

CoreStation HX

Innovative AI PC Solutions, Designed for the Data Center

Solution Brief

CoreStation HX with Omnisca Horizon and Direct Connect

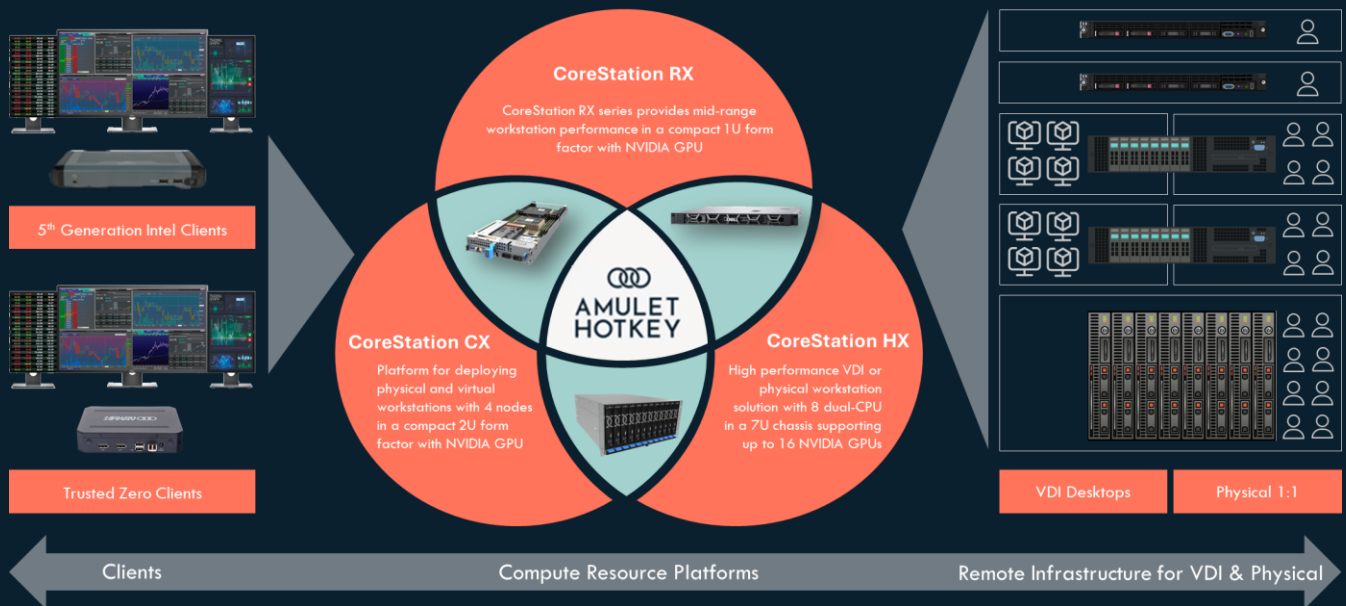
Deliver secure remote access to high performance physical desktops as part of a broader VDI deployment. Optimized for your most compute and latency sensitive users.

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.

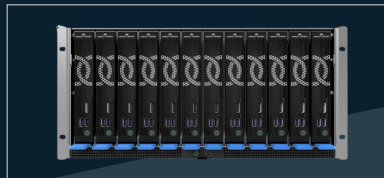
CoreStation HX Hardware Infrastructure

The CoreStation HX solution consists of 3 core components:



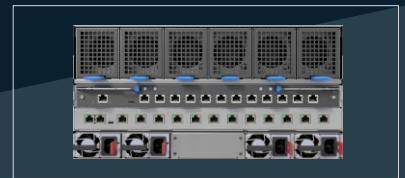
CoreStation HX Nodes

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

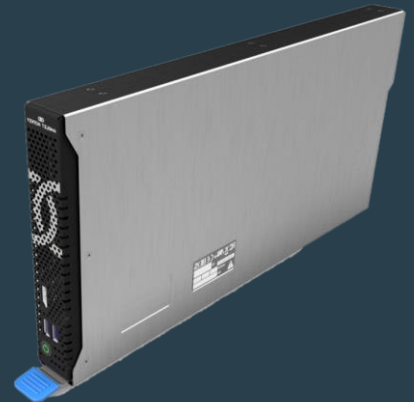
Network connectivity and advanced enclosure/node management

CoreStation HX2000 AI PC Node

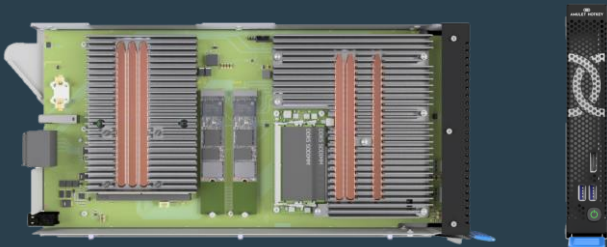
CoreStation HX2000 provides a dedicated AI PC from the data center and is designed to support the most performance and latency sensitive applications, with no resource sharing or contention with other users.

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

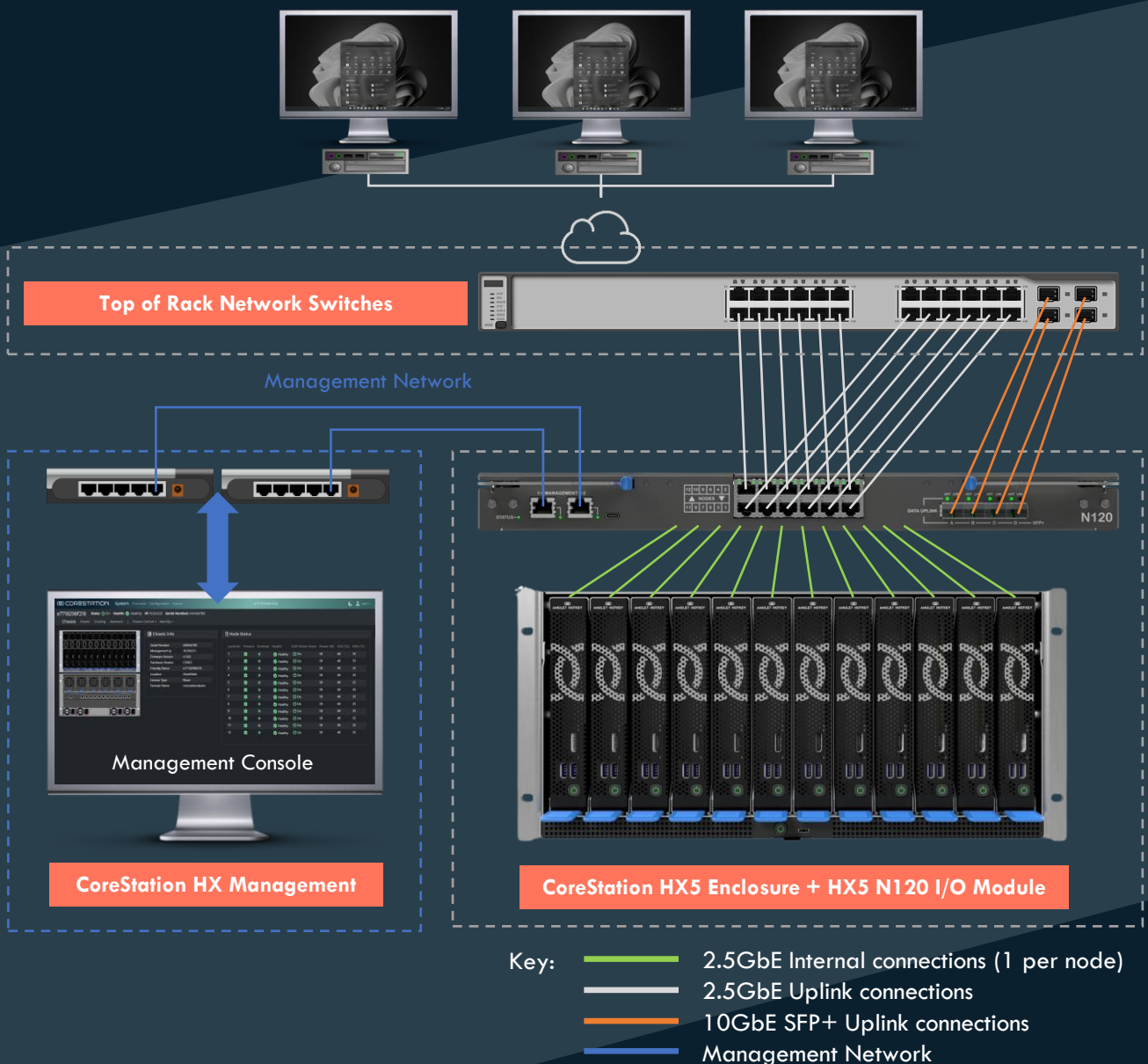
CoreStation HX Networking

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: Omnisia Horizon

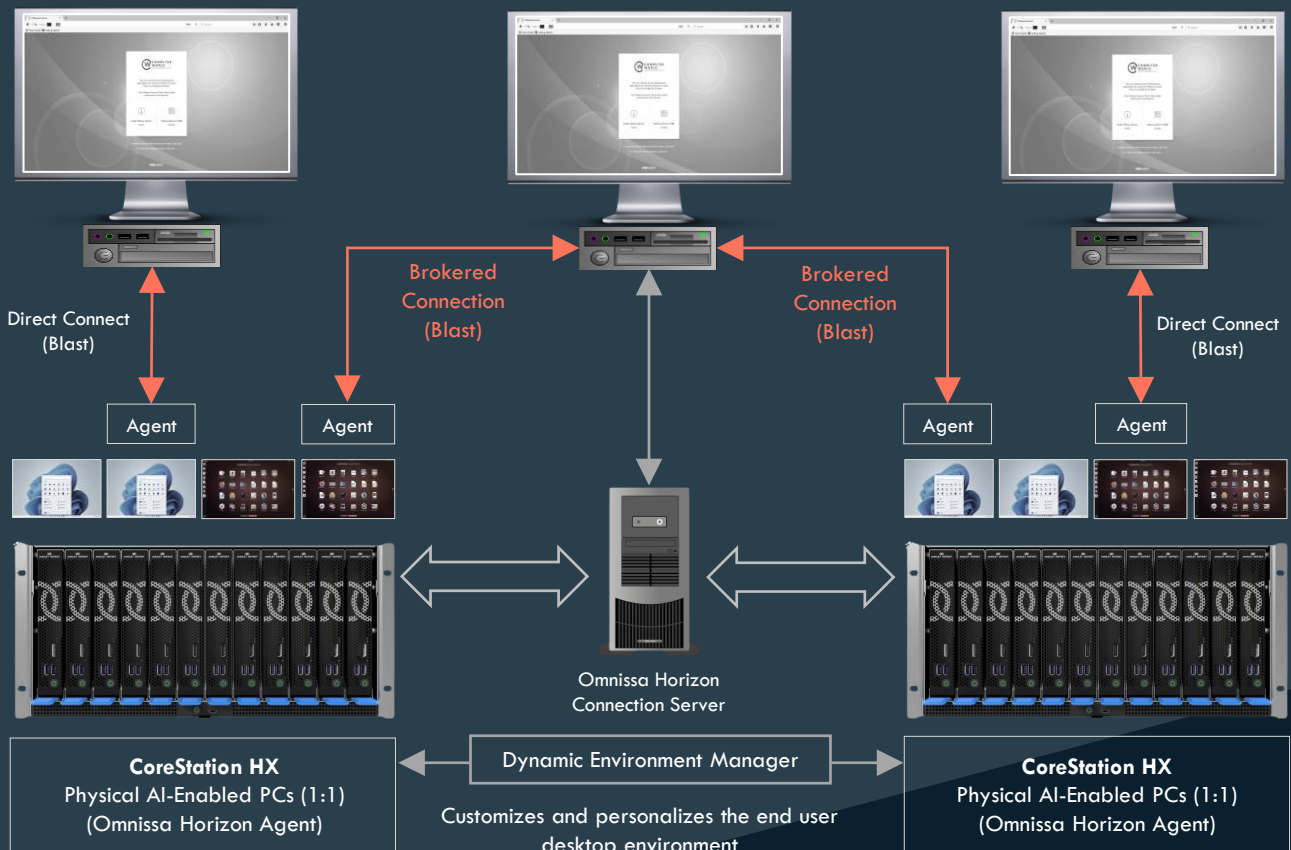
This solutions brief focuses on enabling end users to have remote access to their CoreStation HX AI-enabled PCs, hosted in the datacenter, using the Omnisia Horizon solution. End users can connect directly to their desktop on a 1:1 basis, or they can be brokered via a connection server.

Omnisia Horizon Digital Workspace Solution

With Omnisia Horizon, organizations can not only deliver remote virtual desktop machines and virtual apps, but it can also connect end users to physical workstations (brokered or direct connect) located centrally in the data center. The datacenter can be on-premises infrastructure or delivered from a cloud service effectively delivering physical desktop resource as a managed service to both internal employees and external partners.

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 Omnisia Horizon Blast display protocol. Administrators gain centralized control, efficiency, and security by having apps and data located in the data center.

Core to the Horizon solution for managing and delivering physical desktop machines is the connection broker, that connects end users to their resources with each physical PC running the Omnisia Horizon Agent.



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 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 range of 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.

High Performance Secure Thin Clients

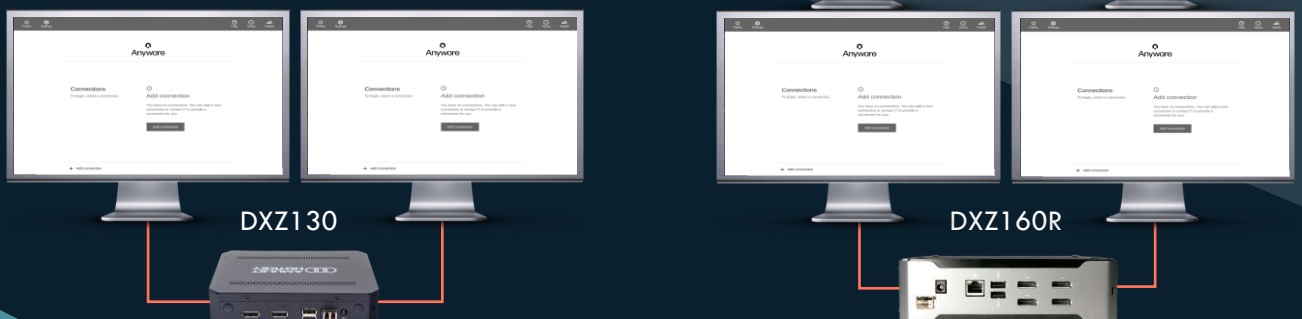
The DX1700 and DX1500 series of thin clients are designed up to support four screens each running at 4k (3840 x 2160) and are available with up to 16GB RAM with Intel i3, i5, or Intel U300 CPUs.



Trusted Zero Clients



Designed for the HP Anyware Trusted Zero Client solution, the AMD-based DXZ130 and DXZ160R trusted zero clients support up to four screens at 4k as well as optional SFP network connections. The DXZ160R comes complete with a ruggedized case.



In Summary

This solutions brief has provided a high-level blueprint that serves as an example of how to approach delivering high performance AI-enabled remote physical PC and workstation solutions, remotely from the datacenter, specifically designed and built to cater for compute and graphically intense workload environments.

In this case 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 the end user connections and delivery being managed by Omnisca Horizon and the Blast protocol. Optionally, organizations can take advantage of the Omnisca Dynamic Environment Manager solution to deliver and manage end user personalization, profiles, and custom settings.

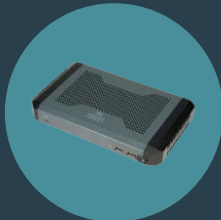
Access to the remote desktop resources is delivered using the Amulet Hotkey client solutions as the end point device, running the Omnisca Horizon client software.

Find out more

To find out more about the Amulet Hotkey CoreStation HX solutions, Amulet Hotkey 5th Gen thin clients, or Amulet Hotkey Trusted Zero Clients for delivering a complete end-to-end solution for high performance virtual desktop infrastructure, using the Citrix delivery methodology, click the icons below:



CoreStation HX



5th Gen DX
Thin Client



Trusted
Zero Client



Omnisca
Horizon

Alternatively, talk to us directly by phoning or emailing your local sales office listed below.

Contact Us

EMEA Sales

+44 (0) 20 7960 2400
emeasales@amulethotkey.com

N America Sales

+1 212 269 9300
ussales@amulethotkey.com

APJ Sales

+61 409 930 884
apsales@amulethotkey.com

CoreStation HX

Solution Brief

www.corestation.com

