

IEIT SYSTEMS Server NF5180G7

Powered by Intel Processors
Perfect Combination of Computing Density and Scalability



The NF5180G7 series maximizes the performance, computing density, and scalability in a 1U space and is suitable for a variety of computing-intensive service scenarios such as high-performance computing and virtualization. With rich storage matrices, the NF5180G7 meets the needs of scalability and network balance to the greatest extent. It also satisfies the low-PUE needs of more high-density data centers by integrating multi-dimensional cooling solutions such as air cooling, cold plate cooling, and immersion cooling in the 1U models.

Product Models

Model Name	Front/Rear Access	Cooling
NF5180-M7-A0-R0-00	Rear	Air cooling
NF5180-M7-A0-F0-00	Front	Air cooling
NF5180-M7-C0-R0-00	Rear	Cold plate cooling
NF5180-M7-M0-U0-00	Up	Immersion cooling

Product Features

Excellent performance and high efficiency

- Built on the 4th /5th Gen Intel® Xeon® Scalable processors, the NF5180G7 series supports up to 64 cores and 128 threads per CPU with a TDP of up to 350 W and a max Turbo frequency of 4.2 GHz through 4 UPI links at 20 GT/s.
- Supports up to 32 DDR5 ECC DIMMs (5,600 MT/s, RDIMMs) to deliver high speeds and superior availability.

Flexible configurations and outstanding scalability

- The NF5180G7 series supports up to 12 2.5-inch SAS/SATA/NVMe drives or 32 E1.S SSDs at the front, and up to 2 2.5-inch SAS/SATA drives at the rear (refer to the specific configurations).
- Supports PCIe 5.0/4.0, up to 2 optional hot-swappable OCP 3.0, and provides 1 Gb, 10 Gb, 25 Gb, 40 Gb, 100 Gb, 200 Gb, and 400 Gb network interfaces.
- With Compute Express Link (CXL), an open-source and standard cache-coherent interconnect protocol, and E3.S storage medium, the NF5180G7 provides caching media in addition to traditional DIMMs to meet the core needs of large-capacity cache services.

Security, reliability, and smart O&M

- The front I/O design enables O&M personnel to operate in the cold aisle, which simplifies O&M operations, extends the service life of thermo-sensitive components such as optical modules and smart NICs, and improves data stability.
- The redundancy design of core components, such as the BIOS and BMC, ensures that the system can start by switching to the standby flash, ensure that the system can start by switching to the standby chip, and supports the online upgrade of the BMC without suspending services, thus guaranteeing service continuity.

High efficiency, carbon emission reduction, and energy conservation

- Supports cold plate cooling and immersion cooling, and provides comprehensive liquid-cooling solutions for data centers. With full-stack liquid-cooling capabilities, the NF5180G7 series can drop the PUE of data centers to below 1.1.
- By working with Inspur's unique zonal intelligent control technology, the NF5180G7 series can adjust the fan speed intelligently based on the power consumption of components in different air ducts, eliminating temperature transmission delays and realizing energy-saving fan speed regulation and accurate air supply.
- With the focus on environmental protection, key components of the series meet the lead-free requirements (RoHS), and all packaging and packing materials are recyclable.

Product Specifications

Item	Description	
Form Factor	1U rack server	
Processor	Up to two 4 th /5 th Gen Intel® Xeon® Scalable processors Up to 64 cores, with a max Turbo frequency of 4.2 GHz 4 UPI links per CPU and up to 20 GT/s per link TDP up to 350 W	
Chipset	Intel Emmitsburg	
Memory	Up to 32 DDR5 DIMMs (5,600 MT/s) 16 DIMMs per CPU and 32 DIMMs for 2 CPUs RDIMMs supported	
Storage Drive	General Front: 32 × E1.S SSD 12 × 2.5-inch SAS/SATA/NVMe drive (up to 12 NVMe SSDs) 10 × 2.5-inch SAS/SATA/NVMe drive 8 × 2.5-inch SAS/SATA/NVMe drive + 2 × M.2 SSD + 2 × E1.S SSD 4 × 3.5-inch SAS/SATA/NVMe drive + 2 × M.2 SSD + 2 × E1.S SSD 4 × 3.5-inch SAS/SATA/NVMe drive + 4 × 2.5-inch SAS/SATA/NVMe drive Rear: 2 × 2.5-inch SAS/SATA drive (hot-swap)	Front I/O Front: 12 × E1.S SSD + 2 × M.2 SSD 4 × E3.S SSD/4 × 2.5-inch SAS/SATA/NVMe drive
	Internal Storage: Up to 3 TF cards, 1 for BMC, 2 for PCH Up to 2 SATA M.2 SSDs or 2 PCIe x4 M.2 SSDs	Rear: -
	Storage Controller: RAID/SAS controller Onboard PCH that supports 14 SATA connectors Intel onboard NVMe controller and optional Intel NVMe RAID Key	
Network	2 × optional hot-swap OCP 3.0 module	3 × optional hot-swap OCP 3.0 module
I/O Expansion Slot	Up to 6 PCIe expansion slots, including 1 mezz RAID and 2 hot-swappable OCP 3.0 Up to 4 PCIe expansion slots for cold-plated configuration, including 2 hot-swappable OCP 3.0	Up to 8 PCIe expansion slots, including 1 RAID mezzanine, 3 hot-swappable OCP 3.0 (1 for front, 2 for rear)
Port	Front: 1 × USB 2.0 port 1 × USB 3.0 port 1 × DB15 VGA port 1 × type-C port Rear: 2 × USB 3.0 port 1 × DB15 VGA port 1 × COM port (Micro USB) 1 × RJ45 port Internal: 1 × USB 3.0 port	Front: 1 × USB 2.0 port 1 × USB 3.0 port 1 × DB15 VGA port 1 × RJ45 port Rear: 2 × USB 3.0 port 1 × DB15 VGA port 1 × COM port (Micro USB) 1 × RJ45 port Internal: 1 × USB 3.0 port
	Fan: 8 hot-swap dual-rotor fans with N+1 redundancy (none for immersion-cooling models)	
	Power Supply: Supports 550/800/1,300/1,600/2,000 W CRPS standard PSUs with 1+1 redundancy	
System Management	Integrated with 1 independent 1,000 Mbps network port, dedicated to IPMI remote management	
Security Features	Two-factor authentication, TPM 2.0, security panel, intrusion alert, BIOS/BMC chipset-level redundancy, power capping, etc.	
Operating System	Microsoft Windows Server, Red Hat Enterprise Linux, SUSE Linux Enterprise Server, CentOS, etc.	
Dimensions (H × W × D)	10 × 2.5-inch drive configuration (equipped with conventional heatsinks) With mounting ears: 43 × 482 × 830 mm (1.69 × 18.98 × 32.68 in.) Without mounting ears: 43 × 438 × 815 mm (1.69 × 17.24 × 32.09 in.)	
	12 × 2.5-inch drive configuration: With mounting ears: 43 × 482 × 881 mm (1.69 × 18.98 × 34.69 in.) Without mounting ears: 43 × 438 × 858 mm (1.69 × 17.24 × 33.78 in.)	
	Other configurations: With mounting ears: 43 × 482 × 880 mm (1.69 × 18.98 × 34.65 in.) Without mounting ears: 43 × 438 × 865 mm (1.69 × 17.24 × 34.06 in.)	
Weight	Full configuration: <31 kg (68.34 lbs) (For details, see the white paper)	
Operating Temperature	5°C to 50°C (41°F to 122°F) (For details, see the white paper)	

* The descriptions and pictures of products in this manual, are provided only as a reference. For detailed product specification or price, please consult IEIT SYSTEMS authorized local distributor.
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