

CoreStation HX

Innovative AI PC Solutions, Designed for the Data Center

Solution Brief

CoreStation HX with Citrix Remote PC Access

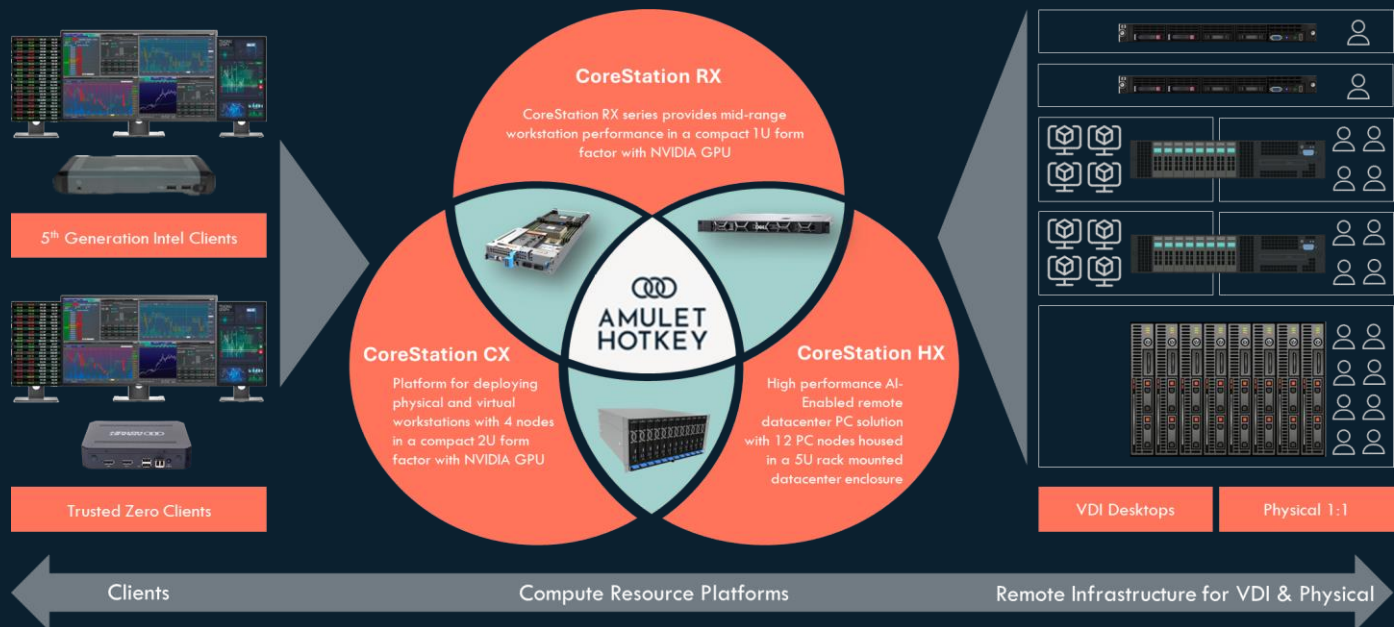
Deliver secure remote access to high performance physical desktops as part of a broader VDI deployment. Optimized for your most compute and latency sensitive users.

Executive Summary

Amulet Hotkey solutions enable organizations to deploy a hybrid remote desktop environment to its employees. The ability to provide dedicated resources alongside and integrated with a more traditional virtual desktop deployment is unique in the market, and essential to addressing the highly varied user requirements that many organisations need to support.

As part of its broader product portfolio, Amulet Hotkey offers a range of client-side hardware devices, delivering a complete end-to-end remote desktop solution that has been fully validated.

Amulet Hotkey also brings years of experience in optimizing for performance and user experience.



At the heart of the Amulet Hotkey infrastructure is the CoreStation range of systems. Available as a 5U enclosure that can accommodate up to 12 Intel AI PC systems (CoreStation HX), a modular 2U form-factor with up to 4 nodes (CoreStation CX), or a 1U rackmount form-factor (CoreStation RX), each CoreStation compute node has been optimized for performance and density.

With performance in mind, the CoreStation range is designed to meet a broad range of workloads. From Intel Xeon-E, Xeon Scalable, or Core Ultra CPUs, alongside data center and workstation-class GPUs.

CoreStation RX and CX are server-based platforms, each node supporting either a physical workstation on a 1:1 end-user basis running a desktop OS or running a hypervisor enabling them to host multiple virtual desktop instances. CoreStation HX on the other hand delivers dedicated AI PCs directly from the data center.

Whichever CoreStation platform is deployed, all are optimized for hardware accelerated graphics and provide greater user density and performance than standard off-the-shelf solutions.

Common across the entire range is the ability to manage CoreStation nodes remotely, regardless of form factor, from an easy-to-use console that makes management simple. This comprehensive level of management allows service providers to deploy Amulet Hotkey solutions 'as-a-service', enabling them to provide their customers with secure remote access to physical and virtual desktops.

Solution Overview

CoreStation HX Solution Architecture

CoreStation HX is designed to deliver dedicated AI PCs from the data center. A 5U rack mounted enclosure with fully-redundant power, cooling and advanced management capabilities, provides the backbone to the solution. Customers can choose the appropriate compute node to suit their workload requirements with up to 12 nodes per enclosure. End users can connect remotely using their preferred protocol and end point device and experience a high-performance, dedicated, remote desktop experience.

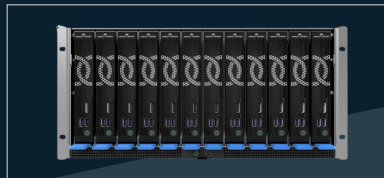
CoreStation HX Hardware Infrastructure

The CoreStation HX solution consists of 3 core components:



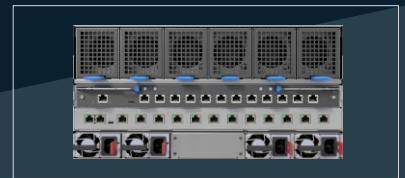
CoreStation HX Nodes

High-performance AI-enabled remote PC and workstation nodes



CoreStation HX5 Enclosure

Rack mounted 5U enclosure for PC nodes, I/O, and management



CoreStation HX I/O Module

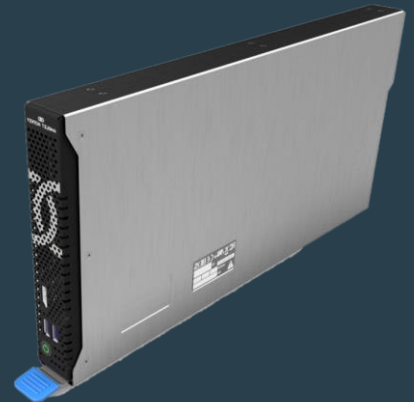
Network connectivity and advanced enclosure/node management

CoreStation HX2000 AI PC Node

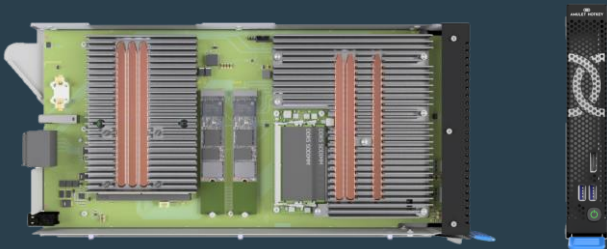
CoreStation HX2000 provides a dedicated AI PC from the data center and is designed to support the most performance and latency sensitive applications, with no resource sharing or contention with other users.

It delivers desktop performance without the complexity and subscription costs of a performance VDI solution and associated hypervisor management overheads.

Also capable of supporting edge AI workloads and operating as a bare-metal micro-server, CoreStation HX delivers the following resources:



- Up to 12 nodes in 5U with redundant PSU
- Up to 16 cores with 5GHz+ clock speeds
- Easy to manage with out-of-band KVM, monitoring, and firmware updates
- Integrated GPU with up to 8 Iris Xe cores
- Dedicated NPU to handle AI tasks efficiently
- Optional discrete NVIDIA RTX series GPU



Technical Overview

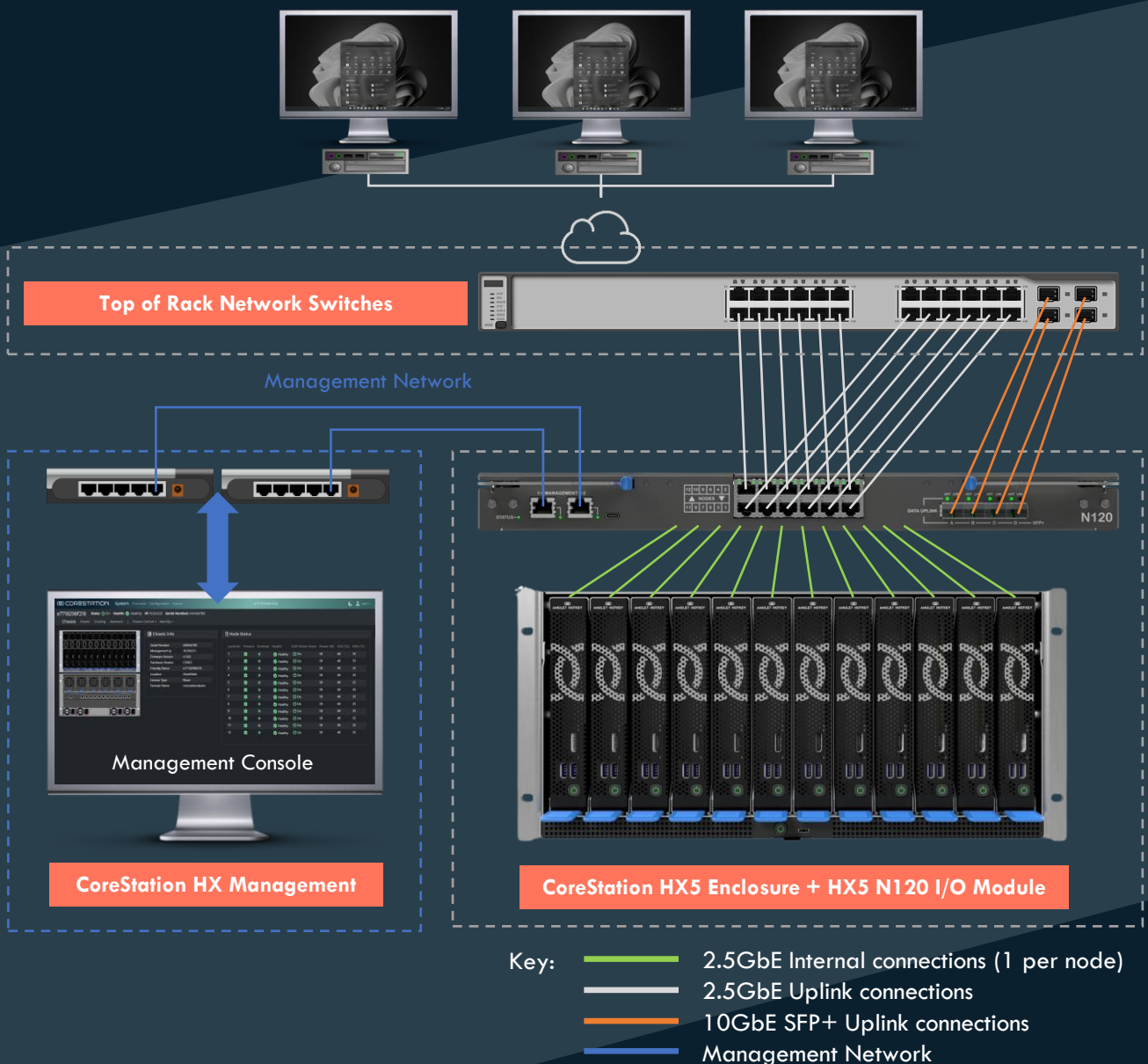
CoreStation HX Networking

CoreStation HX AI PC nodes connect to your network via the HX I/O module in the HX enclosure. This I/O module can support four different configurations, from pass-through to switched networking.

CoreStation HX Network Connectivity Options

CoreStation HX5 N120 I/O Module

The CoreStation HX5 N120 I/O module provides both passthrough networking or uplink capabilities using its optional internal switch technology, in addition to dual-port management connections.



Solution Overview

Software Platform: Citrix Virtual Apps and Desktops and Remote PC

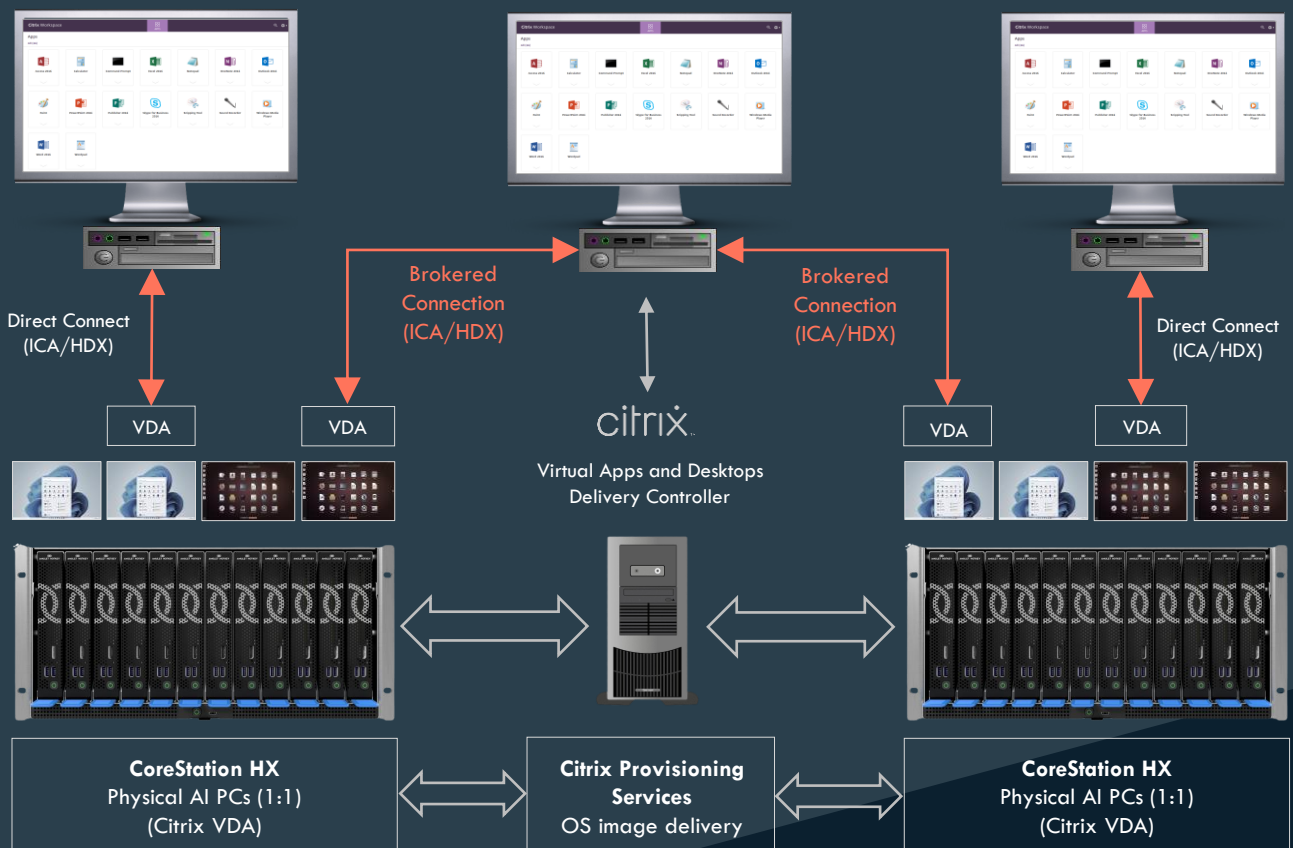
This solutions brief focuses on enabling end users to have remote access to their CoreStation HX AI-enabled PCs, hosted in the data center, using the Citrix Virtual Apps and Desktops solution. End users can connect directly to their desktop on a 1:1 basis, or they can be brokered via a connection server.

Citrix Virtual Apps and Desktops

With Citrix Virtual Apps and Desktops, organizations can not only deliver remote access to virtual desktops and hosted apps, but it can also connect end users to physical workstations, hosted in a central location. This location could be on-premises, however there are many benefits to hosting the equipment in a data center. These benefits include increased uptime and co-location with other critical systems and data. Some customers may choose to have these systems delivered as a managed service by Amulet Hotkey or another partner.

In terms of the end user experience, using their end point client device, end users are presented with an easy-to-use client app where they simply access their physical desktops, delivered using the Citrix display protocol. As a Citrix Technology Partner, Amulet Hotkey has worked with Citrix to understand how to optimize the protocol for best possible user experience and performance in this deployment scenario.

Core to the Citrix solution is the Delivery Controller, which manages the allocation of systems to users. The Delivery Controller can also be used to manage spare capacity and for connection optimization.



Connecting Remotely from the Edge

Client Solutions for Remote Connectivity

The final piece of the solution, now that the remote workstation platform is in place, and just as important to get right, is the device from which the end user is going to connect to their virtual desktop machine. If the device is underpowered then the end user could experience poor or inconsistent performance regardless of the hosting infrastructure. Therefore, it is critical to use the correct device to match the end users use case.

The Amulet Hotkey 5th generation DX thin clients provide not only a range of hardware specifications to meet the end user requirements but also are agnostic when it comes to what operating system they run. This means you can also match the most suitable operating system to the use case, in this example, delivering applications and desktops using Citrix technology.

High Performance Secure Thin Clients

The DX1500 and DX1700 series of thin clients are designed up to support four screens each running up to 4k (3840 x 2160) and are available with up to 16GB RAM and Intel i5, i3, or Intel U300 CPUs.



DX1700 Thin Client

UNICON

DX1500 Thin Client

- Intel 13th Gen 'Raptor Lake' Core CPU: i5-1335U
- Up to 16GB RAM
- Up to 256GB SATA or NVMe flash storage
- Four DisplayPort 1.4 video outputs supporting up to 3840×2160 on four simultaneous displays or 5120 x 2160 on two displays.
- Copper RJ45 10/100/1000 Mbit/s and SFP Module supporting 1000Mbit/s LR and SR Fibre & copper



- Intel 13th Gen 'Raptor Lake' Core CPUs: U300 and i3-1315U
- Up to 8GB RAM
- Up to 256GB SATA or NVMe flash storage
- Four DisplayPort 1.4 video outputs supporting up to 3840×2160 on four simultaneous displays or 5120 x 2160 on two displays.
- Copper RJ45 10/100/1000 Mbit/s and SFP Module supporting 1000Mbit/s LR and SR Fibre & copper

In Summary

This solutions brief has provided a high-level blueprint that serves as an example of how to deliver secure remote access to dedicated systems, hosted in the data center. This approach is designed to cater for users who might otherwise struggle with the performance of a traditional virtual desktop solution and is ideal for applications that require high clock speeds and low latency.

In this example blueprint the compute requirements are delivered using the Amulet Hotkey CoreStation HX solution as the infrastructure platform to deliver AI-enabled high-performance 1:1 remote compute capabilities, with end user connections and delivery being managed by Citrix Virtual Apps and Desktops and the Citrix display protocol.

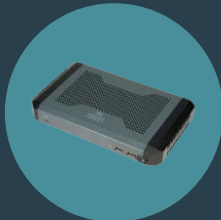
Access to the remote desktop resources is delivered using the Amulet Hotkey 5th Generation DX thin client solutions as the end point device, running the Citrix client software and Unicon endpoint operating system.

Find out more

To find out more about the Amulet Hotkey CoreStation HX solutions, Amulet Hotkey 5th Gen thin clients, or Citrix desktop and application delivery solutions to provide a complete end-to-end solution for high performance, remote, AI-enabled desktop infrastructure, click the icons below:



CoreStation HX



5th Gen DX
Thin Client



Citrix



Unicon

Alternatively, talk to us directly by phoning or emailing one of our team on the details below.

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