

# Product overview

Product descriptions and front, rear, and inside views of HX Series systems

**Lenovo**

# Lenovo ThinkAgile HX Series appliances overview

ThinkAgile HX Series appliances are preloaded with Nutanix software and are based on Lenovo's 1U x3550 M5 platform (MT 8869), 2U x3650 M5 platform (MT 8871), the 2U4N SD350 (MT 5493), the n400 (MT 5495), and the 1U SR630, 2U SR650, 4U SR950, and 2U4N SD530 platform.

From November 2020, the HX Series includes two additional appliance models, one based on the SR655 with an AMD processor, and one based on the SE350. ThinkAgile HX Series appliances cover a range of hardware configurations to support a variety of workloads.

| Workload         | Marketing name   | Purpose   |
|------------------|--|---|
| Light to medium  | HX1020, HX1310, HX1320*  | Engineered for business applications and Virtual Desktop Infrastructure (VDI) and optimized for remote office/branch office (ROBO) environments |
| Small deployment | HX1520-R, HX2320, HX2310-E, HX2710-E, HX2320-E, HX2720-E                         | Suitable for small and medium businesses  |
| Compute heavy    | HX3510-G, HX3310, HX3310-F, HX3710, HX3710-F, HX3320, HX3320-F, HX3520-G, HX3720 | Suitable for business applications and VDI  |
| Storage heavy    | HX5510, HX5510-C, HX5520, HX5520-C   | Suitable for big data and enterprise applications   |
| High performance | HX7510, HX7520, HX7820   | Suitable for enterprise applications and databases, I/O intensive operations  |

**Note:** Lenovo offers four options for Nutanix software: Express Edition, Starter Edition, Pro Edition, and Ultimate Edition.

# Lenovo ThinkAgile HX Series certified nodes overview

ThinkAgile HX Series certified nodes are based on Lenovo's 1U SR630, 2U SR650, 4U SR950, and 2U4N SD530 platform and have optional, pre-loaded software. From November 2020, the HX Series includes two additional appliance models, one based on the SR655 with an AMD processor, and one based on the SE350. ThinkAgile HX Series appliances cover a range of hardware configurations to support a variety of workloads.

| Workload         | Marketing name                   | Purpose   |
|------------------|----------------------------------|---|
| Light to medium  | HX1321                           | Engineered for business applications and Virtual Desktop Infrastructure (VDI) and optimized for remote office/branch office (ROBO) environments |
| Small deployment | HX1521-R                         | Suitable for small and medium businesses  |
| Compute heavy    | HX3321, HX3521-G, HX3376, HX3721 | Suitable for business applications and VDI  |
| Storage heavy    | HX5521, HX5521-C                 | Suitable for big data and enterprise applications   |
| High performance | HX7521, HX7821                   | Suitable for enterprise applications and databases, I/O intensive operations  |

**Note:** Lenovo offers four options for Nutanix software: Express Edition, Starter Edition, Pro Edition, and Ultimate Edition.

# Differences between Lenovo ThinkAgile HX Series appliances and certified nodes

ThinkAgile HX Series  
appliances

**Hardware plus  
software support**

## Pre-integrated hardware and software with a software license

- ✓ Fully certified software and hardware with ThinkAgile Advantage Single Point of Support
- ✓ Nutanix software preloaded
- ✓ Software license included – life of device or perpetual
- ✓ ThinkAgile Advantage deployment services

ThinkAgile HX Series  
certified nodes

**Software license plus  
support**

**Software bits**

**Hardware plus  
support**

## Pre-integrated hardware and software without a software license

- ✓ Fully certified software and hardware with ThinkAgile Advantage Single Point of Support
- ✓ Nutanix software preloaded
- ✓ Separate support contract for software
- ✓ Separate software license – term-based license (1 to 5 years)
- ✓ Software license transferable to new or different hardware
- ✓ Flexibility with deployment services

# ThinkAgile HX Series appliances and certified nodes

|  | ThinkAgile HX Series appliances   | ThinkAgile HX Series certified nodes  |
|--|---|---|
| Base description                             | Turnkey solution with pre-integrated hardware, software, and support from a single provider                       | Software-defined infrastructure platforms certified for VMware, Nutanix, and Microsoft S2D                        |
| Country Support                              | ThinkAgile Advantage (where available) with IBM hardware-only base warranty elsewhere                             | ThinkAgile Advantage (where available) with IBM hardware-only base warranty elsewhere                             |
| Lenovo Support                               | Single Point of Support for ThinkAgile Advantage (where available) with IBM hardware-only base warranty elsewhere | Single Point of Support for ThinkAgile Advantage (where available) with IBM hardware-only base warranty elsewhere |
| Software pre-load                            | Mandatory   | Optional (Pending contract update).   |
| Software licenses                            | Mandatory   | Base – No license<br>Upgrade – Plan is for Lenovo-provided ELA/resell SKUs when available                         |
| Basic hardware installation (rack and stack) | Base – Not included<br>Upgrade – Buy Lenovo hardware install service  | Base – Not included<br>Upgrade – Buy Lenovo hardware install service  |
| Deployment service                           | Mandatory   | Base – Not included<br>Upgrade – Buy Lenovo deployment service  |
| Certified components only                    | Yes   | Yes   |
| Certified firmware only                      | Yes   | Yes   |

## HX 1000 Series overview

The HX 1000 Series consists of the 1U single-node HX1310 based on the x3550 M5, the HX1320 and HX1321 based on the SR630, and the 2U single-node HX1520-R and HX1521-R based on the SR650. The HX1310 has eight 2.5-inch front hot-swap drive bays, the HX1320 and HX1321 have four 3.5-inch front hot-swap drive bays, and the HX1520-R and HX1521-R have twelve or fourteen 3.5-inch drive bays.



HX1310



HX1320 / HX1321



HX1520-R / HX1521-R

## HX1020 and HX1021 overview

The HX1020 Series is based on the ThinkSystem SE350 and is available in a 1U one-node form factor. The HX1020 Series supports an all-flash, all-NVMe configuration only. The HX1020 Series also supports one NVIDIA T4 GPU with a four-drive configuration. The HX1020 Series has only limited serviceability as the processor is soldered to the system planar and there are no hot-swap drives. Legacy boot is also not supported, and systems must use UEFI boot.

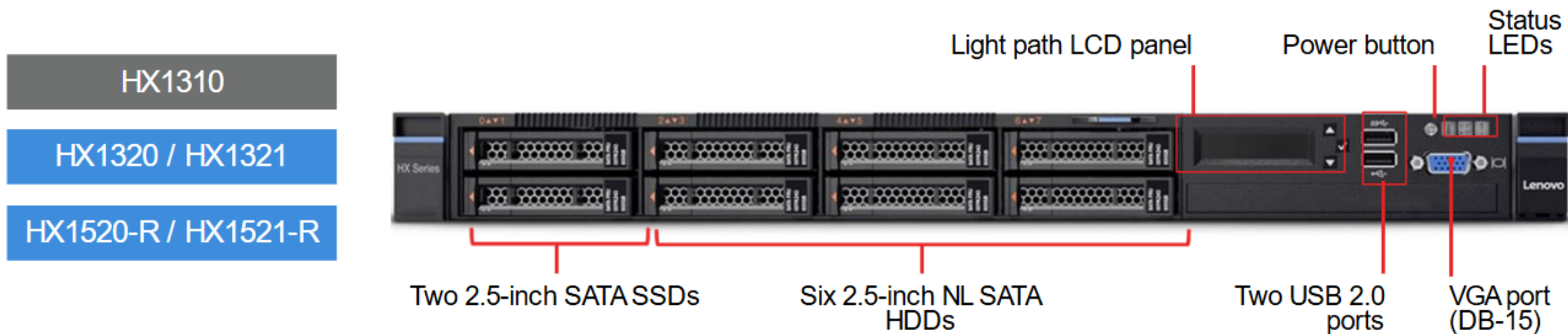


**Note:** 1. To ensure the HX1020 Series has NVMe support, it will be shipped with AOS version 5.16 or later.

2. For system views of the HX1020 and HX1021, refer to course: [ES71911B Servicing the Lenovo ThinkSystem SE350 Edge Server](#)

## HX 1000 Series front view

Click the system name buttons to see front views of the corresponding HX 1000 Series systems.



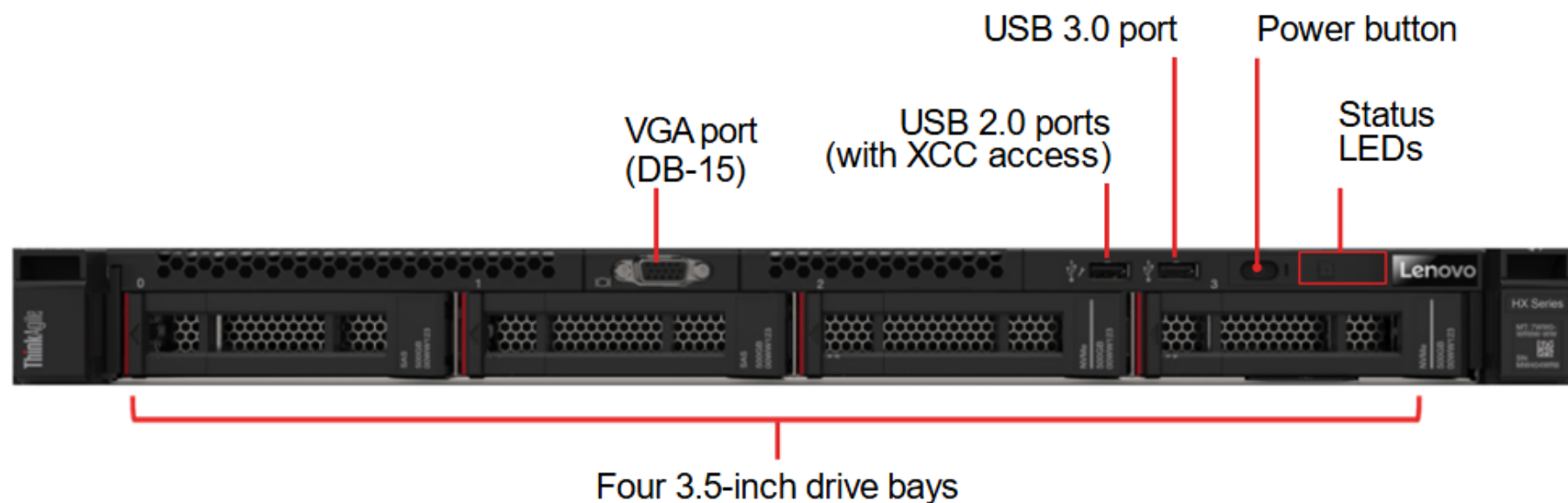
## HX 1000 Series front view

Click the system name buttons to see front views of the corresponding HX 1000 Series systems.

HX1310

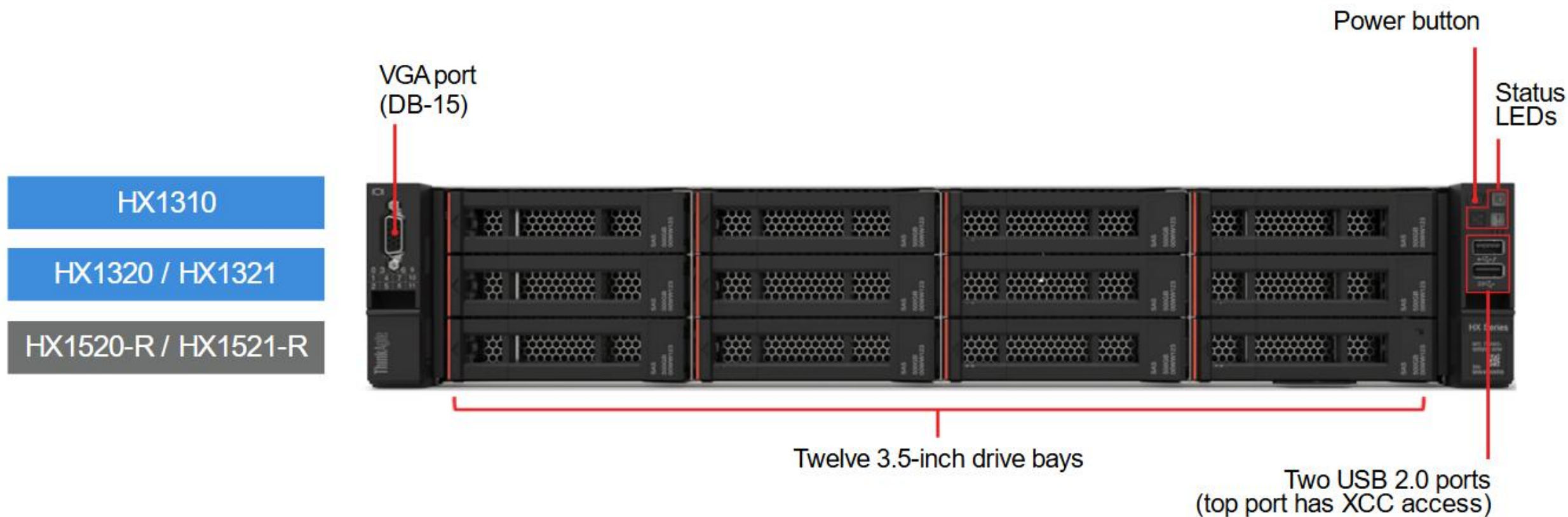
HX1320 / HX1321

HX1520-R / HX1521-R



# HX 1000 Series front view

Click the system name buttons to see front views of the corresponding HX 1000 Series systems.



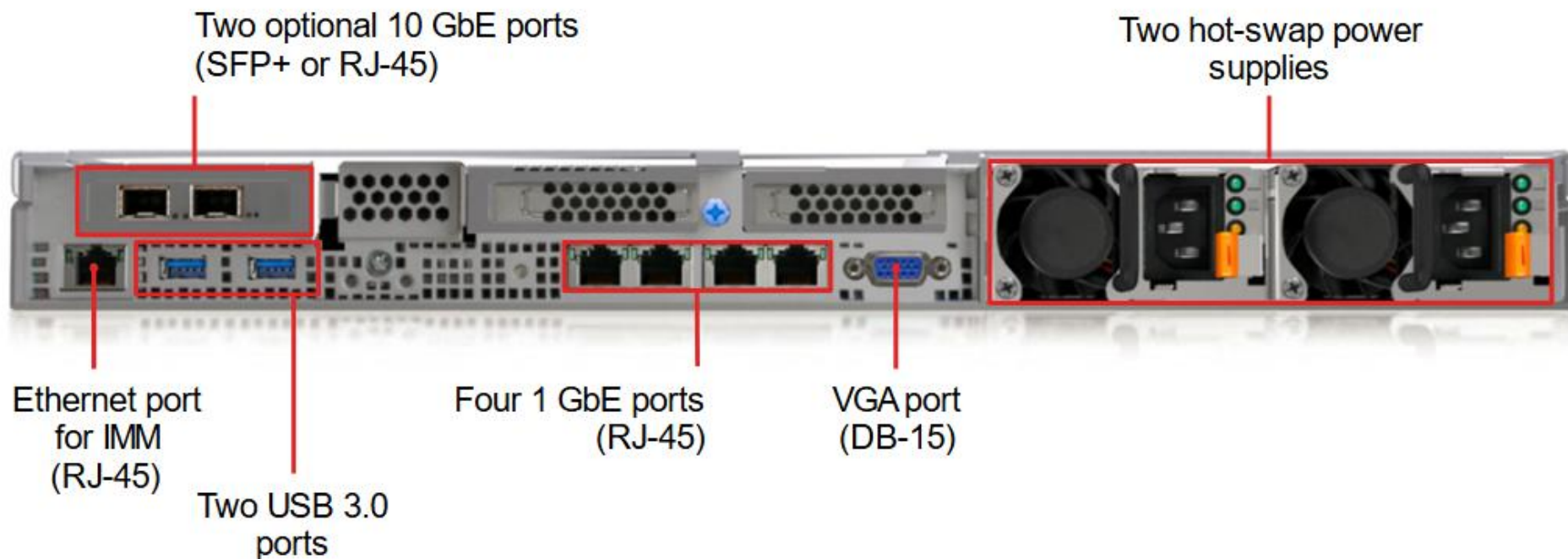
## HX 1000 Series rear view

Click the system name buttons to see rear views of the corresponding HX 1000 Series systems.

HX1310

HX1320 / HX1321

HX1520-R / HX1521-R



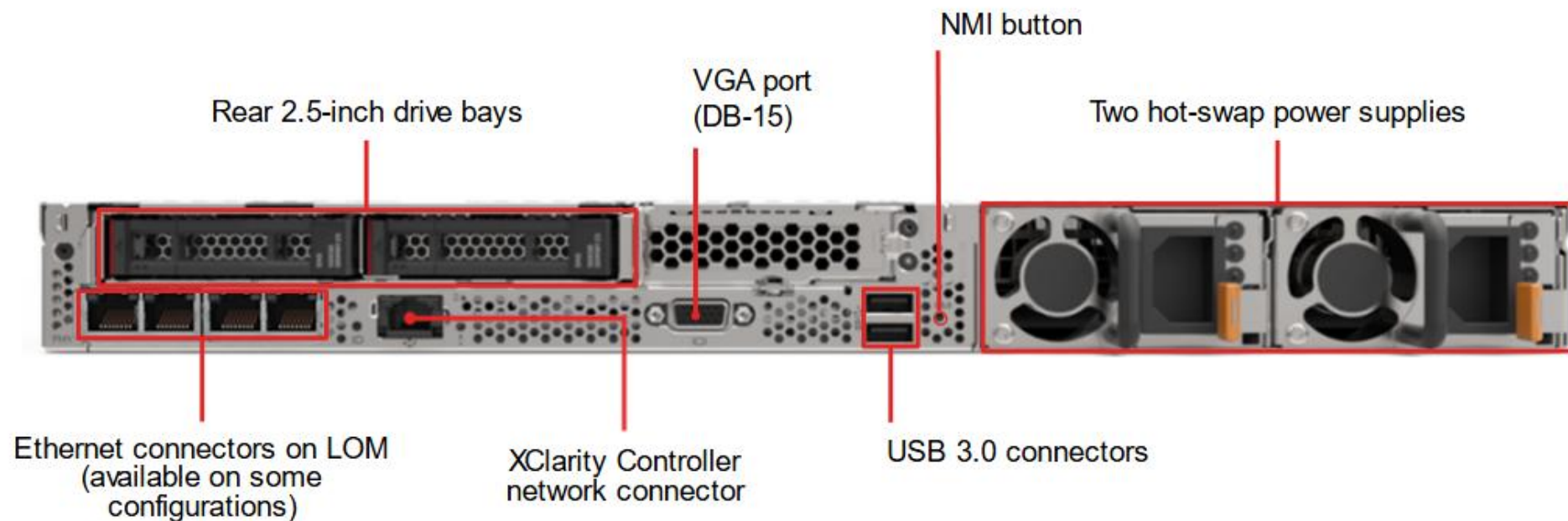
## HX 1000 Series rear view

Click the system name buttons to see rear views of the corresponding HX 1000 Series systems.

HX1310

HX1320 / HX1321

HX1520-R / HX1521-R



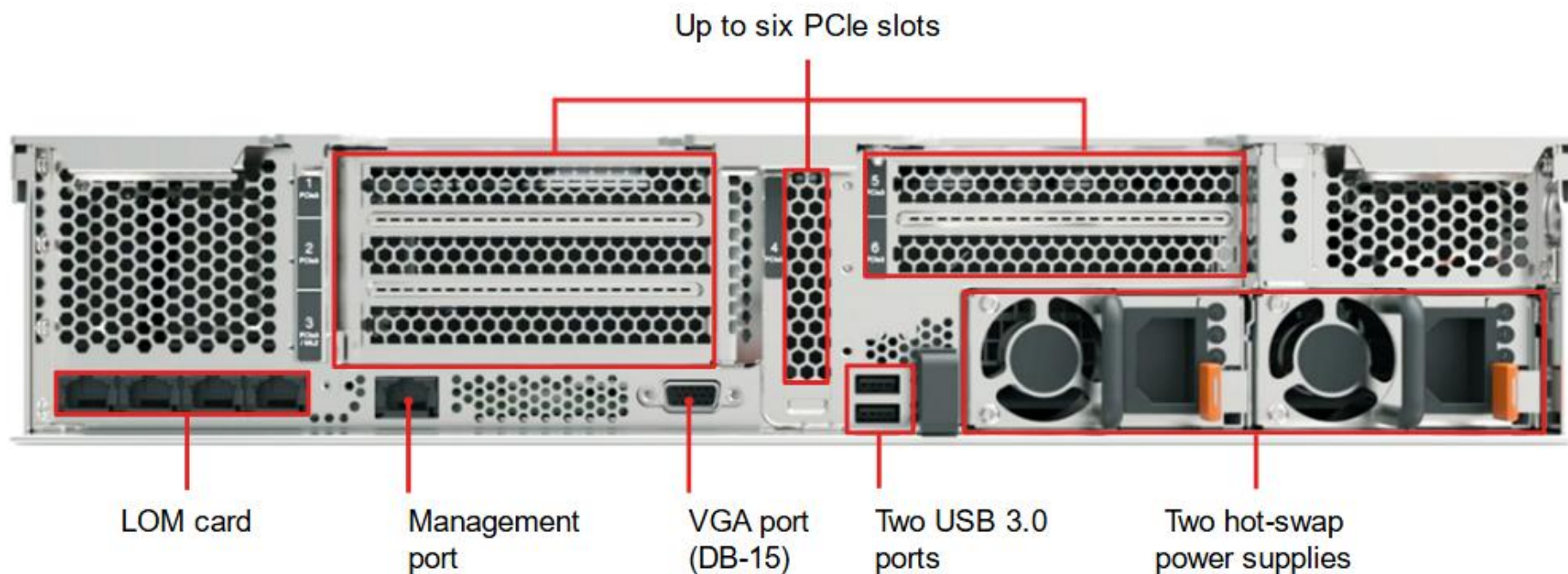
## HX 1000 Series rear view

Click the system name buttons to see rear views of the corresponding HX 1000 Series systems.

HX1310

HX1320 / HX1321

HX1520-R / HX1521-R



# HX 2000 Series overview

The HX 2000 Series includes:

- The 1U single-node HX2310-E, HX2320, and HX2320-E
- The 2U four-node HX2710-E and HX2720

**Note:** The HX2310-E is based on the x3550 M5, the HX2320 and HX2320-E are based on the SR630, the HX2720-E is based on the sd350 compute node and n400 enclosure, and the HX2720 is based on the SD530.

The HX 2000 Series has the following drive bays:

- The HX2310-E has seven 2.5-inch front hot-swap drive bays.
- The HX2320 has four 3.5-inch front hot-swap drive bays.
- The HX2320-E has eight 2.5-inch front hot-swap drive bays.
- The HX2710-E and HX2720-E have six 2.5-inch front hot-swap drive bays per node.



HX2310-E



HX2320



HX2320-E



HX2710-E



HX2720

## HX 2000 Series front view

Click the system name buttons to see front views of the corresponding HX 2000 Series systems.

HX2310-E

HX2320

HX2320-E

HX2710-E

HX2720-E



## HX 2000 Series front view

Click the system name buttons to see front views of the corresponding HX 2000 Series systems.

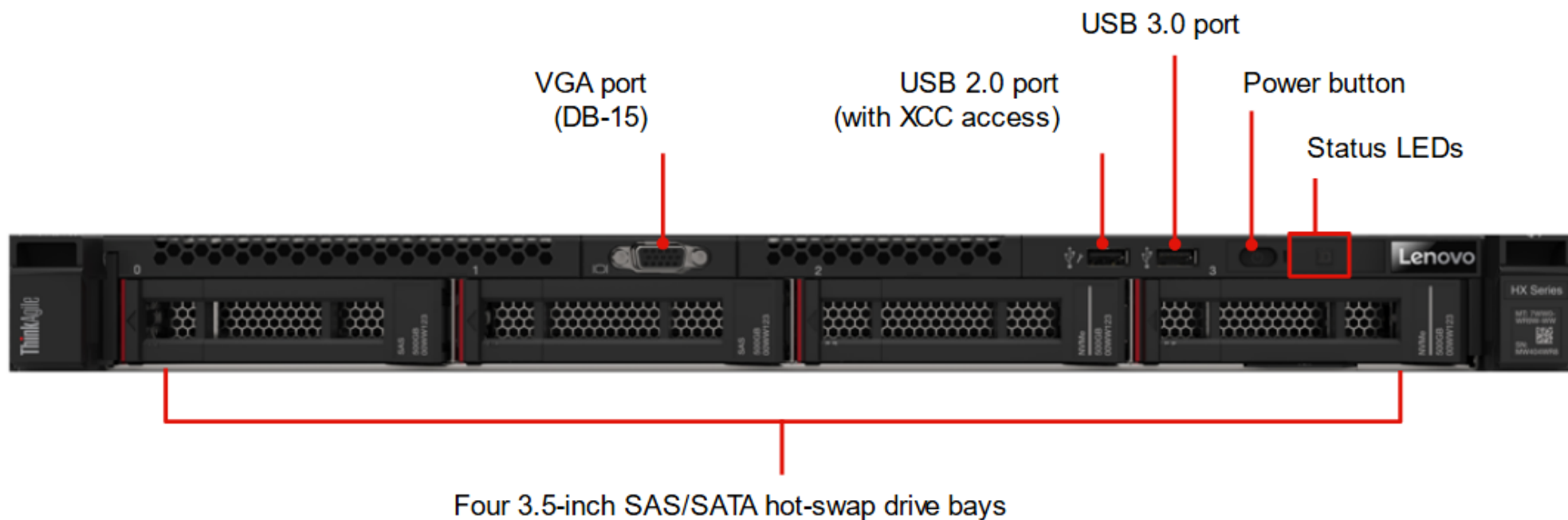
HX2310-E

HX2320

HX2320-E

HX2710-E

HX2720-E



## HX 2000 Series front view

Click the system name buttons to see front views of the corresponding HX 2000 Series systems.

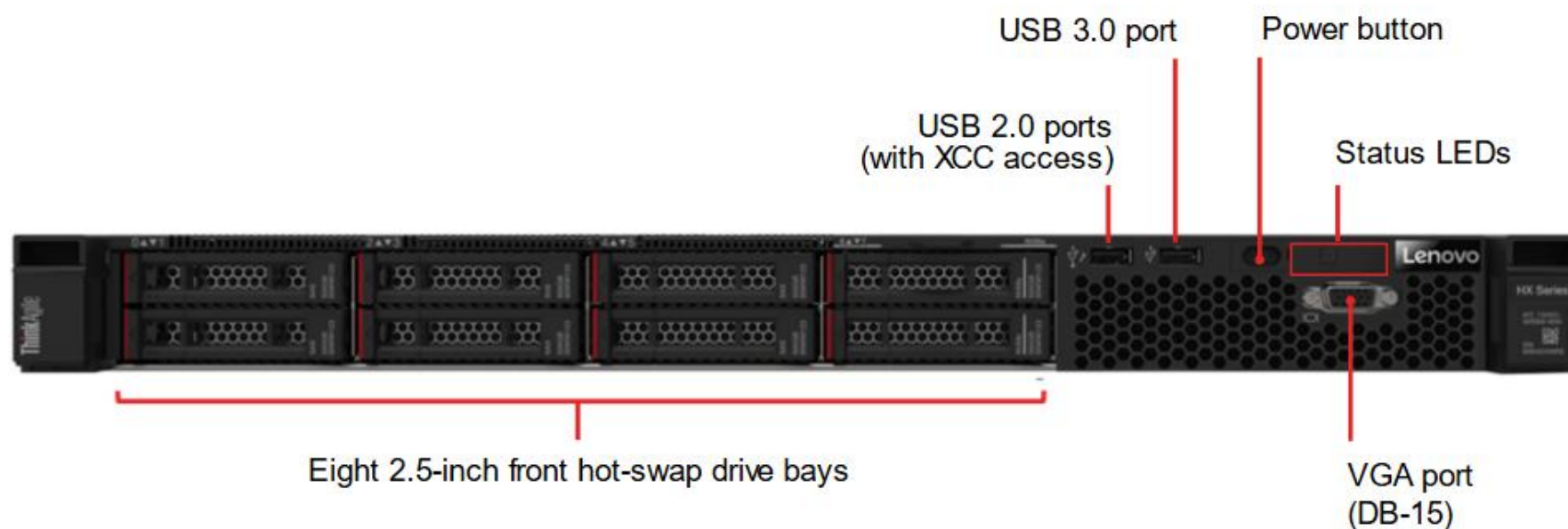
HX2310-E

HX2320

HX2320-E

HX2710-E

HX2720-E



## HX 2000 Series front view

Click the system name buttons to see front views of the corresponding HX 2000 Series systems.

HX2310-E

HX2320

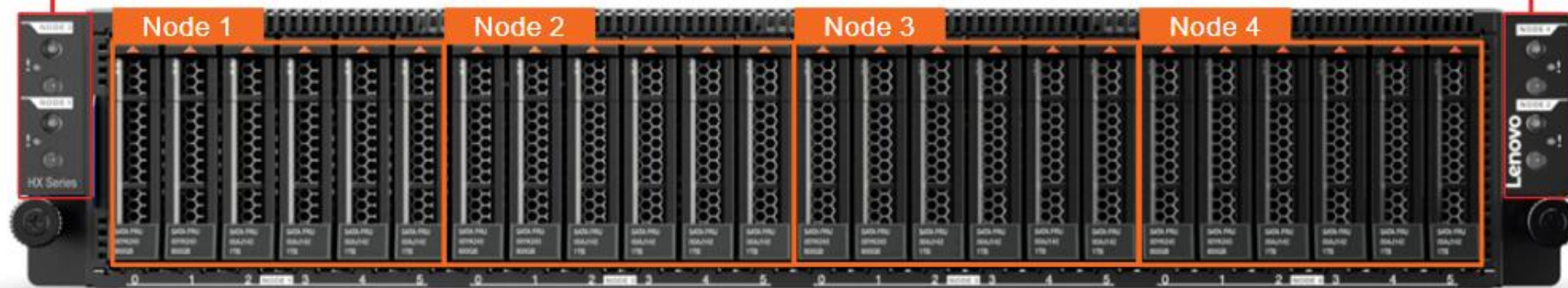
HX2320-E

HX2710-E

HX2720-E

Control panel for node 1 and 3  
(power button/LED, system error LED,  
and ID button/LED)

Control panel for node 2 and 4  
(power button/LED, system error LED, and  
ID button/LED)



2.5-inch SATA SSD plus five 2.5-inch NL SATA HDDs  
(this drive configuration is the same for all nodes)

## HX 2000 Series front view

Click the system name buttons to see front views of the corresponding HX 2000 Series systems.

HX2310-E

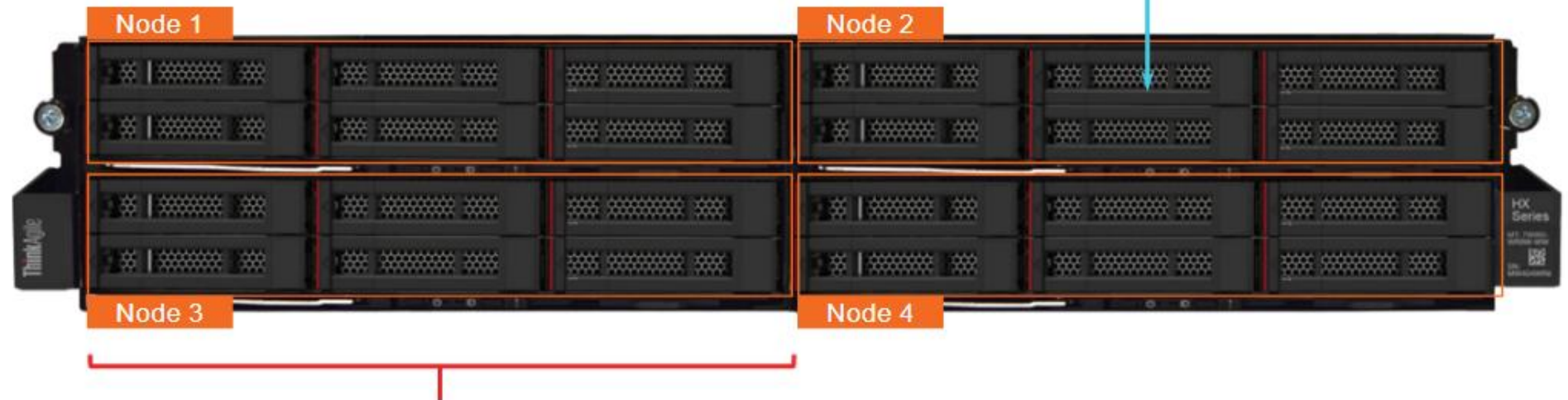
HX2320

HX2320-E

HX2710-E

HX2720-E

Click any node to see more information.



Each node contains one to two 2.5-inch SATA SSDs plus four to five 2.5-inch SATA HDDs (maximum of six drives per node)

## HX 2000 Series front view

Click the system name buttons to see front views of the corresponding HX 2000 Series systems.

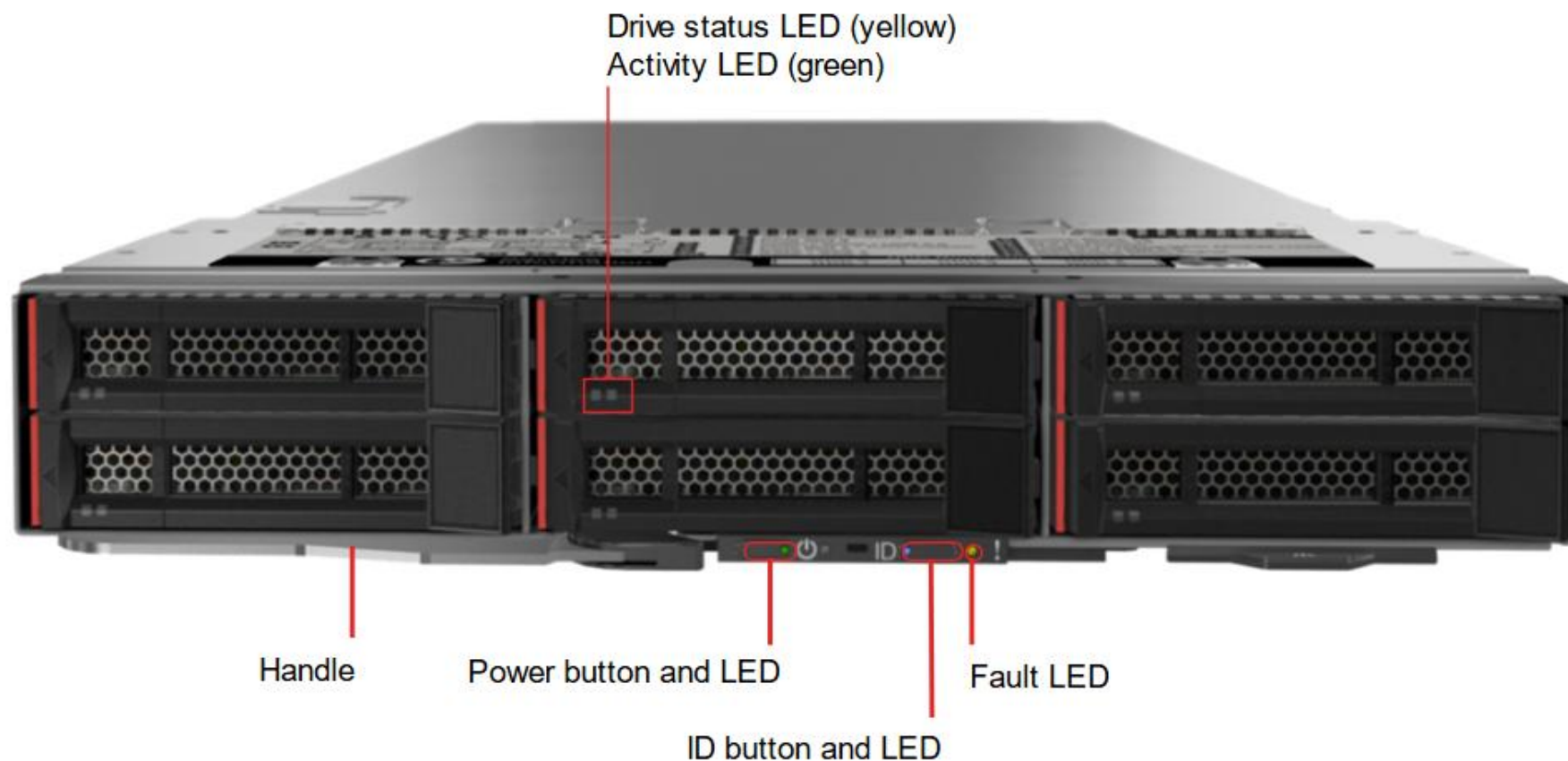
HX2310-E

HX2320

HX2320-E

HX2710-E

HX2720-E



## HX 2000 Series rear view

Click the system name buttons to see rear views of the corresponding HX 2000 Series systems.

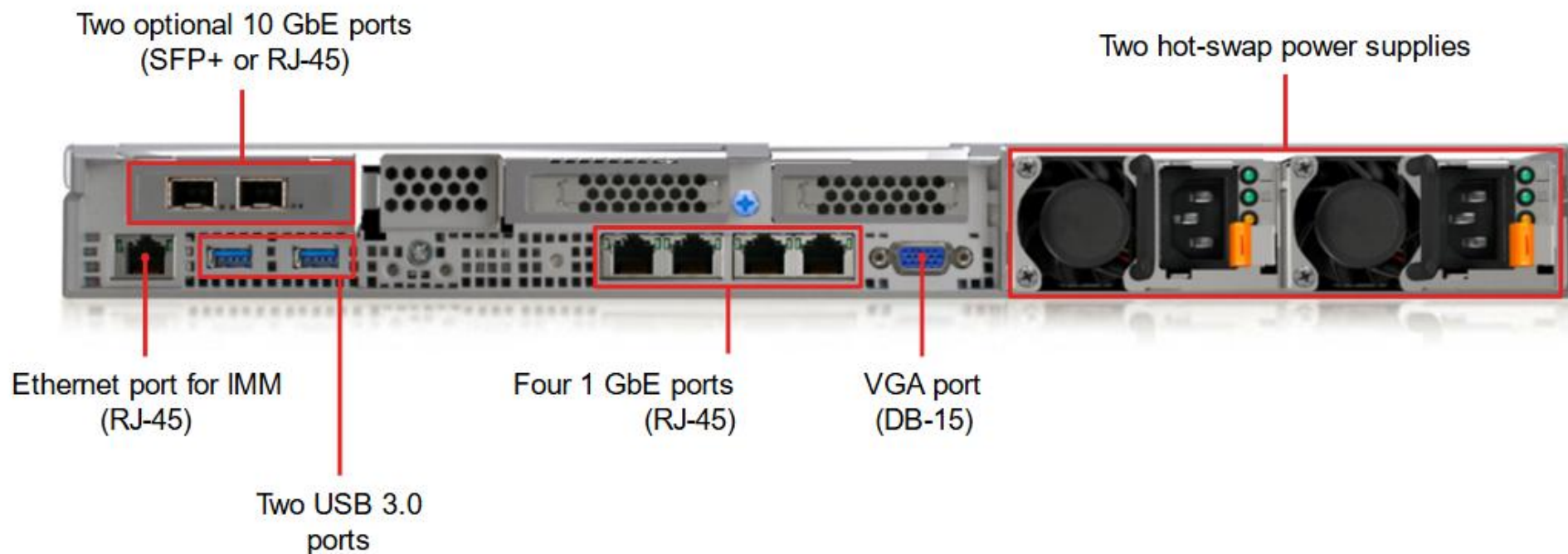
HX2310-E

HX2320

HX2320-E

HX2710-E

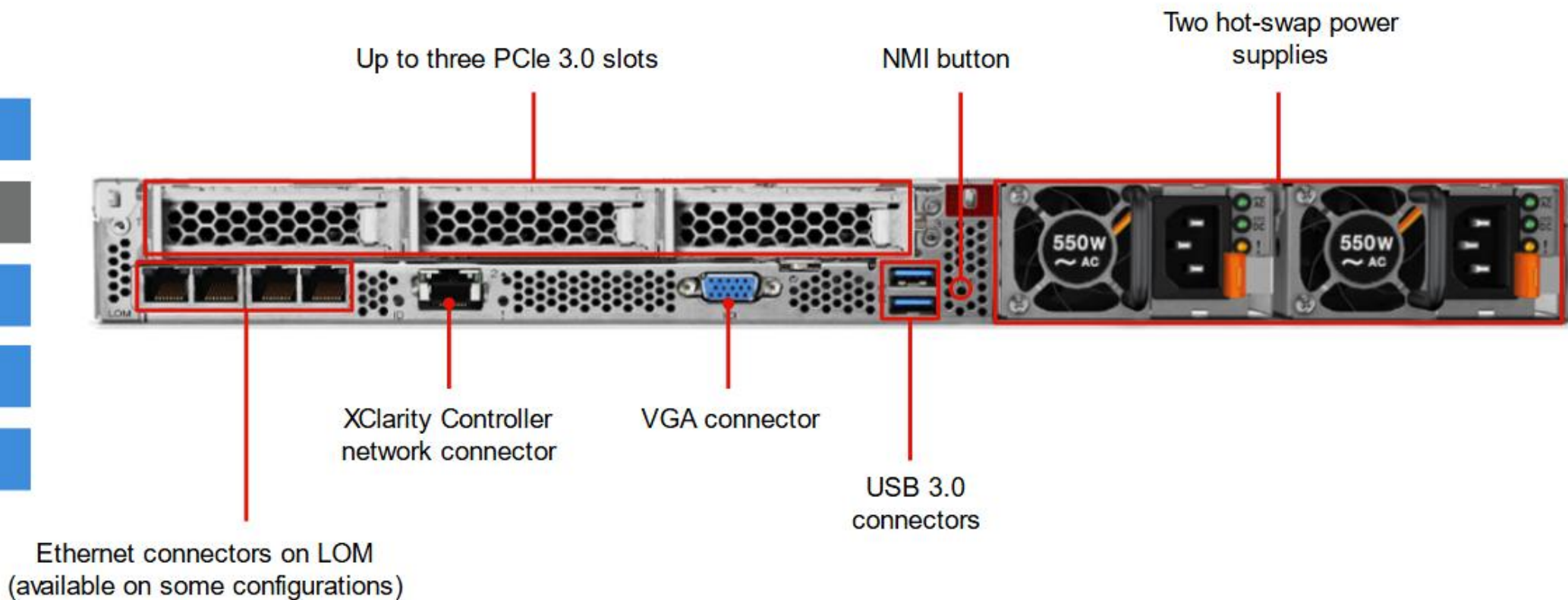
HX2720-E



## HX 2000 Series rear view

Click the system name buttons to see rear views of the corresponding HX 2000 Series systems.

- [HX2310-E](#)
- [HX2320](#)
- [HX2320-E](#)
- [HX2710-E](#)
- [HX2720-E](#)



## HX 2000 Series rear view

Click the system name buttons to see rear views of the corresponding HX 2000 Series systems.

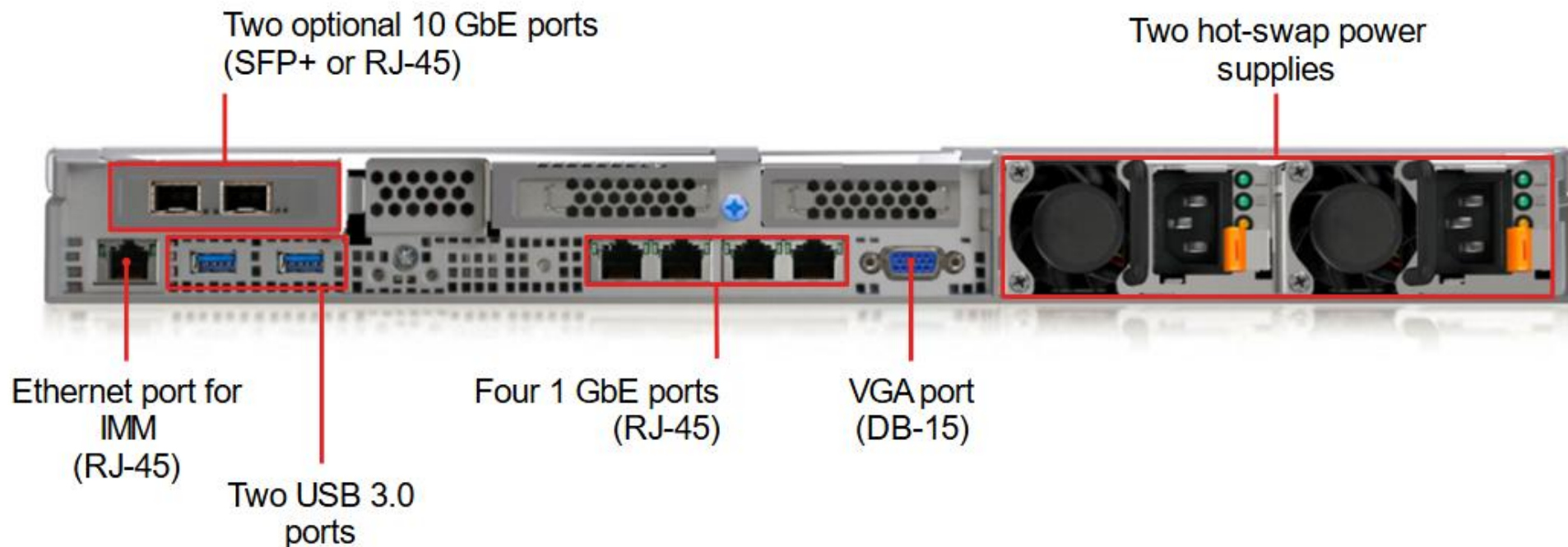
HX2310-E

HX2320

HX2320-E

HX2710-E

HX2720-E



## HX 2000 Series rear view

Click the system name buttons to see rear views of the corresponding HX 2000 Series systems.

HX2310-E

HX2320

HX2320-E

HX2710-E

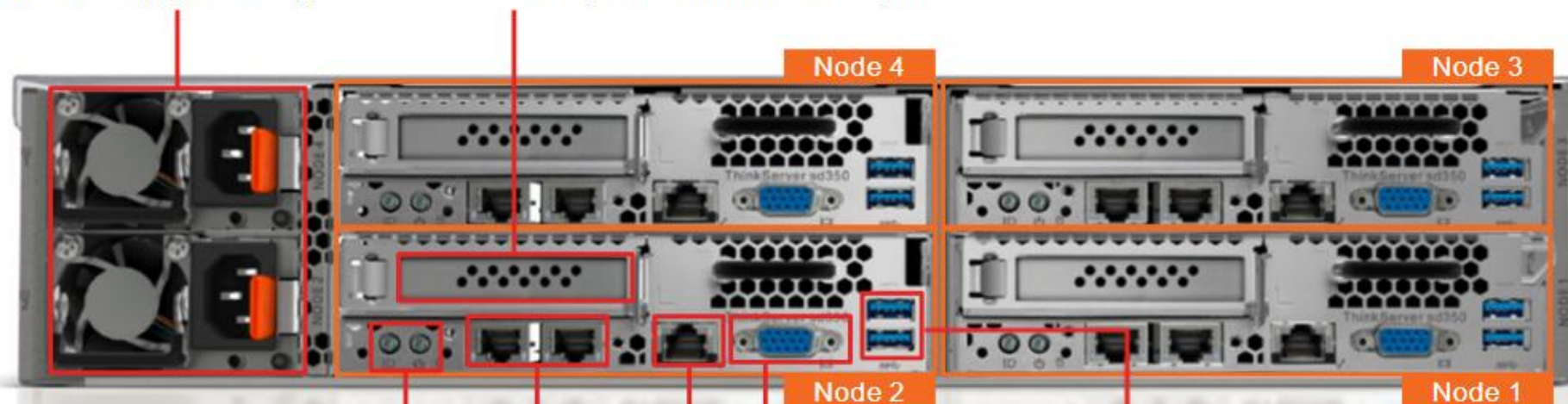
HX2720-E

Two hot-swap power supplies

Two optional 10 GbE RJ-45 ports

Node 4

Node 3



System LEDs

VGA port (DB-15)

Two USB 3.0 ports

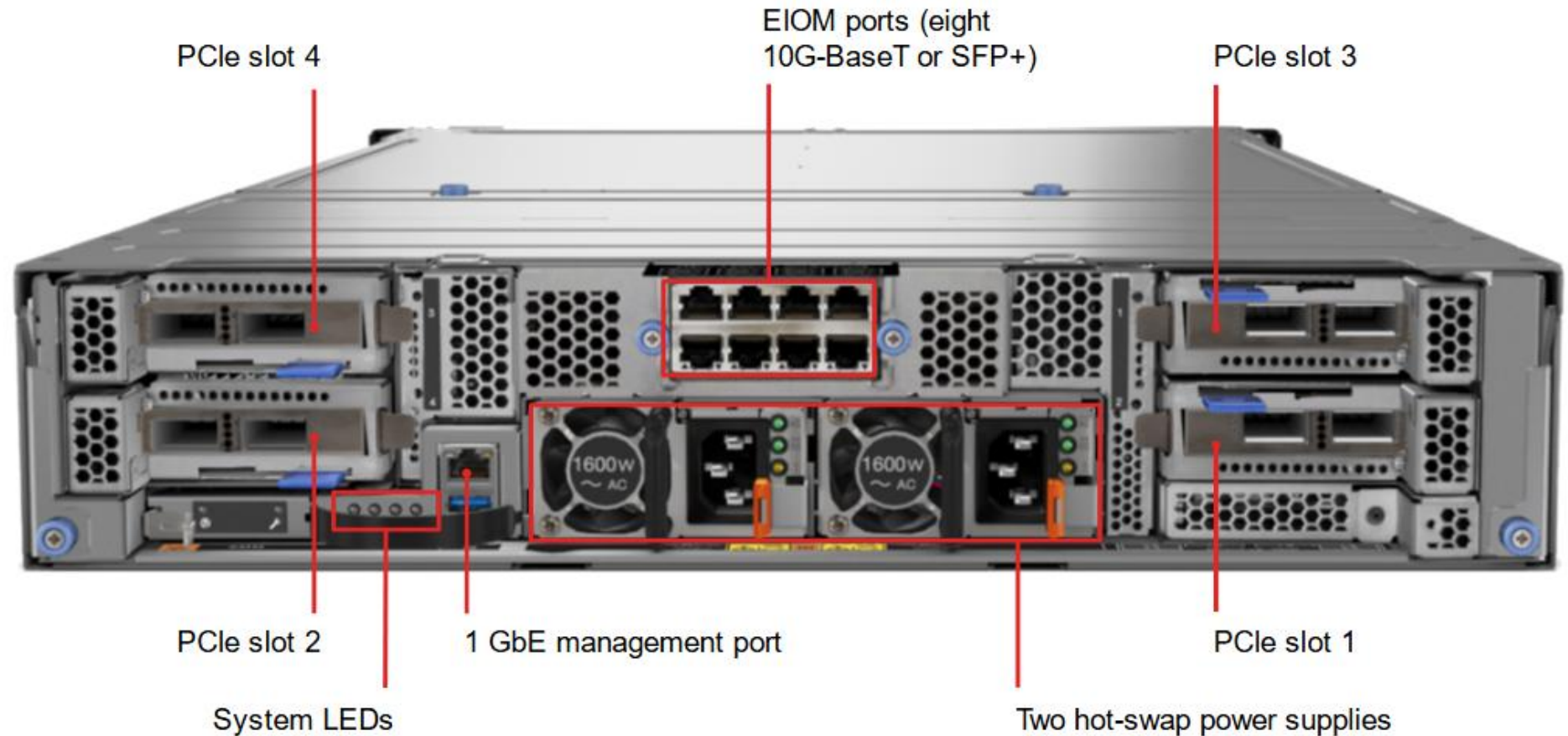
Two 1 GbE RJ-45 (default) or  
two 10 GbE SFP+ ports

Ethernet port for  
management  
(RJ-45)

## HX 2000 Series rear view

Click the system name buttons to see rear views of the corresponding HX 2000 Series systems.

- [HX2310-E](#)
- [HX2320](#)
- [HX2320-E](#)
- [HX2710-E](#)
- [HX2720-E](#)



# HX 3000 Series overview

The HX 3000 Series includes:

- The 1U single-node HX3310, HX3310-F, HX3320, and HX3321
- The 2U single-node HX3510-G, HX3520-G, and HX3521-G
- The 2U four-node HX3710, HX3710-F, HX3720, and HX3721

**Note:** The HX3310 and HX3310-F are based on the x3550 M5, the HX3320 and HX3321 are based on the SR630, the HX3510-G is based on the x3650 M5, the HX3520-G and HX3521-G are based on the SR650, the HX3710 and HX3710-F are based on the sd350 compute node and n400 enclosure, and the HX3720 and HX3721 are based on the SD530.

The HX 3000 Series has the following drive bays:

- The HX3310, HX3310-F, and HX3510-G have eight 2.5-inch front hot-swap drive bays.
- The HX3320 and HX3321 have twelve 2.5-inch front hot-swap drive bays and two 2.5-inch rear drive bays.
- The HX3710, HX3710-F, HX3720, and HX3721 have six 2.5-inch front hot-swap drive bays per node.



Lenovo

HX3310, HX3310-F



HX3320 / HX3321



HX3510-G



HX3520-G / HX3521-G



HX3710, HX3710-F



HX3720 / HX3721

# HX 3000 Series front view

Click the system name buttons to see front views of the corresponding HX 3000 Series systems.

HX3310, HX3310-F

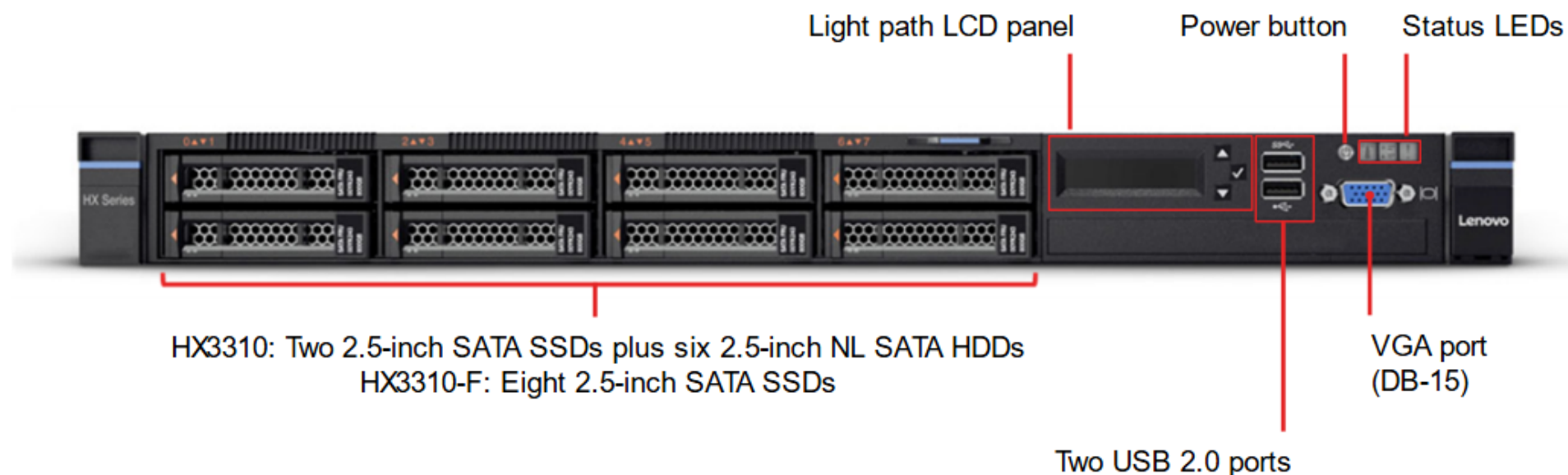
HX3320 / HX3321

HX3510-G

HX3520-G / HX3521-G

HX3710, HX3710-F

HX3720 / HX3721



## HX 3000 Series front view

Click the system name buttons to see front views of the corresponding HX 3000 Series systems.

HX3310, HX3310-F

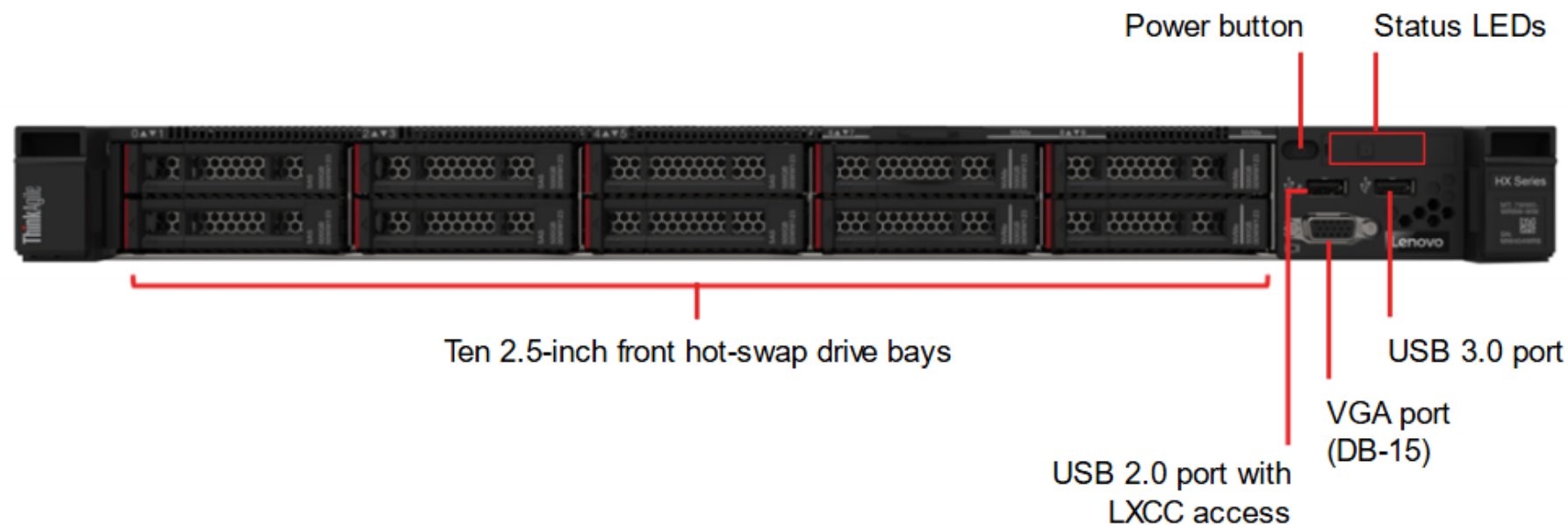
HX3320 / HX3321

HX3510-G

HX3520-G / HX3521-G

HX3710, HX3710-F

HX3720 / HX3721



# HX 3000 Series front view

Click the system name buttons to see front views of the corresponding HX 3000 Series systems.

HX3310, HX3310-F

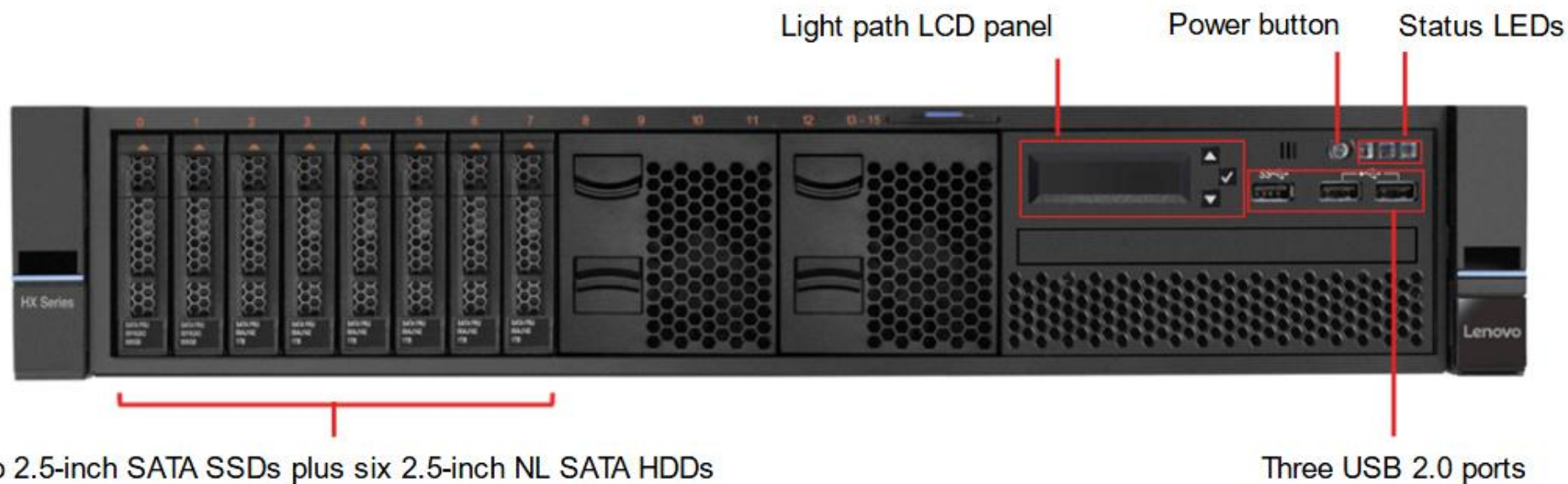
HX3320 / HX3321

HX3510-G

HX3520-G / HX3521-G

HX3710, HX3710-F

HX3720 / HX3721



# HX 3000 Series front view

Click the system name buttons to see front views of the corresponding HX 3000 Series systems.

HX3310, HX3310-F

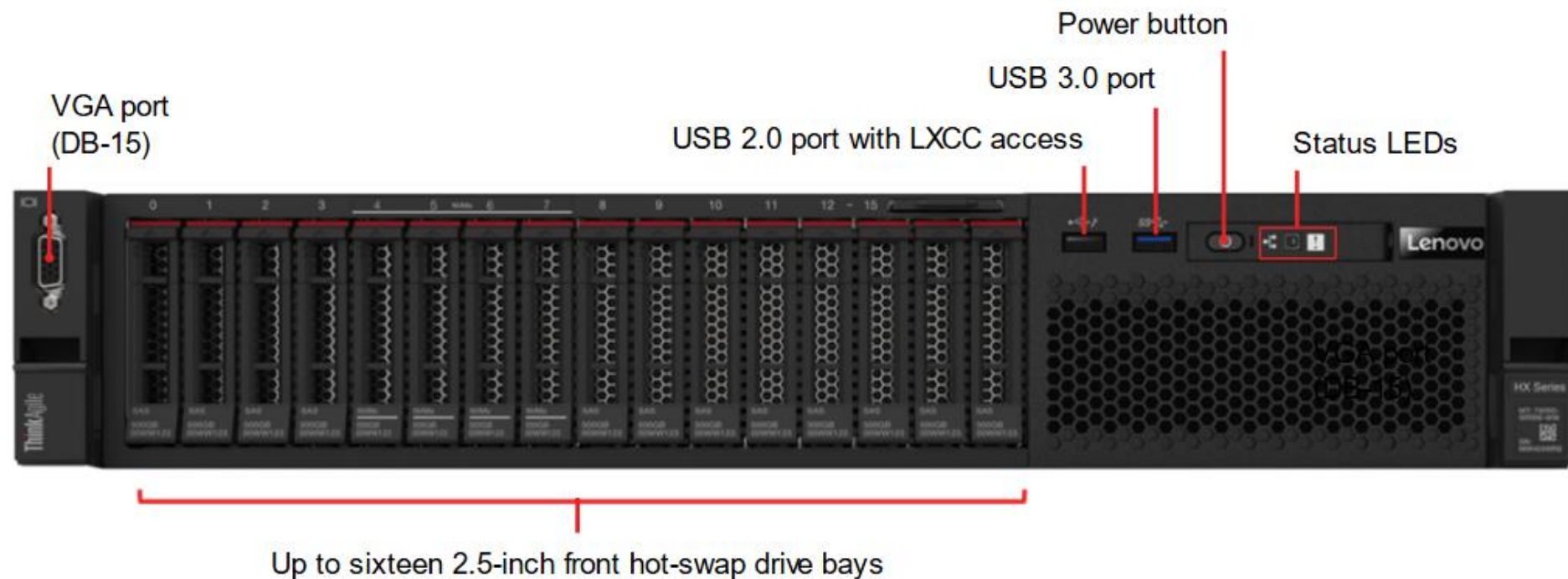
HX3320 / HX3321

HX3510-G

HX3520-G / HX3521-G

HX3710, HX3710-F

HX3720 / HX3721



# HX 3000 Series front view

Click the system name buttons to see front views of the corresponding HX 3000 Series systems.

HX3310, HX3310-F

HX3320 / HX3321

HX3510-G

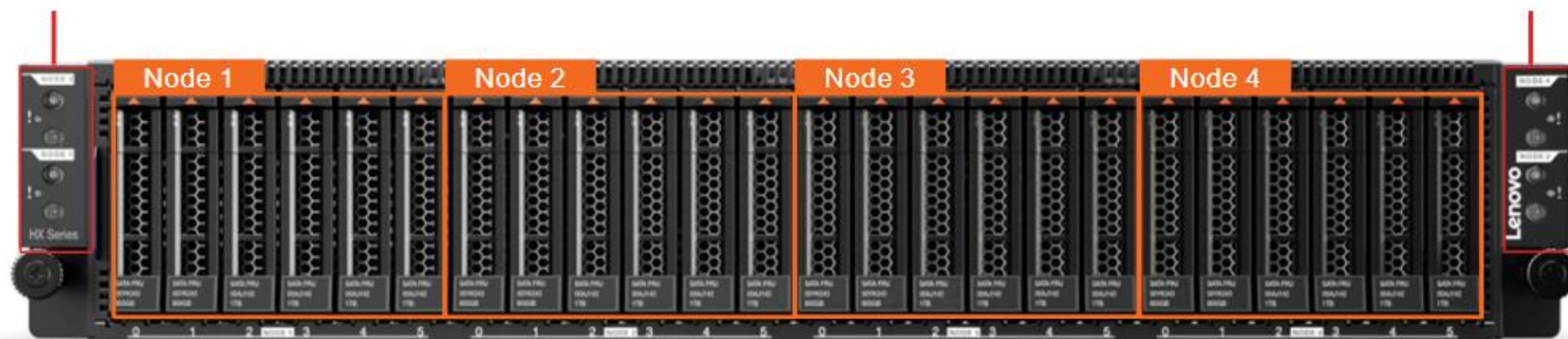
HX3520-G / HX3521-G

HX3710, HX3710-F

HX3720 / HX3721

Control panel for node 1 and 3  
(power button/LED, system error LED,  
and ID button/LED)

Control panel for node 2 and 4  
(power button/LED, system error LED, and  
ID button/LED)



HX3710: Two 2.5-inch SATA SSD plus four 2.5-inch NL SATA HDDs  
HX3710-F: Six 2.5-inch SATA SSDs  
(This drive configuration is the same for all nodes)

# HX 3000 Series front view

Click the system name buttons to see front views of the corresponding HX 3000 Series systems.

HX3310, HX3310-F

HX3320 / HX3321

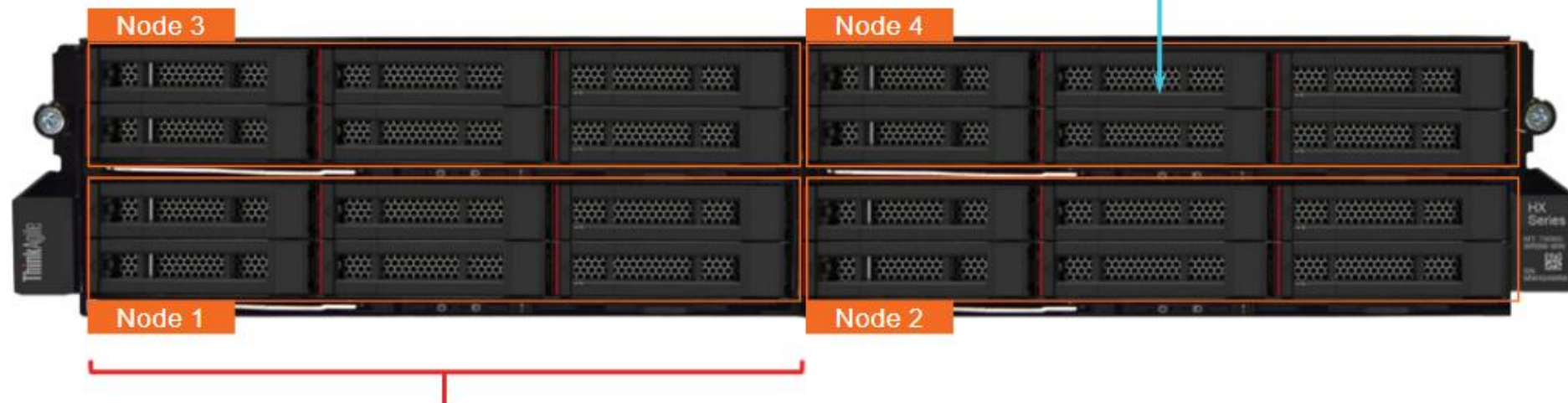
HX3510-G

HX3520-G / HX3521-G

HX3710, HX3710-F

HX3720 / HX3721

Click any node to see more information.



Each node contains two, four, or six 2.5-inch SATA or SAS SSDs and/or four 2.5-inch SATA HDDs (maximum of six drives per node)

# HX 3000 Series front view

Click the system name buttons to see front views of the corresponding HX 3000 Series systems.

HX3310, HX3310-F

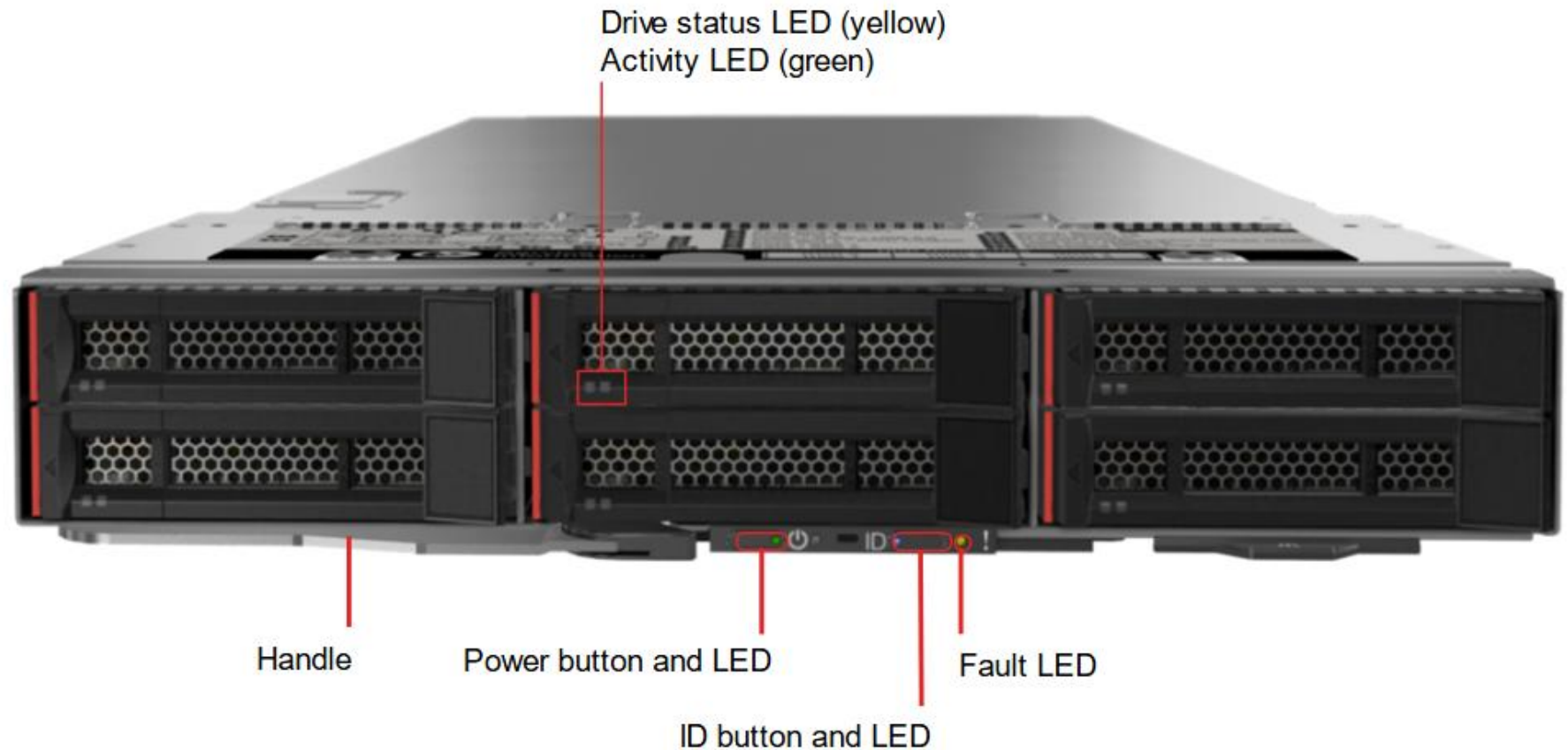
HX3320 / HX3321

HX3510-G

HX3520-G / HX3521-G

HX3710, HX3710-F

HX3720 / HX3721



## HX 3000 Series rear view

Click the system name buttons to see rear views of the corresponding HX 3000 Series systems.

HX3310, HX3310-F

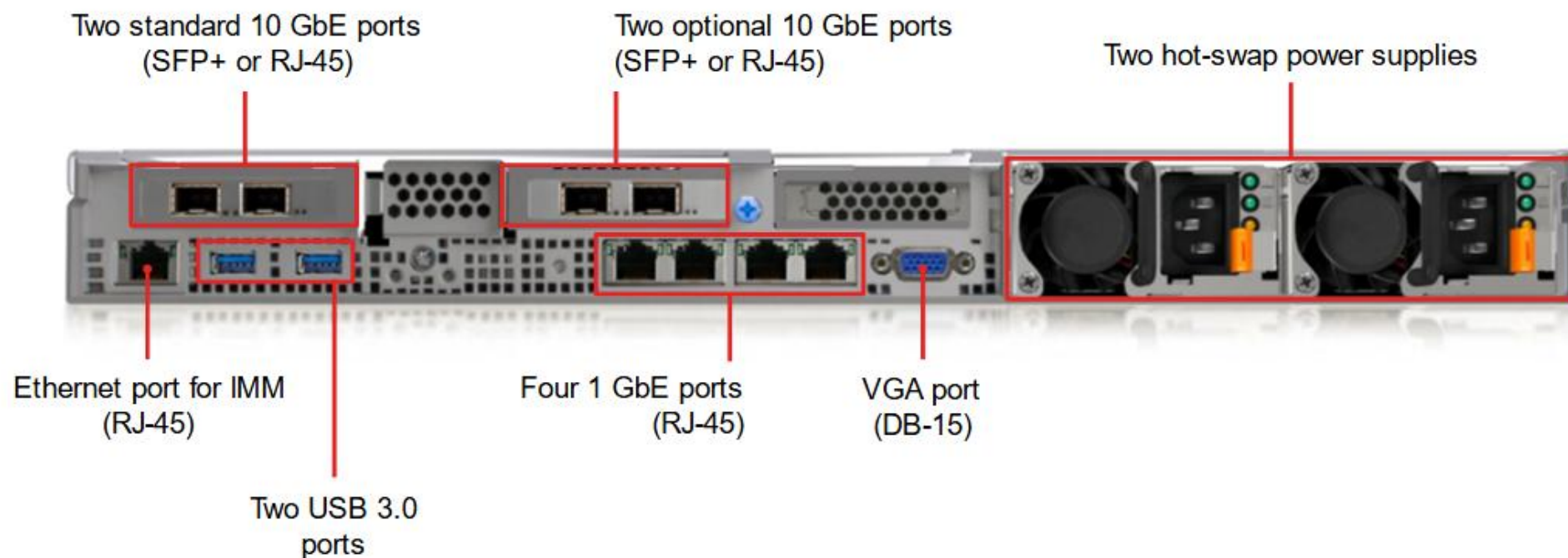
HX3320 / HX3321

HX3510-G

HX3520-G / HX3521-G

HX3710, HX3710-F

HX3720 / HX3721



## HX 3000 Series rear view

Click the system name buttons to see rear views of the corresponding HX 3000 Series systems.

HX3310, HX3310-F

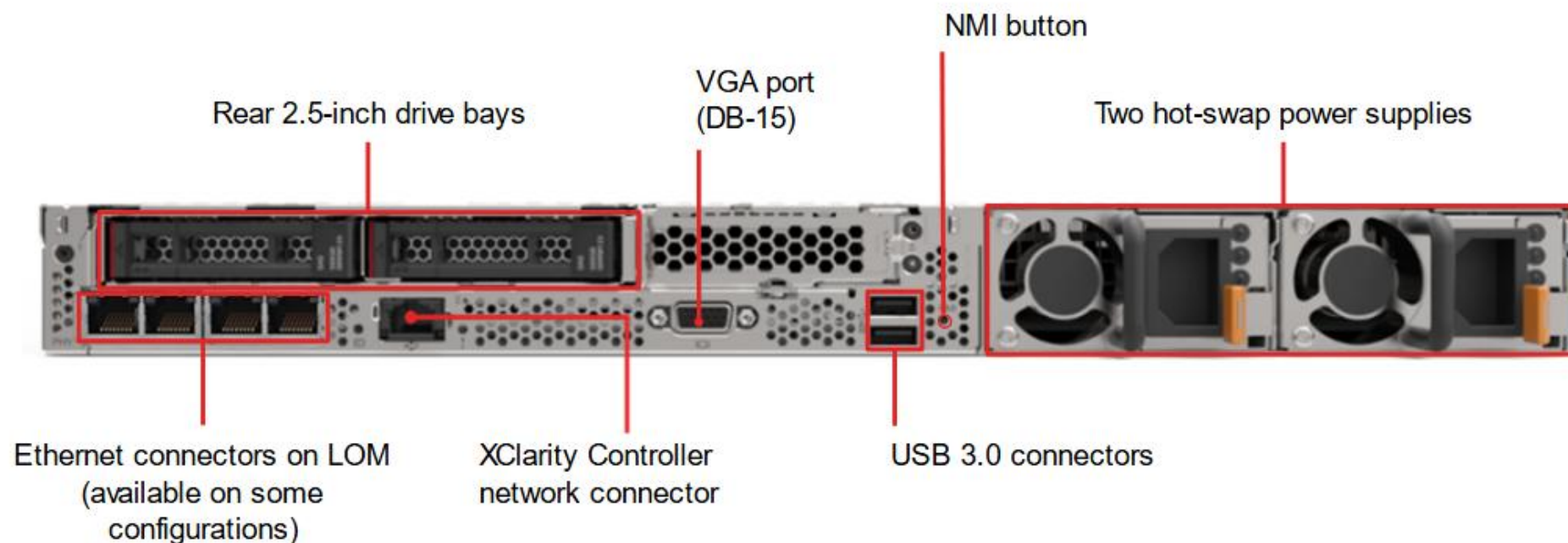
HX3320 / HX3321

HX3510-G

HX3520-G / HX3521-G

HX3710, HX3710-F

HX3720 / HX3721



# HX 3000 Series rear view

Click the system name buttons to see rear views of the corresponding HX 3000 Series systems.

HX3310, HX3310-F

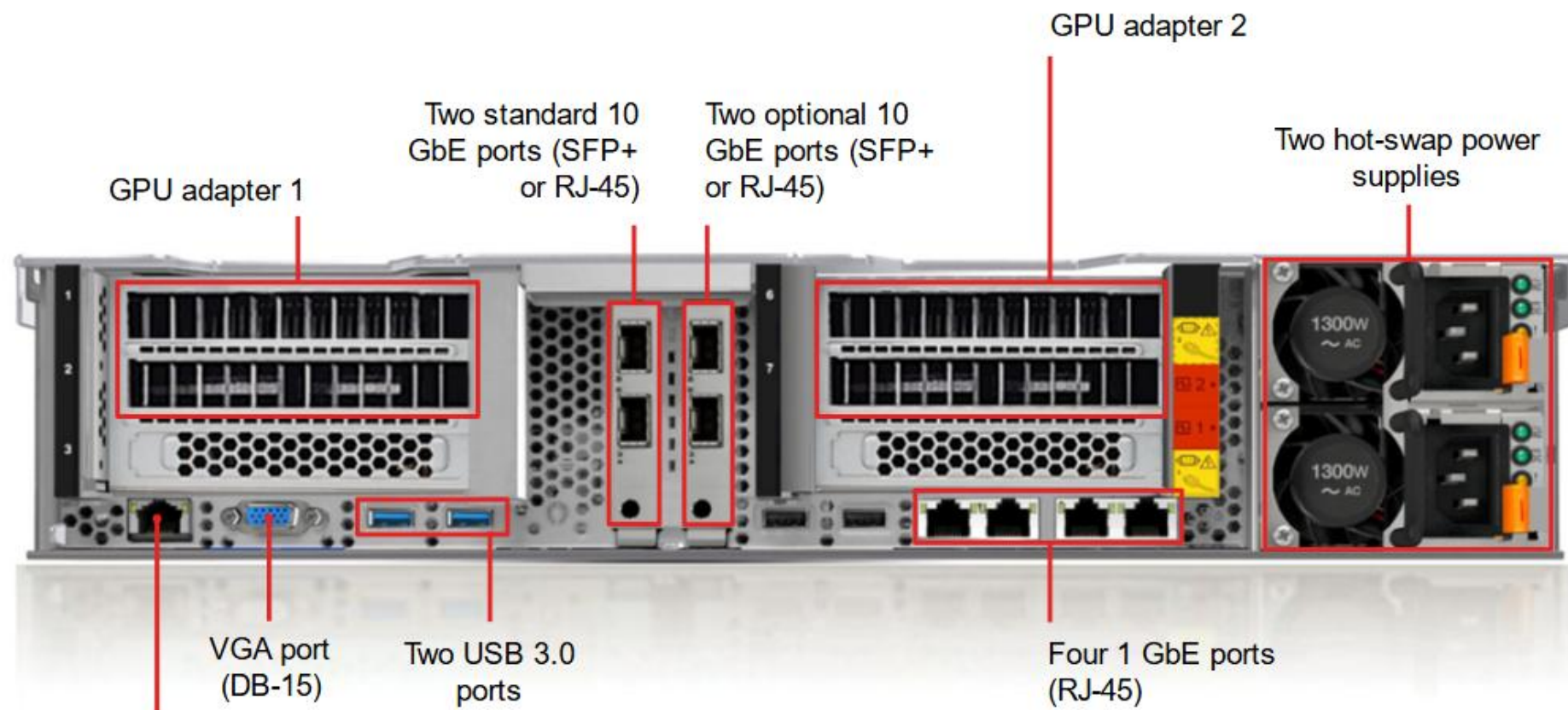
HX3320 / HX3321

HX3510-G

HX3520-G / HX3521-G

HX3710, HX3710-F

HX3720 / HX3721



## HX 3000 Series rear view

Click the system name buttons to see rear views of the corresponding HX 3000 Series systems.

HX3310, HX3310-F

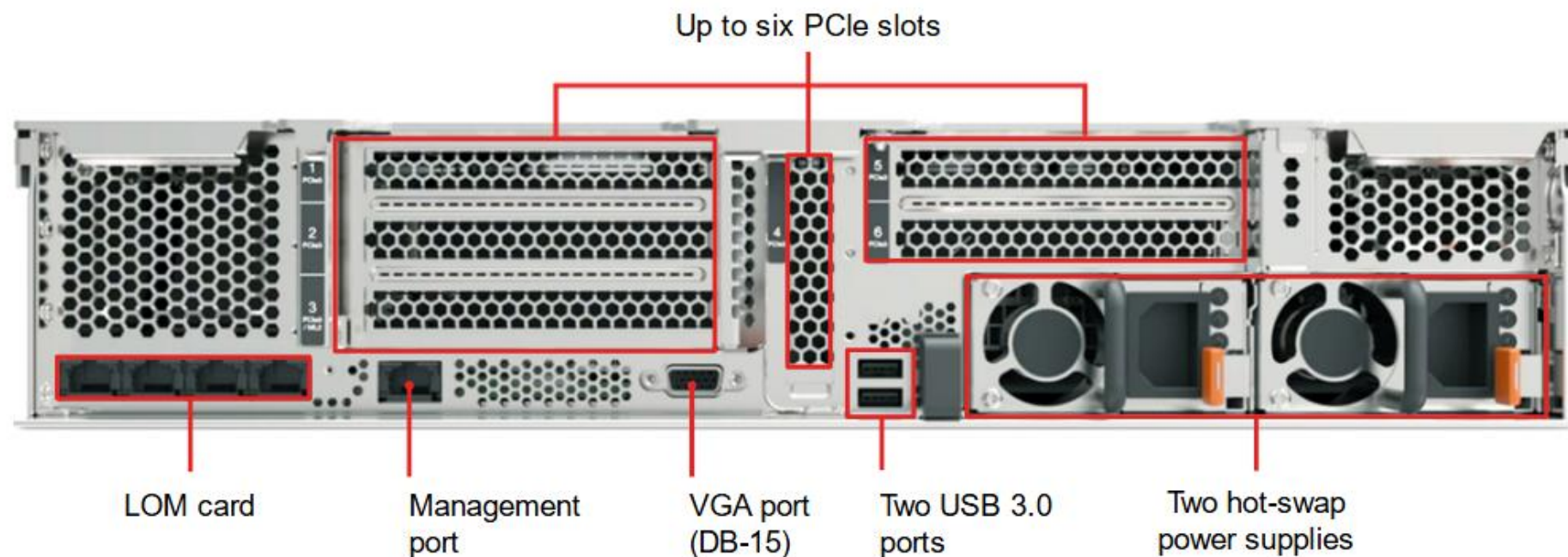
HX3320 / HX3321

HX3510-G

HX3520-G / HX3521-G

HX3710, HX3710-F

HX3720 / HX3721



# HX 3000 Series rear view

Click the system name buttons to see rear views of the corresponding HX 3000 Series systems.

HX3310, HX3310-F

HX3320 / HX3321

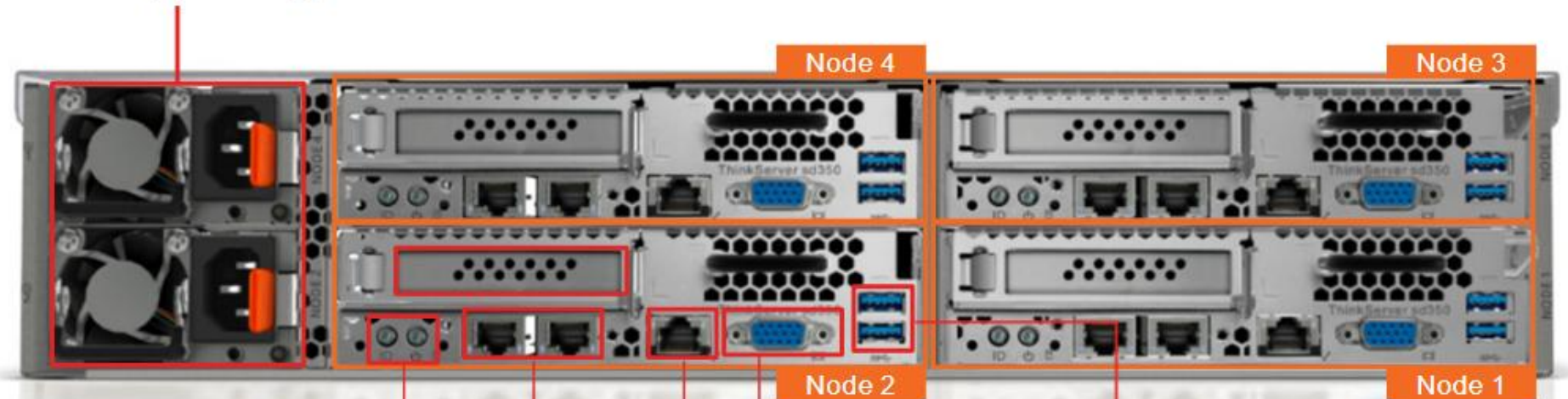
HX3510-G

HX3520-G / HX3521-G

HX3710, HX3710-F

HX3720 / HX3721

Two hot-swap power supplies



System LEDs

Two default 10 GbE SFP+ or  
RJ-45 ports

Ethernet port for management  
(RJ-45)

VGA port (DB-15)

Two USB 3.0 ports

## HX 3000 Series rear view

Click the system name buttons to see rear views of the corresponding HX 3000 Series systems.

HX3310, HX3310-F

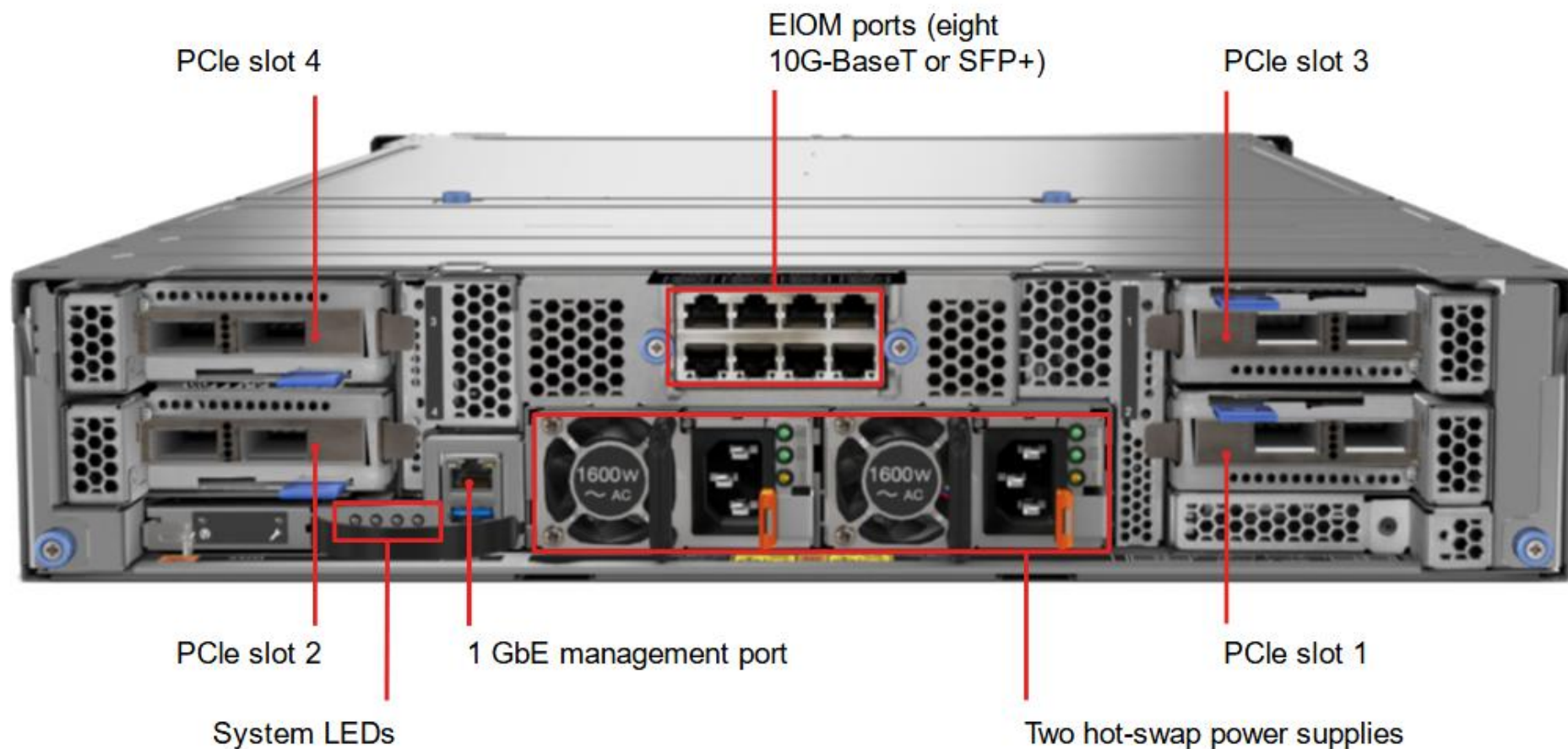
HX3320 / HX3321

HX3510-G

HX3520-G / HX3521-G

HX3710, HX3710-F

HX3720 / HX3721



## HX3375 and HX3376 overview

The ThinkAgile HX3000 Series, which features the latest AMD EPYC processors, is available in a rack-dense 1U one-node form-factor. The HX3375 and HX3376 Series is based on the ThinkSystem SR645 and supports up to 12 drives, including four NVMe drives. Due to AMD platform limitations, FFDC provides less information about this system than the equivalent Intel platform. The HX3000 Series uses an OCP mezz card for networking.



**Note:** For system views of the HX3375 and HX3376, refer to course: [ES72021 Servicing the Lenovo ThinkSystem SR645](#)

## HX 5000 Series overview

The HX 5000 Series is comprised of the 2U single-node HX5510, HX5510-C, HX5520, HX5521, HX5520-C and HX5521-C systems. The HX5510 and HX5510-C are based on the x3650 M5 (MT 8871) platform and share the same front view. The HX5520, HX5521, HX5520-C, and HX5521-C are based on the SR650 platform and share the same front view.

The HX5510 and HX5510-C have eight 3.5-inch front hot-swap drive bays, and the HX5520, HX5521, HX5520-C, and HX5521-C have up to fourteen 3.5-inch hot-swap drive bays (twelve 3.5-inch front drive bays and two 3.5-inch rear drive bays).



HX5510, HX5510-C



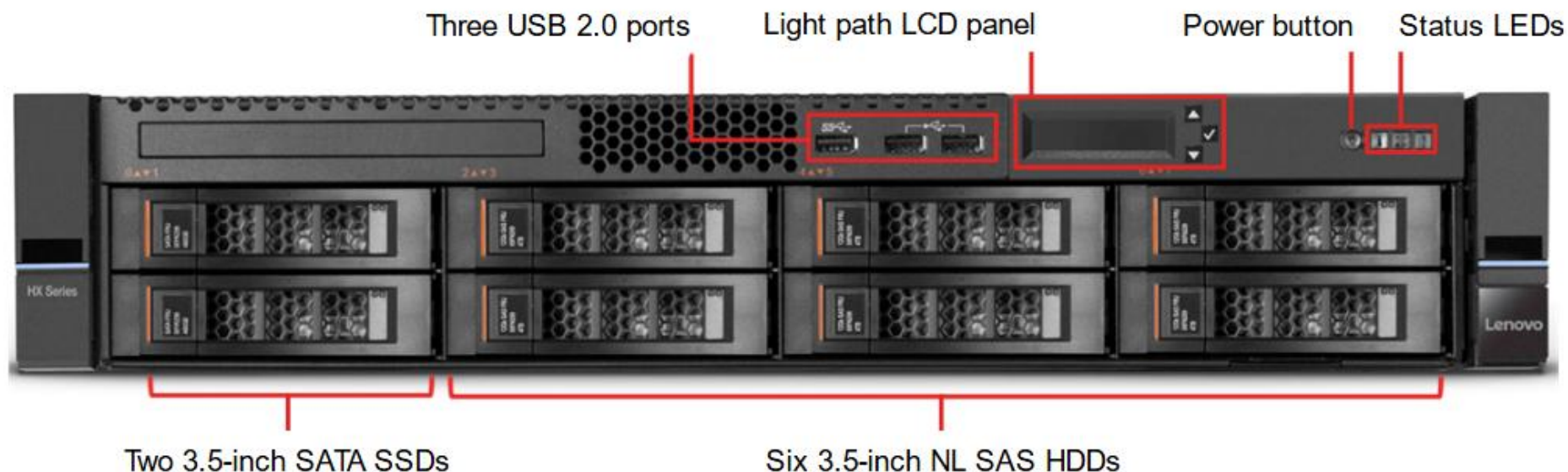
HX5520 / HX5521,  
HX5520-C / HX5521-C

# HX 5000 Series front view

Click the system name buttons to see front views of the corresponding HX 5000 Series systems.

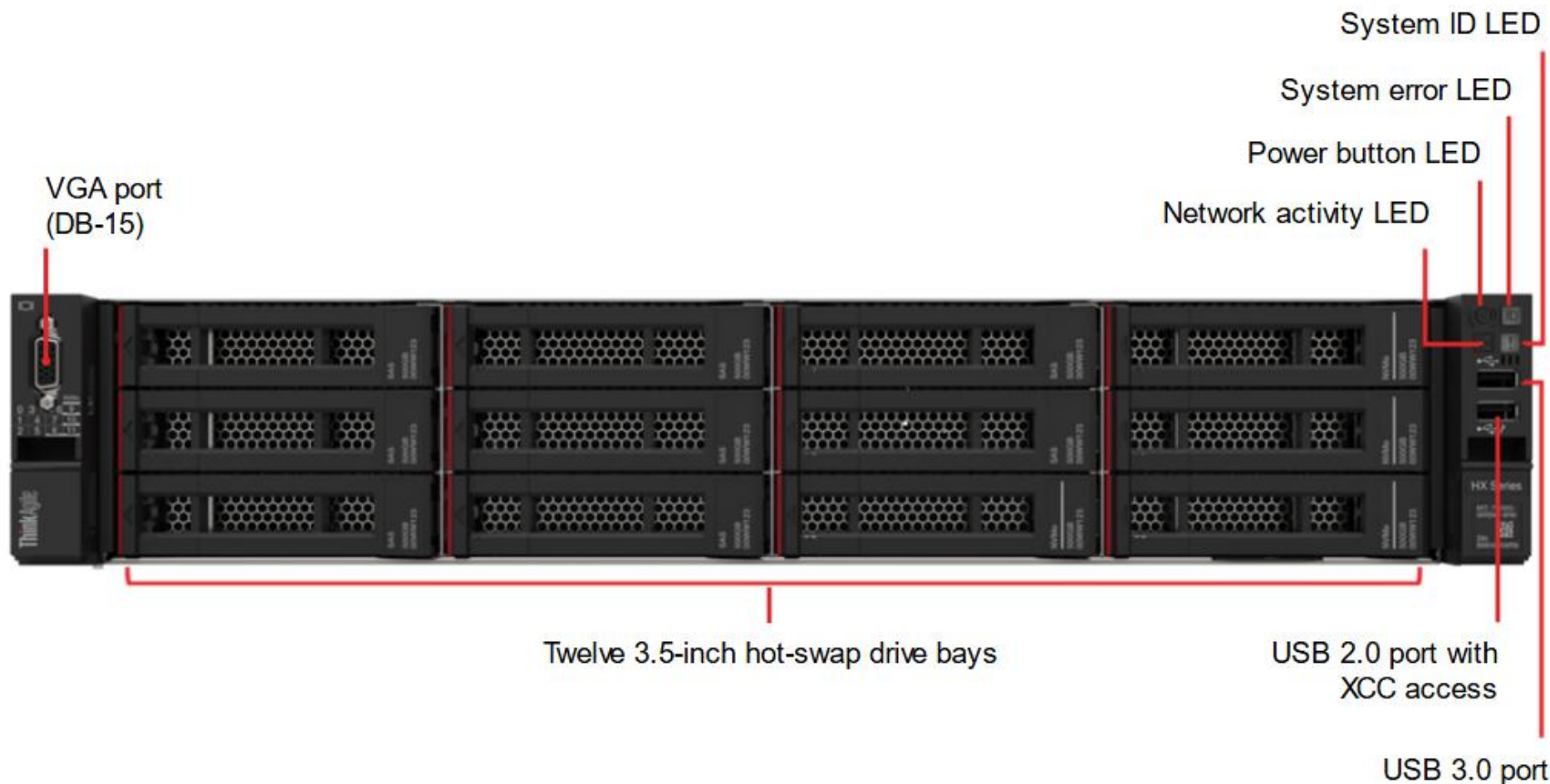
HX5510, HX5510-C

HX5520 / HX5521,  
HX5520-C / HX5521-C



# HX 5000 Series front view

Click the system name buttons to see front views of the corresponding HX 5000 Series systems.

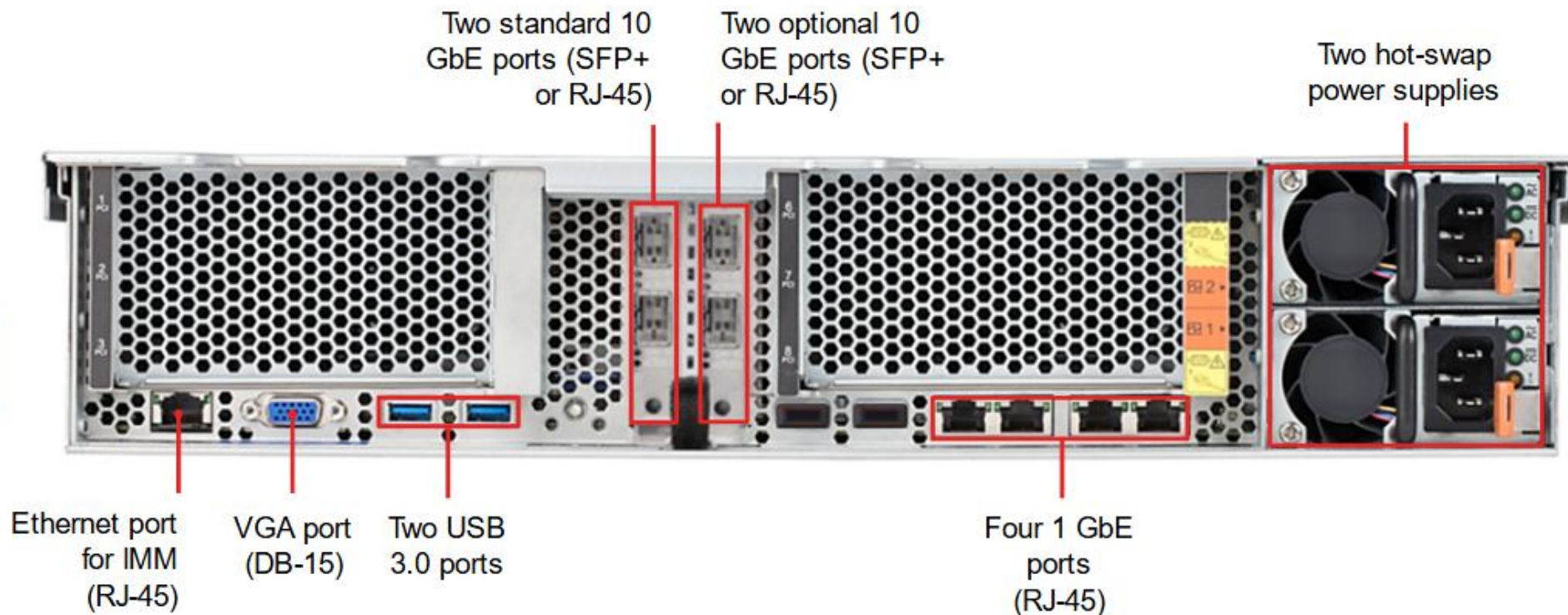


## HX 5000 Series rear view

Click the system name buttons to see front views of the corresponding HX 5000 Series systems.

HX5510, HX5510-C

HX5520 / HX5521,  
HX5520-C / HX5521-C

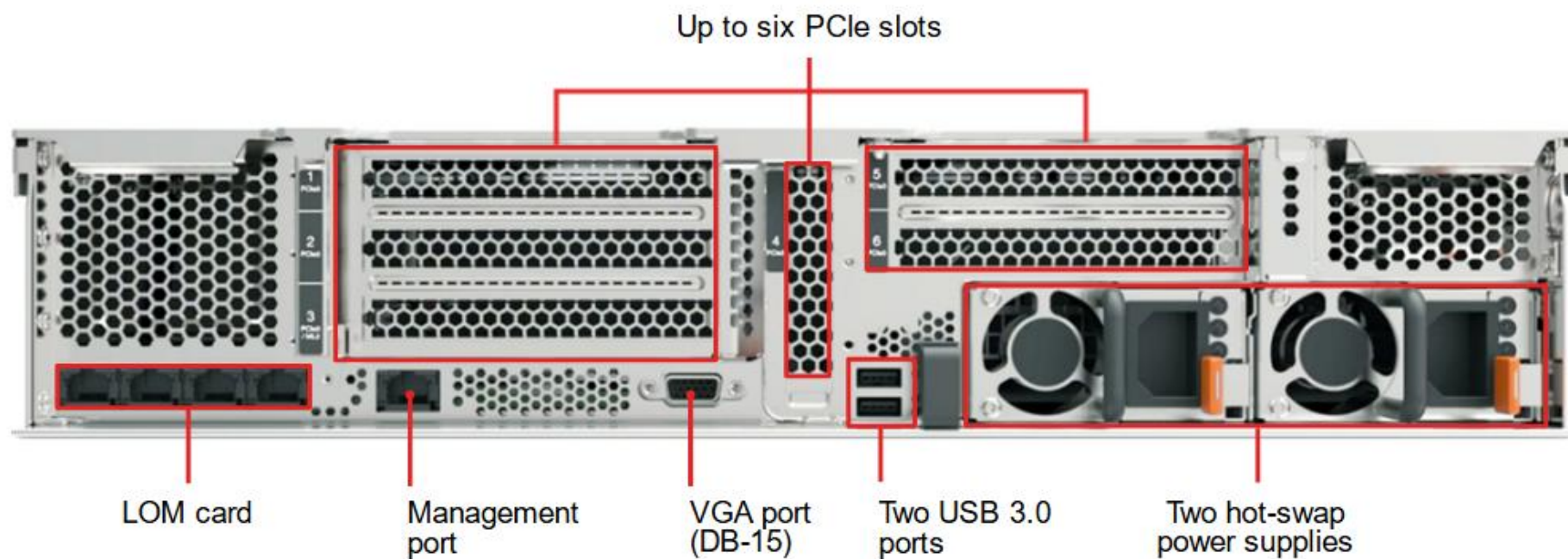


## HX 5000 Series rear view

Click the system name buttons to see front views of the corresponding HX 5000 Series systems.

HX5510, HX5510-C

HX5520 / HX5521,  
HX5520-C / HX5521-C



## HX 7000 Series overview

The HX 7000 Series is comprised of the 2U single-node HX7510, HX7520, and HX7521 and the 4U single-node HX7820 and HX7821. The HX7510 is based on the x3650 M5, the HX7520 and HX7521 are based on the SR650, and the HX7820 and HX7821 are based on the SR950.

The HX 7000 Series systems support twenty-four 2.5-inch front hot-swap drive bays.



HX7510



HX7520 / HX7521



HX7820 / HX7821

## HX 7000 Series front view

Click the system name buttons to see front views of the corresponding HX 7000 Series systems.

HX7510

HX7520 / HX7521

HX7820 / HX7821



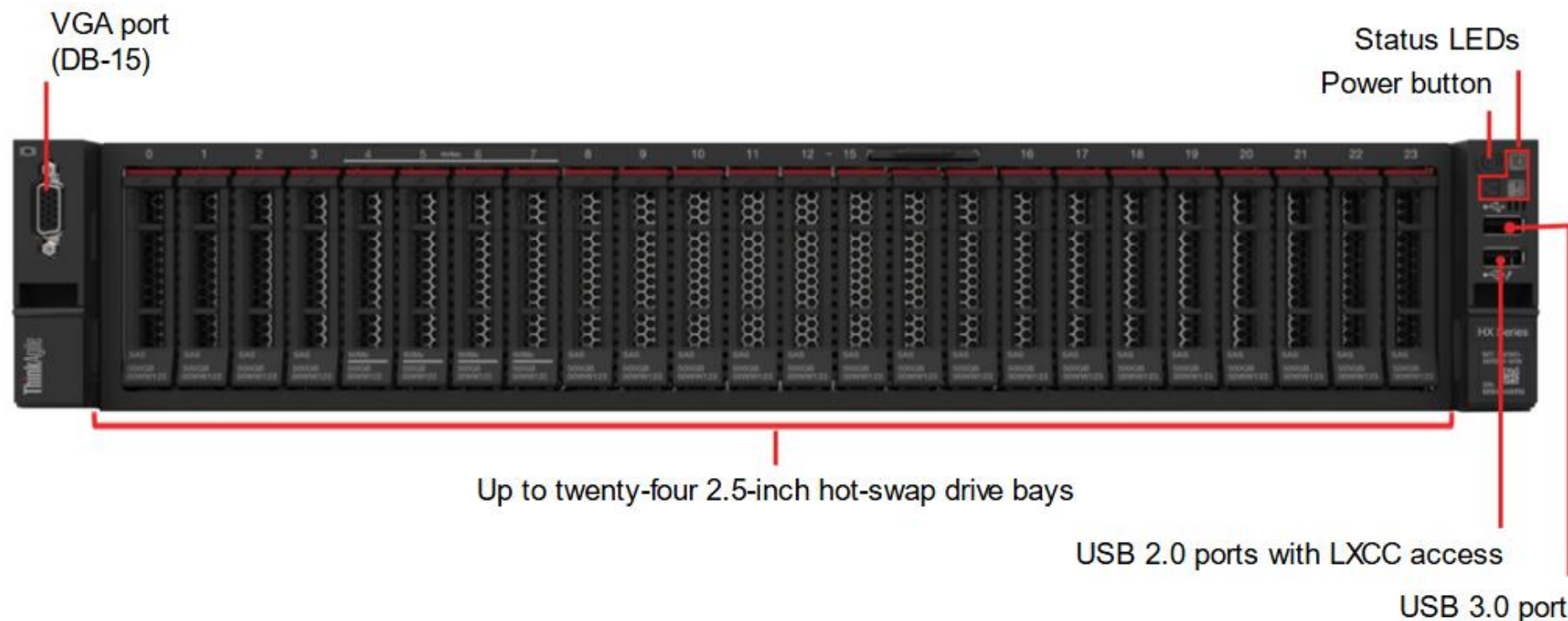
## HX 7000 Series front view

Click the system name buttons to see front views of the corresponding HX 7000 Series systems.

HX7510

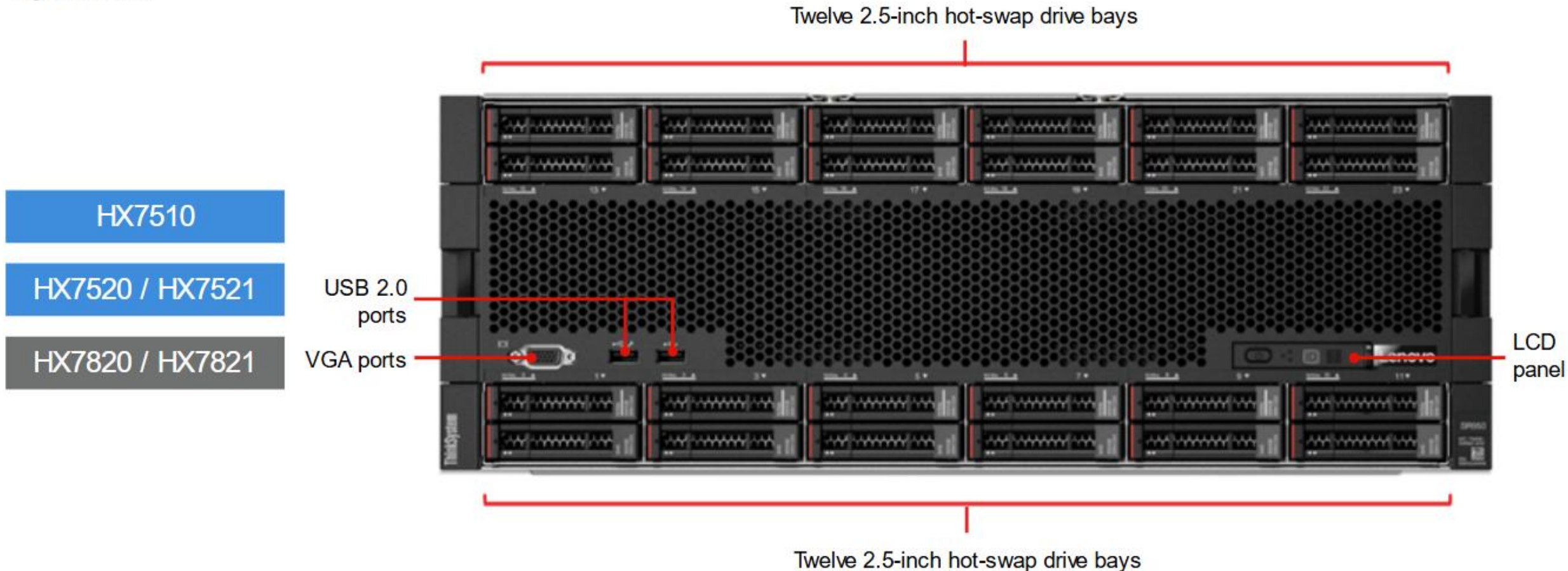
HX7520 / HX7521

HX7820 / HX7821



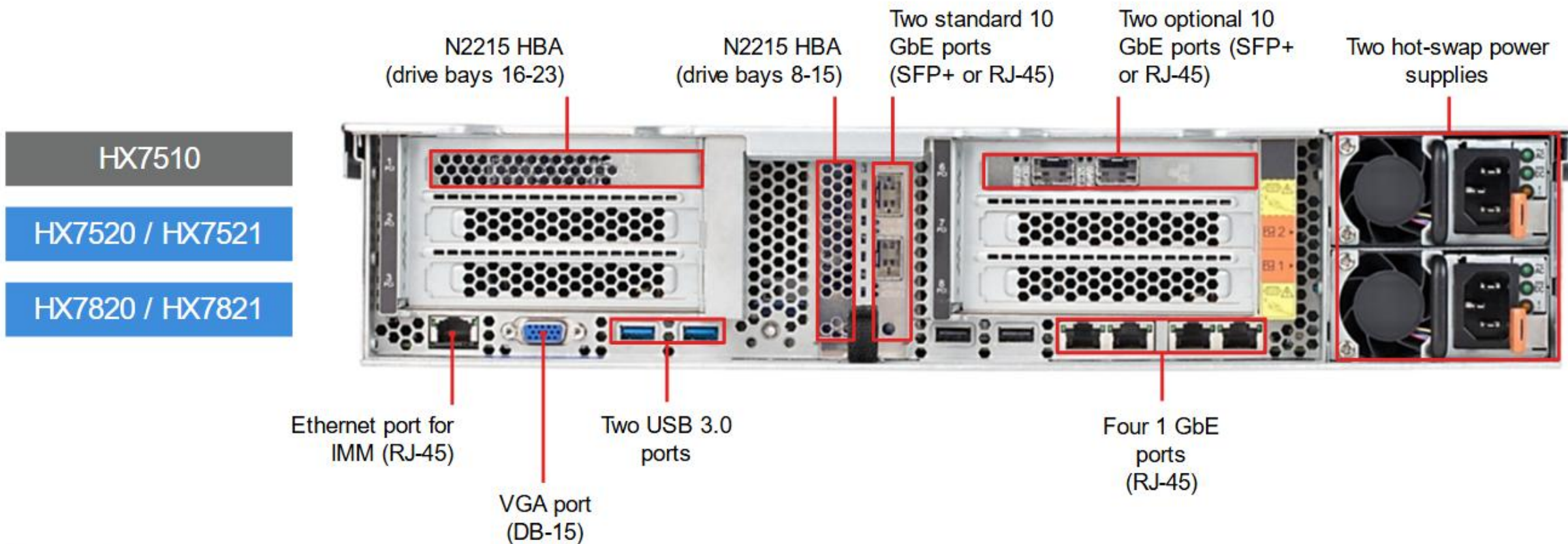
# HX 7000 Series front view

Click the system name buttons to see front views of the corresponding HX 7000 Series systems.



## HX 7000 Series rear view

Click the system name buttons to see rear views of the corresponding HX 7000 Series systems.



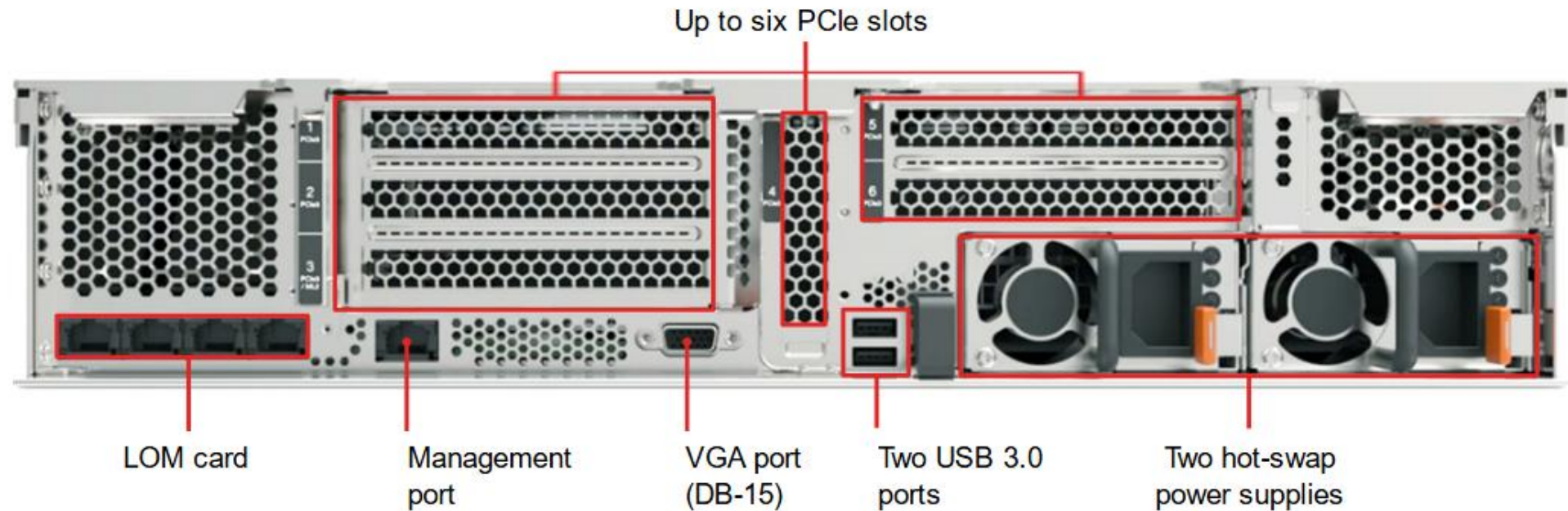
## HX 7000 Series rear view

Click the system name buttons to see rear views of the corresponding HX 7000 Series systems.

HX7510

HX7520 / HX7521

HX7820 / HX7821



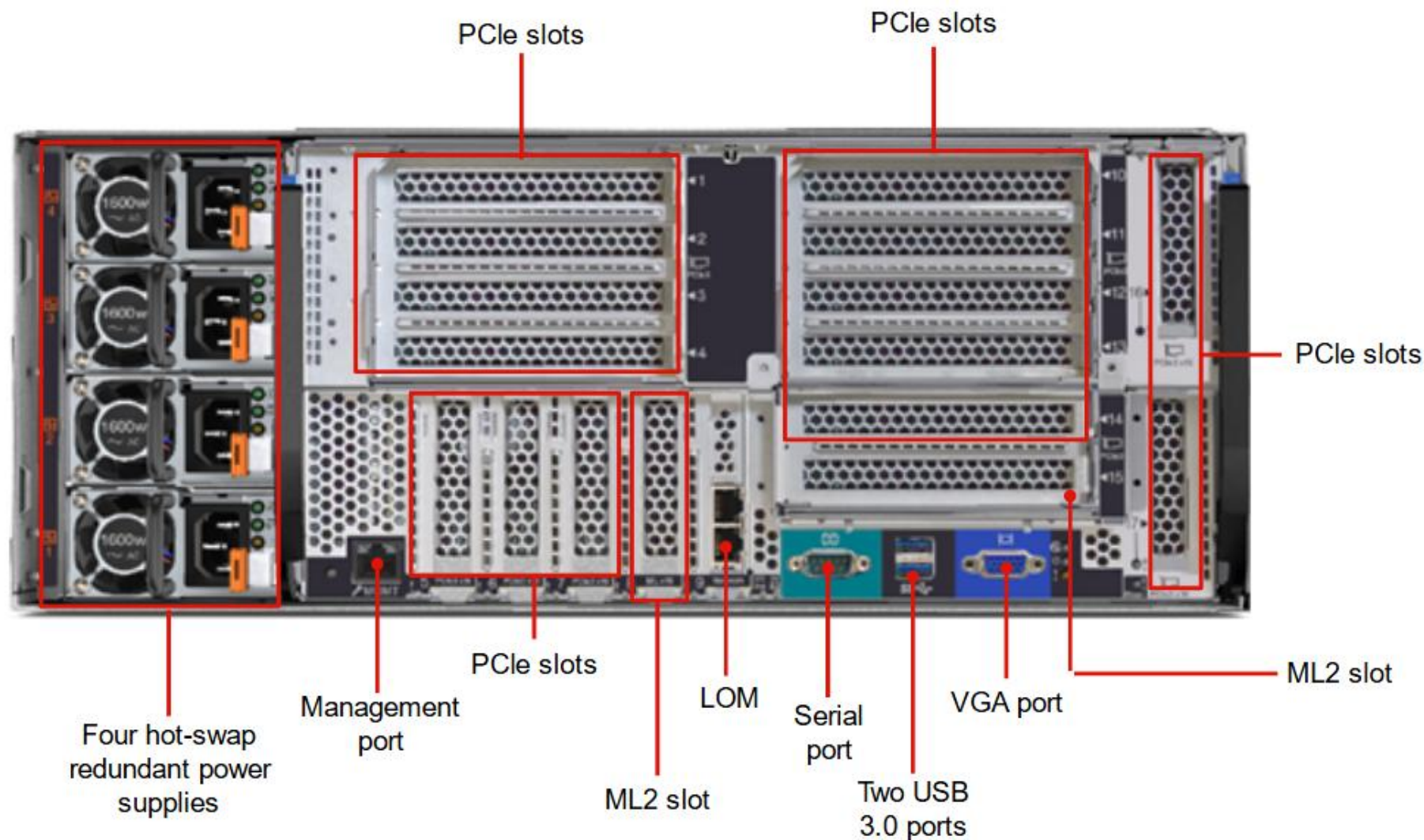
# HX 7000 Series rear view

Click the system name buttons to see rear views of the corresponding HX 7000 Series systems.

HX7510

HX7520 / HX7521

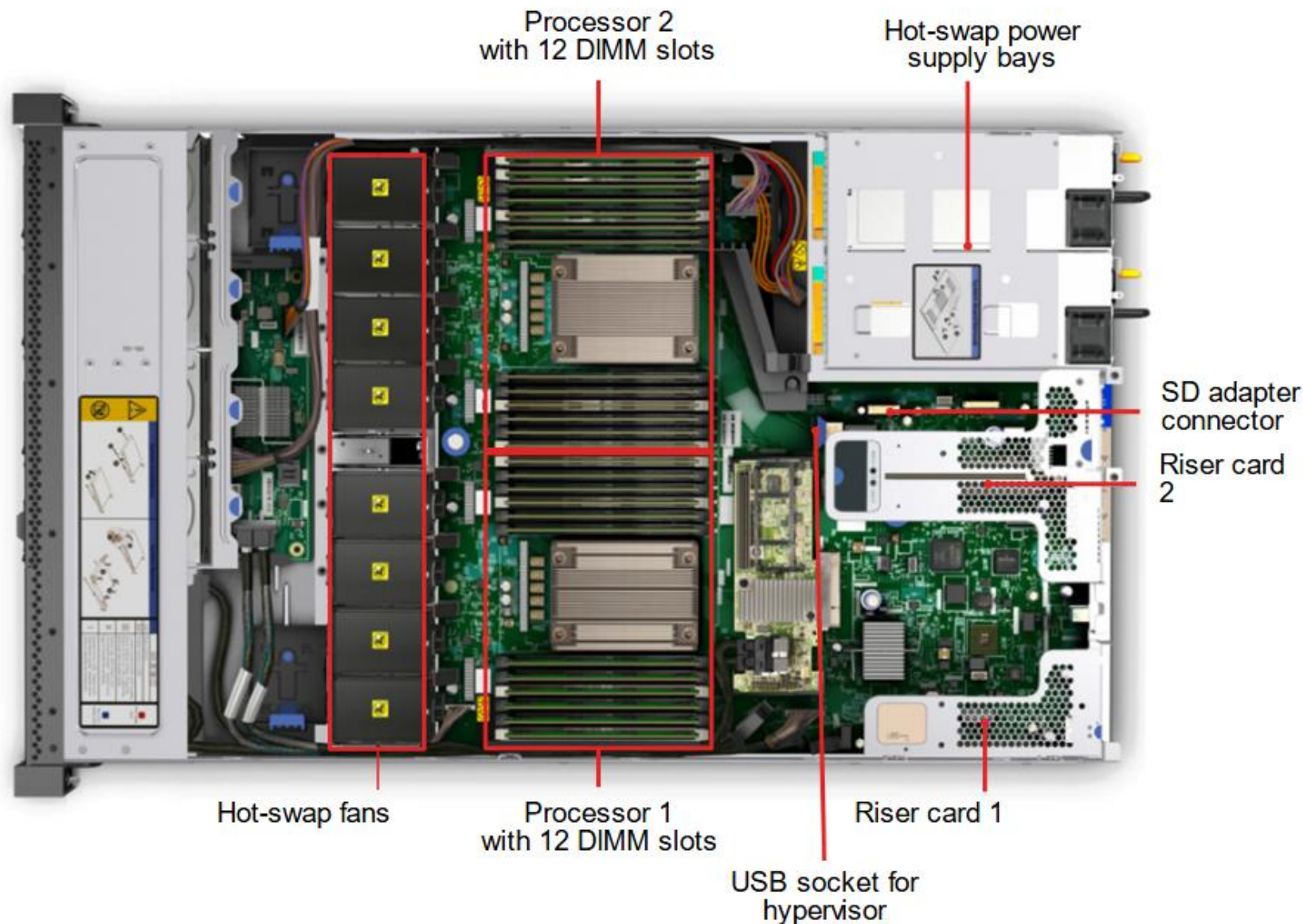
HX7820 / HX7821



# ThinkAgile HX Series inside view

The HX Series is based on the x3550 M5, x3650 M5, sd350 and n400, SD530, SR630, and SR650 platforms. HX Series appliances and certified nodes have the same internal components as the systems they are based on. Click the platform name buttons to see inside views of the corresponding systems.

|            |            |
|------------|------------|
| x3550 M5   | SD530 node |
| x3650 M5   | SR630      |
| sd350 node | SR650      |

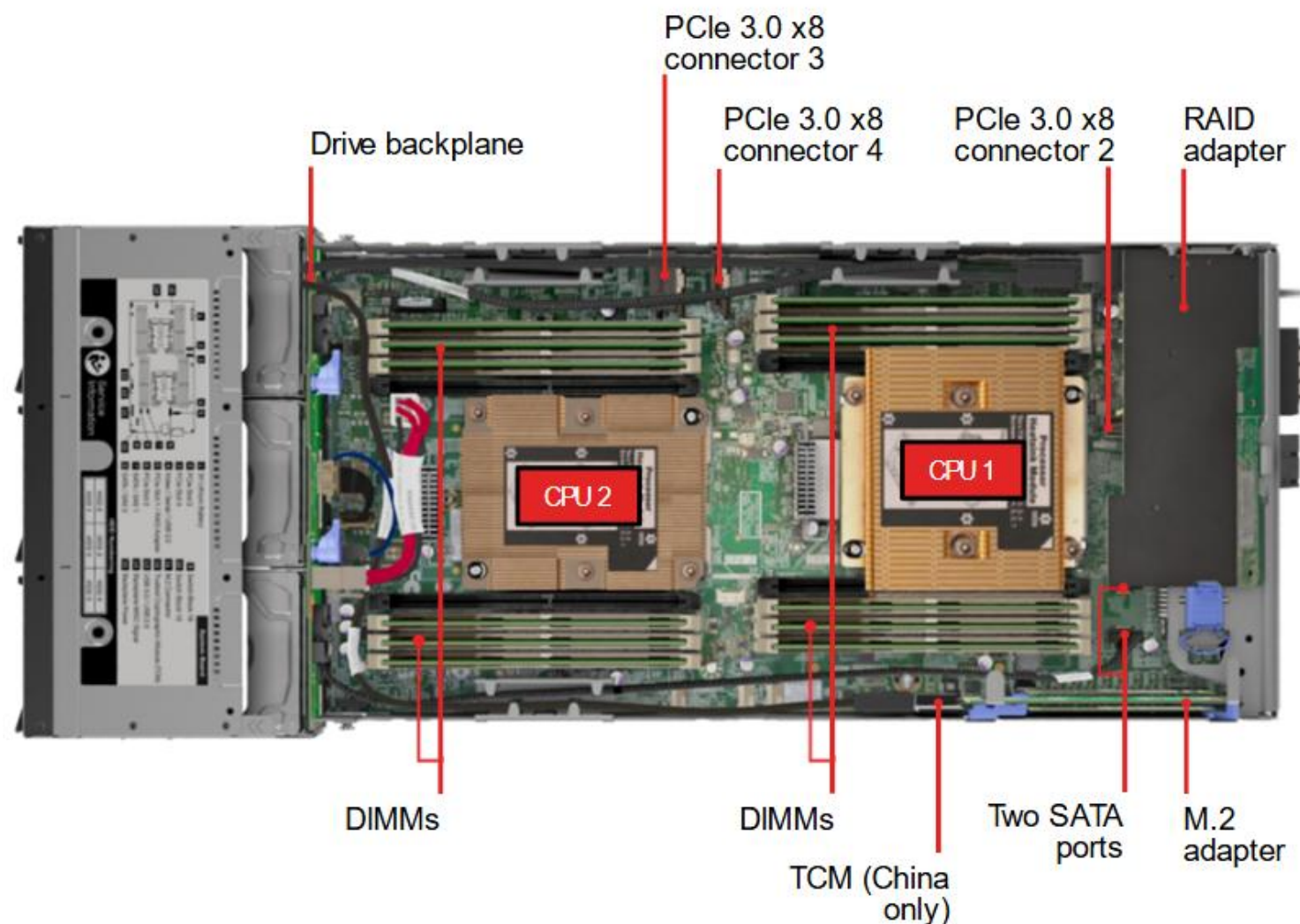


## ThinkAgile HX Series inside view

The HX Series is based on the x3550 M5, x3650 M5, sd350 and n400, SD530, SR630, and SR650 platforms. HX Series appliances and certified nodes have the same internal components as the systems they are based on.

Click the platform name buttons to see inside views of the corresponding systems.

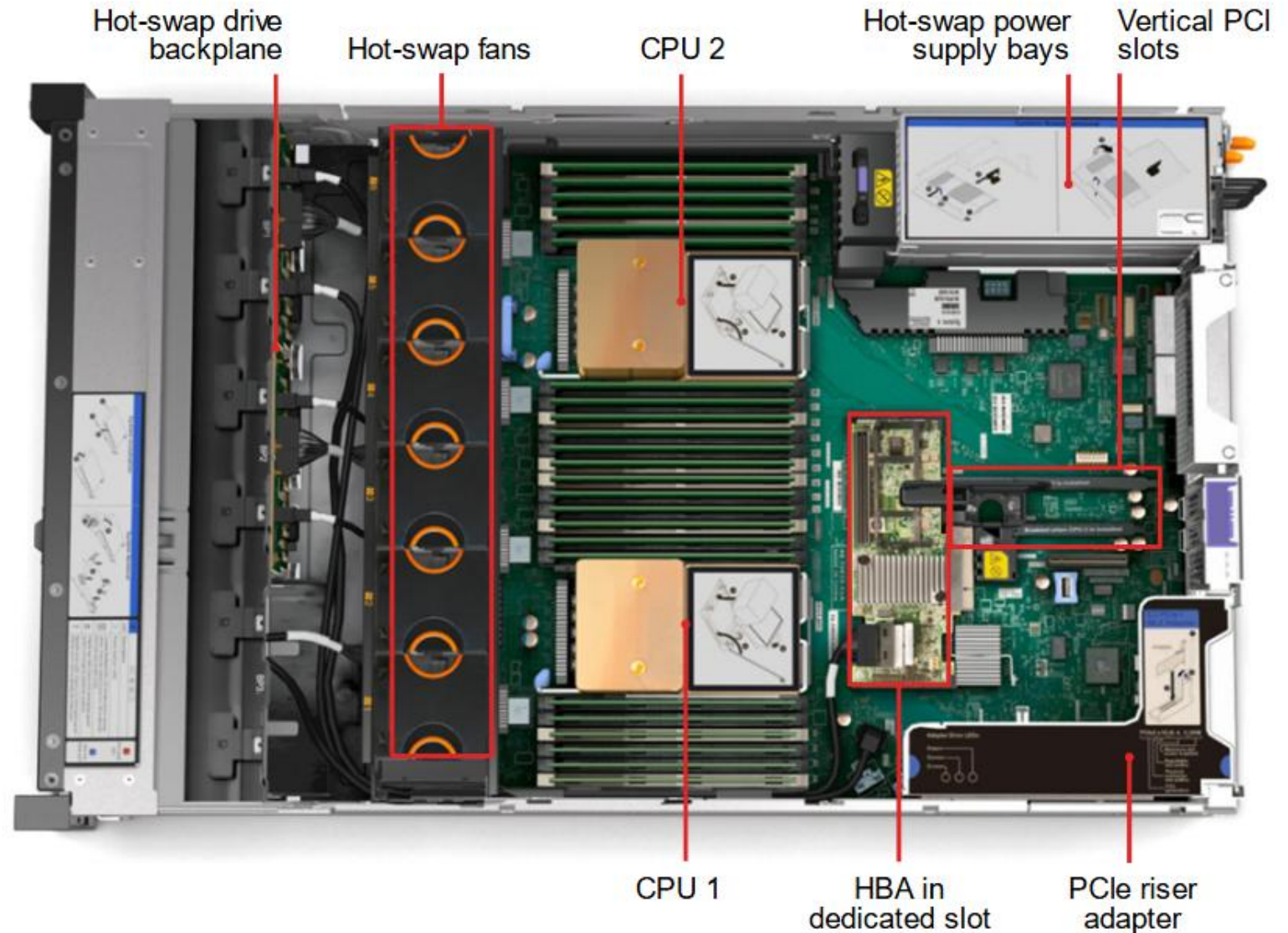
|            |            |
|------------|------------|
| x3550 M5   | SD530 node |
| x3650 M5   | SR630      |
| sd350 node | SR650      |



# ThinkAgile HX Series inside view

The HX Series is based on the x3550 M5, x3650 M5, sd350 and n400, SD530, SR630, and SR650 platforms. HX Series appliances and certified nodes have the same internal components as the systems they are based on. Click the platform name buttons to see inside views of the corresponding systems.

|            |            |
|------------|------------|
| x3550 M5   | SD530 node |
| x3650 M5   | SR630      |
| sd350 node | SR650      |



# ThinkAgile HX Series inside view

The HX Series is based on the x3550 M5, x3650 M5, sd350 and n400, SD530, SR630, and SR650 platforms. HX Series appliances and certified nodes have the same internal components as the systems they are based on.

Click the platform name buttons to see inside views of the corresponding systems.

x3550 M5

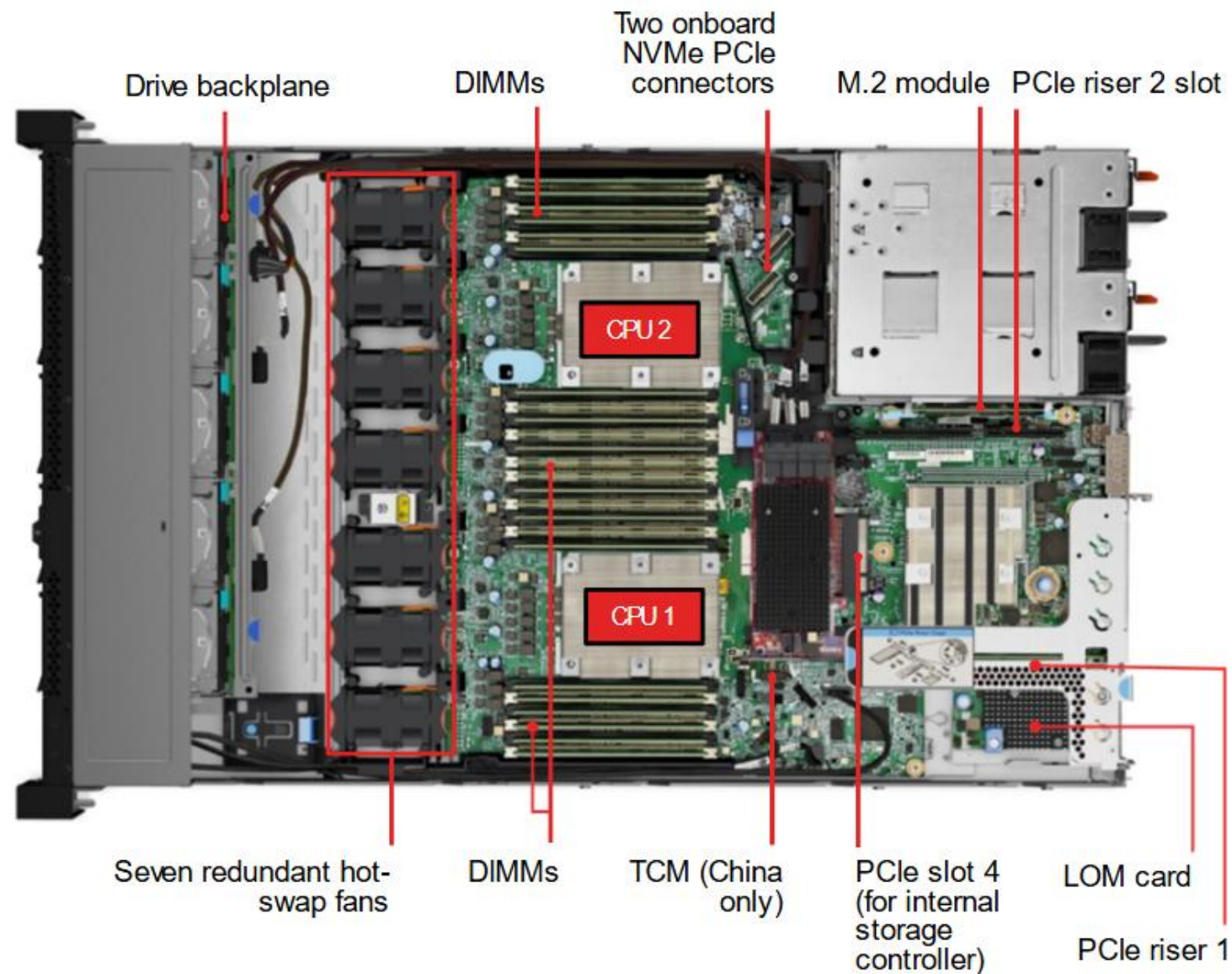
SD530 node

x3650 M5

SR630

sd350 node

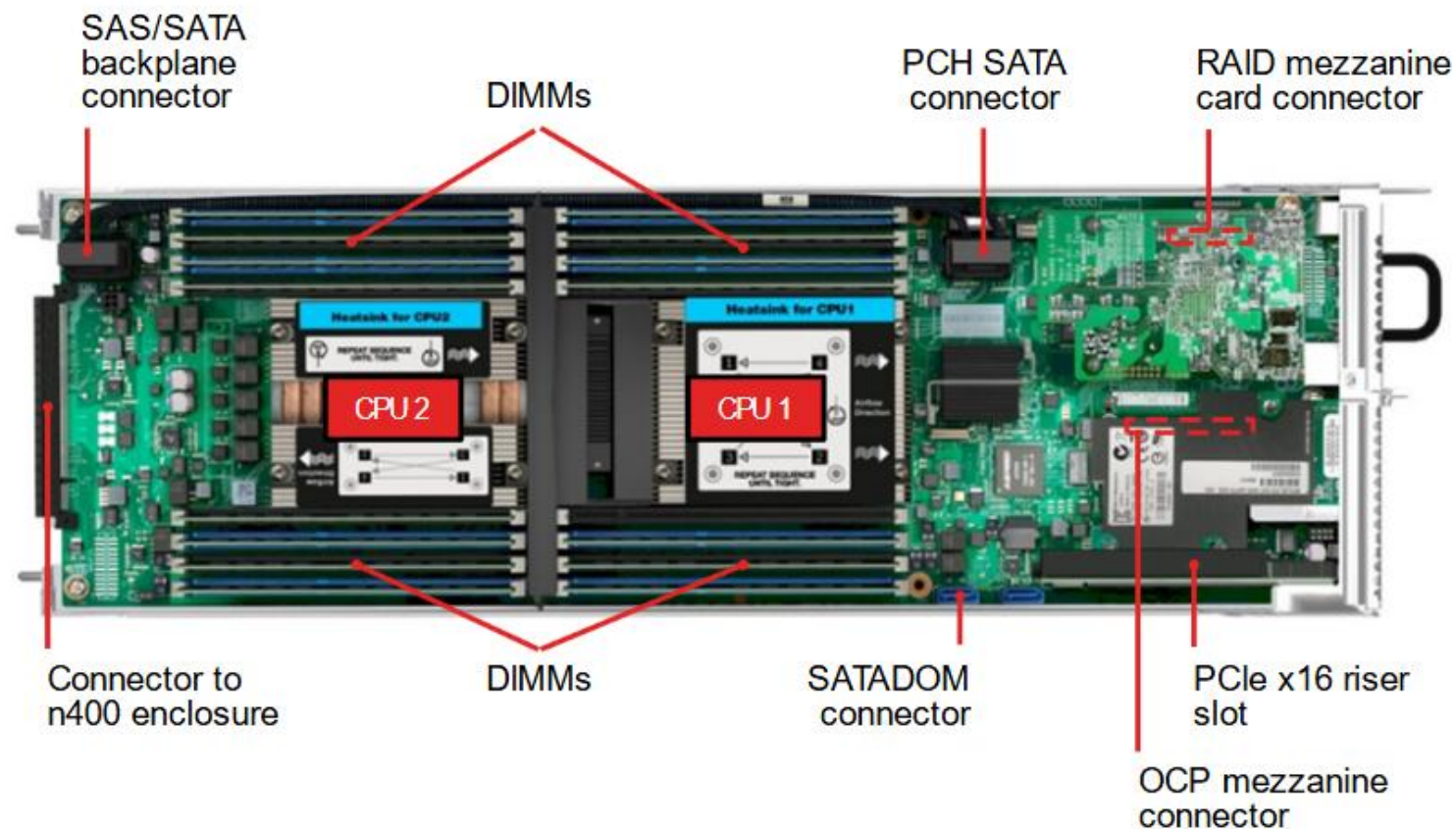
SR650



# ThinkAgile HX Series inside view

The HX Series is based on the x3550 M5, x3650 M5, sd350 and n400, SD530, SR630, and SR650 platforms. HX Series appliances and certified nodes have the same internal components as the systems they are based on. Click the platform name buttons to see inside views of the corresponding systems.

|            |            |
|------------|------------|
| x3550 M5   | SD530 node |
| x3650 M5   | SR630      |
| sd350 node | SR650      |



# ThinkAgile HX Series inside view

The HX Series is based on the x3550 M5, x3650 M5, sd350 and n400, SD530, SR630, and SR650 platforms. HX Series appliances and certified nodes have the same internal components as the systems they are based on.

Click the platform name buttons to see inside views of the corresponding systems.

x3550 M5

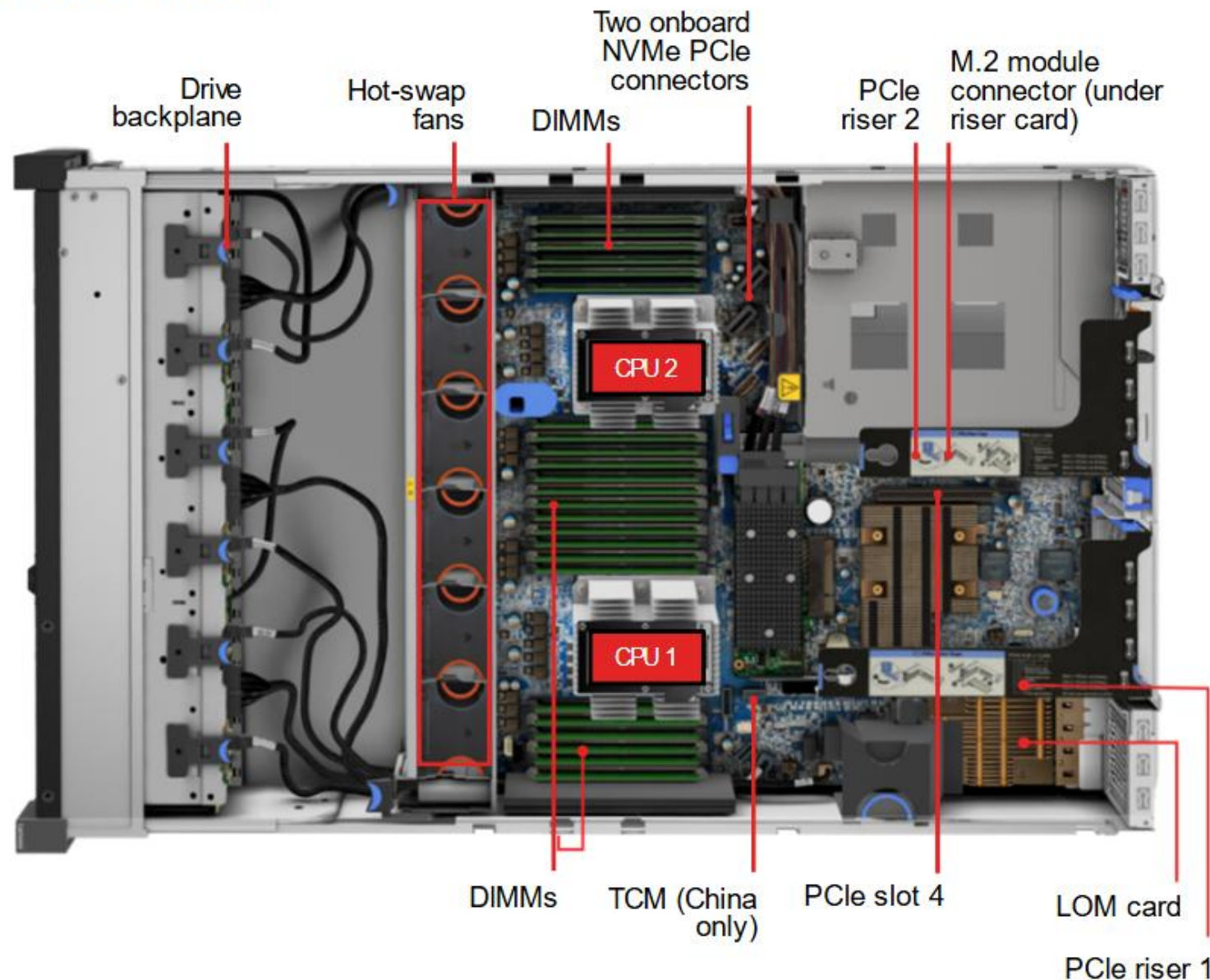
SD530 node

x3650 M5

SR630

sd350 node

SR650



## ThinkAgile HX7820 and 7821 inside view

The HX7820 and HX7821 are based on the SR950, a four-socket system with a storage-rich configuration. There are two system boards in the lower compute tray and one storage tray on the upper side. Each system board supports two CPUs and 24 DIMMs.

For more details, refer to the SR950 3D tour: <https://lenovopress.com/lp0674-3d-tour-thinksystem-sr950>

