

ThinkAgile MX1000 Series Edge Servers

Ground-Breaking New Class of Edge Servers for Easy Azure Stack HCI Edge Solutions



New Class of Edge servers

Computing resources are needed not just in the data center, but remotely as well. However, for performance reasons, remote data-generating devices must be close to computing and storage resources. Hence the Lenovo ThinkAgile MX1000 Series Edge servers (Appliance and Certified Node). Lenovo ThinkAgile MX appliances map to Microsoft Azure Stack HCI Integrated Systems and ThinkAgile MX Certified Nodes map to Microsoft Azure Stack HCI Validated Nodes. Its small footprint and power efficiency allow for reliable server-class performance at many Edge locations.

With additional benefits of ruggedness and variety of mounting options, these servers are ideal for small locations. Azure Stack HCI certification adds the reliability, high availability and security of HCI to these versatile Edge servers.

The rugged ThinkAgile MX1000 Series can handle temperatures from 0° to 55°C, as well as tolerate locations with high-dust and vibration—such as construction site trailers and manufacturing floors. It can be deployed equally well in a traditional office or branch location due to its office-friendly acoustics. The half-width, short-depth, 1U server can be installed almost anywhere: hung on a wall, stacked on a shelf, or mounted in a rack. This high-performance server, using the Intel® Xeon® D processor, features up to 8 cores, 256GB of DDR4 RAM, and 16TB of internal M.2 solid-state storage.

ThinkAgile MX1000 Series is available starting with a 2-node Azure Stack HCI cluster including hardware, software, licenses, and support, making it an extremely affordable Edge or multi-site offering, for small businesses as well as large enterprises.

Accelerate your Business

Deploying hyperconverged infrastructure is a widely accepted method for modernizing legacy infrastructure. Taking it to the next level, a hybrid cloud approach enables placing each workload in the right place: public cloud for some, on-premises for others. Azure Stack HCI is Microsoft's HCI solution for customers that wish to run workloads on-premises and extend easily to Azure for hybrid capabilities such as back-up, site recovery, storage, cloud-based monitoring and more.

Azure Stack HCI is a new HCI host operating system from Microsoft, delivered as an Azure service, providing the latest and up-to-date security, performance and feature updates. Azure Stack HCI builds on the foundation of the Microsoft Windows Server Software Defined (WSSD) program and provides a certification path for Storage Spaces Direct solutions.

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Lenovo's ThinkAgile MX1000 Series combines Azure Stack HCI with industry leading Lenovo servers to deliver a unique, rugged edge solution that is easy to deploy and easy to sustain. As you would expect, Lenovo makes lifecycle management easy and complete system support is covered by a single phone call.

Simplicity and Flexibility

To enhance the support experience, XClarity, Lenovo's suite of systems management tools, integrates directly with Windows Admin Center, providing a unified single-pane-of-glass simple experience across infrastructure, virtual machines, software, and hardware. ThinkAgile MX Nodes offer a wide range of processor, memory, and storage options to provide the maximum flexibility for customizing your infrastructure.

A Price Performer

ThinkAgile MX1020 Appliances (also called Integrated Systems) include the new Azure Stack HCI software, and optionally include Windows Server Datacenter 2019 edition in case the customers require unlimited guest OS virtual machine licenses. ThinkAgile MX1021 Certified Nodes (also called Validated Nodes) optionally include the Azure Stack HCI software or the Windows Server Datacenter 2019 depending on their needs.

Azure Stack HCI OS license provides a huge value to customers including:

- **Storage Spaces Direct (S2D):** State of the art Software defined storage from Microsoft with multiple high-performance resiliency options, deduplication, compression and more.
- **Windows Admin Center (WAC):** A web-based management portal is included with the software at no extra cost. WAC can be used to deploy S2D clusters. Additionally, Lenovo's XClarity plugin allows customers to deploy their hardware as well as software from that single interface, enabling single pane of management.
- **Hyper-V:** Hypervisor is included in the license

- **Software-Defined Networking:** Features such as virtual network encryption, firewall auditing, virtual network peering enable customers to get the benefits of a more secure software defined network with Azure Stack HCI.

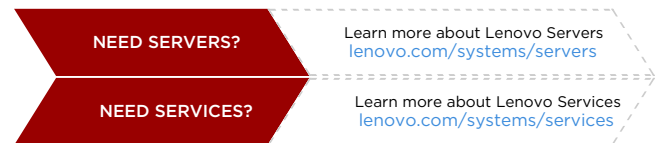
Azure Stack HCI is hybrid by design, and customers can benefit from native integration with Azure ARC and Azure Monitor and connect to Azure for a variety of Azure hybrid services seamlessly. Fleet management for hosts and VMs allows customers to monitor and manage clusters at scale. Additionally, ThinkAgile MX1000 Series includes a specially priced 8-core-only Microsoft WS2019 Datacenter license making this Edge platform an incredible value.

As Much Help As You Need

Lenovo and Lenovo partners have a comprehensive portfolio of professional services that supports the full life cycle of your infrastructure. At every stage — from planning to deploying, supporting, optimizing, and end of life — extra help is available to accelerate meeting your business objectives.

For More Information

To learn more about ThinkAgile MX Certified Nodes, contact your Lenovo representative or Business Partner, or visit lenovo.com/thinkagile. For detailed specifications, consult the [ThinkAgile MX1021 product guide](#).



Specifications

Product Name	ThinkAgile MX1020 Appliance ThinkAgile MX1021 Certified Node
Form Factor	1U height, half-width Edge server
Processors	Intel® Xeon® D-2100 Series processor, 8 to 16 cores, up to 100W
Memory	4 DIMM slots. Up to 256GB maximum with 4x 64GB LRDIMMs
Expansion	One PCIe 3.0 x16 slot
Drive Bays	Up to 3x M.2 adapters (1x boot adapter, 2x data adapters) for a total of 10x M.2 drives. <ul style="list-style-type: none"> ● 1x Single M.2 Adapter (1 drive) or 1x Dual M.2 Adapter (2 drives) installed in dedicated slot, for boot ● 1x 4-bay PCIe x16 adapter in dedicated bay, for 4x M.2 drives, NVMe or SATA, for data ● 1x 4-bay PCIe x16 adapter in PCIe riser slot, for 4x M.2 adapters, NVMe only, for data
Internal Storage	<ul style="list-style-type: none"> ● 2x M.2 2280 SATA boot drives + 8x M.2 22110 NVMe data storage drives ● 2x M.2 2280 SATA boot drives + 4x M.2 22110 NVMe/SATA data storage drives ● SED, high temperature, high capacity, and high endurance drive options ● Optional encryption key deletion on tamper or theft detection
Network Interface	Wired network module (10G SFP+ LOM package): 2x 10GbE SFP+, 2x 1GbE RJ45 (support 10/100 Mbps), 2x dedicated ports for remote management
Power	<ul style="list-style-type: none"> ● Dual-redundant external power supplies 100-240V AC ● Single DC supply: -48VDC (-40VDC to -72VDC), 8.4A
High Availability	Direct-connect networking: For a 2-node HCI cluster, it is possible to connect the network adapters directly to each other without placing a network switch between the nodes.
RAID Support	<ul style="list-style-type: none"> ● Software RAID available ● Hardware RAID 0/1 for M.2 SATA Boot SSDs ● Hardware RAID 0/1 for M.2 SATA Storage SSDs
Management	Optional hardware management via Lenovo XClarity and resource management through Microsoft Windows Admin Center, with mobile option
License Options	Azure Stack HCI (included with Appliance), Windows Server 2019 Datacenter (optional)
Warranty and Support	Three-year or one-year customer-replaceable unit and onsite limited warranty, 9 x 5 next business day. ThinkAgile Advantage Single Point of Support where available (included with Appliance)

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