technical Specifications

<b>Processor</b>	2 x 3rd Gen Intel® Xeon® Scalable processors (Intel Whitley Platform all series Ice Lake processors), up to 300 W
<b>Chipset</b>	Intel® C621A
<b>DIMM</b>	Up to 32 x DDR4 DIMMs; up to 16 x DDR4 DIMMs with liquid cooling for memory
<b>Local Storage</b>	Multiple drive configurations with hot swap support: 2 x SAS/SATA drives + 10 x SAS/SATA/NVMe drives
<b>RAID</b>	RAID 0, 1, 10, 5, 50, 6, or 60; supercapacitor for cache data power failure protection, RAID level migration, drive roaming, self-diagnosis, and remote web-based configuration
<b>Network</b>	Multiple network expansion capabilities, 1 x OCP 3.0 NIC, which can be configured as required
<b>PCIe Expansion</b>	4 x PCIe slots, including 1 x dedicated PCIe slot for RAID controller card, and 3 x standard PCIe 4.0 slots
<b>Fan Module</b>	7 x hot-swappable counter-rotating fan modules in N+1 redundancy
<b>Cold Plate</b>	One liquid-cooling board can be configured. The specifications are as follows: - 2 x CPUs + VRD liquid cooling, with liquid cooling ratio up to 65% - 2 x CPUs + 16 x DIMMs + VRD liquid cooling, with liquid cooling ratio up to 80%
<b>Power Supply</b>	One DC power module can be configured. The specifications are as follows: - 1600 W PSU - 3000 W PSU
<b>Management</b>	The iBMC chip integrates one dedicated management GE network port, providing comprehensive management features such as fault diagnosis, automatic O&M, and hardware security hardening. - The iBMC supports standard interfaces such as Redfish, SNMP, and IPMI 2.0, provides a remote management user interface based on HTML5/VNC KVM; supports out-of-band management functions such as monitoring, diagnosis, configuration, Agentless, and remote control for simplified management - It is optional to configure the FusionDirector management software that provides advanced management features such as five intelligent technologies, enabling intelligent, automatic, visualized, and refined management throughout the lifecycle
<b>OS</b>	Microsoft Windows Server, SUSE Linux Enterprise Server, VMware ESXi, Red Hat Enterprise Linux, Oracle, Ubuntu, Debian, and openEuler
<b>Security</b>	Security features such as power-on password, administrator password, TPM 2.0, and secure boot
<b>Operating Temperature</b>	5°C to 45°C (41°F to 113°F), compliant with ASHRAE Classes A1 to A4
<b>Product Certification</b>	CE and UL
<b>Dimension (H x W x D)</b>	43.2 mm x 536 mm x 900 mm (1.70 in. x 21.10 in. x 35.43 in.)

# Rack-Scale Server

## DH120E V7

### Introduction




DH120E V7

DH120E V7 is a next-generation 1U 2-socket liquid-cooled server designed for the Internet, IDC, cloud computing, enterprise business, and telecom service applications. DH120E V7 features flexible expansion, high performance computing, high reliability, simplified management, and easy deployment. It is ideal for core IT services, cloud computing, virtualization, scientific computing, enterprise or telecom service applications, and other complex workloads.

### Technical Specifications

<b>Processor</b>	2 x 4th Gen Intel® Xeon® Scalable processors (Intel Eagle Stream Platform all series Sapphire Rapids processors), with TDP up to 350 W
<b>Chipset</b>	Emmitsburg PCH
<b>DIMM</b>	Up to 32 x DDR5 DIMMs
<b>Local Storage</b>	Multiple drive configurations with hot swap support: up to 12 x SAS/SATA/NVMe drives
<b>RAID</b>	RAID 0, 1, 10, 5, 50, 6, or 60; supercapacitor for cache data power failure protection, RAID level migration, drive roaming, self-diagnosis, and remote web-based configuration
<b>Network</b>	Multiple network expansion capabilities; up to 4 x standard HHHL NIC slots which can be configured as required
<b>PCIe Expansion</b>	Up to 4 x PCIe 5.0 x16 HHHL slots and 1 x HHHL slot for standard RAID controller card/1 x self-developed RAID controller card
<b>Fan Module</b>	7 x hot-swappable counter-rotating fan modules in N+1 redundancy
<b>Cold Plate</b>	2 x processors and VRD liquid cooling
<b>Power Supply</b>	1 x 3000 W DC PSU
<b>Management</b>	BMC management system for the server node
<b>OS</b>	SLES, Red Hat, VMware, and Ubuntu
<b>Security</b>	Administrator password, TPM 2.0, and secure boot
<b>Operating Temperature</b>	5°C to 45°C (41°F to 113°F), compliant with ASHRAE Classes A1 to A4
<b>Certification</b>	CE and UL
<b>Dimension (H x W x D)</b>	43.2 mm x 536 mm x 900 mm (1.70 in. x 21.10 in. x 35.43 in.)





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