



Inspur Information Launches M6 Server Family Based on 3rd Gen Intel Xeon Scalable Processors

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IDC's Quick Take

Inspur Information's launch of a new M6 server family based on the Intel 3rd generation Xeon processor platform exemplifies the way IT infrastructure solutions providers can thrive in the digital era by being agile and responsive. They are agile in terms of new product development and releases and responsive in terms of incorporating features demanded by their customers.

Product Announcement Highlights

On April 8, 2021, Inspur, a leading IT infrastructure solutions provider, [launched](#) a new M6 server family based on 3rd Gen Intel Xeon Scalable processors. The M6 server family offers 16 products designed for performance-intensive computing (PIC) applications, such as artificial intelligence, big data and analytics, and modeling and simulation. It is also designed to support shared and dedicated cloud infrastructure, the latter increasingly finding a place among several enterprises that cannot move certain applications into a multitenant public cloud environment.

According to Inspur, the M6 servers provide industry-leading deployment density, performance, hardware decoupling, and quality, improving performance by 46% compared with Inspur's previous server generation. For instance, in tests conducted by Inspur, video processing capacity was enhanced by 30%, with overall storage density and IOPS (input/output operations per second) scaling up by 3 times and 3.2 times, respectively. This meets low-latency and high-bandwidth requirements for use cases such as high-speed data streaming and transfer, online computing, and high-frequency trading.

The new server family is designed to simplify and streamline operations. It comes with several key features for flexible deployment scenarios. Highlights include:

- **Best-in-class performance, energy efficiency, and scalability.** For instance, the Inspur NF5280M6 features best-in-class scalability (up 40% in I/O scalability) in a 2U form factor; Inspur NF5180M6 provides E1.S storage that scales up storage density by 3 times and IOPS by 3.2 times, for both high-density storage and high-speed data transfer; and Inspur NF5688M6, with an emphasis on AI, provides an optimal GPU-IB-NVMe ratio of 1:1:1, which enables AI computing power of up to 5 peta operations per second (PetaOPS) in a 6U form factor.
- **Improvements to design, components, and systems.** The introduction of environmental sensing and air pressure monitoring features strike an optimum balance between heat dissipation and vibration at system level, enabling the highest processor bin in a 1U form factor and over 10% higher hard disk performance. In view of power supply demands of these bare metal servers, Inspur has redefined the standard to meet the power supply needs and increase the power density by 2%. The automatic O&M tools can shorten the annual mean time to maintenance (MTTM) per 100 units by 600 person-hours, increasing O&M efficiency by 200%.

- **Securing mission-critical applications with multiple mechanisms.** M6 servers feature improved security encompassing hardware and software-based mechanisms, including firmware and system-level protection. These include dual levels of protection on both the power supply and the mainboard, plus a real-time overloading response feature in hardware; building up the verification hub with FPGA as the root of trust and ISQP as an independent initializer in firmware; and conducting power-on internal memory health testing, component selection, margin protection design, and volume deployment validation. All these measures greatly ease overall risks to the whole system and lower the internal memory failure rate by 60%.
- **Open computing friendly.** As a platinum sponsor of Open Compute Project Foundation, Inspur has ensured that the M6 servers support OCP, ODCC, and Open19 standards. As a core member of global open computing organizations, Inspur is committed to developing a robust open compute ecosystem and contributing technologies to the open compute community. The new M6 server family features key products designed in line with open computing standards, such as the ORS6000S rack, NF5180M6, and NF5280M6. All products embrace open software protocols, such as OpenBMC and Redfish, as well as a multitude of open standard components like OCP3.0 network and E1.S storage.

As a leading provider of computing platforms for modern IT infrastructure, Inspur brings over 30 years of technology and industry experience in the datacenter. With the introduction of the new M6 server family, Inspur is seeking to further facilitate the digital transformation at enterprises worldwide.

IDC's Point of View

Digital infrastructure has been a driving force of a modern economy with the rise of online education, remote work, and intelligent manufacturing. The impact and influence of digital infrastructure can be measured along two dimensions: data and compute. From a data perspective, IDC predicts the annual data generated worldwide will increase from 33ZB in 2018 to 175ZB in 2025. From a computing point of view, a recently commissioned IDC study (by Inspur) shows that 1 point increase in installed computing power can lead to a 3.3‰ increase in its digital economy and a 1.8‰ increase in gross domestic product (GDP) for any country on average.

Economic and social changes (such as COVID-19) accelerate digital transformation and the digital economy. Contribution to the economy by digitalization will continue to increase, and this will in turn drive growth of digital infrastructure. As the modern enterprise continues its journey of digitalization, it will develop intelligent applications, which in turn will demand virtually endless computing power, necessitating the continuous upgrade of their infrastructure.

This turns the spotlight on IT solutions providers like Inspur to lead the industry in terms of new hardware and innovative designs and ultimately address infrastructure challenges imposed by data explosion and digital transformation. With a processor platform partner like Intel, they can deliver flexible performance needed to service workloads from the edge through the network to the cloud. They need to deliver on the promise of a balanced platform with built-in acceleration and advanced security capabilities to meet the most in-demand workload requirements. Vendors need to continue to deliver more value to their customers with high performance, reliability, and scalability to meet the needs of their digital transformation.

With this in mind, IDC advises CIOs and IT buyers to invest in long-term digital infrastructure strategy:

- Partner with their internal and stakeholders to deliver new digital experiences that will redefine their business.
- Prepare their organizations to develop and manage applications and data as strategic differentiators.
- Invest in distributed infrastructure that spans from edge and to the core and automation at scale.
- Partner with leaders that deliver best-in-class IT infrastructure for agile, scalable, and autonomous operations.

Subscriptions Covered:

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