Solution Brief

**Enterprise, Cloud, Small Business, and Edge Computing**

# Intel® Server M20NTP Family

## Featuring 3rd Gen Intel® Xeon® Scalable Processors

## Setting a New Standard for Essential Servers

### A cost-effective solution for a wide range of data center needs

The Intel® Server M20NTP Family is a cost-effective platform delivering advanced security, enterprise-grade manageability, next-gen performance, and other essential features you need for your moderate enterprise, cloud, and SMB demands. It is the ideal essential companion to Intel's broader range of servers, and a great choice for basic enterprise and cloud deployments, as well as edge and small business needs.

Available in both space-conserving 1U and flexible 2U configurations (coming soon), and featuring support for 3rd Gen Intel® Xeon® Scalable Silver or Gold processors, these servers are capable of handling a wide range of demands and needs. In addition, performance is improved by more and faster memory channels (8 channels per processor at up to 2,933 MT/s compared to 6 channels per processor at 2,667 MT/s in previous generation products).[1]

### When you want more from an essential server

Workload needs vary greatly. Choosing the best server for each workload is important to ensure you have the right balance of performance and TCO. Entry servers play essential roles for enterprise data centers, cloud providers, edge compute, and small and medium business needs.

The Intel® Server M20NTP Family is a cost-effective platform that delivers the performance and security advantages of 3rd Gen Intel® Xeon® Scalable processors across moderate workload demands, such as lighter VM hosting, infrastructure monitoring, and provisioning.

The Intel® Server M20NTP Family is validated by Intel and comes with Intel's differentiated, world-class service and support[2] to simplify deployment and operations. It's a smart and flexible scale-out choice to meet growing performance needs.

### Purpose-built to handle a variety of enterprise and cloud requirements

Next-gen performance and security features make the Intel® Server M20NTP Family an ideal choice for essential workloads to meet enterprise, cloud, small business, and edge demands.

**Enterprise workloads**

- Infrastructure monitoring
- Firewall/edge appliance
- Utility and provisioning
- Hyperconverged (HCI)
- Web server

**Cloud workloads**

- IaaS/PaaS (VM host)
- Container-based apps
- Infrastructure orchestration

**Small business and edge computing**

- Email
- Small database
- Web server
- Hyperconverged (HCI)
- Intelligent retail
- Manufacturing

The Intel® Server M20NTP Family delivers features you might not expect in an essential server. Here are just a few of the platform-wide innovations that deliver differentiating performance, scalability, security, and reliability to drive a competitive advantage for your business.

- **Boost your compute performance:** 3rd Gen Intel® Xeon® Scalable processors deliver outstanding per-core performance across a wide variety of tasks and workloads. Up to 52 cores per server in 1U and 2U form factors provide outstanding compute headroom. Plus, you get more memory bandwidth, as well as faster I/O throughput, thanks to PCIe 4.0 support.
- **Increased memory bandwidth and speed:** Up to 1 TB of system memory capacity per server, 8 memory channels per processor, and up to 2,933 MT/s memory speed in 1U and 2U configurations.
- **Breakthrough storage performance with affordable capacity:** Intel® Optane™ SSDs deliver breakthrough performance for your high-speed storage tier. Support for four SSDs in 1U systems and up to 16 SSDs in 2U systems provides high-density practicality for your capacity tier. And you get storage flexibility, thanks to support for NVMe, SAS, and SATA drives.
- **High-speed networking:** Accelerate network throughput by integrating a 100 Gb Ethernet add-in card.
- **Flexibility and versatility:**
  - Speed I/O with PCIe 4.0, with up to 48 lanes (per socket) at 16 GT/s vs. previous generation[3]
  - One DB15 video connector
  - Four USB 3.0 ports (2 in back + 2 in front)
- **Hardware-enhanced security:** Adding even more value, hardware-enhanced security innovation with Intel® Software Guard Extensions (Intel® SGX) and new hardware-level cryptographic algorithm implementations better protect sensitive apps, data, and firmware, to help keep data safe without the typical performance penalty.

## Scalable performance across the platform

- **3rd Gen Intel® Xeon® Scalable processors**
  - Up to 52 cores per server in 1U and 2U configurations
  - Up to 1 TB system memory
  - 8 memory channels per processor
  - Up to 2,933 MT/s of bandwidth
- **100 Gb Ethernet support with PCIe 4.0**
  - Integrated dual 1 GbE Ethernet + Type 1 OCPv2 slot for 10, 25, 40GbE option
- **Flexible rack options**
  - 1U: Four flexible 3.5" SAS/SATA HDDs or 2.5" NVME/SAS/SATA SSDs, two LP x16 PCIe 4.0 slots
  - 2U: Up to 16 2.5" SAS/SATA SSD drive bays, of which 8 can support NVMe, two FHHL x16 PCIe 4.0 + four HHHL x8 PCIe 4.0 slots
- **Enhanced Security Support**
  - Intel® Software Guard Extensions (Intel® SGX)
  - Intel® Trusted Execution Technology (Intel® TXT)
  - Trusted Platform Module 2.0 (optional)
  - Intel® Total Memory Encryption (Intel® TME)

## Unleash the power of Confidential Computing

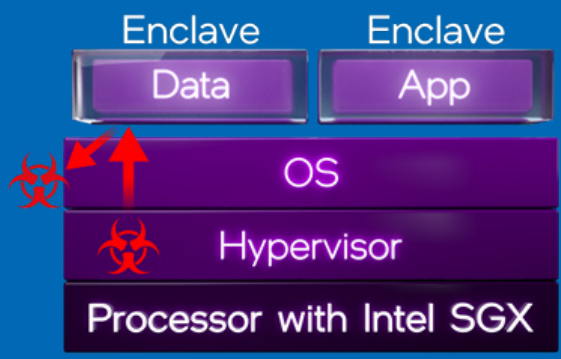
For decades, sensitive data was encrypted to protect it when transmitted or stored. But data was still exposed and vulnerable during active processing.

Intel® Software Guard Extensions (Intel® SGX) closes that gap by placing sensitive data and code in isolated, secure, processor-enforced enclaves to help protect sensitive data even if a system's software layers become compromised.

Intel SGX® is the most tested, researched, and battle-tested data center Trusted Execution Environment, with the smallest available attack surface.

Confidential Computing with Intel® SGX enables organizations to discover insights not possible before when sensitive data was siloed, and to move sensitive workloads to the cloud with confidence.

Fortanix developed the SDKMS (Self-Defending Key Management Service)—a secure key management platform—using Intel® SGX protection. The platform provides significantly greater data protection for both new and existing applications across public, private, and multi-cloud environments, as well as on-premises deployments.



## Available as a board-only product

In addition to offering an integrated, rack-mountable server system, the Intel® Server M20NTP Family also offers a board-only product. The Intel® Server Board M20NTP2SB includes support for additional processors, including Intel® Xeon® Platinum 8300 and Intel® Xeon® Gold 6300 processors, versus the server system. That enables configurations with up to 80 cores per board, and up to 3,200 MT/s of memory bandwidth.

## A key member of the Intel® Server Family portfolio

The Intel® Server Systems portfolio supports a wide range of demands and needs—from moderate workload demands, to your most data-intensive and compute-intensive workloads, to intelligent edge platforms. Intel® Server Systems can be configured to-order for your specific needs. You can learn more about these systems in the portfolio by visiting: https://www.intel.com/serverproducts

## Enterprise-class server management

Intel® Server Systems provide consistent, enterprise-grade server management across all platforms to simplify deployment, monitoring, updating, and debugging.

The consistent interface, tools, and utilities simplify and accelerate all stages of the server lifecycle—from build and customize, to deployment, multi-server management, and single-server debug and maintenance.

## Deploy with confidence with Intel quality, reliability, service, and support

Intel's manufacturing leadership ensures you're getting a high-quality, highly reliable infrastructure. Not only are Intel servers packed with innovation, they all come with Intel's world-class services and support package,[2] delivering unique value to every stage of the server lifecycle—from pre-purchase and deployment, to operations, management, and support.

You can take advantage of Intel's proven support and service, including a 3-year warranty (optional 5-year) and global technical support.

Intel® Server Systems are also easy to deploy and operate, with comprehensive documentation for integration, configuration, and management. Select Intel® Server Systems, including the Intel® Server M20NTP Family, are available as partially or fully integrated, configure-to-order systems, allowing specific configuration of the CPU, memory, storage, and I/O devices.

## Reduce risk of counterfeit parts with Intel® Transparent Supply Chain

Counterfeit electronic parts are a growing security concern across all organizations. These concerns have grown as supply chains have become increasingly complex, multi-layered, and global.

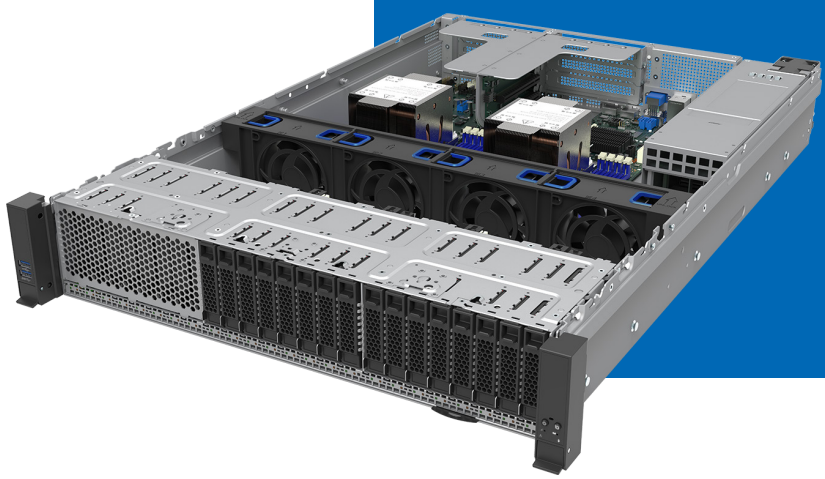
Current supply chain practices start with trusting the source, but processes are limited for screening out counterfeit components, particularly for products containing many subsystems.

Intel® Transparent Supply Chain helps partners and customers verify the authenticity and firmware version of servers and their components through a set of tools, policies, and procedures. These verification steps, implemented on the factory floor at server manufacturers, enable enterprises to verify the authenticity and firmware version of systems and their components when systems arrive at their site.

**This industry-leading approach helps:**

- Provide component-level traceability and visibility
- Detect tampering of components and configuration state between stops
- Deliver fleet-level insights across suppliers

These and other safeguards combine to increase assurance and trust that the Intel servers you're purchasing and deploying are free of counterfeit components that could compromise your business or customers.



## Additional Resources

For more information on specific configurations, see the Intel® Server M20NTP Family Configuration Guide or visit: ARK.intel.com

For more information on Intel® Server Products visit: https://www.intel.com/serverproducts

For more information on the Intel® Server M20NTP Family visit: https://www.intel.com/server-system-M20NTP

Marketing Resources: Access a library of marketing assets by visiting the DSG Marketing Asset Library at: https://servermarketinglibrary.intel.com

1. DDR4 memory for 1.5x memory bandwidth versus previous generation compares Intel® Xeon® Gold 5320 processor (code name Ice Lake) with 8 channels of DDR4 up to 2,933 MT/s (1 DPC) vs. Intel® Xeon® Gold 5220R processor (code name Cascade Lake) with 6 channels of DDR4 up to 2,667 MT/s (1 DPC).

2. World class support is substantiated by an average Net Promoter Score (NPS) of 81 for Intel® Datacenter Solutions Group (DSG) services, last calculated on December 31, 2021. NPS is a rolling, 12-month summary of DSG-specific customer responses to follow-up customer satisfaction surveys conducted by DSG following DSG's completion of support requests.

3. 2x I/O performance versus previous generation compares PCIe 4.0 at 16 GT/s transfer rate vs. PCIe 3.0 at 8 GT/s.

Performance varies by use, configuration, and other factors. Your costs and results may vary. Learn more at www.Intel.com/PerformanceIndex.

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