

# IBM FlashSystem 9200 combines IBM Spectrum Virtualize, NVMe-based IBM FlashCore technology, and IBM Storage Insights to accelerate workloads, deliver cloud-based analytics, and proactively manage storage

## Table of contents

|   |  |
|---|--|
| <a href="#">1 Overview</a>                  | <a href="#">20 Publications</a>          |
| <a href="#">2 Key requirements</a>          | <a href="#">21 Technical information</a> |
| <a href="#">2 Planned availability date</a> | <a href="#">26 Terms and conditions</a>  |
| <a href="#">3 Description</a>               | <a href="#">30 Prices</a>                |
| <a href="#">7 Product number</a>            |  |

## At a glance

IBM FlashSystem<sup>(R)</sup> 9200 combines IBM Spectrum<sup>(R)</sup> Virtualize, IBM FlashCore<sup>(R)</sup> Modules, IBM<sup>(R)</sup> Storage Insights, and Storage Class Memory to deliver a Non-Volatile Memory Express (NVMe) accelerated multicloud-enabled storage system.

IBM FlashCore Module performance combined with the use of Storage Class Memory as the highest level storage tier, enables FlashSystem 9200 to increase performance and lower latencies. FlashCore offerings include a new XL 38.4 TB module option.

Storage Class Memory drives will also be made available on IBM FlashSystem 9100 for clients to add to their existing control enclosures to boost performance.

A precabled, preconfigured rack product, FlashSystem 9200R contains multiple FlashSystem 9200 control enclosures and uses IBM Spectrum Virtualize to linearly scale the performance and capacity through clustering.

FlashSystem 9200 utility models provide a variable capacity storage offering. These models offer a fixed capacity with the base subscription and variable capacity usage pricing, all managed with IBM Storage Insights.

## Overview

IBM FlashSystem 9200 systems are virtualized, NVMe-based, all-flash software-defined storage solutions designed to unlock the power of your data by combining the latest IBM Spectrum Virtualize, IBM FlashCore, and IBM Storage Insights technologies.

IBM FlashSystem 9200 small form factor (SFF) NVMe control enclosures feature:

- Two node canisters, each with two 16-core processors and options for up to 768 GB memory for a system total of 1.5 TB memory
- Eight (four per canister) 10 Gb Ethernet ports standard for 10 Gb iSCSI connectivity
- Up to six (three per canister) I/O adapter features for 16 Gb Fibre Channel (FC), 32 Gb FC, and 25 Gb Ethernet connectivity
- Support for up to twenty-four NVMe flash drives, including a 38.4 TB FlashCore Module and four storage-class memory drive options
- 2U, 19-inch rack mount enclosure

FlashSystem 9200 supports two 12 Gb SAS expansion enclosure models. FlashSystem 9000 SFF Expansion Enclosure Model AFF supports up to twenty-four 2.5-inch flash drives, while FlashSystem 9000 large form factor (LFF) HD Expansion Enclosure Model A9F supports up to ninety-two flash drives in a 3.5-inch carrier. SFF and LFF HD expansion enclosures can be intermixed within a FlashSystem 9000 system.

Model AG8 FlashSystem 9200 systems scale up to 760 drives with the attachment of FlashSystem 9000 expansion enclosures. FlashSystem 9200 systems can be clustered to help deliver greater performance, bandwidth, and scalability. A FlashSystem 9200 clustered system can contain up to four FlashSystem 9200 systems and up to 3,040 drives.

FlashSystem 9200 systems can be added into existing clustered systems that include FlashSystem 9100, FlashSystem 7200, and Storwize<sup>(R)</sup> V7000 systems.

FlashSystem 9200R is available as a precabled, preconfigured rack with a dedicated Fibre Channel network for clustering. Available with two, three, or four clustered FlashSystem 9200 systems and up to four expansion enclosures, it can be ordered as a FlashSystem 9202R, 9203R, and 9204R.

All FlashSystem 9200 function capabilities are provided through IBM Spectrum Virtualize software and licensed through IBM Spectrum Virtualize Software for FlashSystem 9150 and 9200 V8 (5639-FA3). For additional information about FlashSystem 9200 functional capabilities and software, see the materials listed in the [Reference information](#) section.

IBM FlashSystem 9200 utility models are intended for use where variable billing is required to meet a solution's requirements. [IBM Storage Insights](#) (free edition or pro) is used to monitor the system and is required in the utility model space.

The local project office will work with the Storage Insights data to determine the actual physical data provisioned in the system. This data will be compared to the base system capacity subscription, and any provisioned capacity beyond that base subscription will be billed per terabyte, per month, on a quarterly basis.

---

## Key requirements

---

FlashSystem 9200 requires IBM Spectrum Virtualize Software for FlashSystem 9150 and 9200 V8.3.1 (5639-FA3), or later, for operation. Use of the software is entitled through the acquisition of IBM Spectrum Virtualize software licenses.

FlashSystem 9200 control enclosures support external storage virtualization. Use of the external virtualization capability is entitled through the acquisition of IBM Spectrum Virtualize Software for SAN Volume Controller (SW PID 5641-VC8 in AAS and SW PID 5725-M19 in Passport Advantage<sup>(R)</sup>).

[IBM Storage Insights](#) (free edition or pro) is used to monitor the system and is required in the utility model space.

For a comprehensive list of supported environments, devices, and configurations, see the [IBM System Storage™ Interoperation Center \(SSIC\)](#) website.

---

## Planned availability date

---

- March 6, 2020: All FlashSystem 9200 models and features except as noted below
- March 20, 2020: FlashSystem 9200R as the associated feature codes 4651, AL0R, AL01, AL02, AL03, AL04, and FSRS
- June 12, 2020: TAA Compliance (feature number 0983)
- April 17, 2020: 32 Gb FC LW SFP Transceivers (feature number ACHV) and 25GbE (RoCE) Adapter Pair (feature number AHB6)

**Note:** IBM FlashSystem 9200 model UG8 will not be available for ordering in India

---

## Description

---

FlashSystem 9200 is designed to meet modern high-performance storage requirements such as ultra-low latency, cost-effectiveness, operational efficiency, and mission-critical reliability. Built on a flash-optimized design with an end-to-end NVMe strategy, FlashSystem 9200 delivers extremely low latencies to multicloud environments. Combining IBM Spectrum Virtualize and IBM FlashCore technologies with innovative, flexible, and powerful NVMe storage, these systems can help transform infrastructure efficiency. The inclusion of IBM Storage Insights helps optimize your storage infrastructure using predictive analytics.

Continuing with the commitment to the transformation in data value with a complete NVMe strategy, FlashSystem 9200 comes with support for Storage Class Memory NVMe drives. These small capacity, ultra-low latency drives can be used in conjunction with Easy Tier<sup>(R)</sup> to further improve the overall performance of your NVMe workloads, or as a stand-alone flash storage tier with even higher performance.

The introduction of FlashSystem 9200R enables clients to order a preassembled and configured cluster of FlashSystem 9200 controllers with optional expansion enclosures. These systems include a dedicated FC network for clustering and linear scaling of capacity and performance.

Clustering support is retained across the FlashSystem 9200 product range with support for clustering with the new FlashSystem 7200, as well as previous generation FlashSystem 9100 and IBM Storwize V7000 products.

The following are FlashSystem 9200 solution components:

- IBM FlashSystem 9200 hardware components
- IBM Spectrum Virtualize Software for FlashSystem 9200
- IBM Storage Insights

### **FlashSystem 9200 hardware components**

#### *FlashSystem 9200 SFF NVMe Control Enclosure Model AG8*

- Two node canisters, each with two 16-core processors and integrated hardware-assisted compression acceleration
- Cache options from 256 GB (128 GB per canister) to 1.5 TB (768 GB per canister)
- Eight 10 Gb Ethernet ports standard for iSCSI connectivity
- 25 Gb Ethernet ports for iSCSI and iSER connectivity
- 32 Gb FC and 16 Gb FC ports
- 12 Gb SAS ports for expansion enclosure attachment
- Twenty-four slots for NVMe flash drives
- 2U, 19-inch rack mount enclosure with AC power supplies

#### *FlashSystem 9000 SFF Expansion Enclosure Model AFF*

- Two expansion canisters
- 12 Gb SAS ports for control enclosure and expansion enclosure attachment
- Twenty-four slots for 2.5-inch SAS flash drives
- 2U, 19-inch rack mount enclosure with AC power supplies

#### *FlashSystem 9000 LFF High Density Expansion Enclosure Model A9F*

- Two expansion canisters
- 12 Gb SAS ports for control enclosure and expansion enclosure attachment
- Ninety-two slots for 2.5-inch SAS flash drives in a 3.5-inch carrier
- 5U, 19-inch rack mount enclosure with AC power supplies

#### *FlashSystem 9200R rack*

- Preambled, installed, and configured by IBM, these racks contain:
  - Two, three, or four clustered FlashSystem 9200 control enclosure models AG8, which can be specified by ordering a FlashSystem 9202R, 9203R, and 9204R respectively.
  - A pair of either Brocade or Cisco 32 Gb FC switches for a dedicated FC clustered network (Cisco 32 Gb FC switch option not available in EAC countries at this time)
  - Option for up to four FlashSystem 9000 SFF expansion enclosures (Model AFF) or up to two FlashSystem 9000 LFF expansion enclosures (Model A9F)
- Final configuration will occur on site following delivery
- Additional components can be added to the rack after delivery to meet the growing needs of the business

#### **FC and iSCSI (with iSER support) connectivity with intermix flexibility**

FlashSystem 9200 systems include eight 10 Gb Ethernet ports standard for iSCSI connectivity, two 1 Gb Ethernet ports for service, and can be configured with six I/O adapter features to provide up to twenty-four 16 Gb or 32 Gb FC ports, or up to twelve 25 Gb Ethernet (iSCSI -- iSER capable) ports.

**Note:** A minimum quantity of one 32 Gb FC adapter feature or one 25 Gb Ethernet adapter feature is required.

#### **IBM FlashCore Modules and industry-standard NVMe drive options**

FlashSystem 9200 is designed for IBM FlashCore Modules, storage-class memory drives, and industry-standard NVMe flash drives. You can intermix FlashCore Modules or industry-standard flash drives for improved performance.

FlashCore Modules integrate IBM MicroLatency<sup>(R)</sup> technology, advanced flash management, and reliability into a small form factor NVMe module, with built-in, performance-neutral hardware compression and encryption. A higher capacity 38.4 TB FlashCore Module is being offered with FlashSystem 9200 to further increase storage density.

For improved flexibility, FlashSystem 9200 systems also support a variety of industry-standard, self-encrypting NVMe flash drives.

Deployments requiring higher scalability and density can take advantage of FlashSystem 9000 expansion enclosures using 12 Gb SAS flash drives.

The following NVMe FlashCore Modules are supported in FlashSystem 9200 control enclosures:

- 4.8 TB NVMe FlashCore Module
- 9.6 TB NVMe FlashCore Module
- 19.2 TB NVMe FlashCore Module
- 38.4 TB NVMe FlashCore Module

The following NVMe storage-class memory drives are supported in FlashSystem 9200 control enclosures:

- 375 GB NVMe Storage Class Memory drive
- 750 GB NVMe Storage Class Memory drive

- 800 GB NVMe Storage Class Memory drive
- 1.6 TB NVMe Storage Class Memory drive

The following NVMe industry-standard drives are supported in FlashSystem 9200 control enclosures:

- 800 GB NVMe flash drive
- 1.92 TB NVMe flash drive
- 3.84 TB NVMe flash drive
- 7.68 TB NVMe flash drive
- 15.36 TB 2.5-inch NVMe flash drive

The following 12 Gb SAS industry-standard drives are supported in FlashSystem 9000 expansion enclosures:

- 1.92 TB 12 Gb SAS flash drive (2.5-inch and 3.5-inch form factor features)
- 3.84 TB 12 Gb SAS flash drive (2.5-inch and 3.5-inch form factor features)
- 7.68 TB 12 Gb SAS flash drive (2.5-inch and 3.5-inch form factor features)
- 15.36 TB 12 Gb SAS flash drive (2.5-inch and 3.5-inch form factor features)
- 30.72 TB 12 Gb SAS flash drive (2.5-inch and 3.5-inch form factor features)

All drives are dual-port and hot-swappable. Drives of the same form factor and connector type can be intermixed within an enclosure. SFF and LFF HD expansion enclosures can be intermixed behind the SFF control enclosure.

### **Scalable configurations respond to growing capacity needs**

A single FlashSystem 9200 control enclosure can support up to twenty FlashSystem 9000 SFF expansion enclosures with a maximum of 504 drives per system or up to eight FlashSystem 9000 LFF HD expansion enclosures with a maximum of 760 drives per system. Intermixing of expansion enclosures in a system is supported. Expansion enclosures are designed to be dynamically added with virtually no downtime, helping to quickly and seamlessly respond to growing capacity demands.

With four-way system clustering, the size of the system can be increased to a maximum of 3,040 drives. FlashSystem 9200 systems can be added into existing Storwize V7000 clustered systems.

Further scalability can be achieved with virtualization of external storage. When FlashSystem 9200 virtualizes an external storage system, capacity in the external system inherits the functional richness and ease of use of FlashSystem 9200.

### **Designed for high availability**

FlashSystem 9200 is designed to offer high system and data availability with the following features:

- HyperSwap<sup>(R)</sup> support
- Dual-active, intelligent node canisters with mirrored cache
- Dual-port flash drives with automatic drive failure detection and RAID rebuild
- Redundant hardware, including power supplies and fans
- Hot-swappable and customer replaceable components
- Automated path failover support for the data path between the server and the drives

### **IBM Spectrum Virtualize for FlashSystem 9200**

IBM Spectrum Virtualize combines a variety of IBM technologies, including deduplication, compression, thin provisioning, and SCSI Unmap, HyperSwap (high-availability solution), Easy Tier (automatic and dynamic data tiering), encryption

of internal and external virtualized storage, FlashCopy<sup>®</sup> (snapshot), and remote data replication. These technologies are designed to enable FlashSystem 9200 to offer a rich set of functional capabilities and deliver extraordinary levels of storage efficiency when used together.

FlashSystem 9200 functional capabilities are provided through IBM Spectrum Virtualize Software for FlashSystem 9200. For additional information about FlashSystem 9200 functional capabilities and software, see the materials listed in the [Reference information](#) section.

### IBM Storage Insights

Included at no charge, cloud-based IBM Storage Insights provides a single dashboard that gives you a clear view of all your IBM block storage. You'll be able to make better decisions by seeing trends in performance and capacity. Storage health information enables you to focus on areas needing attention and when IBM support is needed, Storage Insights simplifies uploading logs, speeds resolution with online configuration data, and provides an overview of open tickets all in one place. Storage Insights Pro is a subscription service that provides longer historical views of data, more reporting and optimization options, and supports IBM file and block storage together with third party storage.

There is no ordering required. For registration and installation information, see the [IBM Storage Insights Enrollment](#) website.

IBM FlashSystem utility models are provided for clients who can benefit from a variable capacity system, where billing is based only on actually provisioned space. The hardware is leased through IBM Global Finance on a three-year lease, which entitles the client to utilize up to 35% of the total system capacity at no additional cost. If storage needs increase beyond that 35% capacity, usage is billed based on the average daily provisioned capacity per terabyte, per month, on a quarterly basis.

**Example:** A client has a FlashSystem 9200 utility model with 4.8 TB NVMe drives, for a total system capacity of 115 TB. The base subscription for such a system is 40.25 TB. During the months where the average daily usage is below 40.25 TB, there is no additional billing.

The system will monitor daily provisioned capacity and will average those daily usage rates over the month term. The result is the average daily usage for the month.

If a customer uses 45 TB, 42.5 TB, and 50 TB in three consecutive months, Storage Insights will calculate the overage as follows, rounding to the nearest terabyte:

| Average daily | Base  | Overage | To be billed |
|---------------|-------|---------|--------------|
| 45            | 40.25 | 4.75    | 5 TB         |
| 42.5          | 40.25 | 2.25    | 2 TB         |
| 50            | 40.25 | 9.75    | 10 TB        |

The total capacity billed at the end of the quarter will be 17 TB per month in this example.

Flash drive expansions may be ordered with the system, in all supported configurations.

The local project office will compile the usage information from Storage Insights on a quarterly basis. This data will be compared to the base system capacity subscription, and any provisioned capacity beyond that base subscription will be billed per terabyte, per month, on a quarterly basis. The calculated usage is based on the average use over a given month. In a highly variable environment, such as managed or cloud service providers, this subscription enables the system to be utilized only as much as is necessary during any given month. Usage may increase or decrease, and will be billed accordingly. Provisioned capacity is considered capacity that is reserved by the system. In thick-provisioned environments, this will be the capacity that is allocated to a host, whether it has data written or not. For thin-provisioned

environments, the data that is actually written is used. This is because of the different ways in which thick and thin provisioning utilize flash drive space.

## Accessibility by people with disabilities

Accessibility Compliance Reports (previously known as a VPAT) containing details on accessibility compliance to standards, including the Worldwide Consortium Web Content Accessibility Guidelines, European Standard EN 301 349, and US Section 508, can be found on the [IBM Accessibility Conformance Report Request](#) website.

## Reference information

For additional information about FlashSystem 9200 software, see Software Announcement [220-023](#), dated February 11, 2020.

## Product number

The following are newly announced features and models on the specified models of the IBM System Storage 9846 and 9848 machine types:

| Description                            | Machine type | Model | Feature |
|--|--------------|-------|---------|
| 4.8 TB NVMe FlashCore Module           | 9846         | AF7   | AHS5    |
| 9.6 TB NVMe FlashCore Module           | 9846         | AF7   | AHS6    |
| 19.2 TB NVMe FlashCore Module          | 9846         | AF7   | AHS7    |
| 38.4 TB NVMe FlashCore Module          | 9846         | AF7   | AHS8    |
| 375 GB NVMe Storage Class Memory Drive | 9846         | AF7   | AHTA    |
| 750 GB NVMe Storage Class Memory Drive | 9846         | AF7   | AHTB    |
| 800 GB NVMe Storage Class Memory Drive | 9846         | AF7   | AHTE    |
| 1.6 TB NVMe Storage Class Memory Drive | 9846         | AF7   | AHTF    |
| 4.8 TB NVMe FlashCore Module           | 9846         | AF8   | AHS5    |
| 9.6 TB NVMe FlashCore Module           | 9846         | AF8   | AHS6    |
| 19.2 TB NVMe FlashCore Module          | 9846         | AF8   | AHS7    |
| 38.4 TB NVMe FlashCore Module          | 9846         | AF8   | AHS8    |
| 375 GB NVMe Storage Class Memory Drive | 9846         | AF8   | AHTA    |
| 750 GB NVMe Storage Class Memory Drive | 9846         | AF8   | AHTB    |
| 800 GB NVMe Storage Class Memory Drive | 9846         | AF8   | AHTE    |
| 1.6 TB NVMe Storage Class Memory Drive | 9846         | AF8   | AHTF    |

| <b>Description</b>                              | <b>Machine type</b> | <b>Model</b> | <b>Feature</b> |
|---|---------------------|--------------|----------------|
| IBM FlashSystem 9200 SFF NVMe Control Enclosure | 9846                | AG8          |                |
| JEMT Indicator                                  | 9846                | AG8          | 0021           |
| TAA Compliance                                  | 9846                | AG8          | 0983           |
| Bulk Order Indicator                            | 9846                | AG8          | 5555           |
| Power Cord - EMEA                               | 9846                | AG8          | 9716           |
| Power Cord - Australia / New Zealand            | 9846                | AG8          | 9717           |
| Power Cord - Europe / Africa                    | 9846                | AG8          | 9718           |
| Power Cord - Denmark                            | 9846                | AG8          | 9719           |
| Power Cord - South Africa                       | 9846                | AG8          | 9720           |
| Power Cord - Switzerland                        | 9846                | AG8          | 9721           |
| Power Cord - Chile / Italy                      | 9846                | AG8          | 9722           |
| Power Cord - Israel                             | 9846                | AG8          | 9723           |
| Power Cord - Argentina                          | 9846                | AG8          | 9725           |
| Power Cord - China                              | 9846                | AG8          | 9726           |
| Power Cord - PDU Connection                     | 9846                | AG8          | 9730           |
| Power Cord - Brazil                             | 9846                | AG8          | 9733           |
| Power Cord - India                              | 9846                | AG8          | 9734           |
| Power Cord - Korea                              | 9846                | AG8          | 9736           |
| RFID AG/AP: 902-928 MHz                         | 9846                | AG8          | A2EV           |
| RFID EMEA: 865.6-867.8 MHz                      | 9846                | AG8          | A2EW           |
| Encryption Enablement                           | 9846                | AG8          | ACE6           |
| Encryption USB Drive Pack                       | 9846                | AG8          | ACEA           |
| 768 GB Cache upgrade                            | 9846                | AG8          | ACGB           |
| 512 GB Cache upgrade                            | 9846                | AG8          | ACGJ           |
| 240 GB M.2 Boot drive Pair                      | 9846                | AG8          | ACGV           |
| 16 Gb FC LW SFP Transceivers(Pair)              | 9846                | AG8          | ACHU           |
| 32 Gb FC LW SFP Transceivers (Pair)             | 9846                | AG8          | ACHV           |
| 1m OM3 Fiber Cable (LC)                         | 9846                | AG8          | ACSQ           |
| 5m OM3 Fiber Cable (LC)                         | 9846                | AG8          | ACSR           |
| 10m OM3 Fiber Cable (LC)                        | 9846                | AG8          | ACSS           |
| 25m OM3 Fiber Cable (LC)                        | 9846                | AG8          | ACST           |



| <b>Description</b>         | <b>Machine type</b> | <b>Model</b> | <b>Feature</b> |
|----------------------------|---------------------|--------------|----------------|
| OEM 1 FC Order Indicator   | 9846                | AG8          | ACW1           |
| OEM 2 FC Order Indicator   | 9846                | AG8          | ACW2           |
| OEM 3 FC Order Indicator   | 9846                | AG8          | ACW3           |
| OEM 4 FC Order Indicator   | 9846                | AG8          | ACW4           |
| OEM 5 FC Order Indicator   | 9846                | AG8          | ACW5           |
| OEM 6 FC Order Indicator   | 9846                | AG8          | ACW6           |
| OEM 7 FC Order Indicator   | 9846                | AG8          | ACW7           |
| OEM 8 FC Order Indicator   | 9846                | AG8          | ACW8           |
| OEM 9 FC Order Indicator   | 9846                | AG8          | ACW9           |
| OEM 10 FC Order Indicator  | 9846                | AG8          | ACWA           |
| OEM 11 FC Order Indicator  | 9846                | AG8          | ACWB           |
| OEM 12 FC Order Indicator  | 9846                | AG8          | ACWC           |
| OEM 13 FC Order Indicator  | 9846                | AG8          | ACWD           |
| OEM 14 FC Order Indicator  | 9846                | AG8          | ACWE           |
| OEM 15 FC Order Indicator  | 9846                | AG8          | ACWF           |
| OEM 1 MTM Order Indicator  | 9846                | AG8          | ACY1           |
| OEM 2 MTM Order Indicator  | 9846                | AG8          | ACY2           |
| OEM 3 MTM Order Indicator  | 9846                | AG8          | ACY3           |
| OEM 4 MTM Order Indicator  | 9846                | AG8          | ACY4           |
| OEM 5 MTM Order Indicator  | 9846                | AG8          | ACY5           |
| OEM 6 MTM Order Indicator  | 9846                | AG8          | ACY6           |
| OEM 7 MTM Order Indicator  | 9846                | AG8          | ACY7           |
| OEM 8 MTM Order Indicator  | 9846                | AG8          | ACY8           |
| OEM 9 MTM Order Indicator  | 9846                | AG8          | ACY9           |
| OEM 10 MTM Order Indicator | 9846                | AG8          | ACYA           |
| OEM 11 MTM Order Indicator | 9846                | AG8          | ACYB           |
| OEM 12 MTM Order Indicator | 9846                | AG8          | ACYC           |
| OEM 13 MTM Order Indicator | 9846                | AG8          | ACYD           |
| OEM 14 MTM Order Indicator | 9846                | AG8          | ACYE           |
| OEM 15 MTM Order Indicator | 9846                | AG8          | ACYF           |
| Generic Bezel              | 9846                | AG8          | ACZA           |
| Generic Packaging          | 9846                | AG8          | ACZF           |

| <b>Description</b>                        | <b>Machine type</b> | <b>Model</b> | <b>Feature</b> |
|---|---------------------|--------------|----------------|
| Order Type 1 Indicator - CTO              | 9846                | AG8          | ADN1           |
| Order Type 2 Indicator - MTM Only         | 9846                | AG8          | ADN2           |
| Order Type 3 Indicator - FC Only          | 9846                | AG8          | ADN3           |
| No Rules Order Indicator                  | 9846                | AG8          | ADNR           |
| TAA Designated Country                    | 9846                | AG8          | ADZ1           |
| Shipping and Handling NC                  | 9846                | AG8          | AG00           |
| Shipping and Handling - Model AF8         | 9846                | AG8          | AGJK           |
| Shipping and Handling                     | 9846                | AG8          | AGJN           |
| 16Gb FC 4 Port Adapter Pair               | 9846                | AG8          | AHB3           |
| 32 Gb FC 4 Port Adapter Cards (Pair)      | 9846                | AG8          | AHB4           |
| 25GbE (RoCE) Adapter Pair                 | 9846                | AG8          | AHB6           |
| 25GbE (iWARP) Adapter Pair                | 9846                | AG8          | AHB7           |
| SAS Expansion Enclosure Attach Card(Pair) | 9846                | AG8          | AHBA           |
| Power Cord - PDU C20                      | 9846                | AG8          | AHP6           |
| 4.8 TB NVMe FlashCore Module              | 9846                | AG8          | AHS5           |
| 9.6 TB NVMe FlashCore Module              | 9846                | AG8          | AHS6           |
| 19.2 TB NVMe FlashCore Module             | 9846                | AG8          | AHS7           |
| 38.4 TB NVMe FlashCore Module             | 9846                | AG8          | AHS8           |
| 800 GB NVMe Flash Drive                   | 9846                | AG8          | AHT1           |
| 1.92 TB NVMe Flash Drive                  | 9846                | AG8          | AHT2           |
| 3.84 TB NVMe Flash Drive                  | 9846                | AG8          | AHT3           |
| 7.68 TB NVMe Flash Drive                  | 9846                | AG8          | AHT4           |
| 15.36 TB NVMe Flash Drive                 | 9846                | AG8          | AHT5           |
| 375 GB NVMe Storage Class Memory Drive    | 9846                | AG8          | AHTA           |
| 750 GB NVMe Storage Class Memory Drive    | 9846                | AG8          | AHTB           |
| 800 GB NVMe Storage Class Memory Drive    | 9846                | AG8          | AHTE           |
| 1.6 TB NVMe Storage Class Memory Drive    | 9846                | AG8          | AHTF           |
| Future use - reserved 1                   | 9846                | AG8          | AHY1           |

| <b>Description</b>  | <b>Machine type</b> | <b>Model</b> | <b>Feature</b> |
|---|---------------------|--------------|----------------|
| Future use - reserved 2                                   | 9846                | AG8          | AHY2           |
| Future use - reserved 3                                   | 9846                | AG8          | AHY3           |
| Future use - reserved 4                                   | 9846                | AG8          | AHY4           |
| Future use - reserved 5                                   | 9846                | AG8          | AHY5           |
| Future use - reserved 6                                   | 9846                | AG8          | AHY6           |
| Future use - reserved 7                                   | 9846                | AG8          | AHY7           |
| Future use - reserved 8                                   | 9846                | AG8          | AHY8           |
| Future use - reserved 9                                   | 9846                | AG8          | AHY9           |
| VersaStack Solution Indicator                             | 9846                | AG8          | AHZC           |
| Enhanced High Availability Solution indicator             | 9846                | AG8          | AHZZ           |
| Red Hat <sup>(R)</sup> OpenShift <sup>(R)</sup> Indicator | 9846                | AG8          | AJGH           |
| BP Post-Sale Services                                     | 9846                | AG8          | SVBP           |
| IBM Systems Lab Services Post-Sale Services               | 9846                | AG8          | SVCS           |
| Other IBM Post-Sale Services                              | 9846                | AG8          | SVNN           |
| Rack Indicator Rack 1                                     | 9848                | A9F          | 4651           |
| Rack component mounted in position 1                      | 9848                | A9F          | AL01           |
| Rack component mounted in position 2                      | 9848                | A9F          | AL02           |
| FlashSystem Rack Product Indicator                        | 9848                | A9F          | FSRS           |
| 4.8 TB NVMe FlashCore Module                              | 9848                | AF7          | AHS5           |
| 9.6 TB NVMe FlashCore Module                              | 9848                | AF7          | AHS6           |
| 19.2 TB NVMe FlashCore Module                             | 9848                | AF7          | AHS7           |
| 38.4 TB NVMe FlashCore Module                             | 9848                | AF7          | AHS8           |
| 375 GB NVMe Storage Class Memory Drive                    | 9848                | AF7          | AHTA           |
| 750 GB NVMe Storage Class Memory Drive                    | 9848                | AF7          | AHTB           |
| 800 GB NVMe Storage Class Memory Drive                    | 9848                | AF7          | AHTE           |
| 1.6 TB NVMe Storage Class Memory Drive                    | 9848                | AF7          | AHTF           |
| 4.8 TB NVMe FlashCore Module                              | 9848                | AF8          | AHS5           |

| <b>Description</b>                              | <b>Machine type</b> | <b>Model</b> | <b>Feature</b> |
|---|---------------------|--------------|----------------|
| 9.6 TB NVMe FlashCore Module                    | 9848                | AF8          | AHS6           |
| 19.2 TB NVMe FlashCore Module                   | 9848                | AF8          | AHS7           |
| 38.4 TB NVMe FlashCore Module                   | 9848                | AF8          | AHS8           |
| 375 GB NVMe Storage Class Memory Drive          | 9848                | AF8          | AHTA           |
| 750 GB NVMe Storage Class Memory Drive          | 9848                | AF8          | AHTB           |
| 800 GB NVMe Storage Class Memory Drive          | 9848                | AF8          | AHTE           |
| 1.6 TB NVMe Storage Class Memory Drive          | 9848                | AF8          | AHTF           |
| Rack Indicator Rack 1                           | 9848                | AFF          | 4651           |
| Rack component mounted in position 1            | 9848                | AFF          | AL01           |
| Rack component mounted in position 2            | 9848                | AFF          | AL02           |
| Rack component mounted in position 3            | 9848                | AFF          | AL03           |
| Rack component mounted in position 4            | 9848                | AFF          | AL04           |
| FlashSystem Rack Product Indicator              | 9848                | AFF          | FSRS           |
| IBM FlashSystem 9200 SFF NVMe Control Enclosure | 9848                | AG8          |                |
| JEMT Indicator                                  | 9848                | AG8          | 0021           |
| TAA Compliance                                  | 9848                | AG8          | 0983           |
| Rack Indicator Rack 1                           | 9848                | AG8          | 4651           |
| Bulk Order Indicator                            | 9848                | AG8          | 5555           |
| Power Cord - EMEA                               | 9848                | AG8          | 9716           |
| Power Cord - Australia / New Zealand            | 9848                | AG8          | 9717           |
| Power Cord - Europe / Africa                    | 9848                | AG8          | 9718           |
| Power Cord - Denmark                            | 9848                | AG8          | 9719           |
| Power Cord - South Africa                       | 9848                | AG8          | 9720           |
| Power Cord - Switzerland                        | 9848                | AG8          | 9721           |
| Power Cord - Chile / Italy                      | 9848                | AG8          | 9722           |
| Power Cord - Israel                             | 9848                | AG8          | 9723           |
| Power Cord - Argentina                          | 9848                | AG8          | 9725           |
| Power Cord - China                              | 9848                | AG8          | 9726           |

| <b>Description</b>                  | <b>Machine type</b> | <b>Model</b> | <b>Feature</b> |
|-------------------------------------|---------------------|--------------|----------------|
| Power Cord - PDU Connection         | 9848                | AG8          | 9730           |
| Power Cord - Brazil                 | 9848                | AG8          | 9733           |
| Power Cord - India                  | 9848                | AG8          | 9734           |
| Power Cord - Korea                  | 9848                | AG8          | 9736           |
| RFID AG/AP: 902-928 MHz             | 9848                | AG8          | A2EV           |
| RFID EMEA: 865.6-867.8 MHz          | 9848                | AG8          | A2EW           |
| Encryption Enablement               | 9848                | AG8          | ACE7           |
| Encryption USB Drive Pack           | 9848                | AG8          | ACEA           |
| 768 GB Cache upgrade                | 9848                | AG8          | ACGB           |
| 512 GB Cache upgrade                | 9848                | AG8          | ACGJ           |
| 240 GB M.2 Boot drive Pair          | 9848                | AG8          | ACGV           |
| 16 Gb FC LW SFP Transceivers(Pair)  | 9848                | AG8          | ACHU           |
| 32 Gb FC LW SFP Transceivers (Pair) | 9848                | AG8          | ACHV           |
| 1m OM3 Fiber Cable (LC)             | 9848                | AG8          | ACSQ           |
| 5m OM3 Fiber Cable (LC)             | 9848                | AG8          | ACSR           |
| 10m OM3 Fiber Cable (LC)            | 9848                | AG8          | ACSS           |
| 25m OM3 Fiber Cable (LC)            | 9848                | AG8          | ACST           |
| OEM 1 FC Order Indicator            | 9848                | AG8          | ACW1           |
| OEM 2 FC Order Indicator            | 9848                | AG8          | ACW2           |
| OEM 3 FC Order Indicator            | 9848                | AG8          | ACW3           |
| OEM 4 FC Order Indicator            | 9848                | AG8          | ACW4           |
| OEM 5 FC Order Indicator            | 9848                | AG8          | ACW5           |
| OEM 6 FC Order Indicator            | 9848                | AG8          | ACW6           |
| OEM 7 FC Order Indicator            | 9848                | AG8          | ACW7           |
| OEM 8 FC Order Indicator            | 9848                | AG8          | ACW8           |
| OEM 9 FC Order Indicator            | 9848                | AG8          | ACW9           |
| OEM 10 FC Order Indicator           | 9848                | AG8          | ACWA           |
| OEM 11 FC Order Indicator           | 9848                | AG8          | ACWB           |
| OEM 12 FC Order Indicator           | 9848                | AG8          | ACWC           |
| OEM 13 FC Order Indicator           | 9848                | AG8          | ACWD           |
| OEM 14 FC Order Indicator           | 9848                | AG8          | ACWE           |

| <b>Description</b>                   | <b>Machine type</b> | <b>Model</b> | <b>Feature</b> |
|--------------------------------------|---------------------|--------------|----------------|
| OEM 15 FC Order Indicator            | 9848                | AG8          | ACWF           |
| OEM 1 MTM Order Indicator            | 9848                | AG8          | ACY1           |
| OEM 2 MTM Order Indicator            | 9848                | AG8          | ACY2           |
| OEM 3 MTM Order Indicator            | 9848                | AG8          | ACY3           |
| OEM 4 MTM Order Indicator            | 9848                | AG8          | ACY4           |
| OEM 5 MTM Order Indicator            | 9848                | AG8          | ACY5           |
| OEM 6 MTM Order Indicator            | 9848                | AG8          | ACY6           |
| OEM 7 MTM Order Indicator            | 9848                | AG8          | ACY7           |
| OEM 8 MTM Order Indicator            | 9848                | AG8          | ACY8           |
| OEM 9 MTM Order Indicator            | 9848                | AG8          | ACY9           |
| OEM 10 MTM Order Indicator           | 9848                | AG8          | ACYA           |
| OEM 11 MTM Order Indicator           | 9848                | AG8          | ACYB           |
| OEM 12 MTM Order Indicator           | 9848                | AG8          | ACYC           |
| OEM 13 MTM Order Indicator           | 9848                | AG8          | ACYD           |
| OEM 14 MTM Order Indicator           | 9848                | AG8          | ACYE           |
| OEM 15 MTM Order Indicator           | 9848                | AG8          | ACYF           |
| Generic Bezel                        | 9848                | AG8          | ACZA           |
| Generic Packaging                    | 9848                | AG8          | ACZF           |
| FlashSystem V9000 Brand Indicator 2U | 9848                | AG8          | ACZG           |
| Order Type 1 Indicator - CTO         | 9848                | AG8          | ADN1           |
| Order Type 2 Indicator - MTM Only    | 9848                | AG8          | ADN2           |
| Order Type 3 Indicator - FC Only     | 9848                | AG8          | ADN3           |
| No Rules Order Indicator             | 9848                | AG8          | ADNR           |
| TAA Designated Country               | 9848                | AG8          | ADZ1           |
| Shipping and Handling NC             | 9848                | AG8          | AG00           |
| Shipping and Handling - Model AF8    | 9848                | AG8          | AGJK           |
| Shipping and Handling                | 9848                | AG8          | AGJN           |
| 16Gb FC 4 Port Adapter Pair          | 9848                | AG8          | AHB3           |
| 32 Gb FC 4 Port Adapter Cards (Pair) | 9848                | AG8          | AHB4           |
| 25GbE (RoCE) Adapter Pair            | 9848                | AG8          | AHB6           |

| <b>Description</b>                            | <b>Machine type</b> | <b>Model</b> | <b>Feature</b> |
|---|---------------------|--------------|----------------|
| 25GbE (iWARP) Adapter Pair                    | 9848                | AG8          | AHB7           |
| SAS Expansion Enclosure Attach Card(Pair)     | 9848                | AG8          | AHBA           |
| Power Cord - PDU C20                          | 9848                | AG8          | AHP6           |
| 4.8 TB NVMe FlashCore Module                  | 9848                | AG8          | AHS5           |
| 9.6 TB NVMe FlashCore Module                  | 9848                | AG8          | AHS6           |
| 19.2 TB NVMe FlashCore Module                 | 9848                | AG8          | AHS7           |
| 38.4 TB NVMe FlashCore Module                 | 9848                | AG8          | AHS8           |
| 800 GB NVMe Flash Drive                       | 9848                | AG8          | AHT1           |
| 1.92 TB NVMe Flash Drive                      | 9848                | AG8          | AHT2           |
| 3.84 TB NVMe Flash Drive                      | 9848                | AG8          | AHT3           |
| 7.68 TB NVMe Flash Drive                      | 9848                | AG8          | AHT4           |
| 15.36 TB NVMe Flash Drive                     | 9848                | AG8          | AHT5           |
| 375 GB NVMe Storage Class Memory Drive        | 9848                | AG8          | AHTA           |
| 750 GB NVMe Storage Class Memory Drive        | 9848                | AG8          | AHTB           |
| 800 GB NVMe Storage Class Memory Drive        | 9848                | AG8          | AHTE           |
| 1.6 TB NVMe Storage Class Memory Drive        | 9848                | AG8          | AHTF           |
| Future use - reserved 1                       | 9848                | AG8          | AHY1           |
| Future use - reserved 2                       | 9848                | AG8          | AHY2           |
| Future use - reserved 3                       | 9848                | AG8          | AHY3           |
| Future use - reserved 4                       | 9848                | AG8          | AHY4           |
| Future use - reserved 5                       | 9848                | AG8          | AHY5           |
| Future use - reserved 6                       | 9848                | AG8          | AHY6           |
| Future use - reserved 7                       | 9848                | AG8          | AHY7           |
| Future use - reserved 8                       | 9848                | AG8          | AHY8           |
| Future use - reserved 9                       | 9848                | AG8          | AHY9           |
| VersaStack Solution Indicator                 | 9848                | AG8          | AHZC           |
| Enhanced High Availability Solution indicator | 9848                | AG8          | AHZZ           |
| Red Hat OpenShift Indicator                   | 9848                | AG8          | AJGH           |

| <b>Description</b>                          | <b>Machine type</b> | <b>Model</b> | <b>Feature</b> |
|---|---------------------|--------------|----------------|
| Rack component mounted in position 1        | 9848                | AG8          | AL01           |
| Rack component mounted in position 2        | 9848                | AG8          | AL02           |
| Rack component mounted in position 3        | 9848                | AG8          | AL03           |
| Rack component mounted in position 4        | 9848                | AG8          | AL04           |
| FlashSystem 9200R Integration               | 9848                | AG8          | AL0R           |
| FlashSystem Rack Product Indicator          | 9848                | AG8          | FSRS           |
| BP Post-Sale Services                       | 9848                | AG8          | SVBP           |
| IBM Systems Lab Services Post-Sale Services | 9848                | AG8          | SVCS           |
| Other IBM Post-Sale Services                | 9848                | AG8          | SVNN           |
| 4.8 TB NVMe FlashCore Module                | 9848                | UF7          | AHS5           |
| 9.6 TB NVMe FlashCore Module                | 9848                | UF7          | AHS6           |
| 19.2 TB NVMe FlashCore Module               | 9848                | UF7          | AHS7           |
| 38.4 TB NVMe FlashCore Module               | 9848                | UF7          | AHS8           |
| 375 GB NVMe Storage Class Memory Drive      | 9848                | UF7          | AHTA           |
| 750 GB NVMe Storage Class Memory Drive      | 9848                | UF7          | AHTB           |
| 800 GB NVMe Storage Class Memory Drive      | 9848                | UF7          | AHTE           |
| 1.6 TB NVMe Storage Class Memory Drive      | 9848                | UF7          | AHTF           |
| 4.8 TB NVMe FlashCore Module                | 9848                | UF8          | AHS5           |
| 9.6 TB NVMe FlashCore Module                | 9848                | UF8          | AHS6           |
| 19.2 TB NVMe FlashCore Module               | 9848                | UF8          | AHS7           |
| 38.4 TB NVMe FlashCore Module               | 9848                | UF8          | AHS8           |
| 375 GB NVMe Storage Class Memory Drive      | 9848                | UF8          | AHTA           |
| 750 GB NVMe Storage Class Memory Drive      | 9848                | UF8          | AHTB           |
| 800 GB NVMe Storage Class Memory Drive      | 9848                | UF8          | AHTE           |
| 1.6 TB NVMe Storage Class Memory Drive      | 9848                | UF8          | AHTF           |



| <b>Description</b>  | <b>Machine type</b> | <b>Model</b> | <b>Feature</b> |
|---|---------------------|--------------|----------------|
| IBM FlashSystem 9200 Utility Model SFF NVMe Control Enclosure | 9848                | UG8          |                |
| TAA Compliance  | 9848                | UG8          | 0983           |
| Bulk Order Indicator  | 9848                | UG8          | 5555           |
| Power Cord - EMEA   | 9848                | UG8          | 9716           |
| Power Cord - Australia / New Zealand                          | 9848                | UG8          | 9717           |
| Power Cord - Europe / Africa                                  | 9848                | UG8          | 9718           |
| Power Cord - Denmark  | 9848                | UG8          | 9719           |
| Power Cord - South Africa                                     | 9848                | UG8          | 9720           |
| Power Cord - Switzerland                                      | 9848                | UG8          | 9721           |
| Power Cord - Chile / Italy                                    | 9848                | UG8          | 9722           |
| Power Cord - Israel   | 9848                | UG8          | 9723           |
| Power Cord - Argentina  | 9848                | UG8          | 9725           |
| Power Cord - China  | 9848                | UG8          | 9726           |
| Power Cord - PDU Connection                                   | 9848                | UG8          | 9730           |
| Power Cord - Brazil   | 9848                | UG8          | 9733           |
| Power Cord - India  | 9848                | UG8          | 9734           |
| Power Cord - Korea  | 9848                | UG8          | 9736           |
| RFID AG/AP: 902-928 MHz                                       | 9848                | UG8          | A2EV           |
| RFID EMEA: 865.6-867.8 MHz                                    | 9848                | UG8          | A2EW           |
| Encryption Enablement   | 9848                | UG8          | ACE7           |
| Encryption USB Drive Pack                                     | 9848                | UG8          | ACEA           |
| 768 GB Cache upgrade  | 9848                | UG8          | ACGB           |
| 512 GB Cache upgrade  | 9848                | UG8          | ACGJ           |
| 240 GB M.2 Boot drive Pair                                    | 9848                | UG8          | ACGV           |
| 16 Gb FC LW SFP Transceivers(Pair)                            | 9848                | UG8          | ACHU           |
| 32 Gb FC LW SFP Transceivers (Pair)                           | 9848                | UG8          | ACHV           |
| 1m OM3 Fiber Cable (LC)                                       | 9848                | UG8          | ACSQ           |
| 5m OM3 Fiber Cable (LC)                                       | 9848                | UG8          | ACSR           |
| 10m OM3 Fiber Cable (LC)                                      | 9848                | UG8          | ACSS           |
| 25m OM3 Fiber Cable (LC)                                      | 9848                | UG8          | ACST           |
| OEM 1 FC Order Indicator                                      | 9848                | UG8          | ACW1           |

| <b>Description</b>           | <b>Machine type</b> | <b>Model</b> | <b>Feature</b> |
|------------------------------|---------------------|--------------|----------------|
| OEM 2 FC Order Indicator     | 9848                | UG8          | ACW2           |
| OEM 3 FC Order Indicator     | 9848                | UG8          | ACW3           |
| OEM 4 FC Order Indicator     | 9848                | UG8          | ACW4           |
| OEM 5 FC Order Indicator     | 9848                | UG8          | ACW5           |
| OEM 6 FC Order Indicator     | 9848                | UG8          | ACW6           |
| OEM 7 FC Order Indicator     | 9848                | UG8          | ACW7           |
| OEM 8 FC Order Indicator     | 9848                | UG8          | ACW8           |
| OEM 9 FC Order Indicator     | 9848                | UG8          | ACW9           |
| OEM 10 FC Order Indicator    | 9848                | UG8          | ACWA           |
| OEM 11 FC Order Indicator    | 9848                | UG8          | ACWB           |
| OEM 12 FC Order Indicator    | 9848                | UG8          | ACWC           |
| OEM 13 FC Order Indicator    | 9848                | UG8          | ACWD           |
| OEM 14 FC Order Indicator    | 9848                | UG8          | ACWE           |
| OEM 15 FC Order Indicator    | 9848                | UG8          | ACWF           |
| OEM 1 MTM Order Indicator    | 9848                | UG8          | ACY1           |
| OEM 2 MTM Order Indicator    | 9848                | UG8          | ACY2           |
| OEM 3 MTM Order Indicator    | 9848                | UG8          | ACY3           |
| OEM 4 MTM Order Indicator    | 9848                | UG8          | ACY4           |
| OEM 5 MTM Order Indicator    | 9848                | UG8          | ACY5           |
| OEM 6 MTM Order Indicator    | 9848                | UG8          | ACY6           |
| OEM 7 MTM Order Indicator    | 9848                | UG8          | ACY7           |
| OEM 8 MTM Order Indicator    | 9848                | UG8          | ACY8           |
| OEM 9 MTM Order Indicator    | 9848                | UG8          | ACY9           |
| OEM 10 MTM Order Indicator   | 9848                | UG8          | ACYA           |
| OEM 11 MTM Order Indicator   | 9848                | UG8          | ACYB           |
| OEM 12 MTM Order Indicator   | 9848                | UG8          | ACYC           |
| OEM 13 MTM Order Indicator   | 9848                | UG8          | ACYD           |
| OEM 14 MTM Order Indicator   | 9848                | UG8          | ACYE           |
| OEM 15 MTM Order Indicator   | 9848                | UG8          | ACYF           |
| Generic Bezel                | 9848                | UG8          | ACZA           |
| Generic Packaging            | 9848                | UG8          | ACZF           |
| Order Type 1 Indicator - CTO | 9848                | UG8          | ADN1           |

| <b>Description</b>                        | <b>Machine type</b> | <b>Model</b> | <b>Feature</b> |
|---|---------------------|--------------|----------------|
| Order Type 2 Indicator - MTM Only         | 9848                | UG8          | ADN2           |
| Order Type 3 Indicator - FC Only          | 9848                | UG8          | ADN3           |
| No Rules Order Indicator                  | 9848                | UG8          | ADNR           |
| TAA Designated Country                    | 9848                | UG8          | ADZ1           |
| Variable Usage 1TB/month                  | 9848                | UG8          | AE00           |
| Variable Usage 10TB/month                 | 9848                | UG8          | AE01           |
| Variable Usage 100TB/month                | 9848                | UG8          | AE02           |
| Shipping and Handling NC                  | 9848                | UG8          | AG00           |
| Shipping and Handling - Model AF8         | 9848                | UG8          | AGJK           |
| Shipping and Handling                     | 9848                | UG8          | AGJN           |
| 16Gb FC 4 Port Adapter Pair               | 9848                | UG8          | AHB3           |
| 32 Gb FC 4 Port Adapter Cards (Pair)      | 9848                | UG8          | AHB4           |
| 25GbE (RoCE) Adapter Pair                 | 9848                | UG8          | AHB6           |
| 25GbE (iWARP) Adapter Pair                | 9848                | UG8          | AHB7           |
| SAS Expansion Enclosure Attach Card(Pair) | 9848                | UG8          | AHBA           |
| Power Cord - PDU C20                      | 9848                | UG8          | AHP6           |
| 4.8 TB NVMe FlashCore Module              | 9848                | UG8          | AHS5           |
| 9.6 TB NVMe FlashCore Module              | 9848                | UG8          | AHS6           |
| 19.2 TB NVMe FlashCore Module             | 9848                | UG8          | AHS7           |
| 38.4 TB NVMe FlashCore Module             | 9848                | UG8          | AHS8           |
| 800 GB NVMe Flash Drive                   | 9848                | UG8          | AHT1           |
| 1.92 TB NVMe Flash Drive                  | 9848                | UG8          | AHT2           |
| 3.84 TB NVMe Flash Drive                  | 9848                | UG8          | AHT3           |
| 7.68 TB NVMe Flash Drive                  | 9848                | UG8          | AHT4           |
| 15.36 TB NVMe Flash Drive                 | 9848                | UG8          | AHT5           |
| 375 GB NVMe Storage Class Memory Drive    | 9848                | UG8          | AHTA           |
| 750 GB NVMe Storage Class Memory Drive    | 9848                | UG8          | AHTB           |
| 800 GB NVMe Storage Class Memory Drive    | 9848                | UG8          | AHTE           |

| Description                                   | Machine type | Model | Feature |
|---|--------------|-------|---------|
| 1.6 TB NVMe Storage Class Memory Drive        | 9848         | UG8   | AHTF    |
| Future use - reserved 1                       | 9848         | UG8   | AHY1    |
| Future use - reserved 2                       | 9848         | UG8   | AHY2    |
| Future use - reserved 3                       | 9848         | UG8   | AHY3    |
| Future use - reserved 4                       | 9848         | UG8   | AHY4    |
| Future use - reserved 5                       | 9848         | UG8   | AHY5    |
| Future use - reserved 6                       | 9848         | UG8   | AHY6    |
| Future use - reserved 7                       | 9848         | UG8   | AHY7    |
| Future use - reserved 8                       | 9848         | UG8   | AHY8    |
| Future use - reserved 9                       | 9848         | UG8   | AHY9    |
| VersaStack Solution Indicator                 | 9848         | UG8   | AHZC    |
| Enhanced High Availability Solution indicator | 9848         | UG8   | AHZZ    |
| Red Hat OpenShift Indicator                   | 9848         | UG8   | AJGH    |
| No Ship MES                                   | 9848         | UG8   | AQQQ    |
| BP Post-Sale Services                         | 9848         | UG8   | SVBP    |
| IBM Systems Lab Services Post-Sale Services   | 9848         | UG8   | SVCS    |
| Other IBM Post-Sale Services                  | 9848         | UG8   | SVNN    |

---

## Business Partner information

---

If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for this announcement. A PartnerWorld<sup>(R)</sup> ID and password are required (use IBMid).

[BP Attachment for Announcement Letter 120-011](#)

---

## Publications

---

To order additional hardcopy publications for a fee or download free PDF format publications, go to the [IBM Publications Center](#) website.

IBM Knowledge Center provides you with a single point of reference where you can access product documentation for IBM systems hardware, operating systems, and server software. Through a consistent framework, you can efficiently find information and personalize your access by going to [IBM Knowledge Center](#) for all your product information needs.

To access the IBM Publications Center Portal, go to the [IBM Publications Center](#) website.

The Publications Center is a worldwide central repository for IBM product publications and marketing material with a catalog of 70,000 items. Extensive

search facilities are provided. A large number of publications are available online in various file formats, which can currently be downloaded.

---

## Services

---

### **IBM Systems Lab Services**

---

IBM Systems Lab Services offers a wide array of services available for your enterprise. It brings expertise on the latest technologies from the IBM development community and can help with your most difficult technical challenges.

IBM Systems Lab Services exists to help you successfully implement emerging technologies so as to accelerate your return on investment and improve your satisfaction with your IBM systems and solutions. Services examples include initial implementation, integration, migration, and skills transfer on IBM systems solution capabilities and recommended practices. IBM Systems Lab Services is one of the service organizations of IBM's world-renowned IBM Systems Group development labs.

For details on available services, contact your IBM representative or go to the [Lab Services](#) website.

### **Global Technology Services**

---

IBM services include business consulting, outsourcing, hosting services, applications, and other technology management.

These services help you learn about, plan, install, manage, or optimize your IT infrastructure to be an on-demand business. They can help you integrate your high-speed networks, storage systems, application servers, wireless protocols, and an array of platforms, middleware, and communications software for IBM and many non-IBM offerings. IBM is your one-stop shop for IT support needs.

For details on available services, contact your IBM representative or go to the [IBM Global Technology Services<sup>\(R\)</sup>](#) website.

For details on available IBM Business Continuity and Recovery Services, contact your IBM representative or go to the [Resiliency Services](#) website.

Details on education offerings related to specific products can be found on the [IBM authorized training](#) website.

---

## Technical information

---

### **Specified operating environment**

---

#### ***Physical specifications***

- Height: 8.8 cm (3.5 in.)
- Width: 48.3 cm (19.0 in.)
- Depth: 85.0 cm (33.5 in.)
- Approximate weight:
  - Empty: 38.5 kg (84.7 lb)
  - Fully configured: 46.6 kg (102.5 lb)

To assure installability and serviceability in non-IBM industry-standard racks, review the installation planning information for any product-specific installation requirements.

#### ***Standards***

**Note:** This product was designed, tested, manufactured, and certified for safe operation. It complies with IEC 60950-1 and/or IEC 62368-1 and where required, to relevant national differences/deviations (NDs) to these IEC base standards. This includes, but is not limited to: EN (European Norms including all Amendments under the Low Voltage Directive), UL/CSA (North America bi-national harmonized and marked per accredited NRTL agency listings), and other such derivative certifications according to corporate determinations and latest regional publication compliance standardized requirements.

- Regulatory Model ID (RMID, for control system base platform): **FBIII**

(Relevant machine type - models may also be used to supplement identification for worldwide co-compliance filings or registrations with regulatory bodies.)

### ***Operating environment***

#### **Air temperature:**

- Operating: 5°C to 35°C (41°F to 95°F) from 0 to 3048 m (0 to 10,000 ft). Above 900 m, de-rate maximum air temperature 1 degree per 300 m
- Nonoperating: 1°C to 50°C (34°F to 122°F)

#### **Relative humidity:**

- Operating: 8% - 80% noncondensing
- Nonoperating: 8% - 80% noncondensing

#### **Electrical power:**

- Voltage range: 200 - 240 V AC
- Frequency: 50 - 60 Hz
- Power: 2000 W
- Heat dissipation (BTU per hour): 6825
- Acoustical noise emission: 8.1 bels (idling), 8.1 bels (operating)

### ***Homologation***

This product is not certified for direct connection by any means whatsoever to interfaces of public telecommunications networks. Certification may be required by law prior to making any such connection. Contact an IBM representative or reseller for any questions.

### ***Hardware requirements***

Go to the [IBM SSIC](#) website for the latest hardware requirements and compatibility information.

### ***Software requirements***

IBM FlashSystem 9200 models AG8 and UG8 require IBM Spectrum Virtualize for FlashSystem 9150 and 9200 Software V8.3.1 or later, for operation.

FlashSystem 9100 models AF7, AF8, UF7 and UF8 must be at IBM Spectrum Virtualize for FlashSystem 9150 and 9200 Software V8.2.1.6 or V8.3.0.1, or later, to use feature codes AHS5, AHS6 and AHS7, and V8.3.1, or later, to use feature code AHS8.

IBM Spectrum Virtualize for FlashSystem 9200 software is preloaded by IBM on FlashSystem 9200 machines. Use of the software is entitled through the acquisition of IBM Spectrum Virtualize software licenses.

IBM FlashSystem 9200 Model AG8 supports external virtualization. Use of the external virtualization capability is entitled through the acquisition of IBM Spectrum

Virtualize Software for SAN Volume Controller (SW PID 5641-VC8 in AAS and SW PID 5725-M19 in Passport Advantage).

Go to the [IBM SSIC](#) website for the latest hardware requirements and compatibility information.

### Limitations

#### Drive considerations

FlashCore Modules:

- Six drive minimum
- Distributed RAID 6 (recommended), Distributed RAID 5 (supported)
- FlashCore Modules in the same RAID array must be of the same capacity

Storage-class memory drives:

- Two drive minimum with up to four drives of the same type and capacity
- Distributed RAID 5, or TRAIID 1 or 10 with less than 4 drives

Industry-standard NVMe drives:

- Two drive minimum (vaires by RAID type)
- Traditional RAID 10 and Distributed RAID 6 (recommended), Distributed RAID 5 (supported)
- Industry standard NVMe drives in the same RAID array must be of the same capacity

#### Supported memory configurations

| Base memory | ACGJ<br>Plant or Field<br>upgrade | ACJG<br>Plant or Field<br>upgrade | Total memory |
|-------------|-----------------------------------|-----------------------------------|--------------|
| 256 GB      | -                                 | -                                 | 256 GB       |
| 256 GB      | 512 GB                            | -                                 | 768 GB       |
| 256 GB      | 512 GB                            | 768 GB                            | 1536 GB      |

#### Expansion enclosure attachment rules

| Machine type | Model    | Max. quantity of SAS chains per controller or node pair | Max. quantity of expansion enclosures per SAS chain (AFF / A9F) | Max. quantity of drive slots per SAS chain | Max. quantity of drive slots per system | Max. quantity of drive slots per clustered system |
|--------------|----------|---|---|--|---|---|
| 9848         | AG8, UG8 | 2   | 10 / 4  | 368  | 760                                     | 3040  |

#### 2U expansion enclosures and 5U expansion enclosure mix rules:

| Maximum # of drive slots per SAS expansion string |
|---|
| 5U  |

| 2U | 0   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0  | 0   | 24  | 48  | 72  | 96  | 120 | 144 | 168 | 192 | 216 | 240 |
| 1  | 92  | 116 | 140 | 164 | 188 | 212 | 236 | 260 | -   | -   | -   |
| 2  | 184 | 208 | 232 | 256 | 280 | 304 | -   | -   | -   | -   | -   |
| 3  | 276 | 300 | 324 | -   | -   | -   | -   | -   | -   | -   | -   |
| 4  | 368 | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   |

**Encryption:** The Encryption Enablement feature and the Encryption USB Drive Pack feature (feature numbers ACE6, ACE7, and ACEA, respectively) are not available in the following countries:

- Armenia
- Belarus
- Kazakhstan
- Kyrgyzstan
- Russia

Encryption may be subject to limitations and restrictions for supported configurations, environments, and use. See the *V8.3.1 Configuration Limits and Restrictions for IBM FlashSystem 9200* document at the [IBM Systems Support](#) site for details.

**Shipments to India:** FlashSystem 9200 machines shipped prior to the published planned availability date for India are not compliant with India certification and product labeling requirements.

If you did not acquire your machine from IBM as a direct shipment to India, you are responsible for validating the machine has the appropriate certifications and product labels.

Contact your IBM sales representative or Business Partner for assistance with this validation.

### Rack rules

FlashSystem 9200R represents a limited set of possible configurations.

Each FlashSystem 9200R order must contain these components:

- Two, three, or four 9848 Model AG8 control enclosures
- Two Brocade 8960-F24 or two Cisco 8977-T32 FC switches
- Optionally 0 - 4 9848 Model AFF expansion enclosures, with no more than one expansion enclosure per AG8, and no mixing with 9848 A9F
- Optionally 0 - 2 9848 Model A9F expansion enclosures, with no more than one expansion enclosure per AG8, and no mixing with 9848 AFF
- One 7965-S42 rack with appropriate PDUs required to power components within the rack
- All components in the rack must include feature codes FSRS and 4651
- For 9848 AG8, AFF, and A9F, the first, largest capacity enclosure will include feature code AL01, with subsequent enclosures using AL02, AL03, and AL04 in capacity order. The 9848 AG8 with AL01 must also have AL0R included.

Following the initial order, each AG8 can be upgraded through MES.

Additional components can be ordered separately and added to the rack within the configuration limitations of the FlashSystem 9200. Clients will be required to ensure space, power, and cooling requirements are met. If assistance is needed with the installation of these additional components beyond the service provided by IBM SSR install, IBM Lab Services are available.

### Planning information



## **Cable orders**

Cables are required for the following:

- I/O connectivity to servers and fabric components
- Expansion enclosure attachment
- System management

As a convenience, a limited selection of cables can be ordered with FlashSystem 9200 machines. See the [Product number](#) section for feature numbers.

Cables, along with installation services, are also available from IBM Network Integration and Deployment Services, an IBM Global Services offering.

### **I/O connectivity cables**

Cables are required to connect the FlashSystem 9200 I/O ports to server or fabric ports.

**32 Gb FC:** FlashSystem 9200 requires a 50.0/125 micrometer fiber optic cable terminated with an LC Duplex connector. The following can be ordered with FlashSystem 9200 control enclosure models:

- 1-meter OM3 fiber cable (LC)
- 5-meter OM3 fiber cable (LC)
- 10-meter OM3 fiber cable (LC)
- 25-meter OM3 fiber cable (LC)

**25 Gb iSCSI:** FlashSystem 9200 requires 50.0/125 micrometer fiber optic cable terminated with an LC Duplex connector. The following fiber optic cables can be ordered with FlashSystem 9200 control enclosure models:

- 1-meter OM3 fiber cable (LC)
- 5-meter OM3 fiber cable (LC)
- 10-meter OM3 fiber cable (LC)
- 25-meter OM3 fiber cable (LC)

**10 Gb iSCSI (onboard):** FlashSystem 9200 onboard 10 GbE ports require Cat 6A/Class E<sub>A</sub> channel using 6a or 7 twisted pair cables. These cables are not available for ordering with the machine and must be supplied by the client.

### **System management cables**

FlashSystem 9200 requires a Category 5 or Category 5E Ethernet cable terminated with an 8P8C modular connector (RJ45 compatible connector). This cable is not available for ordering with the machine and must be supplied by the client.

### **Security, auditability, and control**

---

This product uses the security and auditability features of the preloaded application software.

The client is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communications facilities.

### **IBM Systems Lab Services**

---

For details on available services, contact your IBM representative or go to the [Lab Services](#) website.

---

## Terms and conditions

---

### Volume orders

---

Contact your IBM representative.

### IBM Global Financing

---

Yes

### Products - terms and conditions

---

#### Warranty period

| Warranty and additional coverage options                               | Coverage summary <sup>1</sup>  |
|--|--|
| Warranty period:   | Machine type <b>9846</b> : One year  |
| Service level:   | IBM On-Site Repair -- 24x7 Same Day  |
| Warranty period:   | Machine type <b>9848</b> : 3 years - (One year + two years Extended Warranty services) |
| Service level:   | IBM On-Site Repair -- 24x7 Same Day  |
| Service upgrade options  |  |
| Warranty service upgrade   | <sup>1</sup>   |
| Maintenance services (post-warranty)                                   | IBM On-Site Repair, Next Business Day and Same Day options                             |
| IBM Hardware Maintenance Services - committed maintenance <sup>2</sup> | Yes  |

<sup>1</sup> See complete coverage details below

<sup>2</sup> Not offered in the US

- Machine type 9846: One year
- Machine type 9848: Three years

Machine type 9846 is provided with one year of standard warranty. Machine type 9848 is provided with one year of standard warranty and two years of extended warranty service. Please consult with your advisors about the appropriate financial treatment for these products.

The FlashSystem 9200R bundled components (the switches, storage controllers, expansion enclosures, and rack) have their own individual warranty and maintenance terms and conditions.

Technical Advisor support will be provided during the warranty period for machine type 9848 only. This support enhances end-to-end support for the client's complex IT solutions. The Technical Advisor uses an integrated approach for proactive, coordinated cross-team support to enable customers to maximize IT availability. Technical Advisor support for FlashSystem 9200 will be delivered remotely and will include a documented support plan, coordinated problem and crisis management, reporting on the client's hardware inventories and software levels, and consultation regarding FlashSystem 9200 software updates. The Technical Advisor will conduct a Welcome Call with the client and provide a statement of work for this support.

An IBM part or feature installed during the initial installation of an IBM machine is subject to a full warranty effective on the date of installation of the machine. An IBM part or feature that replaces a previously installed part or feature assumes the remainder of the warranty period for the replaced part or feature. An IBM part or

feature added to a machine without replacing a previously installed part or feature is subject to a full warranty effective on its date of installation. Unless specified otherwise, the warranty period, type of warranty service, and service level of a part or feature are the same as those for the machine in which it is installed.

To obtain copies of the IBM Statement of Limited Warranty, contact your reseller or IBM. An IBM part or feature installed during the initial installation of an IBM machine is subject to the full warranty period specified by IBM. An IBM part or feature that replaces a previously installed part or feature assumes the remainder of the warranty period for the replaced part or feature. An IBM part or feature added to a machine without replacing a previously installed part or feature is subject to a full warranty. Unless specified otherwise, the warranty period, type of warranty service, and service level of a part or feature are the same as those for the machine in which it is installed.

### ***Extended Warranty Service***

Machine type 9848 is provided with one year of standard warranty. For your convenience, IBM has provided two additional years of extended warranty services to make this offering. Consult with your advisors about the appropriate financial treatment for this offering.

### ***Warranty service***

If required, IBM provides repair or exchange service depending on the types of warranty service specified for the machine. IBM will attempt to resolve your problem over the telephone, or electronically through an IBM website. Certain machines contain remote support capabilities for direct problem reporting, remote problem determination, and resolution with IBM. You must follow the problem determination and resolution procedures that IBM specifies. Following problem determination, if IBM determines on-site service is required, scheduling of service will depend upon the time of your call, machine technology and redundancy, and availability of parts. If applicable to your product, parts considered Client Replaceable Units (CRUs) will be provided as part of the machine's standard warranty service.

Service levels are response-time objectives and are not guaranteed. The specified level of warranty service may not be available in all worldwide locations. Additional charges may apply outside IBM's normal service area. Contact your local IBM representative or your reseller for country-specific and location-specific information.

### ***On-site Service***

At IBM's discretion, you will receive specified CRU service, or IBM will repair the failing machine at your location and verify its operation. You must provide a suitable working area to allow disassembly and reassembly of the IBM machine. The area must be clean, well-lit, and suitable for the purpose.

Service level is:

- IBM On-site Repair 24 hours per day, 7 days a week, same day response.

### ***Warranty service***

IBM is now shipping machines with selected non-IBM parts that contain an IBM field replaceable unit (FRU) part number label. These parts are to be serviced during the IBM machine warranty period. IBM is covering the service on these selected non-IBM parts as an accommodation to their clients, and normal warranty service procedures for the IBM machine apply.

### ***International Warranty Service***

Only Machine type 9846 is eligible for International Warranty Service. International Warranty Service allows you to relocate any machine that is eligible for International Warranty Service and receive continued warranty service in any country where the IBM machine is serviced. If you move your machine to a different country, you

are required to report the machine information to your Business Partner or IBM representative.

The warranty service type and the service level provided in the servicing country may be different from that provided in the country in which the machine was purchased. Warranty service will be provided with the prevailing warranty service type and service level available for the eligible machine type in the servicing country, and the warranty period observed will be that of the country in which the machine was purchased.

The following types of information can be found on the [International Warranty Service](#) website

- Machine warranty entitlement and eligibility
- Directory of contacts by country with technical support contact information
- Announcement Letters

### ***Warranty service upgrades***

During the warranty period, warranty service upgrades provide an enhanced level of On-site Service for an additional charge. Service levels are response-time objectives and are not guaranteed. See the Warranty services section for additional details.

IBM will attempt to resolve your problem over the telephone or electronically by access to an IBM website. Certain machines contain remote support capabilities for direct problem reporting, remote problem determination, and resolution with IBM. You must follow the problem determination and resolution procedures that IBM specifies. Following problem determination, if IBM determines on-site service is required, scheduling of service will depend upon the time of your call, machine technology and redundancy, and availability of parts.

- On-Site Repair, 7 days a week, 24hrs/day, 2 hour response objective. Response times are objectives and are not guaranteed.

### ***Maintenance service options***

IBM FlashSystem 9200 is backed by a seven-year flash wear guarantee through the applicable warranty period plus up to six years of optional post-warranty hardware maintenance. Clients may purchase the post-warranty hardware maintenance either at the time of system purchase or up until IBM announces withdrawal from service. IBM also may offer warranty service upgrades that provide additional services during the warranty period. IBM reserves the right to modify or withdraw this or any other offerings at any time. Other terms, conditions, and exclusions apply. Consult with your advisors about the appropriate financial treatment for this offering. Not available in all countries. Contact your sales representative for more information.

If required, IBM provides repair or exchange service depending on the types of maintenance service specified for the machine. IBM will attempt to resolve your problem over the telephone or electronically, via an IBM website. Certain machines contain remote support capabilities for direct problem reporting, remote problem determination, and resolution with IBM. You must follow the problem determination and resolution procedures that IBM specifies. Following problem determination, if IBM determines on-site service is required, scheduling of service will depend upon the time of your call, machine technology and redundancy, and availability of parts. Service levels are response-time objectives and are not guaranteed. The specified level of maintenance service may not be available in all worldwide locations. Additional charges may apply outside IBM's normal service area. Contact your local IBM representative or your reseller for country-specific and location-specific information. The following service selections are available as maintenance options for your machine type. To help improve problem determination efficiency, it is advised that the SMTP and call home service settings be configured on the IBM FlashSystem 9200.

### ***On-site Service***

IBM will repair the failing machine at your location and verify its operation. You must provide a suitable working area to allow disassembly and reassembly of the IBM machine. The area must be clean, well-lit, and suitable for the purpose.

Service levels are:

- On-Site Repair, Monday through Friday (excluding holidays), 8am to 5pm, next business day.
- On-Site Repair, Monday through Friday (excluding holidays), 8am to 5pm, 4 hour response objective. Response times are objectives and are not guaranteed.
- On-Site Repair, 7 days a week, 24hrs/day.
- On-Site Repair, 7 days a week, 24hrs/day, 2 hour response objective. Response times are objectives and are not guaranteed.

### ***Non-IBM parts service***

Under certain conditions, IBM provides services for selected non-IBM parts at no additional charge for machines that are covered under warranty service upgrades or maintenance services.

This service includes hardware problem determination (PD) on the non-IBM parts (for example, adapter cards, PCMCIA cards, disk drives, memory) installed within IBM machines and provides the labor to replace the failing parts at no additional charge.

If IBM has a Technical Service Agreement with the manufacturer of the failing part, or if the failing part is an accommodations part (a part with an IBM FRU label), IBM may also source and replace the failing part at no additional charge. For all other non-IBM parts, customers are responsible for sourcing the parts. Installation labor is provided at no additional charge, if the machine is covered under a warranty service upgrade or a maintenance service.

### ***Enterprise class support***

Enterprise Class Support is included as part of IBM's warranty service with IBM FlashSystem 9200 products under machine type 9848.

IBM FlashSystem 9200 machine type 9848 includes:

- IBM FlashSystem 9200 Control Enclosure 9848-AG8
- IBM FlashSystem 9200 Control Enclosure 9848-UG8
- IBM FlashSystem 9000 Expansion Enclosure 9848-AFF
- IBM FlashSystem 9000 Expansion Enclosure 9848-A9F

ECS also provides services for these software products:

- IBM Spectrum Virtualize Software for FlashSystem 9150 and 9200 Controller V8 Software, PID 5639-FA3

Other hardware or software that is used with an IBM FlashSystem 9200 product is not covered under ECS. This includes the other machine-type models within the rack based 9200R product, which are covered under their own warranty and maintenance terms and conditions.

ECS delivers these types of services for covered hardware and software:

- Technical Advisors to proactively improve problem management and communication
- IBM Service Support Representatives (SSR) to perform:
  - Onsite product setup and installation (including software)
  - Configuration support
  - Installation of up to six (6) software updates (remote, or onsite if necessary) during the warranty period

- Enhanced response times for Severity 1 problems (response objective: within 30 minutes)

See "Types of Warranty Service" and "Service Levels" in the IBM Statement of Limited Warranty for explanations of warranty service types and service levels. Where applicable, IBM strongly recommends that customers configure their systems to report system errors back to IBM, including regular interval reporting checks and automated alerts to the IBM support team to facilitate problem awareness and the fastest possible response time. In addition, IBM strongly recommends that all customers apply code level updates in a timely fashion to remain current. This reduces exposure to unscheduled outages and reduces unnecessary repair actions, thus enhancing overall availability of the product.

You can obtain a copy of the IBM Statement of Limited Warranty for this product from the [IBM Support](#) website. The Statement of Limited Warranty is available on this site in 18 languages.

### ***Usage plan machine***

No

### ***IBM hourly service rate classification***

Two

When a type of service involves the exchange of a machine part, the replacement may not be new, but will be in good working order.

## **General terms and conditions**

---

### ***Field-installable features***

Yes

### ***Model conversions***

No

### ***Machine installation***

Installation is performed by IBM. IBM will install the machine in accordance with the IBM installation procedures for the machine. In the United States, contact IBM at 1-800-IBM-SERV (426-7378). In other countries, contact the local IBM office.

### ***Graduated program license charges apply***

No

### ***Licensed Internal Code and Licensed Machine Code***

This product does not contain Licensed Internal Code or Licensed Machine Code.

### ***Educational allowance***

A reduced charge is available to qualified education clients. The educational allowance may not be added to any other discount or allowance.

The educational allowance is 15% for the products in this announcement.

---

## **Prices**

---

For additional information and current prices, contact your local IBM representative or IBM Business Partner.

The following are newly announced features and model on the specified model of the IBM System Storage 9846 machine type:

| <b>Description</b>                     | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|--|---------------------|------------------------|---------------------------------------|------------|---------------|
| FlashSystem 9200 Control               | AG8                 |                        | Both                                  | No         |               |
| 4.8 TB NVMe FlashCore Module           | AF7                 | AHS5                   | Both                                  | No         | No            |
| 9.6 TB NVMe FlashCore Module           | AF7                 | AHS6                   | Both                                  | No         | No            |
| 19.2 TB NVMe FlashCore Module          | AF7                 | AHS7                   | Both                                  | No         | No            |
| 38.4 TB NVMe FlashCore Module          | AF7                 | AHS8                   | Both                                  | No         | No            |
| 375 GB NVMe Storage Class Memory Drive | AF7                 | AHTA                   | Both                                  | No         | No            |
| 750 GB NVMe Storage Class Memory Drive | AF7                 | AHTB                   | Both                                  | No         | No            |
| 800 GB NVMe Storage Class Memory Drive | AF7                 | AHTE                   | Both                                  | No         | No            |
| 1.6 TB NVMe Storage Class Memory Drive | AF7                 | AHTF                   | Both                                  | No         | No            |
| 4.8 TB NVMe FlashCore Module           | AF8                 | AHS5                   | Both                                  | No         | No            |
| 9.6 TB NVMe FlashCore Module           | AF8                 | AHS6                   | Both                                  | No         | No            |
| 19.2 TB NVMe FlashCore Module          | AF8                 | AHS7                   | Both                                  | No         | No            |
| 38.4 TB NVMe FlashCore Module          | AF8                 | AHS8                   | Both                                  | No         | No            |
| 375 GB NVMe Storage                    | AF8                 | AHTA                   | Both                                  | No         | No            |

| <b>Description</b>                     | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|--|---------------------|------------------------|---------------------------------------|------------|---------------|
| Class Memory Drive                     |                     |                        |                                       |            |               |
| 750 GB NVMe Storage Class Memory Drive | AF8                 | AHTB                   | Both                                  | No         | No            |
| 800 GB NVMe Storage Class Memory Drive | AF8                 | AHTE                   | Both                                  | No         | No            |
| 1.6 TB NVMe Storage Class Memory Drive | AF8                 | AHTF                   | Both                                  | No         | No            |
| JEMT Indicator                         | AG8                 | 0021                   | Initial                               | No         | No            |
| TAA Compliance                         | AG8                 | 0983                   | Initial                               | No         | No            |
| Bulk Order Indicator                   | AG8                 | 5555                   | MES                                   | No         | No            |
| Power Cord - EMEA                      | AG8                 | 9716                   | Both                                  | No         | No            |
| Power Cord - Australia / New Zealand   | AG8                 | 9717                   | Both                                  | No         | No            |
| Power Cord - Europe / Africa           | AG8                 | 9718                   | Both                                  | No         | No            |
| Power Cord - Denmark                   | AG8                 | 9719                   | Both                                  | No         | No            |
| Power Cord - South Africa              | AG8                 | 9720                   | Both                                  | No         | No            |
| Power Cord - Switzerland               | AG8                 | 9721                   | Both                                  | No         | No            |
| Power Cord - Chile / Italy             | AG8                 | 9722                   | Both                                  | No         | No            |
| Power Cord - Israel                    | AG8                 | 9723                   | Both                                  | No         | No            |
| Power Cord - Argentina                 | AG8                 | 9725                   | Both                                  | No         | No            |
| Power Cord - China                     | AG8                 | 9726                   | Both                                  | No         | No            |
| Power Cord                             | AG8                 | 9730                   | Both                                  | No         | No            |



| <b>Description</b>                  | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|-------------------------------------|---------------------|------------------------|---------------------------------------|------------|---------------|
| - PDU Connection                    |                     |                        |                                       |            |               |
| Power Cord - Brazil                 | AG8                 | 9733                   | Both                                  | No         | No            |
| Power Cord - India                  | AG8                 | 9734                   | Both                                  | No         | No            |
| Power Cord - Korea                  | AG8                 | 9736                   | Both                                  | No         | No            |
| RFID AG/AP: 902-928 MHz             | AG8                 | A2EV                   | Initial                               | No         | No            |
| RFID EMEA: 865.6-867.8 MHz          | AG8                 | A2EW                   | Initial                               | No         | No            |
| Encryption Enablement               | AG8                 | ACE6                   | Both                                  | Yes        | No            |
| Encryption USB Drive Pack           | AG8                 | ACEA                   | Both                                  | Yes        | No            |
| 768 GB Cache upgrade                | AG8                 | ACGB                   | Both                                  | No         | No            |
| 512 GB Cache upgrade                | AG8                 | ACGJ                   | Both                                  | No         | No            |
| 240 GB M.2 Boot drive Pair          | AG8                 | ACGV                   | Initial                               | No         | No            |
| 16 Gb FC LW SFP Transceivers(Pair)  | AG8                 | ACHU                   | Both                                  | No         | No            |
| 32 Gb FC LW SFP Transceivers (Pair) | AG8                 | ACHV                   | Both                                  | No         | No            |
| 1m OM3 Fiber Cable (LC)             | AG8                 | ACSQ                   | Both                                  | Yes        | No            |
| 5m OM3 Fiber Cable (LC)             | AG8                 | ACSR                   | Both                                  | Yes        | No            |
| 10m OM3 Fiber Cable (LC)            | AG8                 | ACSS                   | Both                                  | Yes        | No            |
| 25m OM3 Fiber Cable (LC)            | AG8                 | ACST                   | Both                                  | Yes        | No            |
| OEM 1 FC Order Indicator            | AG8                 | ACW1                   | MES                                   | No         | No            |
| OEM 2 FC Order Indicator            | AG8                 | ACW2                   | MES                                   | No         | No            |
| OEM 3 FC Order Indicator            | AG8                 | ACW3                   | MES                                   | No         | No            |

| <b>Description</b>           | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|------------------------------|---------------------|------------------------|---------------------------------------|------------|---------------|
| OEM 4<br>FC Order Indicator  | AG8                 | ACW4                   | MES                                   | No         | No            |
| OEM 5<br>FC Order Indicator  | AG8                 | ACW5                   | MES                                   | No         | No            |
| OEM 6<br>FC Order Indicator  | AG8                 | ACW6                   | MES                                   | No         | No            |
| OEM 7<br>FC Order Indicator  | AG8                 | ACW7                   | MES                                   | No         | No            |
| OEM 8<br>FC Order Indicator  | AG8                 | ACW8                   | MES                                   | No         | No            |
| OEM 9<br>FC Order Indicator  | AG8                 | ACW9                   | MES                                   | No         | No            |
| OEM 10<br>FC Order Indicator | AG8                 | ACWA                   | MES                                   | No         | No            |
| OEM 11<br>FC Order Indicator | AG8                 | ACWB                   | MES                                   | No         | No            |
| OEM 12<br>FC Order Indicator | AG8                 | ACWC                   | MES                                   | No         | No            |
| OEM 13<br>FC Order Indicator | AG8                 | ACWD                   | MES                                   | No         | No            |
| OEM 14<br>FC Order Indicator | AG8                 | ACWE                   | MES                                   | No         | No            |
| OEM 15<br>FC Order Indicator | AG8                 | ACWF                   | MES                                   | No         | No            |
| OEM 1<br>MTM Order Indicator | AG8                 | ACY1                   | Initial                               | No         | No            |
| OEM 2<br>MTM Order Indicator | AG8                 | ACY2                   | Initial                               | No         | No            |
| OEM 3<br>MTM Order Indicator | AG8                 | ACY3                   | Initial                               | No         | No            |
| OEM 4<br>MTM Order Indicator | AG8                 | ACY4                   | Initial                               | No         | No            |
| OEM 5<br>MTM Order Indicator | AG8                 | ACY5                   | Initial                               | No         | No            |
| OEM 6<br>MTM Order Indicator | AG8                 | ACY6                   | Initial                               | No         | No            |
| OEM 7<br>MTM Order Indicator | AG8                 | ACY7                   | Initial                               | No         | No            |
| OEM 8<br>MTM Order Indicator | AG8                 | ACY8                   | Initial                               | No         | No            |
| OEM 9<br>MTM Order Indicator | AG8                 | ACY9                   | Initial                               | No         | No            |

| <b>Description</b>                   | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|--------------------------------------|---------------------|------------------------|---------------------------------------|------------|---------------|
| OEM 10 MTM Order Indicator           | AG8                 | ACYA                   | Initial                               | No         | No            |
| OEM 11 MTM Order Indicator           | AG8                 | ACYB                   | Initial                               | No         | No            |
| OEM 12 MTM Order Indicator           | AG8                 | ACYC                   | Initial                               | No         | No            |
| OEM 13 MTM Order Indicator           | AG8                 | ACYD                   | Initial                               | No         | No            |
| OEM 14 MTM Order Indicator           | AG8                 | ACYE                   | Initial                               | No         | No            |
| OEM 15 MTM Order Indicator           | AG8                 | ACYF                   | Initial                               | No         | No            |
| Generic Bezel                        | AG8                 | ACZA                   | Initial                               | No         | No            |
| Generic Packaging                    | AG8                 | ACZF                   | Initial                               | No         | No            |
| Order Type 1 Indicator - CTO         | AG8                 | ADN1                   | Initial                               | No         | No            |
| Order Type 2 Indicator - MTM Only    | AG8                 | ADN2                   | Initial                               | No         | No            |
| Order Type 3 Indicator - FC Only     | AG8                 | ADN3                   | MES                                   | No         | No            |
| No Rules Order Indicator             | AG8                 | ADNR                   | Both                                  | No         | No            |
| TAA Designated Country               | AG8                 | ADZ1                   | Initial                               | No         | No            |
| Shipping and Handling NC             | AG8                 | AG00                   | Initial                               | No         | No            |
| Shipping and Handling - Model AF8    | AG8                 | AGJK                   | Initial                               | No         | No            |
| Shipping and Handling                | AG8                 | AGJN                   | Initial                               | No         | No            |
| 16Gb FC 4 Port Adapter Pair          | AG8                 | AHB3                   | Both                                  | No         | No            |
| 32 Gb FC 4 Port Adapter Cards (Pair) | AG8                 | AHB4                   | Both                                  | No         | No            |
| 25GbE (RoCE) Adapter Pair            | AG8                 | AHB6                   | Both                                  | No         | No            |

| <b>Description</b>                        | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|---|---------------------|------------------------|---------------------------------------|------------|---------------|
| 25GbE (iWARP) Adapter Pair                | AG8                 | AHB7                   | Both                                  | No         | No            |
| SAS Expansion Enclosure Attach Card(Pair) | AG8                 | AHBA                   | Both                                  | No         | No            |
| Power Cord - PDU C20                      | AG8                 | AHP6                   | Both                                  | No         | No            |
| 4.8 TB NVMe FlashCore Module              | AG8                 | AHS5                   | Both                                  | No         | No            |
| 9.6 TB NVMe FlashCore Module              | AG8                 | AHS6                   | Both                                  | No         | No            |
| 19.2 TB NVMe FlashCore Module             | AG8                 | AHS7                   | Both                                  | No         | No            |
| 38.4 TB NVMe FlashCore Module             | AG8                 | AHS8                   | Both                                  | No         | No            |
| 800 GB NVMe Flash Drive                   | AG8                 | AHT1                   | Both                                  | No         | No            |
| 1.92 TB NVMe Flash Drive                  | AG8                 | AHT2                   | Both                                  | No         | No            |
| 3.84 TB NVMe Flash Drive                  | AG8                 | AHT3                   | Both                                  | No         | No            |
| 7.68 TB NVMe Flash Drive                  | AG8                 | AHT4                   | Both                                  | No         | No            |
| 15.36 TB NVMe Flash Drive                 | AG8                 | AHT5                   | Both                                  | No         | No            |
| 375 GB NVMe Storage Class Memory Drive    | AG8                 | AHTA                   | Both                                  | No         | No            |
| 750 GB NVMe Storage Class Memory Drive    | AG8                 | AHTB                   | Both                                  | No         | No            |
| 800 GB NVMe Storage Class Memory Drive    | AG8                 | AHTE                   | Both                                  | No         | No            |
| 1.6 TB NVMe Storage                       | AG8                 | AHTF                   | Both                                  | No         | No            |

| <b>Description</b>                            | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|---|---------------------|------------------------|---------------------------------------|------------|---------------|
| Class Memory Drive                            |                     |                        |                                       |            |               |
| Future use - reserved 1                       | AG8                 | AHY1                   | Initial                               | No         | No            |
| Future use - reserved 2                       | AG8                 | AHY2                   | Initial                               | No         | No            |
| Future use - reserved 3                       | AG8                 | AHY3                   | Initial                               | No         | No            |
| Future use - reserved 4                       | AG8                 | AHY4                   | Initial                               | No         | No            |
| Future use - reserved 5                       | AG8                 | AHY5                   | Initial                               | No         | No            |
| Future use - reserved 6                       | AG8                 | AHY6                   | Initial                               | No         | No            |
| Future use - reserved 7                       | AG8                 | AHY7                   | Initial                               | No         | No            |
| Future use - reserved 8                       | AG8                 | AHY8                   | Initial                               | No         | No            |
| Future use - reserved 9                       | AG8                 | AHY9                   | Initial                               | No         | No            |
| VersaStack Solution Indicator                 | AG8                 | AHZC                   | Initial                               | No         | No            |
| Enhanced High Availability Solution indicator | AG8                 | AHZZ                   | Initial                               | No         | No            |
| Red Hat OpenShift Indicator                   | AG8                 | AJGH                   | Initial                               | No         | No            |
| BP Post-Sale Services                         | AG8                 | SVBP                   | Both                                  | Yes        | No            |
| IBM Systems Lab Services Post-Sale Services   | AG8                 | SVCS                   | Both                                  | Yes        | No            |
| Other IBM Post-Sale Services                  | AG8                 | SVNN                   | Both                                  | Yes        | No            |

The following are newly announced features and models on the specified models of the IBM System Storage 9848 machine type:

| <b>Description</b> | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|--------------------|---------------------|------------------------|---------------------------------------|------------|---------------|
| FlashSystem 9200   | UG8                 |                        | Both                                  | No         |               |

| <b>Description</b>                     | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|--|---------------------|------------------------|---------------------------------------|------------|---------------|
| Control Utility                        |                     |                        |                                       |            |               |
| FlashSystem 9200 Control               | AG8                 |                        | Both                                  | No         |               |
| Rack Indicator Rack 1                  | A9F                 | 4651                   | Initial                               | No         | No            |
| Rack component mounted in position 1   | A9F                 | AL01                   | Initial                               | No         | No            |
| Rack component mounted in position 2   | A9F                 | AL02                   | Initial                               | No         | No            |
| FlashSystem Rack Product Indicator     | A9F                 | FSRS                   | Initial                               | No         | No            |
| 4.8 TB NVMe FlashCore Module           | AF7                 | AHS5                   | Both                                  | No         | No            |
| 9.6 TB NVMe FlashCore Module           | AF7                 | AHS6                   | Both                                  | No         | No            |
| 19.2 TB NVMe FlashCore Module          | AF7                 | AHS7                   | Both                                  | No         | No            |
| 38.4 TB NVMe FlashCore Module          | AF7                 | AHS8                   | Both                                  | No         | No            |
| 375 GB NVMe Storage Class Memory Drive | AF7                 | AHTA                   | Both                                  | No         | No            |
| 750 GB NVMe Storage Class Memory Drive | AF7                 | AHTB                   | Both                                  | No         | No            |
| 800 GB NVMe Storage Class Memory Drive | AF7                 | AHTE                   | Both                                  | No         | No            |
| 1.6 TB NVMe Storage Class Memory Drive | AF7                 | AHTF                   | Both                                  | No         | No            |
| 4.8 TB NVMe                            | AF8                 | AHS5                   | Both                                  | No         | No            |

| <b>Description</b>                     | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|--|---------------------|------------------------|---------------------------------------|------------|---------------|
| FlashCore Module                       |                     |                        |                                       |            |               |
| 9.6 TB NVMe FlashCore Module           | AF8                 | AHS6                   | Both                                  | No         | No            |
| 19.2 TB NVMe FlashCore Module          | AF8                 | AHS7                   | Both                                  | No         | No            |
| 38.4 TB NVMe FlashCore Module          | AF8                 | AHS8                   | Both                                  | No         | No            |
| 375 GB NVMe Storage Class Memory Drive | AF8                 | AHTA                   | Both                                  | No         | No            |
| 750 GB NVMe Storage Class Memory Drive | AF8                 | AHTB                   | Both                                  | No         | No            |
| 800 GB NVMe Storage Class Memory Drive | AF8                 | AHTE                   | Both                                  | No         | No            |
| 1.6 TB NVMe Storage Class Memory Drive | AF8                 | AHTF                   | Both                                  | No         | No            |
| Rack Indicator Rack 1                  | AFF                 | 4651                   | Initial                               | No         | No            |
| Rack component mounted in position 1   | AFF                 | AL01                   | Initial                               | No         | No            |
| Rack component mounted in position 2   | AFF                 | AL02                   | Initial                               | No         | No            |
| Rack component mounted in position 3   | AFF                 | AL03                   | Initial                               | No         | No            |
| Rack component mounted in position 4   | AFF                 | AL04                   | Initial                               | No         | No            |
| FlashSystem Rack Product Indicator     | AFF                 | FSRS                   | Initial                               | No         | No            |

| <b>Description</b>                   | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|--------------------------------------|---------------------|------------------------|---------------------------------------|------------|---------------|
| JEMT Indicator                       | AG8                 | 0021                   | Initial                               | No         | No            |
| TAA Compliance                       | AG8                 | 0983                   | Initial                               | No         | No            |
| Rack Indicator Rack 1                | AG8                 | 4651                   | Initial                               | No         | No            |
| Bulk Order Indicator                 | AG8                 | 5555                   | MES                                   | No         | No            |
| Power Cord - EMEA                    | AG8                 | 9716                   | Both                                  | No         | No            |
| Power Cord - Australia / New Zealand | AG8                 | 9717                   | Both                                  | No         | No            |
| Power Cord - Europe / Africa         | AG8                 | 9718                   | Both                                  | No         | No            |
| Power Cord - Denmark                 | AG8                 | 9719                   | Both                                  | No         | No            |
| Power Cord - South Africa            | AG8                 | 9720                   | Both                                  | No         | No            |
| Power Cord - Switzerland             | AG8                 | 9721                   | Both                                  | No         | No            |
| Power Cord - Chile / Italy           | AG8                 | 9722                   | Both                                  | No         | No            |
| Power Cord - Israel                  | AG8                 | 9723                   | Both                                  | No         | No            |
| Power Cord - Argentina               | AG8                 | 9725                   | Both                                  | No         | No            |
| Power Cord - China                   | AG8                 | 9726                   | Both                                  | No         | No            |
| Power Cord - PDU Connection          | AG8                 | 9730                   | Both                                  | No         | No            |
| Power Cord - Brazil                  | AG8                 | 9733                   | Both                                  | No         | No            |
| Power Cord - India                   | AG8                 | 9734                   | Both                                  | No         | No            |
| Power Cord - Korea                   | AG8                 | 9736                   | Both                                  | No         | No            |
| RFID AG/AP: 902-928 MHz              | AG8                 | A2EV                   | Initial                               | No         | No            |
| RFID EMEA:                           | AG8                 | A2EW                   | Initial                               | No         | No            |



| <b>Description</b>                  | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|-------------------------------------|---------------------|------------------------|---------------------------------------|------------|---------------|
| 865.6-867.8 MHz                     |                     |                        |                                       |            |               |
| Encryption Enablement               | AG8                 | ACE7                   | Both                                  | Yes        | No            |
| Encryption USB Drive Pack           | AG8                 | ACEA                   | Both                                  | Yes        | No            |
| 768 GB Cache upgrade                | AG8                 | ACGB                   | Both                                  | No         | No            |
| 512 GB Cache upgrade                | AG8                 | ACGJ                   | Both                                  | No         | No            |
| 240 GB M.2 Boot drive Pair          | AG8                 | ACGV                   | Initial                               | No         | No            |
| 16 Gb FC LW SFP Transceivers(Pair)  | AG8                 | ACHU                   | Both                                  | No         | No            |
| 32 Gb FC LW SFP Transceivers (Pair) | AG8                 | ACHV                   | Both                                  | No         | No            |
| 1m OM3 Fiber Cable (LC)             | AG8                 | ACSQ                   | Both                                  | Yes        | No            |
| 5m OM3 Fiber Cable (LC)             | AG8                 | ACSR                   | Both                                  | Yes        | No            |
| 10m OM3 Fiber Cable (LC)            | AG8                 | ACSS                   | Both                                  | Yes        | No            |
| 25m OM3 Fiber Cable (LC)            | AG8                 | ACST                   | Both                                  | Yes        | No            |
| OEM 1 FC Order Indicator            | AG8                 | ACW1                   | MES                                   | No         | No            |
| OEM 2 FC Order Indicator            | AG8                 | ACW2                   | MES                                   | No         | No            |
| OEM 3 FC Order Indicator            | AG8                 | ACW3                   | MES                                   | No         | No            |
| OEM 4 FC Order Indicator            | AG8                 | ACW4                   | MES                                   | No         | No            |
| OEM 5 FC Order Indicator            | AG8                 | ACW5                   | MES                                   | No         | No            |
| OEM 6 FC Order Indicator            | AG8                 | ACW6                   | MES                                   | No         | No            |
| OEM 7 FC Order Indicator            | AG8                 | ACW7                   | MES                                   | No         | No            |
| OEM 8 FC Order Indicator            | AG8                 | ACW8                   | MES                                   | No         | No            |
| OEM 9 FC Order Indicator            | AG8                 | ACW9                   | MES                                   | No         | No            |

| <b>Description</b>            | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|-------------------------------|---------------------|------------------------|---------------------------------------|------------|---------------|
| OEM 10<br>FC Order Indicator  | AG8                 | ACWA                   | MES                                   | No         | No            |
| OEM 11<br>FC Order Indicator  | AG8                 | ACWB                   | MES                                   | No         | No            |
| OEM 12<br>FC Order Indicator  | AG8                 | ACWC                   | MES                                   | No         | No            |
| OEM 13<br>FC Order Indicator  | AG8                 | ACWD                   | MES                                   | No         | No            |
| OEM 14<br>FC Order Indicator  | AG8                 | ACWE                   | MES                                   | No         | No            |
| OEM 15<br>FC Order Indicator  | AG8                 | ACWF                   | MES                                   | No         | No            |
| OEM 1<br>MTM Order Indicator  | AG8                 | ACY1                   | Initial                               | No         | No            |
| OEM 2<br>MTM Order Indicator  | AG8                 | ACY2                   | Initial                               | No         | No            |
| OEM 3<br>MTM Order Indicator  | AG8                 | ACY3                   | Initial                               | No         | No            |
| OEM 4<br>MTM Order Indicator  | AG8                 | ACY4                   | Initial                               | No         | No            |
| OEM 5<br>MTM Order Indicator  | AG8                 | ACY5                   | Initial                               | No         | No            |
| OEM 6<br>MTM Order Indicator  | AG8                 | ACY6                   | Initial                               | No         | No            |
| OEM 7<br>MTM Order Indicator  | AG8                 | ACY7                   | Initial                               | No         | No            |
| OEM 8<br>MTM Order Indicator  | AG8                 | ACY8                   | Initial                               | No         | No            |
| OEM 9<br>MTM Order Indicator  | AG8                 | ACY9                   | Initial                               | No         | No            |
| OEM 10<br>MTM Order Indicator | AG8                 | ACYA                   | Initial                               | No         | No            |
| OEM 11<br>MTM Order Indicator | AG8                 | ACYB                   | Initial                               | No         | No            |
| OEM 12<br>MTM Order Indicator | AG8                 | ACYC                   | Initial                               | No         | No            |
| OEM 13<br>MTM Order Indicator | AG8                 | ACYD                   | Initial                               | No         | No            |
| OEM 14<br>MTM Order Indicator | AG8                 | ACYE                   | Initial                               | No         | No            |
| OEM 15<br>MTM Order Indicator | AG8                 | ACYF                   | Initial                               | No         | No            |

| <b>Description</b>                        | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|---|---------------------|------------------------|---------------------------------------|------------|---------------|
| Generic Bezel                             | AG8                 | ACZA                   | Initial                               | No         | No            |
| Generic Packaging                         | AG8                 | ACZF                   | Initial                               | No         | No            |
| FlashSystem V9000 Brand Indicator 2U      | AG8                 | ACZG                   | Initial                               | Yes        | No            |
| Order Type 1 Indicator - CTO              | AG8                 | ADN1                   | Initial                               | No         | No            |
| Order Type 2 Indicator - MTM Only         | AG8                 | ADN2                   | Initial                               | No         | No            |
| Order Type 3 Indicator - FC Only          | AG8                 | ADN3                   | MES                                   | No         | No            |
| No Rules Order Indicator                  | AG8                 | ADNR                   | Both                                  | No         | No            |
| TAA Designated Country                    | AG8                 | ADZ1                   | Initial                               | No         | No            |
| Shipping and Handling NC                  | AG8                 | AG00                   | Initial                               | No         | No            |
| Shipping and Handling - Model AF8         | AG8                 | AGJK                   | Initial                               | No         | No            |
| Shipping and Handling                     | AG8                 | AGJN                   | Initial                               | No         | No            |
| 16Gb FC 4 Port Adapter Pair               | AG8                 | AHB3                   | Both                                  | No         | No            |
| 32 Gb FC 4 Port Adapter Cards (Pair)      | AG8                 | AHB4                   | Both                                  | No         | No            |
| 25GbE (RoCE) Adapter Pair                 | AG8                 | AHB6                   | Both                                  | No         | No            |
| 25GbE (iWARP) Adapter Pair                | AG8                 | AHB7                   | Both                                  | No         | No            |
| SAS Expansion Enclosure Attach Card(Pair) | AG8                 | AHBA                   | Both                                  | No         | No            |
| Power Cord - PDU C20                      | AG8                 | AHP6                   | Both                                  | No         | No            |
| 4.8 TB NVMe                               | AG8                 | AHS5                   | Both                                  | No         | No            |

| <b>Description</b>                     | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|--|---------------------|------------------------|---------------------------------------|------------|---------------|
| FlashCore Module                       |                     |                        |                                       |            |               |
| 9.6 TB NVMe FlashCore Module           | AG8                 | AHS6                   | Both                                  | No         | No            |
| 19.2 TB NVMe FlashCore Module          | AG8                 | AHS7                   | Both                                  | No         | No            |
| 38.4 TB NVMe FlashCore Module          | AG8                 | AHS8                   | Both                                  | No         | No            |
| 800 GB NVMe Flash Drive                | AG8                 | AHT1                   | Both                                  | No         | No            |
| 1.92 TB NVMe Flash Drive               | AG8                 | AHT2                   | Both                                  | No         | No            |
| 3.84 TB NVMe Flash Drive               | AG8                 | AHT3                   | Both                                  | No         | No            |
| 7.68 TB NVMe Flash Drive               | AG8                 | AHT4                   | Both                                  | No         | No            |
| 15.36 TB NVMe Flash Drive              | AG8                 | AHT5                   | Both                                  | No         | No            |
| 375 GB NVMe Storage Class Memory Drive | AG8                 | AHTA                   | Both                                  | No         | No            |
| 750 GB NVMe Storage Class Memory Drive | AG8                 | AHTB                   | Both                                  | No         | No            |
| 800 GB NVMe Storage Class Memory Drive | AG8                 | AHTE                   | Both                                  | No         | No            |
| 1.6 TB NVMe Storage Class Memory Drive | AG8                 | AHTF                   | Both                                  | No         | No            |
| Future use - reserved 1                | AG8                 | AHY1                   | Initial                               | No         | No            |
| Future use - reserved 2                | AG8                 | AHY2                   | Initial                               | No         | No            |
| Future use - reserved 3                | AG8                 | AHY3                   | Initial                               | No         | No            |

| <b>Description</b>                            | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|---|---------------------|------------------------|---------------------------------------|------------|---------------|
| Future use - reserved 4                       | AG8                 | AHY4                   | Initial                               | No         | No            |
| Future use - reserved 5                       | AG8                 | AHY5                   | Initial                               | No         | No            |
| Future use - reserved 6                       | AG8                 | AHY6                   | Initial                               | No         | No            |
| Future use - reserved 7                       | AG8                 | AHY7                   | Initial                               | No         | No            |
| Future use - reserved 8                       | AG8                 | AHY8                   | Initial                               | No         | No            |
| Future use - reserved 9                       | AG8                 | AHY9                   | Initial                               | No         | No            |
| VersaStack Solution Indicator                 | AG8                 | AHZC                   | Initial                               | No         | No            |
| Enhanced High Availability Solution indicator | AG8                 | AHZZ                   | Initial                               | No         | No            |
| Red Hat OpenShift Indicator                   | AG8                 | AJGH                   | Initial                               | No         | No            |
| Rack component mounted in position 1          | AG8                 | AL01                   | Initial                               | No         | No            |
| Rack component mounted in position 2          | AG8                 | AL02                   | Initial                               | No         | No            |
| Rack component mounted in position 3          | AG8                 | AL03                   | Initial                               | No         | No            |
| Rack component mounted in position 4          | AG8                 | AL04                   | Initial                               | No         | No            |
| FlashSystem 9200R Integration                 | AG8                 | AL0R                   | Initial                               | No         | No            |
| FlashSystem Rack Product Indicator            | AG8                 | FSRS                   | Initial                               | No         | No            |
| BP Post-Sale Services                         | AG8                 | SVBP                   | Both                                  | Yes        | No            |
| IBM Systems Lab Services                      | AG8                 | SVCS                   | Both                                  | Yes        | No            |

| <b>Description</b>                     | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|--|---------------------|------------------------|---------------------------------------|------------|---------------|
| Post-Sale Services                     |                     |                        |                                       |            |               |
| Other IBM Post-Sale Services           | AG8                 | SVNN                   | Both                                  | Yes        | No            |
| 4.8 TB NVMe FlashCore Module           | UF7                 | AHS5                   | Both                                  | No         | No            |
| 9.6 TB NVMe FlashCore Module           | UF7                 | AHS6                   | Both                                  | No         | No            |
| 19.2 TB NVMe FlashCore Module          | UF7                 | AHS7                   | Both                                  | No         | No            |
| 38.4 TB NVMe FlashCore Module          | UF7                 | AHS8                   | Both                                  | No         | No            |
| 375 GB NVMe Storage Class Memory Drive | UF7                 | AHTA                   | Both                                  | No         | No            |
| 750 GB NVMe Storage Class Memory Drive | UF7                 | AHTB                   | Both                                  | No         | No            |
| 800 GB NVMe Storage Class Memory Drive | UF7                 | AHTE                   | Both                                  | No         | No            |
| 1.6 TB NVMe Storage Class Memory Drive | UF7                 | AHTF                   | Both                                  | No         | No            |
| 4.8 TB NVMe FlashCore Module           | UF8                 | AHS5                   | Both                                  | No         | No            |
| 9.6 TB NVMe FlashCore Module           | UF8                 | AHS6                   | Both                                  | No         | No            |
| 19.2 TB NVMe FlashCore Module          | UF8                 | AHS7                   | Both                                  | No         | No            |
| 38.4 TB NVMe FlashCore Module          | UF8                 | AHS8                   | Both                                  | No         | No            |
| 375 GB NVMe Storage Class              | UF8                 | AHTA                   | Both                                  | No         | No            |

| <b>Description</b>                     | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|--|---------------------|------------------------|---------------------------------------|------------|---------------|
| Memory Drive                           |                     |                        |                                       |            |               |
| 750 GB NVMe Storage Class Memory Drive | UF8                 | AHTB                   | Both                                  | No         | No            |
| 800 GB NVMe Storage Class Memory Drive | UF8                 | AHTE                   | Both                                  | No         | No            |
| 1.6 TB NVMe Storage Class Memory Drive | UF8                 | AHTF                   | Both                                  | No         | No            |
| TAA Compliance                         | UG8                 | 0983                   | Initial                               | No         | No            |
| Bulk Order Indicator                   | UG8                 | 5555                   | MES                                   | No         | No            |
| Power Cord - EMEA                      | UG8                 | 9716                   | Both                                  | No         | No            |
| Power Cord - Australia / New Zealand   | UG8                 | 9717                   | Both                                  | No         | No            |
| Power Cord - Europe / Africa           | UG8                 | 9718                   | Both                                  | No         | No            |
| Power Cord - Denmark                   | UG8                 | 9719                   | Both                                  | No         | No            |
| Power Cord - South Africa              | UG8                 | 9720                   | Both                                  | No         | No            |
| Power Cord - Switzerland               | UG8                 | 9721                   | Both                                  | No         | No            |
| Power Cord - Chile / Italy             | UG8                 | 9722                   | Both                                  | No         | No            |
| Power Cord - Israel                    | UG8                 | 9723                   | Both                                  | No         | No            |
| Power Cord - Argentina                 | UG8                 | 9725                   | Both                                  | No         | No            |
| Power Cord - China                     | UG8                 | 9726                   | Both                                  | No         | No            |
| Power Cord - PDU Connection            | UG8                 | 9730                   | Both                                  | No         | No            |

| <b>Description</b>                  | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|-------------------------------------|---------------------|------------------------|---------------------------------------|------------|---------------|
| Power Cord - Brazil                 | UG8                 | 9733                   | Both                                  | No         | No            |
| Power Cord - India                  | UG8                 | 9734                   | Both                                  | No         | No            |
| Power Cord - Korea                  | UG8                 | 9736                   | Both                                  | No         | No            |
| RFID AG/AP: 902-928 MHz             | UG8                 | A2EV                   | Initial                               | No         | No            |
| RFID EMEA: 865.6-867.8 MHz          | UG8                 | A2EW                   | Initial                               | No         | No            |
| Encryption Enablement               | UG8                 | ACE7                   | Both                                  | Yes        | No            |
| Encryption USB Drive Pack           | UG8                 | ACEA                   | Both                                  | Yes        | No            |
| 768 GB Cache upgrade                | UG8                 | ACGB                   | Both                                  | No         | No            |
| 512 GB Cache upgrade                | UG8                 | ACGJ                   | Both                                  | No         | No            |
| 240 GB M.2 Boot drive Pair          | UG8                 | ACGV                   | Initial                               | No         | No            |
| 16 Gb FC LW SFP Transceivers(1pair) | UG8                 | ACHU                   | Both                                  | No         | No            |
| 32 Gb FC LW SFP Transceivers (Pair) | UG8                 | ACHV                   | Both                                  | No         | No            |
| 1m OM3 Fiber Cable (LC)             | UG8                 | ACSQ                   | Both                                  | Yes        | No            |
| 5m OM3 Fiber Cable (LC)             | UG8                 | ACSR                   | Both                                  | Yes        | No            |
| 10m OM3 Fiber Cable (LC)            | UG8                 | ACSS                   | Both                                  | Yes        | No            |
| 25m OM3 Fiber Cable (LC)            | UG8                 | ACST                   | Both                                  | Yes        | No            |
| OEM 1 FC Order Indicator            | UG8                 | ACW1                   | MES                                   | No         | No            |
| OEM 2 FC Order Indicator            | UG8                 | ACW2                   | MES                                   | No         | No            |
| OEM 3 FC Order Indicator            | UG8                 | ACW3                   | MES                                   | No         | No            |
| OEM 4 FC Order Indicator            | UG8                 | ACW4                   | MES                                   | No         | No            |



| <b>Description</b>            | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|-------------------------------|---------------------|------------------------|---------------------------------------|------------|---------------|
| OEM 5<br>FC Order Indicator   | UG8                 | ACW5                   | MES                                   | No         | No            |
| OEM 6<br>FC Order Indicator   | UG8                 | ACW6                   | MES                                   | No         | No            |
| OEM 7<br>FC Order Indicator   | UG8                 | ACW7                   | MES                                   | No         | No            |
| OEM 8<br>FC Order Indicator   | UG8                 | ACW8                   | MES                                   | No         | No            |
| OEM 9<br>FC Order Indicator   | UG8                 | ACW9                   | MES                                   | No         | No            |
| OEM 10<br>FC Order Indicator  | UG8                 | ACWA                   | MES                                   | No         | No            |
| OEM 11<br>FC Order Indicator  | UG8                 | ACWB                   | MES                                   | No         | No            |
| OEM 12<br>FC Order Indicator  | UG8                 | ACWC                   | MES                                   | No         | No            |
| OEM 13<br>FC Order Indicator  | UG8                 | ACWD                   | MES                                   | No         | No            |
| OEM 14<br>FC Order Indicator  | UG8                 | ACWE                   | MES                                   | No         | No            |
| OEM 15<br>FC Order Indicator  | UG8                 | ACWF                   | MES                                   | No         | No            |
| OEM 1<br>MTM Order Indicator  | UG8                 | ACY1                   | Initial                               | No         | No            |
| OEM 2<br>MTM Order Indicator  | UG8                 | ACY2                   | Initial                               | No         | No            |
| OEM 3<br>MTM Order Indicator  | UG8                 | ACY3                   | Initial                               | No         | No            |
| OEM 4<br>MTM Order Indicator  | UG8                 | ACY4                   | Initial                               | No         | No            |
| OEM 5<br>MTM Order Indicator  | UG8                 | ACY5                   | Initial                               | No         | No            |
| OEM 6<br>MTM Order Indicator  | UG8                 | ACY6                   | Initial                               | No         | No            |
| OEM 7<br>MTM Order Indicator  | UG8                 | ACY7                   | Initial                               | No         | No            |
| OEM 8<br>MTM Order Indicator  | UG8                 | ACY8                   | Initial                               | No         | No            |
| OEM 9<br>MTM Order Indicator  | UG8                 | ACY9                   | Initial                               | No         | No            |
| OEM 10<br>MTM Order Indicator | UG8                 | ACYA                   | Initial                               | No         | No            |

| <b>Description</b>                | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|-----------------------------------|---------------------|------------------------|---------------------------------------|------------|---------------|
| OEM 11 MTM Order Indicator        | UG8                 | ACYB                   | Initial                               | No         | No            |
| OEM 12 MTM Order Indicator        | UG8                 | ACYC                   | Initial                               | No         | No            |
| OEM 13 MTM Order Indicator        | UG8                 | ACYD                   | Initial                               | No         | No            |
| OEM 14 MTM Order Indicator        | UG8                 | ACYE                   | Initial                               | No         | No            |
| OEM 15 MTM Order Indicator        | UG8                 | ACYF                   | Initial                               | No         | No            |
| Generic Bezel                     | UG8                 | ACZA                   | Initial                               | No         | No            |
| Generic Packaging                 | UG8                 | ACZF                   | Initial                               | No         | No            |
| Order Type 1 Indicator - CTO      | UG8                 | ADN1                   | Initial                               | No         | No            |
| Order Type 2 Indicator - MTM Only | UG8                 | ADN2                   | Initial                               | No         | No            |
| Order Type 3 Indicator - FC Only  | UG8                 | ADN3                   | MES                                   | No         | No            |
| No Rules Order Indicator          | UG8                 | ADNR                   | Both                                  | No         | No            |
| TAA Designated Country            | UG8                 | ADZ1                   | Initial                               | No         | No            |
| Variable Usage 1TB/month          | UG8                 | AE00                   | MES                                   | No         | No            |
| Variable Usage 10TB/month         | UG8                 | AE01                   | MES                                   | No         | No            |
| Variable Usage 100TB/month        | UG8                 | AE02                   | MES                                   | No         | No            |
| Shipping and Handling NC          | UG8                 | AG00                   | Initial                               | No         | No            |
| Shipping and Handling - Model AF8 | UG8                 | AGJK                   | Initial                               | No         | No            |
| Shipping and Handling             | UG8                 | AGJN                   | Initial                               | No         | No            |
| 16Gb FC 4 Port Adapter Pair       | UG8                 | AHB3                   | Both                                  | No         | No            |

| <b>Description</b>                        | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|---|---------------------|------------------------|---------------------------------------|------------|---------------|
| 32 Gb FC 4 Port Adapter Cards (Pair)      | UG8                 | AHB4                   | Both                                  | No         | No            |
| 25GbE (RoCE) Adapter Pair                 | UG8                 | AHB6                   | Both                                  | No         | No            |
| 25GbE (iWARP) Adapter Pair                | UG8                 | AHB7                   | Both                                  | No         | No            |
| SAS Expansion Enclosure Attach Card(Pair) | UG8                 | AHBA                   | Both                                  | No         | No            |
| Power Cord - PDU C20                      | UG8                 | AHP6                   | Both                                  | No         | No            |
| 4.8 TB NVMe FlashCore Module              | UG8                 | AHS5                   | Both                                  | No         | No            |
| 9.6 TB NVMe FlashCore Module              | UG8                 | AHS6                   | Both                                  | No         | No            |
| 19.2 TB NVMe FlashCore Module             | UG8                 | AHS7                   | Both                                  | No         | No            |
| 38.4 TB NVMe FlashCore Module             | UG8                 | AHS8                   | Both                                  | No         | No            |
| 800 GB NVMe Flash Drive                   | UG8                 | AHT1                   | Both                                  | No         | No            |
| 1.92 TB NVMe Flash Drive                  | UG8                 | AHT2                   | Both                                  | No         | No            |
| 3.84 TB NVMe Flash Drive                  | UG8                 | AHT3                   | Both                                  | No         | No            |
| 7.68 TB NVMe Flash Drive                  | UG8                 | AHT4                   | Both                                  | No         | No            |
| 15.36 TB NVMe Flash Drive                 | UG8                 | AHT5                   | Both                                  | No         | No            |
| 375 GB NVMe Storage Class Memory Drive    | UG8                 | AHTA                   | Both                                  | No         | No            |
| 750 GB NVMe Storage Class Memory Drive    | UG8                 | AHTB                   | Both                                  | No         | No            |

| <b>Description</b>                            | <b>Model number</b> | <b>Feature numbers</b> | <b>Initial / MES / Both / Support</b> | <b>CSU</b> | <b>RP MES</b> |
|---|---------------------|------------------------|---------------------------------------|------------|---------------|
| 800 GB NVMe Storage Class Memory Drive        | UG8                 | AHTE                   | Both                                  | No         | No            |
| 1.6 TB NVMe Storage Class Memory Drive        | UG8                 | AHTF                   | Both                                  | No         | No            |
| Future use - reserved 1                       | UG8                 | AHY1                   | Initial                               | No         | No            |
| Future use - reserved 2                       | UG8                 | AHY2                   | Initial                               | No         | No            |
| Future use - reserved 3                       | UG8                 | AHY3                   | Initial                               | No         | No            |
| Future use - reserved 4                       | UG8                 | AHY4                   | Initial                               | No         | No            |
| Future use - reserved 5                       | UG8                 | AHY5                   | Initial                               | No         | No            |
| Future use - reserved 6                       | UG8                 | AHY6                   | Initial                               | No         | No            |
| Future use - reserved 7                       | UG8                 | AHY7                   | Initial                               | No         | No            |
| Future use - reserved 8                       | UG8                 | AHY8                   | Initial                               | No         | No            |
| Future use - reserved 9                       | UG8                 | AHY9                   | Initial                               | No         | No            |
| VersaStack Solution Indicator                 | UG8                 | AHZC                   | Initial                               | No         | No            |
| Enhanced High Availability Solution indicator | UG8                 | AHZC                   | Initial                               | No         | No            |
| Red Hat OpenShift Indicator                   | UG8                 | AJGH                   | Initial                               | No         | No            |
| No Ship MES                                   | UG8                 | AQQQ                   | MES                                   | No         | No            |
| BP Post-Sale Services                         | UG8                 | SVBP                   | Both                                  | Yes        | No            |
| IBM Systems Lab Services Post-Sale Services   | UG8                 | SVCS                   | Both                                  | Yes        | No            |
| Other IBM Post-Sale Services                  | UG8                 | SVNN                   | Both                                  | Yes        | No            |

CSU = Customer setup

RP MES = Returnable parts MES

### Alternative service

| <b>Machine type-model</b> | <b>Feature</b> | <b>IOR IBM same day on-site repair (IOR, 24 x 7)</b> | <b>IO8 IBM next day on-site repair (IOR, NBD 9 x 5)</b> |
|---------------------------|----------------|--|---|
| 9846-AG8                  |                |  |   |
| 9846-AG8                  | AHS5           |  |   |
| 9846-AG8                  | AHS6           |  |   |
| 9846-AG8                  | AHS7           |  |   |
| 9846-AG8                  | AHS8           |  |   |
| 9846-AG8                  | AHT1           |  |   |
| 9846-AG8                  | AHT2           |  |   |
| 9846-AG8                  | AHT3           |  |   |
| 9846-AG8                  | AHT4           |  |   |
| 9846-AG8                  | AHT5           |  |   |
| 9846-AG8                  | AHTA           |  |   |
| 9846-AG8                  | AHTB           |  |   |
| 9846-AG8                  | AHTE           |  |   |
| 9846-AG8                  | AHTF           |  |   |

  

| <b>Machine type-model</b> | <b>Feature</b> | <b>IOR IBM same day on-site repair (IOR, 24 x 7)</b> | <b>IO8 IBM next day on-site repair (IOR, NBD 9 x 5)</b> |
|---------------------------|----------------|--|---|
| 9848-AG8                  |                |  |   |
| 9848-AG8                  | AHS5           |  |   |
| 9848-AG8                  | AHS6           |  |   |
| 9848-AG8                  | AHS7           |  |   |
| 9848-AG8                  | AHS8           |  |   |
| 9848-AG8                  | AHT1           |  |   |
| 9848-AG8                  | AHT2           |  |   |
| 9848-AG8                  | AHT3           |  |   |
| 9848-AG8                  | AHT4           |  |   |
| 9848-AG8                  | AHT5           |  |   |
| 9848-AG8                  | AHTA           |  |   |
| 9848-AG8                  | AHTB           |  |   |
| 9848-AG8                  | AHTE           |  |   |
| 9848-AG8                  | AHTF           |  |   |

  

| <b>Machine type-model</b> | <b>Feature</b> | <b>IOR IBM same day on-site repair (IOR, 24 x 7)</b> | <b>IO8 IBM next day on-site repair (IOR, NBD 9 x 5)</b> |
|---------------------------|----------------|--|---|
| 9848-UG8                  |                |  |   |
| 9848-UG8                  | AHS5           |  |   |
| 9848-UG8                  | AHS6           |  |   |
| 9848-UG8                  | AHS7           |  |   |
| 9848-UG8                  | AHS8           |  |   |
| 9848-UG8                  | AHT1           |  |   |
| 9848-UG8                  | AHT2           |  |   |
| 9848-UG8                  | AHT3           |  |   |
| 9848-UG8                  | AHT4           |  |   |
| 9848-UG8                  | AHT5           |  |   |

| <b>Machine type-model</b> | <b>Feature</b> | <b>IOR IBM same day on-site repair (IOR, 24 x 7)</b> | <b>IO8 IBM next day on-site repair (IOR, NBD 9 x 5)</b> |
|---------------------------|----------------|--|---|
| 9848-UG8                  | AHTA           |  |   |
| 9848-UG8                  | AHTB           |  |   |
| 9848-UG8                  | AHTE           |  |   |
| 9848-UG8                  | AHTF           |  |   |

### **ServiceElect (ESA) charges**

For ServiceElect (ESA) maintenance service charges, contact IBM Global Services at 888-IBM-4343 (426-4343).

### **IBM Global Financing**

IBM Global Financing offers competitive financing to credit-qualified clients to assist them in acquiring IT solutions. Offerings include financing for IT acquisition, including hardware, software, and services, from both IBM and other manufacturers or vendors. Offerings (for all client segments: small, medium, and large enterprise), rates, terms, and availability can vary by country. Contact your local IBM Global Financing organization or go to the [IBM Global Financing](#) website for more information.

IBM Global Financing offerings are provided through IBM Credit LLC in the United States and other IBM subsidiaries and divisions worldwide to qualified commercial and government clients. Rates are based on a client's credit rating, financing terms, offering type, equipment type and options, and may vary by country. Other restrictions may apply. Rates and offerings are subject to change, extension, or withdrawal without notice.

Financing solutions from IBM Global Financing can help you stretch your budget and affordably acquire the new product. But beyond the initial acquisition, our end-to-end approach to IT management can also help keep your technologies current, reduce costs, minimize risk, and preserve your ability to make flexible equipment decisions throughout the entire technology lifecycle.

### **Trademarks**

System Storage is a trademark of IBM Corporation in the United States, other countries, or both.

IBM FlashSystem, IBM Spectrum, IBM FlashCore, IBM, Storwize, Passport Advantage, PartnerWorld, Global Technology Services, Easy Tier, MicroLatency, HyperSwap and FlashCopy are registered trademarks of IBM Corporation in the United States, other countries, or both.

Red Hat and OpenShift are registered trademarks of Red Hat Inc. in the U.S. and other countries.

Other company, product, and service names may be trademarks or service marks of others.

### **Terms of use**

IBM products and services which are announced and available in your country can be ordered under the applicable standard agreements, terms, conditions, and prices in effect at the time. IBM reserves the right to modify or withdraw this announcement at any time without notice. This announcement is provided for your information only. Additional terms of use are located at

[Terms of use](#)

For the most current information regarding IBM products, consult your IBM representative or reseller, or go to the [IBM worldwide contacts page](#)

[IBM United States](#)