

Amulet Hotkey CoreStation HX5

Getting Started Guide



Contents

In the box	2
Preparation	2
System Features.....	4
Installation and Connections	4
Management Setup	9
System check and firmware update	11
Node Setup	12
Node OS Management.....	16

In the box

- CoreStation HX5 Enclosure with all Workstation Nodes and Modules fitted
 - Up to Four power supply units
 - Six cooling modules
 - I/O Module
 - 12 Workstation nodes or blanks
- Power Supply cables (For PDU socket or mains plug)
- Rackmount Rails
- Essential documentation

Preparation

Rack Space

- 5U clear rack space required
- Minimum rack depth 630mm + allowance for cable routing

Power

- Four power feeds high-line (200-240Vac) or low-line (100-127Vac)
- Independent IEC C14 Power input connector on each PSU module

Network

- One or two 100M/1G Ethernet ports for management
- 12x 1G/2.5G Ethernet ports for data, one per workstation node

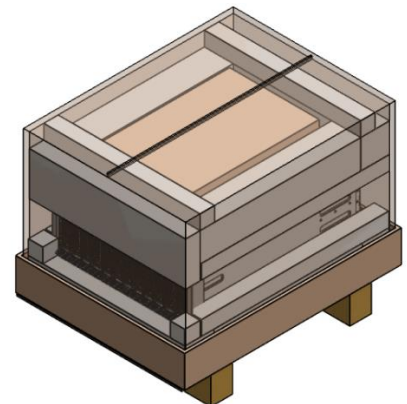
Unpacking

- The system is supplied on a pallet and fully populated with all components
- Unpack the outer carton and top foam to get access to the enclosure



Caution – the system is very heavy when fully populated

- Using a Datacenter lift – Run lifting straps under the enclosure
- Manually – remove all modules from the enclosure, then lift from the packaging with two people



Default Management Console credentials

- Take note of the following details from the label on the CoreStation HX5 I/O Module which are required when signing into the management console for the first time
 - MAC address for the Management Controller

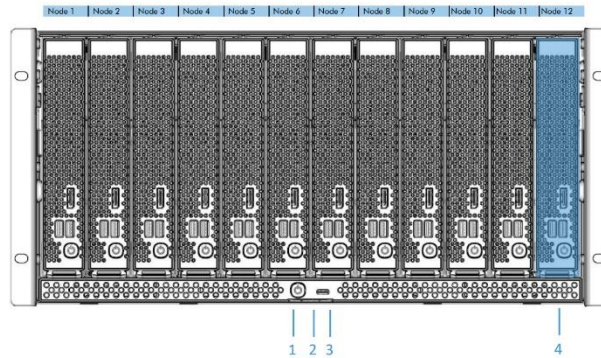
- Default hostname for the Management Controller
- Default password for the admin account on the Management Console

Best Practice deployment

The CoreStation HX system is designed for deployment in a typical modern data center with requirements on power, cooling and networking. Review the *Security Features and Best Practice* section in the HX5 user manual and if the intended deployment differs significantly, contact Amulet Hotkey to verify if there is any required mitigation.

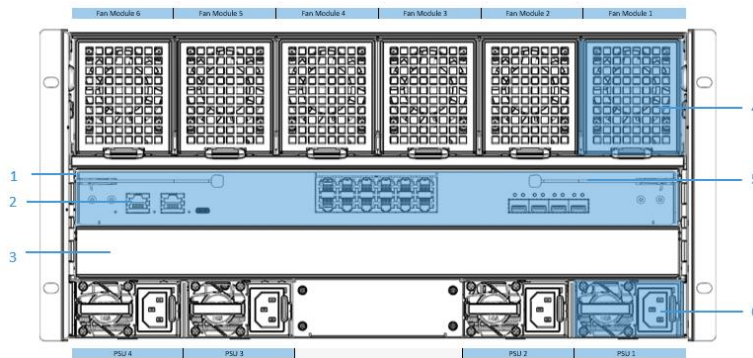
System Features

HX5 Enclosure Front View



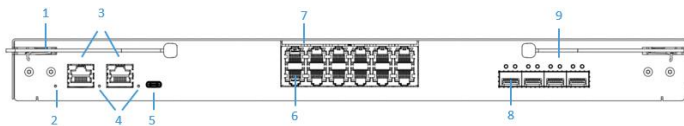
1. Enclosure power button and power indicator
2. System information pull-out tab
3. System serial port (front)
4. Workstation node (node 12 highlighted)

HX5 Enclosure Rear View



1. HX5 I/O module
2. Management network port (2 total)
3. Expansion module (for future use)
4. Cooling Module (6 total)
5. Data uplink ports
6. Power Supply module (4 total)

N120 IO Module rear view

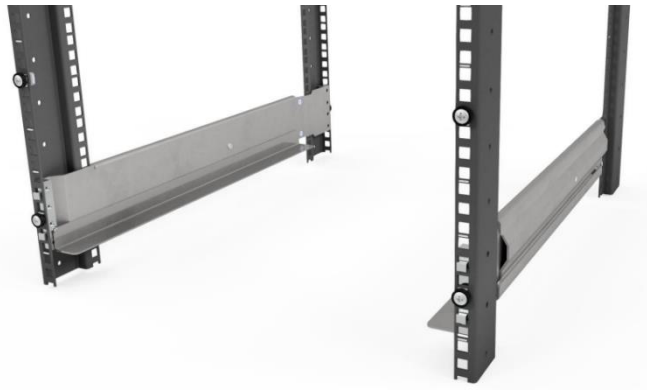


1. Latch Handle
2. Status Indicator
3. Management network ports (2 total, 1GBase-T)
4. Management network link/activity indicators
5. System rear console port (USB-C)
6. Data Passthrough ports (12 total)
7. Node Identification indicators
8. Data SFP+ combined uplink ports (4 total)
9. SFP+ uplink port link/activity indicators

Installation and Connections

CoreStation HX5 Rackmount rail kit

These rails fit between the front and rear posts and provide a solid base to support the enclosure.

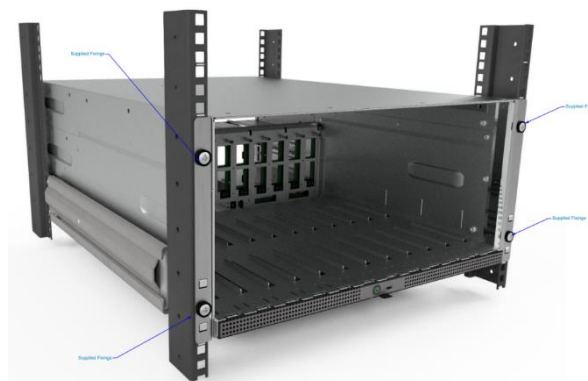


HX5 Rackmount rail kit

Rack type	Four-post racks with square holes only. Threaded racks are not supported. Two-post racks are not supported.
Mounting screw	M6x16 (supplied)
Minimum post spacing depth	600mm / 23.6in
Maximum post spacing depth	900mm / 35.4in

Rack mount installation process

1. Line up the rails so that the supports are at the bottom of the chosen 5U space
2. Extend the rails to match the inside faces of the rack posts
3. Locate the rail hooks in the rack holes to keep rails in position
4. Secure the rear of the rails using a pair of the supplied M6x16 screws with finishing washer
5. Slide the Enclosure into the rack and check it sits on the rails
6. Secure the Enclosure to the rails using four supplied M6 bolts with finishing washers



HX5 enclosure mounted on the rail kit

Precautions

- CoreStation HX5 system can weigh up to 80kg when fully loaded
- Either use appropriate Datacenter lifting equipment or remove all the modules and workstation nodes prior to lifting the Enclosure into the rack.

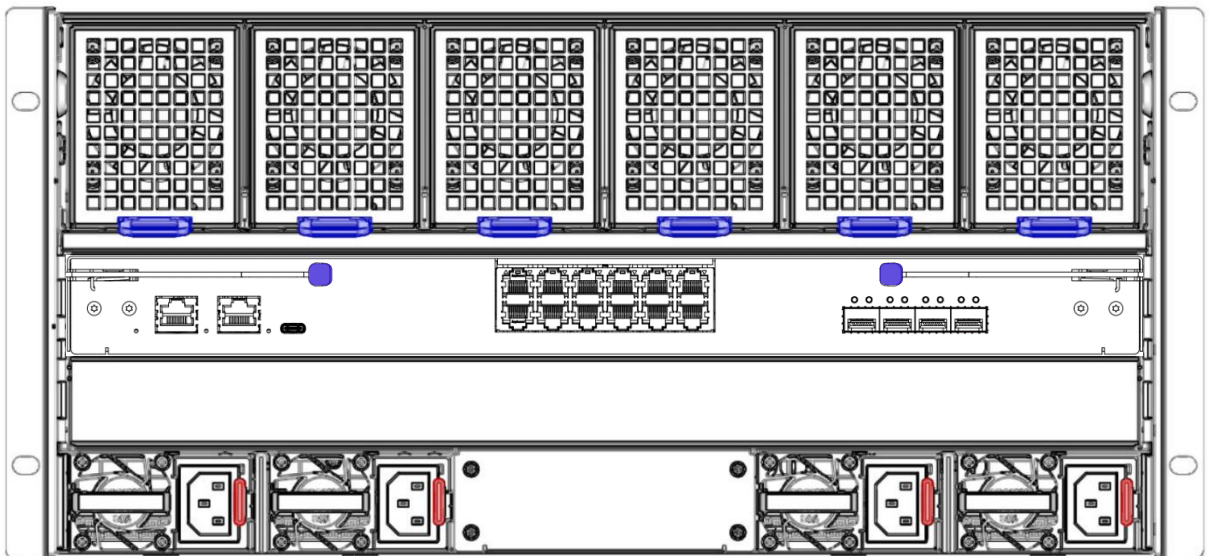
- Two people are required to lift the empty enclosure if mechanical lifting equipment is not available.
- Module and Node retention mechanisms are designed for latching in the normal horizontal orientation and are not designed to allow the Enclosure to be significantly tilted during installation.

Module Installation and Removal

If not already fitted, install the CoreStation system modules:

1. Fit the four power supplies from the rear
2. Fit the I/O module and fans from the rear (install before workstation node installation!)
3. Fit the workstation nodes from the front

IMPORTANT Note: prior to installing the I/O module, find the label and make note of the management console default login credentials which will be needed for the management console login in a later step.

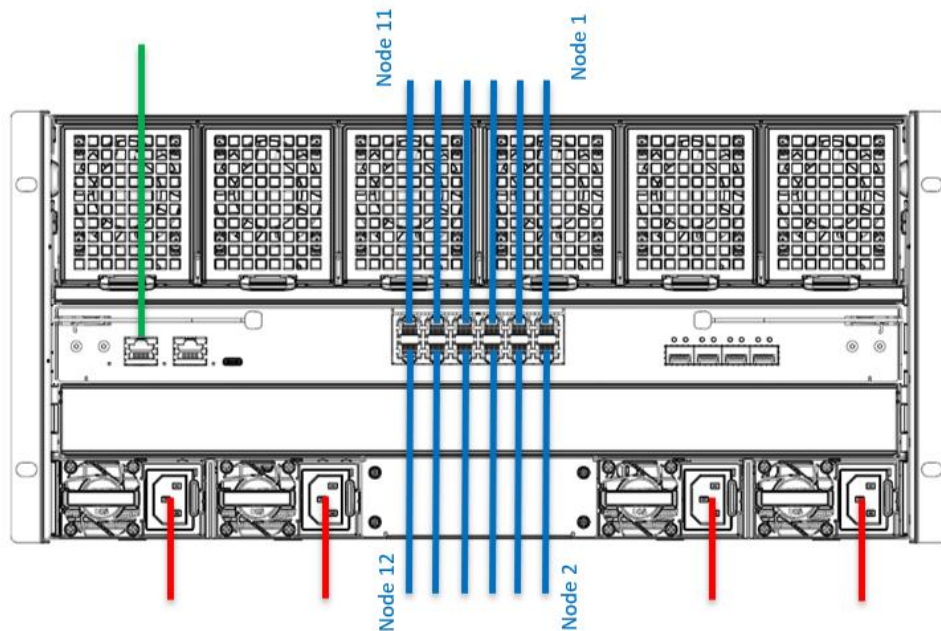


CoreStation HX5 rear module latches

Module	To Insert	To Remove
Power Supply Unit	1. Line up with Enclosure opening 2. Push gently with little resistance, then firmly to mate the connector 3. Check the red handle has clicked into the Enclosure slots 4. Connect power inlet cable 5. The PSU should light the status indicator within two seconds	1. Disconnect power inlet cable 2. Wait five seconds to allow the fans to stop spinning 3. Press the red latch toward the fan 4. Pull the PSU out of from the Enclosure using the handle
I/O Module	The I/O Modules should be inserted before the nodes when possible. 1. Line up with Enclosure opening 2. Push gently until there is resistance 3. Push strongly to until the rear face is flush with the Enclosure 4. Push the blue handles toward the Enclosure to engage the connectors and latch the module. The latch handles should touch the rear face of the I/O module when fully inserted 5. The I/O module should light the status indicator within two seconds	1. If possible, turn off the Enclosure and all services before removal 2. Pull the blue latch handles away from the Enclosure to unlatch and disengage the connectors 3. Pull the I/O module out of the Enclosure by approximately 50mm (2in) using the latch handles 4. Grasp the I/O module either at the sides or top/bottom with fingers and pull it completely out of the Enclosure.
Cooling Module	1. Line up with Enclosure opening with the blue latch handle at the bottom 2. Push gently with little resistance, then firmly to mate the connector 3. Check the blue handle has clicked into the Enclosure slots 4. The fan module should spin up within two seconds.	1. If possible, turn off the nodes which are cooled by this fan module 2. Press the blue latch handle down and pull backwards to remove the module approximately 50mm (2in) from the Enclosure 3. Grasp the fan module at the sides or top/bottom with fingers and pull it completely out of the Enclosure. 4. If the nodes in this cooling channel are still operating, replace the fan module within 30 seconds to prevent thermal throttling
Workstation Node	1. Line up with Enclosure opening 2. Push gently with little resistance, then firmly to mate the connector 3. Check the blue handle has clicked into the Enclosure slot 4. The node should light the status indicator within two seconds	1. Turn off the node 2. Press the blue latch handle down and pull to remove the node approximately 50mm (2in) from the Enclosure 3. Grasp the node at the sides or top/bottom with fingers and pull it completely out of the Enclosure. 4. Take care with the rear of the node as the connectors are delicate and sensitive to electrostatic discharge (ESD)

Required cable connections

- Each power supply uses an IEC C14 socket – use with either C14-C13 extension cables or C13 – Mains cables as required. Cables are supplied with the system.
- The IO Module has two Ethernet ports for management
 - Connect management port 1 to the intended management network. This support operation at 100Mbit/s or 1Gbit/s, auto-neg, full-duplex.
 - Port 2 is reserved and not accessible yet.
- The IO module has twelve Ethernet ports for direct connection to the Workstation nodes
 - Connect the data ports to the data network. These support operation at 100Mbit/s, 1Gbit/s or 2.5Gbit/s, auto-neg, full duplex.
- The IO module has four SFP+ modules supporting 10GbE shared network connections.
 - Currently the SFP+ ports are disabled.
 - Link Aggregation Group planned for 2025.12 firmware release. Initially this is a single basic LAG with all four link members (802.3ad mode, fast LACP rate and transmit hash policy layer 2+3).



Cable connections at rear of HX5 enclosure

- 1x Management network connection (Green) – 100/1000Base-T
- 12x Data network connection (Blue) – 100/1000/2500Base-T
- 4x Power connection (Red) – C13

Management Setup

First Time Power up

- The Management Controller starts up as soon as power is applied to the enclosure
- The front and rear serial console ports are active as soon as the Management controller has completed initialisation
 - Used to configure the method for acquiring an IP address (static or dhcp)
 - Used to check the enclosure status if the management network is unavailable
 - Show up as a standard USB Serial Port when connected to a PC using a standard USB cable

Set IP address

- The management network port will attempt to acquire an Ipv4 address using DHCP by default. It will keep trying forever and does not fall back to a default IP address.
- To specify the management console to use a static IP Address, connect to the enclosure serial port using a standard USB cable
- Open a terminal emulation app such as HyperTerminal and connect using 115,200 baud, 8N1 – 8 data bits, 1 stop bit, no parity.
- Enter the command *net static ip_address subnet_mask gateway*
 - *net static* – instructs the management network to use a fixed, static IP Address
 - *ip_address* – the address and subnet mask that the management network interface should use
 - *Gateway* – the ip address which provides routing to other services

```
> net static 192.168.0.150 255.255.25.0 192.168.0.254
```

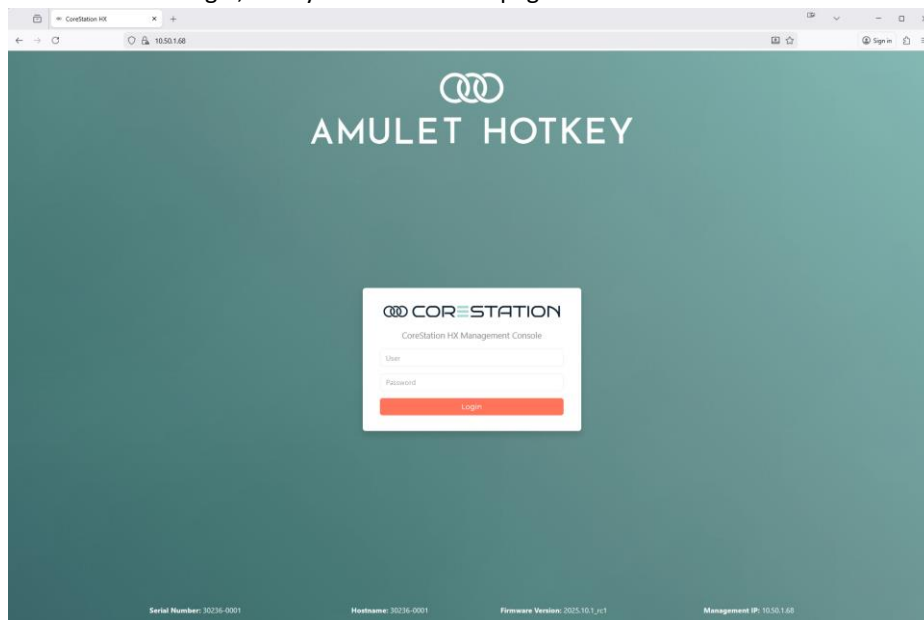
- Use the command *info* to confirm the static IP has been set:

```
> info
Hostname:      cmc-30289-0003
Serial no:     30287-0003
IOM model:     N120
Software version: 2025.10.2_ga
Date:          2025-09-15
Running from:   a
Enclosure uptime: 16:41:18 up 38 days,  2:21,  0 user,  load average:
1.23, 1.42, 1.46
MAC address:    00:13:95:67:AE:60
IP address:     192.168.0.150/24
Gateway:        192.168.0.254
DNS:            192.168.0.10, 8.8.8.8
State:          up
Mode:           Static
```

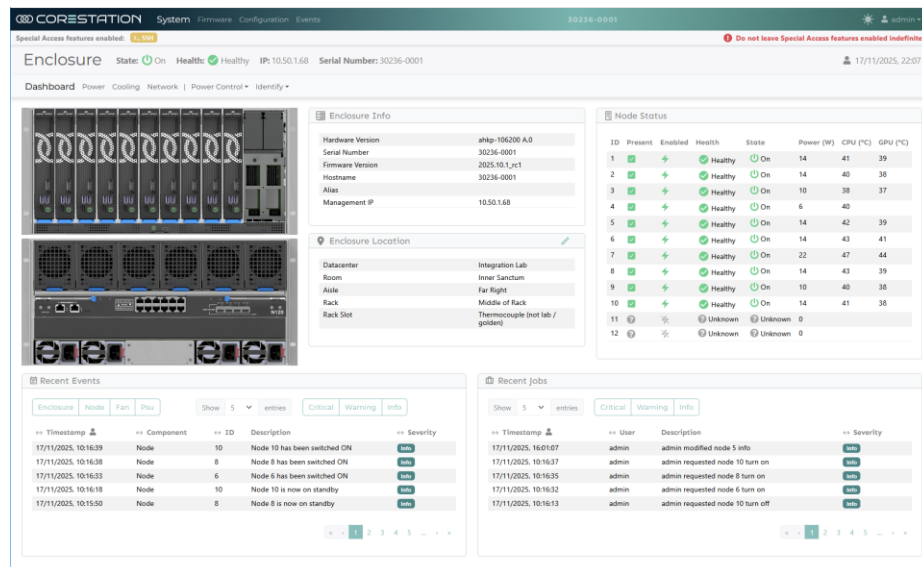
Login with default credentials (unique to each enclosure)

- The default username is *admin* and the default password is printed on the label on the management controller. The IO module must be removed to see the label.
- Briefly press the power button on the front of the enclosure – it will change from amber to green
- Allow up to five minutes for the management console to initialise and startup

- Open a web browser on a machine which can access the network address of the management controller and enter the address of the management controller
 - By static IP if that was set
 - By default hostname, if DNS is available on the management network
 - By the IP address as listed against the management controller MAC address in the DHCP records of the DHCP controller
- The management console uses HTTPS with a self-signed certificate and this will generate a warning on most browsers. Check the certificate credentials in the browser and accept the warning to access the login page for the management console.
- After successful login, the System Dashboard page is shown



Management Console Login Page – showing HTTPS self-signed certificate warning



Management Console System Dashboard

System check and firmware update

Check system health

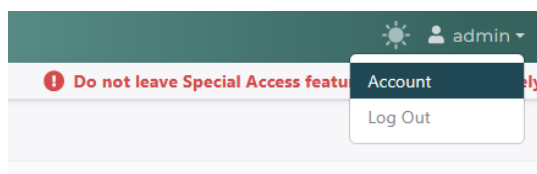
- Browse to the System page and check that the system and all the components are present and in a healthy state



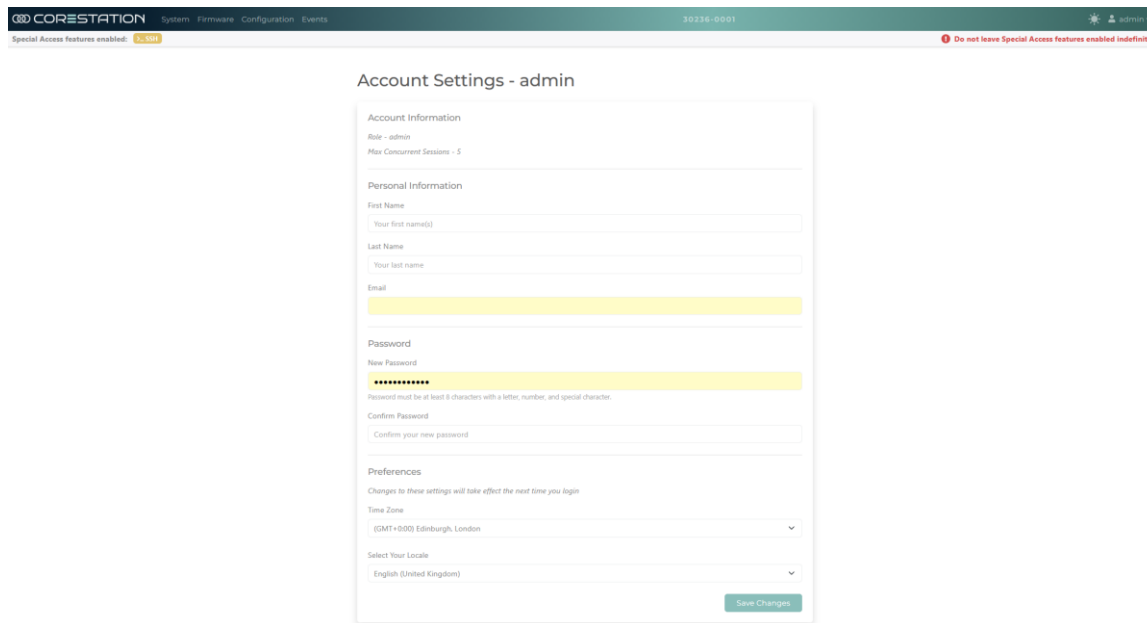
Management Console System Dashboard – Healthy

Change admin user password

- The default password is unique to each system, but should be changed to a new password as soon as possible.
- Browse to the User Profile page and select change password



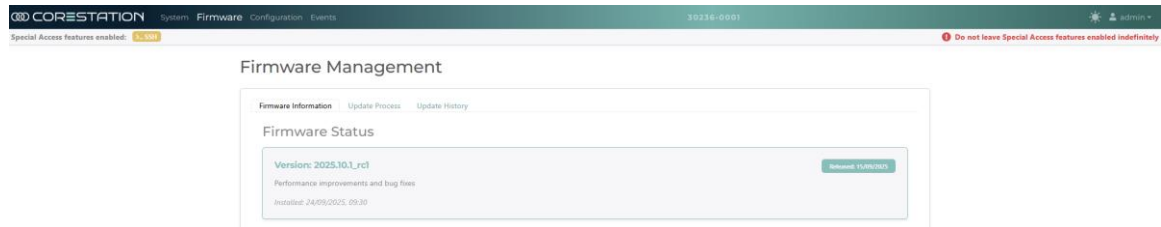
Accessing the Account User Profile page



Change password for the current user

Check for updated firmware

- Browse to Firmware page to see current running version



Management Console firmware page

- Check for latest version on the Amulet Hotkey [CoreStation HX resources page](#)
- Download the latest CoreStation HX system firmware update package and save on a local drive
Note: the CoreStation HX system firmware download requires sign-in. Contact Amulet Hotkey if you need access to the CoreStation HX firmware files.
- Navigate to the **Firmware > Update Process** tab and click **Start An Update** button to open the firmware update dialog



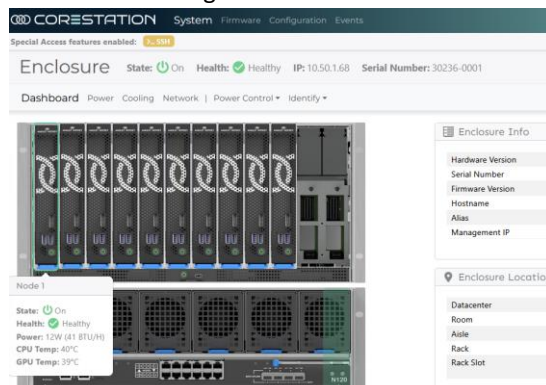
Management Console Firmware Update

- Click **Select File** and browse to the firmware package on the local machine, select **Update Now** to start the update process.

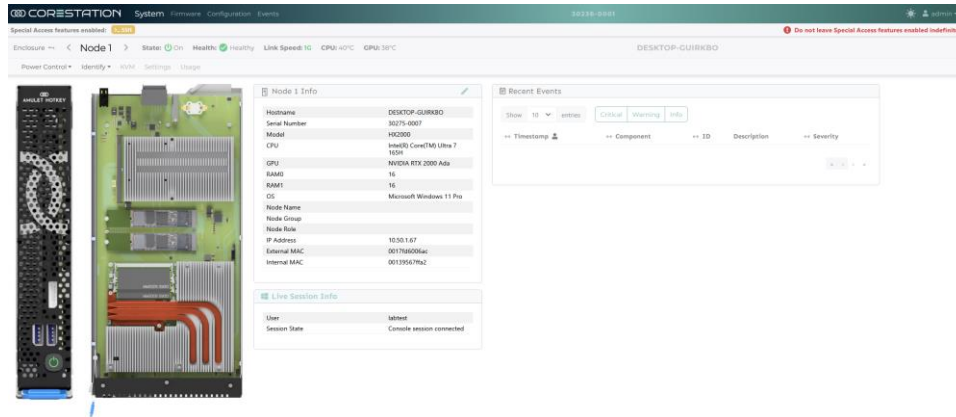
Node Setup

Node details

- Browse to the system page on the management console and select a workstation node by clicking on the enclosure image



- Verify the specifications of the node are as expected

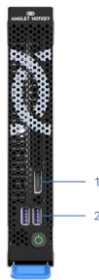


Management Console Node Status page

Node Boot Control

- Local BIOS Access: using the local DisplayPort and USB ports.

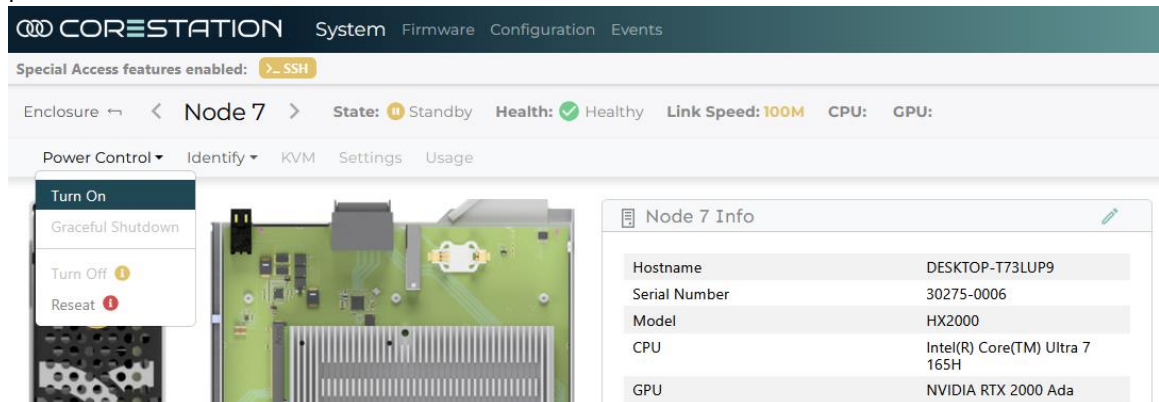
IMPORTANT Note: For CoreStation HX firmware up to 2025.10.x, boot configuration must be done locally by connecting a monitor and keyboard to the front of the HX2000 node. Boot options for local USB and PXE.



- Node Remote Console Access from the Management controller (initial availability targeting the December 2025 software release) will provide access to the local BIOS and boot options.

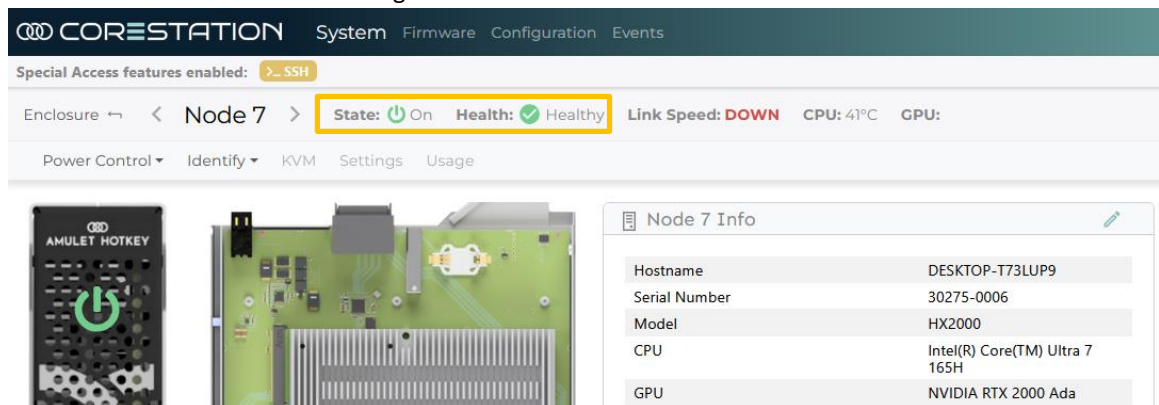
Power Up

- Power up the node using the **System > Node <#> > Power Control** drop-down menu or the front-panel power button on the node



Node Power Control Menu

- Observe the node State status change



Node State during power-on

Connecting to the Workstation

- Workstation nodes delivered with Windows OS pre-installed and configured for proof-of concept will boot directly to the Windows login page. The proof of concept image has RDP enabled which allows remote access for testing, configuration and application installation including installing a remote display protocol.
Note: Nodes configured for Microsoft AutoPilot/Intune are delivered in a Windows OOBE state.
- Workstation IP address and host name will be displayed on the node page
- When nodes are powered down, the node status page displays the last known host name for the node

Connecting – Direct front-panel connection

- Connect a local DisplayPort monitor, USB keyboard and mouse directly to any node using the front-panel ports.

Connecting – Remotely

- Follow the documentation for the remote agent solution as appropriate.

- For nodes deployed with the Amulet Hotkey Proof-of-concept image, an RDP connection will be available using the credentials in section Windows 11 Pro – AHK Proof-of-concept image section below.

OS Installation and re-imaging

- Workstation nodes are usually supplied with an operating system pre-installed and can be configured for remote access before leaving the Amulet Hotkey factory
- Complete OS Re-installation can be performed by several methods:

IMPORTANT Note: Local USB boot or PXE boot must be configured in BIOS using a monitor/keyboard connected to the front of the node or from the currently-installed Windows OS via Powershell commands. Future system updates will enable deployment modes including remote installation from the management console.

- Local USB mass-storage using the front panel USB ports.

IMPORTANT Note: HX2000 nodes running node BIOS prior to 2025.11.x, during a Windows 11 interactive installation the Windows Setup buttons will be displayed off-screen as the resolution will be limited. Workaround options include using non-interactive installation using an autounattend.xml answer file or upgrade the BIOS to a version that includes a fix for the resolution limitation.

- Microsoft SCCM/MDT or PXE boot to Windows PE

Node OS Management

Workstation nodes can be shipped pre-installed with several different Windows 11 Pro images:

OS Option	Image	License	Supported OS Management
No OS	none	none	Customer specific
Windows 11 Pro	AHK Proof-of-concept Intended for initial customer testing	OEM license stored in BIOS	Locally managed users and apps
Windows 11 Pro	Standard Production Image Intended for volume deployment with Microsoft Autopilot	OEM license stored in BIOS	Windows Autopilot / Intune

Windows 11 Pro – AHK Proof-of-concept image

- Amulet Hotkey customised image for simple customer setup and initial testing
 - Node BIOS configuration for RAID if the node has dual M.2 drives and RAID enabled is listed in the quote and purchase order.
 - Windows 11 Pro latest version with installed updates
 - Local Administrator account username and password
 - User: admin, Password: o&v83*10%W, Type: local administrator
 - Local user account username and password
 - User: User, Password: 7ymfX8.WbY, Type: local standard account
- Note:** as a best practice we recommend changing the default passwords at a minimum.

- CoreStation HX base driver pack installed including the GPU driver (integrated Intel GPU or NVIDIA GPU driver and NVIDIA software identified in the CoreStation HX quote and purchase order).
- CoreStation HX node management app installed
- BIOS driver installer to allow BIOS updates from Windows.
- Windows features/settings:
 - Remote Desktop enabled
 - Fast boot / fast start-up disabled
 - Window lock set to never
 - Sleep states set to never
 - Turn screen off to X set to never
 - Make my device hibernate after X set to never
 - Set power button to Shutdown
 - Firewall rules to allow inbound ping requests

This image allows a node to be used immediately after initial power-up for basic testing without the need to perform any management setup or deployment. This image can be further customised or replaced with a corporate OS image as required.

Node details provided as part of delivery:

- Serial Number
- MAC Addresses
- OS Hostname

Windows 11 Pro – Standard Production image

- Standard image for production deployment
- Windows 11 Pro 24H2
- CoreStation HX base driver pack installed
- CoreStation HX node management agent installed

This image is shipped in the Windows Setup OOB state and is intended to be used with Windows Autopilot in self-deploying mode to automatically configure the settings and install applications and updates based on policies defined in the customer's Microsoft Intune portal.

Node details provided as part of delivery:

- Serial Number
- MAC Addresses
- OS Hostname
- Windows hardware hash which can be directly uploaded to your Intune instance

Windows OS drivers and updates

CoreStation HX drivers are published on the Amulet Hotkey [resources](#) website

Download	Content	Supported Deployment Routes
Windows Pro PE pre-install drive pack	Drivers required as part of the Windows Pro install process when re-imaging the node (NIC, RAID drivers)	• Integrate with Windows PE environment (Customer-specific)
Windows Pro Baseline Driver pack	Windows 11 Pro Drivers for all system devices (except GPUs)	• Using Microsoft Intune – see Amulet Hotkey KBA • Directly on machine using AHK Installer application • Extract and install manually (Customer-specific)
Windows Pro Integrated GPU Driver	Windows 11 Pro driver for Intel integrated GPU (All variants)	• Using Microsoft Intune – see Amulet Hotkey KBA • Directly on machine using Intel Installer application
Windows Pro NVIDIA GPU Driver	Windows 11 Pro driver for discrete NVIDIA GPU (All variants)	• Using Microsoft Intune – see Amulet Hotkey KBA • Directly on machine using NVIDIA Installer application
HX2000 BIOS Update	Windows 11 Pro BIOS update application	• Using Microsoft Intune – see Amulet Hotkey KBA • Directly on machine using AHK Installer application



Resources

<https://amulethotkey.force.com/support/s/resources>

EMEA Support

+44(0)20 7960 2400

eurosupport@amulethotkey.com

North America Support

+1(212)269 9300

ussupport@amulethotkey.com

casupport@amulethotkey.com

Asia Pacific Support

apsupport@amulethotkey.com

Latin America Support

latamsupport@amulethotkey.com