

IBM DS8000 four-year warranty all-flash offerings built with POWER9 technology

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At a glance

The IBM[®] DS8900F all-flash family offers:

- Two IBM DS8910F flexibility-class offerings and one IBM DS8950F agility-class offering
- A boost in performance with an increase of 38% to 60% more IOPs
- Next-level cybersecurity with Safeguarded Copy
- Seamless hybrid multicloud integration with transparent cloud tiering
- Data stability and system resiliency for mission-critical workloads across hybrid multicloud deployments
- The fastest application response time for IBM Z[®]
- Enterprise resiliency with seven nines availability
- A variety of disaster recovery configurations with three- and four-site replication
- 32 GFC encryption capable host adapters
- Simplified rack power distribution using intelligent power distribution units (iPDUs)
- NVDIMM for write cache retention
- Transparent cloud tiering with TS7700 as object storage

Overview

IBM DS8000[®] offers the all-flash IBM DS8900F, built with POWER9[™] technology to deliver comprehensive next-level cybersecurity, data stability, and system resiliency for mission-critical workloads across hybrid multicloud deployments. The DS8900F family offers two new classes:

- The flexibility-class DS8910F delivers significant performance improvements as compared to the previous IBM DS8880F generation
- The agility-class DS8950F is efficiently designed to consolidate all your mission-critical workloads for IBM Z, IBM LinuxONE, IBM Power[®] Systems, and distributed environments under a single all-flash storage solution

IBM DS8910F Model 993 is a rackless flexibility-class solution delivering the following features:

- Two 4-core processors (8 cores) per central processor complex (CEC) for a total of 16 cores per system

- A maximum of 48 flash cards (one HPFE Gen 2) when integrated in a compatible IBM Z or LinuxONE rack, and a maximum of 96 flash cards (two HPFE Gen 2) when integrated in a customer provided compatible rack with at least 20U of contiguous space
- 192 GB or 512 GB processor memory per system
- Up to 8 host adapters or 32 ports
- Single-phase and three-phase support

IBM DS8910F Model 994 is a racked flexibility-class solution delivering the following features:

- Two 4-core processors (8 cores) per CEC for a total of 16 cores per system
- A maximum of 192 flash cards (four HPFE Gen 2)
- 192 GB or 512 GB processor memory per system
- Up to 16 host adapters or 64 ports
- Single-phase and three-phase support

IBM DS8950F Model 996 is a racked agility-class solution delivering the following features:

- One 10-core processor per CEC for a total of 20 cores per system with the capacity to add one more 10-core processor per CEC for a total of 40 cores per system
- A maximum of 192 flash cards (four HPFE Gen 2)
- 512 GB processor memory per system in a 20-core system and 1024 GB or 2048 GB processor memory per system in a 40-core system
- Up to 16 host adapters or 64 ports
- Single-phase and three-phase support

IBM DS8950F Model E96 is an expansion for IBM DS8950F Model 996 that can be attached to a 40-core system to enable:

- Up to 192 flash cards (four HPFE Gen 2) for a total of 384 flash drives (eight HPFE Gen 2) per system
- Up to 16 host adapters or 64 ports for a total of 32 host adapters or 128 ports per system
- Single-phase and three-phase support

Key requirements

All announced features and functions that are supported on the IBM DS8000 series require DS8000 LMC 8.9.00.xx.xx (bundle version 89.00.xx.xx), or later.

Planned availability date

- November 15, 2019: General availability
- March 13, 2020: MES planned availability date

Description

The next generation of DS8000 offerings is now available, the DS8900F all-flash family. DS8900F is designed to maximize the power of IBM Z and LinuxONE, and is the trusted storage foundation for mission-critical, multicloud environments. It

integrates seamlessly into hybrid multicloud foundations to unlock an unmatched value for mission-critical workloads, takes advantage of the highest level of business uptime, and meets the needs of critical business services. With DS8900F systems, data is always protected wherever it resides across a multicloud environment.

The DS8900F family delivers the following features and benefits:

- Next-level cybersecurity with Safeguarded Copy: Safeguarded Copy provides protection against data corruption or loss caused by malicious events such as malware and ransomware, delivering data stability and system resiliency for mission-critical workloads.
- The fastest application response time for IBM Z: Latency is the most important performance metric in storage. With 19 microseconds for mainframe and 90 microseconds for distributed systems, the DS8900F family provides ultra-low latency to help clients process huge volumes of transactions faster and deliver real-time insights to differentiate their products and gain a competitive advantage.
- Built from the DS8880 code base: The DS8900F family was developed under the same microcode core as DS8880F, inheriting all the advanced functions available in its predecessor.
- Performance improvements: As compared to the previous DS8880F generation, DS8910F delivers a 60% increase in random IOPS and up to 150% increase in sequential throughput. DS8950F delivers 38% more random IOPS.
- Recovery options: A variety of disaster recovery configurations with three- and four-site replication.
- 32 GFC host adapters with line-rate encryption capability that provide up to two times the bandwidth performance, higher IOPS, and lower latency compared to 16 GFC host adapters.
- Support for IBM Fibre Channel Endpoint Security: DS8900F host adapters include support for IBM Fibre Channel Endpoint Security as part of the cybersecurity solutions offered by IBM. In order to take advantage of this capability, the platforms attached to the DS8900F must also have support for IBM Fibre Channel Endpoint Security.
- Simplified rack power distribution: Intelligent power distribution units (iPDUs) supporting single- or three-phase power in all models.
- NVDIMM for write cache retention: Eliminates system battery requirements.

Transparent cloud tiering on the DS8000 in conjunction with DFSMSHsm continues to provide business efficiencies, flexibility, and a reduction in capital expenses by reducing CPU utilization by more than 50% when archiving large data sets. This efficiency is realized by a direct data transfer from DS8000 to an object storage platform. A new capability is now available to enable the IBM TS7700 Virtualization Engine to be the object storage target for transparent cloud tiering.

TS7700 object storage can coexist object data from DS8000 transparent cloud tiering with traditional FICON^(R) logical tape volumes within the same physical TS7700. No additional hardware is required as data movement is done through existing grid interfaces between the DS8000 and TS7700, and data is logically partitioned out of the existing resident cache.

The DS8880 and DS8880F families now support FlashCopy^(R) onto a Global Mirror primary. This will enable the use of Global Mirror primaries as FlashCopy targets, as well as to use Remote Pair FlashCopy in a Metro/Global Mirror or Metro Mirror/Global Mirror multitarget configuration. This function will increase flexibility in Global Mirror environments and allow use of FlashCopy in Metro/Global Mirror and Metro Mirror/Global Mirror environments while maintaining HyperSwap^(R) readiness.

Section 508 of the US Rehabilitation Act

IBM DS8900F storage family is capable as of November 15, 2019, when used in accordance with associated IBM documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it. A US Section 508

Reference information

For more information about available function authorizations, see Hardware Announcement [117-007](#), dated January 10, 2017.

Product number

The following are newly announced features and models on the specified models of the IBM System Storage[®] 5334 machine type:

| Description | Machine type | Model | Feature |
|--|--------------|-------|---------|
| IBM DS8910F | 5334 | 993 | |
| PPA Software Order Indicator | 5334 | 993 | 0017 |
| DoD Indicator | 5334 | 993 | 0020 |
| JEMT indicator | 5334 | 993 | 0021 |
| Shipping Weight Reduction | 5334 | 993 | 0200 |
| 800GB 2.5" flash encl ind | 5334 | 993 | 0261 |
| 1.6TB 2.5" flash encl ind | 5334 | 993 | 0262 |
| 3.2TB 2.5" flash encl ind | 5334 | 993 | 0263 |
| 1.92 TB 2.5" flash encl ind | 5334 | 993 | 0264 |
| 3.8 TB 2.5" flash encl ind | 5334 | 993 | 0265 |
| 7.68 TB 2.5" flash encl ind | 5334 | 993 | 0266 |
| 15.36 TB 2.5 flash encl ind | 5334 | 993 | 0267 |
| Encryption not capable | 5334 | 993 | 0403 |
| TDCPP free indicator | 5334 | 993 | 0404 |
| Flash card sets custom placement indicator | 5334 | 993 | 0606 |
| Flash enclosure pair indicator | 5334 | 993 | 0607 |
| Safe Guarded Copy Indicator | 5334 | 993 | 0785 |
| 5.1 TB to 10 TB capacity | 5334 | 993 | 0796 |
| 10.1 TB to 25 TB capacity | 5334 | 993 | 0797 |
| 25.1 TB to 50 TB capacity | 5334 | 993 | 0798 |
| 50.1 TB to 75 TB capacity | 5334 | 993 | 0799 |
| 75.1 TB to 100.0 TB capacity | 5334 | 993 | 0801 |
| 100.1 TB to 250 TB capacity | 5334 | 993 | 0803 |
| 250.1 TB to 500 TB capacity | 5334 | 993 | 0804 |

| Description | Machine type | Model | Feature |
|---|---------------------|--------------|----------------|
| 500.1 TB to 1250 TB capacity | 5334 | 993 | 0806 |
| 1250.1 TB to 3000 TB capacity | 5334 | 993 | 0807 |
| 3000.1 TB to 6000 TB capacity | 5334 | 993 | 0808 |
| 6000.1TB TO 12000TB CAPACITY | 5334 | 993 | 0809 |
| IBM/Openwave Alliance | 5334 | 993 | 0930 |
| IBM System i ^(R) Indicator | 5334 | 993 | 0931 |
| IBM System p Indicator | 5334 | 993 | 0932 |
| IBM System x Indicator | 5334 | 993 | 0933 |
| IBM System z ^(R) Indicator | 5334 | 993 | 0934 |
| IBM System z B/C indicator | 5334 | 993 | 0935 |
| IBM System zEnterprise ^(R) Cloud indicator | 5334 | 993 | 0936 |
| zFlex Frame Field Merge | 5334 | 993 | 0937 |
| Rockhopper II Field Merge | 5334 | 993 | 0938 |
| Customer Rack Field Merge | 5334 | 993 | 0939 |
| Linux ^(R) Indicator | 5334 | 993 | 0940 |
| Storage Appliance indicator | 5334 | 993 | 0952 |
| IBM ProtecTIER ^(R) indicator | 5334 | 993 | 0960 |
| IBM Storwize ^(R) V7000 indicator | 5334 | 993 | 0961 |
| IBM N series indicator | 5334 | 993 | 0962 |
| IBM SAN Volume Controller indicator | 5334 | 993 | 0963 |
| IBM/EPIC attachment indicator | 5334 | 993 | 0964 |
| VMware VAAI indicator | 5334 | 993 | 0965 |
| OpenStack indicator | 5334 | 993 | 0966 |
| US TAA compliance indicator | 5334 | 993 | 0983 |
| Remote code load exception | 5334 | 993 | 0990 |
| Remote code load | 5334 | 993 | 0991 |
| Single Phase Power- 208V 30A NEMA L6-30P | 5334 | 993 | 1038 |
| Single Phase Power- 250V 32A IEC 309 | 5334 | 993 | 1039 |

| Description | Machine type | Model | Feature |
|---|---------------------|--------------|----------------|
| 3 Phase Power- 208V 60A IEC 309 (4 pin Delta) | 5334 | 993 | 1040 |
| 3 Phase Power- 250V 32A IEC 309 (5 pin Wye) | 5334 | 993 | 1041 |
| Single Phase Power- 250V 32A, Australia/New Zealand | 5334 | 993 | 1042 |
| Single Phase Power- 250V 30A, Korea | 5334 | 993 | 1043 |
| Single Phase Power- 230V 32A, halogen free IEC 390 | 5334 | 993 | 1044 |
| Overhead ladder - 5ft | 5334 | 993 | 1101 |
| Ladder - Top Expansion - 3ft | 5334 | 993 | 1102 |
| Kick Step | 5334 | 993 | 1103 |
| I/O enclosure pair PCIe 3 | 5334 | 993 | 1303 |
| 50 um Fibre cable (LC) | 5334 | 993 | 1410 |
| 50 um Fibre cable (LC/SC) | 5334 | 993 | 1411 |
| 50 um Fibre cable (Jumper) | 5334 | 993 | 1412 |
| 50 um Fibre cable 3m SW LC | 5334 | 993 | 1413 |
| 9 um Fibre cable (LC) | 5334 | 993 | 1420 |
| 9 um Fibre cable (LC/SC) | 5334 | 993 | 1421 |
| 9 um Fibre cable (Jumper) | 5334 | 993 | 1422 |
| 9 um Fibre cable 3m LW LC | 5334 | 993 | 1423 |
| 40m zHyperLink cable | 5334 | 993 | 1450 |
| 150m zHyperLink cable | 5334 | 993 | 1451 |
| 3m zHyperLink cable | 5334 | 993 | 1452 |
| HPFE Gen 2 adapter card | 5334 | 993 | 1604 |
| HPFE Gen 2 enclosure pair R9 | 5334 | 993 | 1605 |
| 800 GB 2.5-inch flash card set | 5334 | 993 | 1611 |
| 1600 GB 2.5-inch flash card set | 5334 | 993 | 1612 |
| 3200 GB 2.5-inch flash card set | 5334 | 993 | 1613 |
| 1.92 TB 2.5-inch high capacity flash | 5334 | 993 | 1622 |
| 3.8 TB 2.5-inch high capacity flash | 5334 | 993 | 1623 |
| 7.68 TB 2.5-inch high capacity flash | 5334 | 993 | 1624 |

| Description | Machine type | Model | Feature |
|--|---------------------|--------------|----------------|
| 15.36 TB 2.5-inch high capacity flash | 5334 | 993 | 1625 |
| Flash enclosure filler set | 5334 | 993 | 1699 |
| 1U Keyboard/Display | 5334 | 993 | 1765 |
| DS8000 LMC R9.0 | 5334 | 993 | 1890 |
| Hardware installation MES | 5334 | 993 | 1999 |
| 16 Gb 4 port SW FCP/FICON ^(R) adapter PCIE | 5334 | 993 | 3353 |
| 32 Gb 4 port SW FCP/FICON adapter PCIE | 5334 | 993 | 3355 |
| 16 Gb 4 port LW FCP/FICON adapter PCIE | 5334 | 993 | 3453 |
| 32 Gb 4 port LW FCP/FICON adapter PCIE | 5334 | 993 | 3455 |
| zHyperLink adapter | 5334 | 993 | 3500 |
| Transparent cloud tiering 10Gb/1Gb Ethernet pair V2 for 2U controllers | 5334 | 993 | 3602 |
| 8 core processor pair indicator | 5334 | 993 | 4341 |
| 192GB System Cache (8 core) | 5334 | 993 | 4450 |
| 512GB System Cache (8 core) | 5334 | 993 | 4451 |
| BF 10TB increments from 0 to 100 TB | 5334 | 993 | 8151 |
| BF 15TB increments from 100.1 TB to 250 TB | 5334 | 993 | 8152 |
| BF 25TB increments from 250.1 TB to 500 TB | 5334 | 993 | 8153 |
| BF 75TB increments from 500.1 TB to 1250 TB | 5334 | 993 | 8154 |
| BF 175TB increments from 1250.1 TB to 3000 TB | 5334 | 993 | 8155 |
| BF 300TB increments from 3000.1 TB to 6000 TB | 5334 | 993 | 8156 |
| BF 600TB increments from 6000.1 TB to 12000 TB | 5334 | 993 | 8160 |
| CS - Inactive | 5334 | 993 | 8250 |
| CS 10TB increments from 0 to 100 TB | 5334 | 993 | 8251 |

| Description | Machine type | Model | Feature |
|---|---------------------|--------------|----------------|
| CS 15TB increments from 100.1 TB to 250 TB | 5334 | 993 | 8252 |
| CS 25TB increments from 250.1 TB to 500 TB | 5334 | 993 | 8253 |
| CS 75TB increments from 500.1 TB to 1250 TB | 5334 | 993 | 8254 |
| CS 175TB increments from 1250.1 TB to 3000 TB | 5334 | 993 | 8255 |
| CS 300TB increments from 3000.1 TB to 6000 TB | 5334 | 993 | 8256 |
| CS 600TB increments from 6000.1 TB to 12000 TB | 5334 | 993 | 8260 |
| zsS - Active | 5334 | 993 | 8300 |
| zsS - Inactive | 5334 | 993 | 8350 |
| zsS 10TB increments from 0 to 100 TB | 5334 | 993 | 8351 |
| zsS 15TB increments from 100.1 TB to 250 TB | 5334 | 993 | 8352 |
| zsS 25TB increments from 250.1 TB to 500 TB | 5334 | 993 | 8353 |
| zsS 75TB increments from 500.1 TB to 1250 TB | 5334 | 993 | 8354 |
| zsS 175TB increments from 1250.1 TB to 3000 TB | 5334 | 993 | 8355 |
| zsS 300TB increments from 3000.1 TB to 6000 TB | 5334 | 993 | 8356 |
| zsS 600TB increments from 6000.1 TB to 12000 TB | 5334 | 993 | 8360 |
| CSM on HMC - Active | 5334 | 993 | 8451 |
| IGF transaction indicator | 5334 | 993 | 8999 |
| Shipping and Handling NC | 5334 | 993 | AG00 |
| Shipping and handling 993 | 5334 | 993 | AGAJ |
| BP Post-Sale Services | 5334 | 993 | SVBP |
| IBM Systems Lab Services Post-Sale Services | 5334 | 993 | SVCS |

| Description | Machine type | Model | Feature |
|--|---------------------|--------------|----------------|
| Other IBM Post-Sale Services | 5334 | 993 | SVNN |
| IBM DS8910F | 5334 | 994 | |
| PPA Software Order Indicator | 5334 | 994 | 0017 |
| DoD Indicator | 5334 | 994 | 0020 |
| JEMT indicator | 5334 | 994 | 0021 |
| Shipping Weight Reduction | 5334 | 994 | 0200 |
| 800GB 2.5" flash encl ind | 5334 | 994 | 0261 |
| 1.6TB 2.5" flash encl ind | 5334 | 994 | 0262 |
| 3.2TB 2.5" flash encl ind | 5334 | 994 | 0263 |
| 1.92 TB 2.5" flash encl ind | 5334 | 994 | 0264 |
| 3.8 TB 2.5" flash encl ind | 5334 | 994 | 0265 |
| 7.68 TB 2.5" flash encl ind | 5334 | 994 | 0266 |
| 15.36 TB 2.5 flash encl ind | 5334 | 994 | 0267 |
| Encryption not capable | 5334 | 994 | 0403 |
| TDCPP free indicator | 5334 | 994 | 0404 |
| Flash card sets custom placement indicator | 5334 | 994 | 0606 |
| Flash enclosure pair indicator | 5334 | 994 | 0607 |
| Safe Guarded Copy Indicator | 5334 | 994 | 0785 |
| 5.1 TB to 10 TB capacity | 5334 | 994 | 0796 |
| 10.1 TB to 25 TB capacity | 5334 | 994 | 0797 |
| 25.1 TB to 50 TB capacity | 5334 | 994 | 0798 |
| 50.1 TB to 75 TB capacity | 5334 | 994 | 0799 |
| 75.1 TB to 100.0 TB capacity | 5334 | 994 | 0801 |
| 100.1 TB to 250 TB capacity | 5334 | 994 | 0803 |
| 250.1 TB to 500 TB capacity | 5334 | 994 | 0804 |
| 500.1 TB to 1250 TB capacity | 5334 | 994 | 0806 |
| 1250.1 TB to 3000 TB capacity | 5334 | 994 | 0807 |
| 3000.1 TB to 6000 TB capacity | 5334 | 994 | 0808 |
| 6000.1TB TO 12000TB CAPACITY | 5334 | 994 | 0809 |
| IBM/Openwave Alliance | 5334 | 994 | 0930 |
| IBM System i Indicator | 5334 | 994 | 0931 |

| Description | Machine type | Model | Feature |
|---|---------------------|--------------|----------------|
| IBM System p Indicator | 5334 | 994 | 0932 |
| IBM System x Indicator | 5334 | 994 | 0933 |
| IBM System z Indicator | 5334 | 994 | 0934 |
| IBM System z B/C indicator | 5334 | 994 | 0935 |
| IBM System zEnterprise Cloud indicator | 5334 | 994 | 0936 |
| Linux Indicator | 5334 | 994 | 0940 |
| Storage Appliance indicator | 5334 | 994 | 0952 |
| IBM ProtecTIER indicator | 5334 | 994 | 0960 |
| IBM Storwize V7000 indicator | 5334 | 994 | 0961 |
| IBM N series indicator | 5334 | 994 | 0962 |
| IBM SAN Volume Controller indicator | 5334 | 994 | 0963 |
| IBM/EPIC attachment indicator | 5334 | 994 | 0964 |
| VMware VAAI indicator | 5334 | 994 | 0965 |
| OpenStack indicator | 5334 | 994 | 0966 |
| US TAA compliance indicator | 5334 | 994 | 0983 |
| Remote code load exception | 5334 | 994 | 0990 |
| Remote code load | 5334 | 994 | 0991 |
| Front & rear door lock kit | 5334 | 994 | 1014 |
| Single Phase Power- 208V 30A NEMA L6-30P | 5334 | 994 | 1038 |
| Single Phase Power- 250V 32A IEC 309 | 5334 | 994 | 1039 |
| 3 Phase Power- 208V 60A IEC 309 (4 pin Delta) | 5334 | 994 | 1040 |
| 3 Phase Power- 250V 32A IEC 309 (5 pin Wye) | 5334 | 994 | 1041 |
| Single Phase Power- 250V 32A, Australia/New Zealand | 5334 | 994 | 1042 |
| Single Phase Power- 250V 30A, Korea | 5334 | 994 | 1043 |
| Single Phase Power- 230V 32A, halogen free IEC 390 | 5334 | 994 | 1044 |
| Overhead ladder - 5ft | 5334 | 994 | 1101 |

| Description | Machine type | Model | Feature |
|---------------------------------------|---------------------|--------------|----------------|
| Ladder - Top Expansion - 3ft | 5334 | 994 | 1102 |
| Kick Step | 5334 | 994 | 1103 |
| DS8900F rack doors | 5334 | 994 | 1105 |
| SpaceSaver front/rear doors | 5334 | 994 | 1106 |
| Rack side cover pair | 5334 | 994 | 1107 |
| I/O enclosure pair PCIe 3 | 5334 | 994 | 1303 |
| Top exit bracket for fibre cable R9 | 5334 | 994 | 1401 |
| 50 um Fibre cable (LC) | 5334 | 994 | 1410 |
| 50 um Fibre cable (LC/SC) | 5334 | 994 | 1411 |
| 50 um Fibre cable (Jumper) | 5334 | 994 | 1412 |
| 50 um Fibre cable 3m SW LC | 5334 | 994 | 1413 |
| 9 um Fibre cable (LC) | 5334 | 994 | 1420 |
| 9 um Fibre cable (LC/SC) | 5334 | 994 | 1421 |
| 9 um Fibre cable (Jumper) | 5334 | 994 | 1422 |
| 9 um Fibre cable 3m LW LC | 5334 | 994 | 1423 |
| 40m zHyperLink cable | 5334 | 994 | 1450 |
| 150m zHyperLink cable | 5334 | 994 | 1451 |
| HPFE Gen 2 adapter card | 5334 | 994 | 1604 |
| HPFE Gen 2 enclosure pair R9 | 5334 | 994 | 1605 |
| 800 GB 2.5-inch flash card set | 5334 | 994 | 1611 |
| 1600 GB 2.5-inch flash card set | 5334 | 994 | 1612 |
| 3200 GB 2.5-inch flash card set | 5334 | 994 | 1613 |
| 1.92 TB 2.5-inch high capacity flash | 5334 | 994 | 1622 |
| 3.8 TB 2.5-inch high capacity flash | 5334 | 994 | 1623 |
| 7.68 TB 2.5-inch high capacity flash | 5334 | 994 | 1624 |
| 15.36 TB 2.5-inch high capacity flash | 5334 | 994 | 1625 |
| Flash enclosure filler set | 5334 | 994 | 1699 |
| 1U Keyboard/Display | 5334 | 994 | 1765 |
| DS8000 LMC R9.0 | 5334 | 994 | 1890 |
| Earthquake Kit DS8900F AC156 | 5334 | 994 | 1907 |
| Hardware installation MES | 5334 | 994 | 1999 |

| Description | Machine type | Model | Feature |
|--|---------------------|--------------|----------------|
| 16 Gb 4 port SW FCP/FICON adapter PCIE | 5334 | 994 | 3353 |
| 32 Gb 4 port SW FCP/FICON adapter PCIE | 5334 | 994 | 3355 |
| 16 Gb 4 port LW FCP/FICON adapter PCIE | 5334 | 994 | 3453 |
| 32 Gb 4 port LW FCP/FICON adapter PCIE | 5334 | 994 | 3455 |
| zHyperLink adapter | 5334 | 994 | 3500 |
| Transparent cloud tiering 10Gb/1Gb Ethernet pair V2 for 2U controllers | 5334 | 994 | 3602 |
| 8 core processor pair indicator | 5334 | 994 | 4341 |
| 192GB System Cache (8 core) | 5334 | 994 | 4450 |
| 512GB System Cache (8 core) | 5334 | 994 | 4451 |
| BF 10TB increments from 0 to 100 TB | 5334 | 994 | 8151 |
| BF 15TB increments from 100.1 TB to 250 TB | 5334 | 994 | 8152 |
| BF 25TB increments from 250.1 TB to 500 TB | 5334 | 994 | 8153 |
| BF 75TB increments from 500.1 TB to 1250 TB | 5334 | 994 | 8154 |
| BF 175TB increments from 1250.1 TB to 3000 TB | 5334 | 994 | 8155 |
| BF 300TB increments from 3000.1 TB to 6000 TB | 5334 | 994 | 8156 |
| BF 600TB increments from 6000.1 TB to 12000 TB | 5334 | 994 | 8160 |
| CS - Inactive | 5334 | 994 | 8250 |
| CS 10TB increments from 0 to 100 TB | 5334 | 994 | 8251 |
| CS 15TB increments from 100.1 TB to 250 TB | 5334 | 994 | 8252 |
| CS 25TB increments from 250.1 TB to 500 TB | 5334 | 994 | 8253 |
| CS 75TB increments from | 5334 | 994 | 8254 |

| Description | Machine type | Model | Feature |
|---|---------------------|--------------|----------------|
| 500.1 TB to 1250 TB | | | |
| CS 175TB increments from 1250.1 TB to 3000 TB | 5334 | 994 | 8255 |
| CS 300TB increments from 3000.1 TB to 6000 TB | 5334 | 994 | 8256 |
| CS 600TB increments from 6000.1 TB to 12000 TB | 5334 | 994 | 8260 |
| zsS - Active | 5334 | 994 | 8300 |
| zsS - Inactive | 5334 | 994 | 8350 |
| zsS 10TB increments from 0 to 100 TB | 5334 | 994 | 8351 |
| zsS 15TB increments from 100.1 TB to 250 TB | 5334 | 994 | 8352 |
| zsS 25TB increments from 250.1 TB to 500 TB | 5334 | 994 | 8353 |
| zsS 75TB increments from 500.1 TB to 1250 TB | 5334 | 994 | 8354 |
| zsS 175TB increments from 1250.1 TB to 3000 TB | 5334 | 994 | 8355 |
| zsS 300TB increments from 3000.1 TB to 6000 TB | 5334 | 994 | 8356 |
| zsS 600TB increments from 6000.1 TB to 12000 TB | 5334 | 994 | 8360 |
| CSM on HMC - Active | 5334 | 994 | 8451 |
| IGF transaction indicator | 5334 | 994 | 8999 |
| Shipping and Handling NC | 5334 | 994 | AG00 |
| Shipping and handling 994 | 5334 | 994 | AGAK |
| BP Post-Sale Services | 5334 | 994 | SVBP |
| IBM Systems Lab Services Post-Sale Services | 5334 | 994 | SVCS |
| Other IBM Post-Sale Services | 5334 | 994 | SVNN |
| IBM DS8950F | 5334 | 996 | |
| E96 factory merge | 5334 | 996 | 0005 |
| PPA Software Order Indicator | 5334 | 996 | 0017 |
| DoD Indicator | 5334 | 996 | 0020 |
| JEMT indicator | 5334 | 996 | 0021 |

| Description | Machine type | Model | Feature |
|--|---------------------|--------------|----------------|
| Shipping Weight Reduction | 5334 | 996 | 0200 |
| E96 - position 1 | 5334 | 996 | 0245 |
| 800GB 2.5" flash encl ind | 5334 | 996 | 0261 |
| 1.6TB 2.5" flash encl ind | 5334 | 996 | 0262 |
| 3.2TB 2.5" flash encl ind | 5334 | 996 | 0263 |
| 1.92 TB 2.5" flash encl ind | 5334 | 996 | 0264 |
| 3.8 TB 2.5" flash encl ind | 5334 | 996 | 0265 |
| 7.68 TB 2.5" flash encl ind | 5334 | 996 | 0266 |
| 15.36 TB 2.5 flash encl ind | 5334 | 996 | 0267 |
| Encryption not capable | 5334 | 996 | 0403 |
| TDCPP free indicator | 5334 | 996 | 0404 |
| Flash card sets custom placement indicator | 5334 | 996 | 0606 |
| Flash enclosure pair indicator | 5334 | 996 | 0607 |
| Safe Guarded Copy Indicator | 5334 | 996 | 0785 |
| 5.1 TB to 10 TB capacity | 5334 | 996 | 0796 |
| 10.1 TB to 25 TB capacity | 5334 | 996 | 0797 |
| 25.1 TB to 50 TB capacity | 5334 | 996 | 0798 |
| 50.1 TB to 75 TB capacity | 5334 | 996 | 0799 |
| 75.1 TB to 100.0 TB capacity | 5334 | 996 | 0801 |
| 100.1 TB to 250 TB capacity | 5334 | 996 | 0803 |
| 250.1 TB to 500 TB capacity | 5334 | 996 | 0804 |
| 500.1 TB to 1250 TB capacity | 5334 | 996 | 0806 |
| 1250.1 TB to 3000 TB capacity | 5334 | 996 | 0807 |
| 3000.1 TB to 6000 TB capacity | 5334 | 996 | 0808 |
| 6000.1TB TO 12000TB CAPACITY | 5334 | 996 | 0809 |
| IBM/Openwave Alliance | 5334 | 996 | 0930 |
| IBM System i Indicator | 5334 | 996 | 0931 |
| IBM System p Indicator | 5334 | 996 | 0932 |
| IBM System x Indicator | 5334 | 996 | 0933 |
| IBM System z Indicator | 5334 | 996 | 0934 |
| IBM System z B/C indicator | 5334 | 996 | 0935 |

| Description | Machine type | Model | Feature |
|---|---------------------|--------------|----------------|
| IBM System zEnterprise Cloud indicator | 5334 | 996 | 0936 |
| Linux Indicator | 5334 | 996 | 0940 |
| Storage Appliance indicator | 5334 | 996 | 0952 |
| IBM ProtecTIER indicator | 5334 | 996 | 0960 |
| IBM Storwize V7000 indicator | 5334 | 996 | 0961 |
| IBM N series indicator | 5334 | 996 | 0962 |
| IBM SAN Volume Controller indicator | 5334 | 996 | 0963 |
| IBM/EPIC attachment indicator | 5334 | 996 | 0964 |
| VMware VAAI indicator | 5334 | 996 | 0965 |
| OpenStack indicator | 5334 | 996 | 0966 |
| US TAA compliance indicator | 5334 | 996 | 0983 |
| Remote code load exception | 5334 | 996 | 0990 |
| Remote code load | 5334 | 996 | 0991 |
| Front & rear door lock kit | 5334 | 996 | 1014 |
| Single Phase Power- 208V 30A NEMA L6-30P | 5334 | 996 | 1038 |
| Single Phase Power- 250V 32A IEC 309 | 5334 | 996 | 1039 |
| 3 Phase Power- 208V 60A IEC 309 (4 pin Delta) | 5334 | 996 | 1040 |
| 3 Phase Power- 250V 32A IEC 309 (5 pin Wye) | 5334 | 996 | 1041 |
| Single Phase Power- 250V 32A, Australia/New Zealand | 5334 | 996 | 1042 |
| Single Phase Power- 250V 30A, Korea | 5334 | 996 | 1043 |
| Single Phase Power- 230V 32A, halogen free IEC 390 | 5334 | 996 | 1044 |
| Overhead ladder - 5ft | 5334 | 996 | 1101 |
| Ladder - Top Expansion - 3ft | 5334 | 996 | 1102 |
| Kick Step | 5334 | 996 | 1103 |
| DS8900F rack doors | 5334 | 996 | 1105 |
| SpaceSaver front/rear doors | 5334 | 996 | 1106 |
| Rack side cover pair | 5334 | 996 | 1107 |

| Description | Machine type | Model | Feature |
|--|---------------------|--------------|----------------|
| I/O enclosure pair PCIe 3 | 5334 | 996 | 1303 |
| Rack management switch pair | 5334 | 996 | 1310 |
| Top exit bracket for fibre cable R9 | 5334 | 996 | 1401 |
| 50 um Fibre cable (LC) | 5334 | 996 | 1410 |
| 50 um Fibre cable (LC/SC) | 5334 | 996 | 1411 |
| 50 um Fibre cable (Jumper) | 5334 | 996 | 1412 |
| 50 um Fibre cable 3m SW LC | 5334 | 996 | 1413 |
| 9 um Fibre cable (LC) | 5334 | 996 | 1420 |
| 9 um Fibre cable (LC/SC) | 5334 | 996 | 1421 |
| 9 um Fibre cable (Jumper) | 5334 | 996 | 1422 |
| 9 um Fibre cable 3m LW LC | 5334 | 996 | 1423 |
| 40m zHyperLink cable | 5334 | 996 | 1450 |
| 150m zHyperLink cable | 5334 | 996 | 1451 |
| HPFE Gen 2 adapter card | 5334 | 996 | 1604 |
| HPFE Gen 2 enclosure pair R9 | 5334 | 996 | 1605 |
| 800 GB 2.5-inch flash card set | 5334 | 996 | 1611 |
| 1600 GB 2.5-inch flash card set | 5334 | 996 | 1612 |
| 3200 GB 2.5-inch flash card set | 5334 | 996 | 1613 |
| 1.92 TB 2.5-inch high capacity flash | 5334 | 996 | 1622 |
| 3.8 TB 2.5-inch high capacity flash | 5334 | 996 | 1623 |
| 7.68 TB 2.5-inch high capacity flash | 5334 | 996 | 1624 |
| 15.36 TB 2.5-inch high capacity flash | 5334 | 996 | 1625 |
| Flash enclosure filler set | 5334 | 996 | 1699 |
| 1U Keyboard/ Display | 5334 | 996 | 1765 |
| DS8000 LMC R9.0 | 5334 | 996 | 1890 |
| Earthquake Kit DS8900F AC156 | 5334 | 996 | 1907 |
| Hardware installation MES | 5334 | 996 | 1999 |
| 16 Gb 4 port SW FCP/FICON adapter PCIE | 5334 | 996 | 3353 |
| 32 Gb 4 port SW FCP/FICON adapter PCIE | 5334 | 996 | 3355 |
| 16 Gb 4 port LW FCP/FICON adapter PCIE | 5334 | 996 | 3453 |

| Description | Machine type | Model | Feature |
|--|---------------------|--------------|----------------|
| 32 Gb 4 port LW FCP/FICON adapter PCIE | 5334 | 996 | 3455 |
| zHyperLink adapter | 5334 | 996 | 3500 |
| Transparent cloud tiering 10Gb/1Gb Ethernet pair V2 for 4U controllers | 5334 | 996 | 3603 |
| 10 cores processor pair indicator | 5334 | 996 | 4342 |
| 2nd 10 core processor pair indicator | 5334 | 996 | 4343 |
| 512GB System Cache (10 core) | 5334 | 996 | 4452 |
| 1024GB System Cache (20 core) | 5334 | 996 | 4453 |
| 2048GB System Cache (20 core) | 5334 | 996 | 4454 |
| BF 10TB increments from 0 to 100 TB | 5334 | 996 | 8151 |
| BF 15TB increments from 100.1 TB to 250 TB | 5334 | 996 | 8152 |
| BF 25TB increments from 250.1 TB to 500 TB | 5334 | 996 | 8153 |
| BF 75TB increments from 500.1 TB to 1250 TB | 5334 | 996 | 8154 |
| BF 175TB increments from 1250.1 TB to 3000 TB | 5334 | 996 | 8155 |
| BF 300TB increments from 3000.1 TB to 6000 TB | 5334 | 996 | 8156 |
| BF 600TB increments from 6000.1 TB to 12000 TB | 5334 | 996 | 8160 |
| CS - Inactive | 5334 | 996 | 8250 |
| CS 10TB increments from 0 to 100 TB | 5334 | 996 | 8251 |
| CS 15TB increments from 100.1 TB to 250 TB | 5334 | 996 | 8252 |
| CS 25TB increments from 250.1 TB to 500 TB | 5334 | 996 | 8253 |
| CS 75TB increments from 500.1 TB to 1250 TB | 5334 | 996 | 8254 |
| CS 175TB increments from | 5334 | 996 | 8255 |

| Description | Machine type | Model | Feature |
|---|---------------------|--------------|----------------|
| 1250.1 TB to 3000 TB | | | |
| CS 300TB increments from 3000.1 TB to 6000 TB | 5334 | 996 | 8256 |
| CS 600TB increments from 6000.1 TB to 12000 TB | 5334 | 996 | 8260 |
| zsS - Active | 5334 | 996 | 8300 |
| zsS - Inactive | 5334 | 996 | 8350 |
| zsS 10TB increments from 0 to 100 TB | 5334 | 996 | 8351 |
| zsS 15TB increments from 100.1 TB to 250 TB | 5334 | 996 | 8352 |
| zsS 25TB increments from 250.1 TB to 500 TB | 5334 | 996 | 8353 |
| zsS 75TB increments from 500.1 TB to 1250 TB | 5334 | 996 | 8354 |
| zsS 175TB increments from 1250.1 TB to 3000 TB | 5334 | 996 | 8355 |
| zsS 300TB increments from 3000.1 TB to 6000 TB | 5334 | 996 | 8356 |
| zsS 600TB increments from 6000.1 TB to 12000 TB | 5334 | 996 | 8360 |
| CSM on HMC - Active | 5334 | 996 | 8451 |
| IGF transaction indicator | 5334 | 996 | 8999 |
| Shipping and Handling NC | 5334 | 996 | AG00 |
| Shipping and handling 996 | 5334 | 996 | AGAL |
| BP Post-Sale Services | 5334 | 996 | SVBP |
| IBM Systems Lab Services Post-Sale Services | 5334 | 996 | SVCS |
| Other IBM Post-Sale Services | 5334 | 996 | SVNN |
| IBM DS8950F Expansion Unit | 5334 | E96 | |
| E96 factory merge | 5334 | E96 | 0005 |
| E96 field merge | 5334 | E96 | 0006 |
| PPA Software Order Indicator | 5334 | E96 | 0017 |
| DoD Indicator | 5334 | E96 | 0020 |
| JEMT indicator | 5334 | E96 | 0021 |
| Shipping Weight Reduction | 5334 | E96 | 0200 |

| Description | Machine type | Model | Feature |
|--|---------------------|--------------|----------------|
| E96 - position 1 | 5334 | E96 | 0245 |
| 800GB 2.5" flash encl ind | 5334 | E96 | 0261 |
| 1.6TB 2.5" flash encl ind | 5334 | E96 | 0262 |
| 3.2TB 2.5" flash encl ind | 5334 | E96 | 0263 |
| 1.92 TB 2.5" flash encl ind | 5334 | E96 | 0264 |
| 3.8 TB 2.5" flash encl ind | 5334 | E96 | 0265 |
| 7.68 TB 2.5" flash encl ind | 5334 | E96 | 0266 |
| 15.36 TB 2.5 flash encl ind | 5334 | E96 | 0267 |
| Encryption not capable | 5334 | E96 | 0403 |
| TDCPP free indicator | 5334 | E96 | 0404 |
| Flash card sets custom placement indicator | 5334 | E96 | 0606 |
| Flash enclosure pair indicator | 5334 | E96 | 0607 |
| Safe Guarded Copy Indicator | 5334 | E96 | 0785 |
| 5.1 TB to 10 TB capacity | 5334 | E96 | 0796 |
| 10.1 TB to 25 TB capacity | 5334 | E96 | 0797 |
| 25.1 TB to 50 TB capacity | 5334 | E96 | 0798 |
| 50.1 TB to 75 TB capacity | 5334 | E96 | 0799 |
| 75.1 TB to 100.0 TB capacity | 5334 | E96 | 0801 |
| 100.1 TB to 250 TB capacity | 5334 | E96 | 0803 |
| 250.1 TB to 500 TB capacity | 5334 | E96 | 0804 |
| 500.1 TB to 1250 TB capacity | 5334 | E96 | 0806 |
| 1250.1 TB to 3000 TB capacity | 5334 | E96 | 0807 |
| 3000.1 TB to 6000 TB capacity | 5334 | E96 | 0808 |
| 6000.1TB TO 12000TB CAPACITY | 5334 | E96 | 0809 |
| IBM/Openwave Alliance | 5334 | E96 | 0930 |
| IBM System i Indicator | 5334 | E96 | 0931 |
| IBM System p Indicator | 5334 | E96 | 0932 |
| IBM System x Indicator | 5334 | E96 | 0933 |
| IBM System z Indicator | 5334 | E96 | 0934 |
| IBM System z B/C indicator | 5334 | E96 | 0935 |

| Description | Machine type | Model | Feature |
|---|---------------------|--------------|----------------|
| IBM System zEnterprise Cloud indicator | 5334 | E96 | 0936 |
| Linux Indicator | 5334 | E96 | 0940 |
| Storage Appliance indicator | 5334 | E96 | 0952 |
| IBM ProtecTIER indicator | 5334 | E96 | 0960 |
| IBM Storwize V7000 indicator | 5334 | E96 | 0961 |
| IBM N series indicator | 5334 | E96 | 0962 |
| IBM SAN Volume Controller indicator | 5334 | E96 | 0963 |
| IBM/EPIC attachment indicator | 5334 | E96 | 0964 |
| VMware VAAI indicator | 5334 | E96 | 0965 |
| OpenStack indicator | 5334 | E96 | 0966 |
| US TAA compliance indicator | 5334 | E96 | 0983 |
| Front & rear door lock kit | 5334 | E96 | 1014 |
| Single Phase Power- 208V 30A NEMA L6-30P | 5334 | E96 | 1038 |
| Single Phase Power- 250V 32A IEC 309 | 5334 | E96 | 1039 |
| 3 Phase Power- 208V 60A IEC 309 (4 pin Delta) | 5334 | E96 | 1040 |
| 3 Phase Power- 250V 32A IEC 309 (5 pin Wye) | 5334 | E96 | 1041 |
| Single Phase Power- 250V 32A, Australia/New Zealand | 5334 | E96 | 1042 |
| Single Phase Power- 250V 30A, Korea | 5334 | E96 | 1043 |
| Single Phase Power- 230V 32A, halogen free IEC 390 | 5334 | E96 | 1044 |
| Overhead ladder - 5ft | 5334 | E96 | 1101 |
| Ladder - Top Expansion - 3ft | 5334 | E96 | 1102 |
| Kick Step | 5334 | E96 | 1103 |
| DS8900F rack doors | 5334 | E96 | 1105 |
| SpaceSaver front/rear doors | 5334 | E96 | 1106 |
| Rack side cover pair | 5334 | E96 | 1107 |
| I/O enclosure pair PCIe 3 | 5334 | E96 | 1303 |

| Description | Machine type | Model | Feature |
|--|---------------------|--------------|----------------|
| Adjacent 996_E96 PCIE3 Cablesset | 5334 | E96 | 1340 |
| 20 meter 996_E96 PCIE3 Cablesset | 5334 | E96 | 1341 |
| Top exit bracket for fibre cable R9 | 5334 | E96 | 1401 |
| 50 um Fibre cable (LC) | 5334 | E96 | 1410 |
| 50 um Fibre cable (LC/SC) | 5334 | E96 | 1411 |
| 50 um Fibre cable (Jumper) | 5334 | E96 | 1412 |
| 50 um Fibre cable 3m SW LC | 5334 | E96 | 1413 |
| 9 um Fibre cable (LC) | 5334 | E96 | 1420 |
| 9 um Fibre cable (LC/SC) | 5334 | E96 | 1421 |
| 9 um Fibre cable (Jumper) | 5334 | E96 | 1422 |
| 9 um Fibre cable 3m LW LC | 5334 | E96 | 1423 |
| 40m zHyperLink cable | 5334 | E96 | 1450 |
| 150m zHyperLink cable | 5334 | E96 | 1451 |
| HPFE Gen 2 adapter card | 5334 | E96 | 1604 |
| HPFE Gen 2 enclosure pair R9 | 5334 | E96 | 1605 |
| 800 GB 2.5-inch flash card set | 5334 | E96 | 1611 |
| 1600 GB 2.5-inch flash card set | 5334 | E96 | 1612 |
| 3200 GB 2.5-inch flash card set | 5334 | E96 | 1613 |
| 1.92 TB 2.5-inch high capacity flash | 5334 | E96 | 1622 |
| 3.8 TB 2.5-inch high capacity flash | 5334 | E96 | 1623 |
| 7.68 TB 2.5-inch high capacity flash | 5334 | E96 | 1624 |
| 15.36 TB 2.5-inch high capacity flash | 5334 | E96 | 1625 |
| Flash enclosure filler set | 5334 | E96 | 1699 |
| Earthquake Kit DS8900F AC156 | 5334 | E96 | 1907 |
| DS8000 LMC R9.0 indicator | 5334 | E96 | 1990 |
| Hardware installation MES | 5334 | E96 | 1999 |
| 16 Gb 4 port SW FCP/FICON adapter PCIE | 5334 | E96 | 3353 |
| 32 Gb 4 port SW FCP/FICON adapter PCIE | 5334 | E96 | 3355 |
| 16 Gb 4 port LW FCP/FICON adapter PCIE | 5334 | E96 | 3453 |

| Description | Machine type | Model | Feature |
|---|--------------|-------|---------|
| 32 Gb 4 port LW FCP/FICON adapter PCIE | 5334 | E96 | 3455 |
| zHyperLink adapter | 5334 | E96 | 3500 |
| IGF transaction indicator | 5334 | E96 | 8999 |
| Shipping and Handling NC | 5334 | E96 | AG00 |
| Shipping and handling E96 | 5334 | E96 | AGAM |
| BP Post-Sale Services | 5334 | E96 | SVBP |
| IBM Systems Lab Services Post-Sale Services | 5334 | E96 | SVCS |
| Other IBM Post-Sale Services | 5334 | E96 | SVNN |

Feature conversions

The existing components being replaced during a model or feature conversion become the property of IBM and must be returned.

Feature conversions are always implemented on a "quantity of one for quantity of one" basis. Multiple existing features may not be converted to a single new feature. Single existing features may not be converted to multiple new features.

The following conversions are available to clients:

Feature conversions for 5334-993

| From feature | To feature | Returned parts* |
|--|--|-----------------|
| 1038 - Single Phase Power- 208V 30A NEMA L6-30P | 1039 - Single Phase Power- 250V 32A IEC 309 | No |
| 1040 - 3 Phase Power- 208V 60A IEC 309 (4 pin Delta) | 1041 - 3 Phase Power- 250V 32A IEC 309 (5 pin Wye) | No |
| 1611 - 800 GB 2.5-inch flash card set | 1612 - 1600 GB 2.5-inch flash card set | Yes |
| 1611 - 800 GB 2.5-inch flash card set | 1613 - 3200 GB 2.5-inch flash card set | Yes |
| 1612 - 1600 GB 2.5-inch flash card set | 1613 - 3200 GB 2.5-inch flash card set | Yes |
| 1622 - 1.92 TB 2.5-inch high capacity flash | 1623 - 3.8 TB 2.5-inch high capacity flash | Yes |
| 1622 - 1.92 TB 2.5-inch high capacity flash | 1624 - 7.68 TB 2.5-inch high capacity flash | Yes |
| 1623 - 3.8 TB 2.5-inch high capacity flash | 1624 - 7.68 TB 2.5-inch high capacity flash | Yes |
| 1622 - 1.92 TB 2.5-inch high capacity flash | 1625 - 15.36 TB 2.5-inch high capacity flash | Yes |
| 1623 - 3.8 TB 2.5-inch high capacity flash | 1625 - 15.36 TB 2.5-inch high capacity flash | Yes |
| 1624 - 7.68 TB 2.5-inch high capacity flash | 1625 - 15.36 TB 2.5-inch high capacity flash | Yes |
| 4450 - 192GB System Cache (8 core) | 4451 - 512GB System Cache (8 core) | No |

Feature conversions for 5334-994

| From feature | To feature | Returned parts* |
|---|---|-----------------|
| 1038 - Single Phase Power- 208V 30A NEMA L6-30P | 1039 - Single Phase Power- 250V 32A IEC 309 | No |

| From feature | To feature | Returned parts* |
|---|---|-----------------|
| 1040 - 3 Phase Power-208V 60A IEC 309 (4 pin Delta) | 1041 - 3 Phase Power-250V 32A IEC 309 (5 pin Wye) | No |
| 1611 - 800 GB 2.5-inch flash card set | 1612 - 1600 GB 2.5-inch flash card set | Yes |
| 1611 - 800 GB 2.5-inch flash card set | 1613 - 3200 GB 2.5-inch flash card set | Yes |
| 1612 - 1600 GB 2.5-inch flash card set | 1613 - 3200 GB 2.5-inch flash card set | Yes |
| 1622 - 1.92 TB 2.5-inch high capacity flash | 1623 - 3.8 TB 2.5-inch high capacity flash | Yes |
| 1622 - 1.92 TB 2.5-inch high capacity flash | 1624 - 7.68 TB 2.5-inch high capacity flash | Yes |
| 1623 - 3.8 TB 2.5-inch high capacity flash | 1624 - 7.68 TB 2.5-inch high capacity flash | Yes |
| 1622 - 1.92 TB 2.5-inch high capacity flash | 1625 - 15.36 TB 2.5-inch high capacity flash | Yes |
| 1623 - 3.8 TB 2.5-inch high capacity flash | 1625 - 15.36 TB 2.5-inch high capacity flash | Yes |
| 1624 - 7.68 TB 2.5-inch high capacity flash | 1625 - 15.36 TB 2.5-inch high capacity flash | Yes |
| 4450 - 192GB System Cache (8 core) | 4451 - 512GB System Cache (8 core) | No |

Feature conversions for 5334-996

| From feature | To feature | Returned parts* |
|---|---|-----------------|
| 1038 - Single Phase Power- 208V 30A NEMA L6-30P | 1039 - Single Phase Power- 250V 32A IEC 309 | No |
| 1040 - 3 Phase Power-208V 60A IEC 309 (4 pin Delta) | 1041 - 3 Phase Power-250V 32A IEC 309 (5 pin Wye) | No |
| 1611 - 800 GB 2.5-inch flash card set | 1612 - 1600 GB 2.5-inch flash card set | Yes |
| 1611 - 800 GB 2.5-inch flash card set | 1613 - 3200 GB 2.5-inch flash card set | Yes |
| 1612 - 1600 GB 2.5-inch flash card set | 1613 - 3200 GB 2.5-inch flash card set | Yes |
| 1623 - 3.8 TB 2.5-inch high capacity flash | 1624 - 7.68 TB 2.5-inch high capacity flash | Yes |
| 1623 - 3.8 TB 2.5-inch high capacity flash | 1625 - 15.36 TB 2.5-inch high capacity flash | Yes |
| 1624 - 7.68 TB 2.5-inch high capacity flash | 1625 - 15.36 TB 2.5-inch high capacity flash | Yes |
| 4452 - 512GB System Cache (10 core) | 4453 - 1024GB System Cache (20 core) | No |
| 4453 - 1024GB System Cache (20 core) | 4454 - 2048GB System Cache (20 core) | No |

Feature conversions for 5334-E96

| From feature | To feature | Returned parts* |
|---|---|-----------------|
| 1038 - Single Phase Power- 208V 30A NEMA L6-30P | 1039 - Single Phase Power- 250V 32A IEC 309 | No |
| 1040 - 3 Phase Power-208V 60A IEC 309 (4 pin Delta) | 1041 - 3 Phase Power-250V 32A IEC 309 (5 pin Wye) | No |
| 1611 - 800 GB 2.5-inch flash card set | 1612 - 1600 GB 2.5-inch flash card set | Yes |
| 1611 - 800 GB 2.5-inch flash card set | 1613 - 3200 GB 2.5-inch flash card set | Yes |
| 1612 - 1600 GB 2.5-inch flash card set | 1613 - 3200 GB 2.5-inch flash card set | Yes |

| From feature | To feature | Returned parts* |
|---|--|-----------------|
| 1623 - 3.8 TB 2.5-inch high capacity flash | 1624 - 7.68 TB 2.5-inch high capacity flash | Yes |
| 1623 - 3.8 TB 2.5-inch high capacity flash | 1625 - 15.36 TB 2.5-inch high capacity flash | Yes |
| 1624 - 7.68 TB 2.5-inch high capacity flash | 1625 - 15.36 TB 2.5-inch high capacity flash | Yes |

*Parts removed as a result of a feature conversion become the property of IBM.

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^(R) ID and password are required (use IBMid).

[BP Attachment for Announcement Letter 119-063](#)

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Technical information

Specified operating environment

Physical specifications

Model 993

- 19-inch EIA rack mount system
 - 15U contiguous vertical rack space with one HPFE Gen 2 pair, without a 1U keyboard/display (666.75 mm, 26.25 in.)
 - 16U contiguous vertical rack space with one HPFE Gen 2 pair, with a 1U keyboard/display (711.2 mm, 28 in.)
 - 19U contiguous vertical rack space with two HPFE Gen 2 pairs, without a 1U keyboard/display (844.55 mm, 33.25 in.) (Only if installed in a compatible customer provided rack)
 - 20U contiguous vertical rack space with two HPFE Gen 2 pairs, with a 1U keyboard/display (889 mm, 35 in.) (Only if installed in a compatible customer provided rack)
 - Distance between rack front and rear EIA rails: 700 mm - 780 mm (27.6 in. - 30.7 in.)
 - Minimum distance from cabinet rear rail to rear door: 203 mm (8 in.)
- Weight: 320 kg (705 lb)

Model 994

- 40U 19-inch EIA rack
- Height: 1927 mm (75.87 in.)
- Width:
 - Space saver 600 mm (23.62 in.)
 - Decorative covers 616 mm (24.25 in.)
- Depth:
 - Space saver 1169 mm (46 in.)
 - Standard door 1270 mm (50 in.)
- Weight: 762 kg (1680 lb)

Model 996

- 40U 19-inch EIA rack
- Height: 1927 mm (75.87 in.)

- Width:
 - Space saver 600 mm (23.62 in.)
 - Decorative covers 616 mm (24.25 in.)
- Depth:
 - Space saver 1169 mm (46 in.)
 - Standard door 1270 mm (50 in.)
- Weight: 793 kg (1748 lb)

Model E96

- 40U 19-inch EIA rack
- Height: 1927 mm (75.87 in.)
- Width:
 - Space saver 600 mm (23.62 in.)
 - Decorative covers 616 mm (24.25 in.)
- Depth:
 - Space saver 1169 mm (46 in.)
 - Standard door 1270 mm (50 in.)
- Weight: 672 kg (1482 lb)

Operating environment

Model 993

- Temperature: 16°C to 32°C (60°F to 90°F)
- Relative humidity: 20% - 80%
- 11,942 BTU
- Electrical power (DS8910F Model 993): 2.4 kW
- Capacity of exhaust: 500 cubic feet/minute estimated
- Declared operating A-weighted sound power level: 8.4 bels estimated
- Leakage current: 30 mA max

Power consumption

- Model 993 with 2 HPFE pair: 3.5 kW

DASD subsystems

- Maximum physical storage capacity: 1,468,800 Gigabytes with 15.3 TB flash drive sets
- Power consumption: 3,500 W
- DASD Energy Consumption Efficiency: 0.000023 W/Gigabytes

Model 994

- Temperature: 16°C to 32°C (60°F to 90°F)
- Relative humidity: 20% - 80%
- 25,776 BTU
- Electrical power (DS8910F Model 994): 6.5 kW
- Capacity of exhaust: 1,500 cubic feet/minute estimated
- Declared operating A-weighted sound power level: 8.4 bels estimated
- Leakage current: 30 mA max per line cord.

Power consumption

- Model 994 maximum config: 6.5 kW

DASD subsystems

- Maximum physical storage capacity: 2,937,600 Gigabytes with 15.3 TB flash drive sets
- Power consumption: 6,500 W
- DASD Energy Consumption Efficiency: 0.000022 W/Gigabytes

Model 996

- Temperature: 16°C to 32°C (60°F to 90°F)
- Relative humidity: 20% - 80%
- 29,742 BTU
- Electrical power (DS8950F Model 996): 7.5 kW
- Capacity of exhaust: 1,500 cubic feet/minute estimated
- Declared operating A-weighted sound power level: 8.4 bels estimated
- Leakage current: 30 mA max per line cord.

Power consumption

- Model 996 maximum config: 7.5 kW

DASD subsystems

- Maximum physical storage capacity: 2,937,600 Gigabytes with 15.3 TB flash drive sets
- Power consumption: 7,500 W
- DASD Energy Consumption Efficiency: 0.000025 W/Gigabytes

Model E96

- Temperature: 16°C to 32°C (60°F to 90°F)
- Relative humidity: 20% - 80%
- 29,742 BTU
- Electrical power (DS8950F Model 996): 7.5 kW
- Capacity of exhaust: 1,500 cubic feet/minute estimated
- Declared operating A-weighted sound power level: 8.4 bels estimated
- Leakage current: 30 mA max per line cord.

Power consumption

- Model 996 maximum config: 7.5 kW

DASD subsystems

- Maximum physical storage capacity: 2,937,600 Gigabytes with 15.3 TB flash drive sets
- Power consumption: 7,500 W
- DASD Energy Consumption Efficiency: 0.000025 W/Gigabytes

Hardware requirements

Licensed Machine Code

All announced features and functions are supported on the IBM System Storage^(R) DS8000 series and require DS8000 LMC 8.9.00.xx.xx (bundle version 89.00.xx.xx), or later.

Limitations

None.

Planning information

Client responsibilities

Physical configuration planning

Physical configuration planning is a customer responsibility. A marketing specialist can help plan and select the DS8000 series physical configuration and features. Introductory information, including required and optional features, can be found in the *IBM DS8900F Introduction and Planning Guide (SC27-9560)* for the following models:

- DS8910F flexibility class: Rack-mounted models 993 and 994
- DS8950F agility class: Models 996 and E96

Capacity and performance planning assistance is also available. Through the use of Disk Magic, a disk marketing specialist can help plan and anticipate performance characteristics for specific workloads by modeling proposed configurations.

Installation planning

Installation planning is a customer responsibility. Information about planning the installation of a DS8000 series, including equipment, site, and power requirements, can be found in the *IBM DS8900F Introduction and Planning Guide (SC27-9560)* for Models 993, 994, 996, and E96.

Logical configuration planning and application

Logical configuration planning is a customer responsibility. Logical configuration refers to the creation of RAID arrays, volumes, and LUNs, and the assignment of the configured capacity to servers.

Application of the initial logical configuration and all subsequent modifications to the logical configuration is a customer responsibility. The logical configuration can be created, applied, and modified using the DS8000 Storage Manager (GUI) and DS command-line interface.

IBM Global Services will also apply or modify the logical configuration (fee-based service).

Licensed Machine Code planning and application

IBM may release changes to the DS8000 series Licensed Machine Code. IBM plans to make the most current DS8000 series Licensed Machine Code changes available for download by the DS8000 series system from the IBM System Storage technical support website. Not all Licensed Machine Code changes may be available through the support website. If the machine does not function as warranted and a problem can be resolved through the application of downloadable Licensed Machine Code, the customer is responsible for downloading and installing these designated Licensed Machine Code changes as IBM specifies. IBM has responsibility for installing changes that IBM does not make available for you to download. The DS8000 series includes many enhancements to make the Licensed Machine Code change process simpler, quicker, and more automated. A request can be made for IBM to install downloadable Licensed Machine Code changes, however there may be a charge for that service.

Calculating physical and effective capacity

For capacity calculation guidelines, see the *IBM DS8900F Introduction and Planning Guide (SC27-9560)* for models 993, 994, 996, and E96.

Encryption planning

Encryption planning is a customer responsibility. There are three major planning components to the implementation of an encryption environment. Review all planning requirements and include them in the installation considerations.

- IBM Storage Appliance planning
- IBM Security Key Lifecycle Manager (SKLM) planning
- Encryption activation review planning

IBM Storage Appliance planning

IBM Storage Appliance planning is a customer responsibility. Introductory information, including required and optional features, can be found in the *IBM Storage Appliance Guide (SC27-8520)*.

According to encryption best practices, DS8900F requires at least two storage appliances and associated software for each site that has one or more encryption-enabled DS8000 system. One server must be isolated, and the others can be of any supported appliance configuration. Any site that operates independently of other sites must have storage appliances for the encryption-enabled DS8000 systems at that site.

It is the customer's responsibility to replicate any key labels and their associated key material across all storage appliances attached to a given encryption-enabled DS8000 before configuring that key label on the DS8000.

Dual storage appliance server planning

DS8000 supports the ability to configure two independent key labels for each encryption-enabled DS8000. This capability enables the use of two independent storage appliance server platforms when one or both storage appliance server platforms are using secure-key mode key stores. This enables the isolated storage appliance server platform to be used in conjunction with a second appliance server platform that is operating with a secure-key mode key store.

For customers desiring NIST 800-131a compliance, IBM SKLM, formerly known as IBM Tivoli[®] Key Lifecycle Manager, V2.5, or later, is required.

IBM SKLM planning

The DS8000 series now supports SKLM V3.0.

| Program number | VRM | Program name |
|-----------------------|------------|--|
| 5724-T60 | 3.0 | IBM Security Key Lifecycle Manager (For PPA) |
| 5641-SKL | 3.0 | IBM Security Key Lifecycle Manager -- 1 year (For AAS) |
| 5641-SKM | 3.0 | IBM Security Key Lifecycle Manager -- 3 year (For AAS) |

To support enterprise-wide encryption-key management, an updated set of pricing metrics is available. These pricing metrics are simpler and more comprehensive for devices, users, and server capacity.

For self-encrypting disk drives, the metric is per client device with the disk drive feature number.

For more information about the licensing requirements and pricing of the metric, see Software Announcement [213-470](#), dated October 29, 2013.

Isolated key server ordering options

- **Single/dual storage appliance server - Feature numbers 1761 and 1762 are available through machine-type model 2421-AP1:** New storage

appliance server options are available in addition to the existing SKLM isolated key manager (feature number 0204).

- **Customer acquired isolated key server:** See the [IBM Security Key Lifecycle Manager Knowledge Center](#) for hardware and operating system requirements.

Note: Regardless of the ordering method, customers will need to acquire an SKLM license for use of the SKLM software ordered separately from the stand-alone server hardware.

Note: The licensing for SKLM includes both an install license for the SKLM management software and a license for the encrypting drives.

IBM Security Key Lifecycle Manager English publications may be viewed online on the electronic availability date in [IBM Knowledge Center](#).

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

Encryption activation review planning

Encryption activation is a customer responsibility. IBM encryption offerings must be activated prior to use. This activation is part of the installation and configuration steps required for use of the technology. This installation and activation review is performed by the IBM Systems and Technology Lab Services group.

Send email to

storsvcs@us.ibm.com

Go to the [Storage Services](#) website and click on **Contact now** to submit your inquiry or request.

You are responsible for downloading or obtaining from IBM, and installing designated Machine Code (microcode, basic input/output system code (called BIOS), utility programs, device drivers, and diagnostics delivered with an IBM machine) and other software updates in a timely manner from an IBM internet website or from other electronic media, and following the instructions that IBM provides. You may request IBM to install Machine Code changes; however, you may be charged for that service.

Cable orders

Cables are required to connect DS8000 series 16 Gbps and 32 Gbps FCP/FICON^(R) host adapter ports to server or fabric ports. Cables can be purchased using the appropriate DS8000 series feature numbers.

Additional cable options, along with product support services such as installation, are offered by IBM Global Services' Networking Services.

Fibre Channel/FICON (shortwave)

Shortwave Fibre Channel and FICON ports on the DS8000 series require a 50-micron (multimode) fiber optic cable terminated with a LC connector. Fibre Channel cables can be purchased using feature numbers 141x for 50-micron cables.

Fibre Channel/FICON (longwave)

Longwave Fibre Channel and FICON ports on the DS8000 series require a 9-micron (single mode) fiber optic cable terminated with a LC connector. Fibre Channel cables can be purchased using feature numbers 142x for 9-micron cables.

These are single 24-fiber cables with MTP connectors. Internally, a single cable houses 12 fibers for transmit and 12 fibers for receive.

Direct client support

Direct customer support for the DS8000 series is provided by IBM Operational Support Services - Support Line. This fee service can enhance your productivity by providing voice and electronic access into the IBM support organization. IBM Operational Support Services - Support Line will help answer questions pertaining to product and feature usage (how to), configuration, and product compatibility for eligible products. For a list of supported products, go to the [Support Line](#) website.

For more information on services, call 800-IBM-4YOU (426-4968).

Security, auditability, and control

This product uses the security and auditability features of the host hardware, host software, and application software to which it is attached.

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.

IBM Electronic Services

IBM has transformed its delivery of hardware and software support services to help you achieve higher system availability. Electronic Services is a web-enabled solution that offers an exclusive, no-additional-charge enhancement to the service and support available for IBM servers. These services are designed to provide the opportunity for greater system availability with faster problem resolution and preemptive monitoring. Electronic Services comprises two separate, but complementary, elements: Electronic Services news page and Electronic Services Agent.

The Electronic Services news page is a single internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. The news page enables you to gain easier access to IBM resources for assistance in resolving technical problems.

The Electronic Service Agent is no-additional-charge software that resides on your server. It monitors events and transmits system inventory information to IBM on a periodic, client-defined timetable. The Electronic Service Agent automatically reports hardware problems to IBM. Early knowledge about potential problems enables IBM to deliver proactive service that may result in higher system availability and performance. In addition, information collected through the Service Agent is made available to IBM service support representatives when they help answer your questions or diagnose problems. Installation and use of IBM Electronic Service Agent for problem reporting enables IBM to provide better support and service for your IBM server.

To learn how Electronic Services can work for you, go to the [IBM Electronic Service Agent](#) 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 summary¹ |
|--|---|
| Warranty period: | 1 year + 3 years Extended Support (4 years total) |
| Service level: | IBM On-Site, 24x7 Same Day |
| Service upgrade options | |
| Warranty Service Upgrade | Not applicable |
| Maintenance Services (Post-Warranty) | IBM On-Site Repair, 24x7 Same Day |
| IBM Hardware Maintenance Services - committed maintenance ² | Yes |

¹ See complete coverage details below

² Not offered in the US

Four years

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.

Premium Support Services

IBM DS8900F models offer enhanced worldwide client care support, including the availability of four years Premium Support Services in a single machine type. Premium Support Services enhance client communications regarding problem status and actions, and will include the following service enhancements:

- Hardware installation and hardware configuration support
- Improved client problem management
- Faster initial response time to prioritize the resolution of high severity problems
- Improved coordination across support teams within IBM
- Technical Advisor support is included during the warranty period

Extended Warranty Service

This product is provided with one year of standard warranty. For your convenience, IBM has provided three 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, 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:

- 24 hours per day, 7 days a week, same day response.

Usage plan machine

No

IBM hourly service rate classification

Three

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.

The following activities are a customer responsibility:

- Installation planning
- Retrieval and installation of feature activation codes
- Encryption planning

See the [Client responsibilities](#) section for more information.

Customer requests for installation of items not covered in the installation guide may be performed at IBM's hourly service rate designated for the machine.

Graduated program license charges apply

No

Licensed Machine Code

IBM Machine Code is licensed for use by a client on the IBM machine for which it was provided by IBM under the terms and conditions of the IBM License Agreement

for Machine Code, to enable the machine to function in accordance with its specifications, and only for the capacity authorized by IBM and acquired by the client. You can obtain the agreement from the [License Agreement for Machine Code and Licensed Internal Code](#) website.

Access to Machine Code updates is conditioned on entitlement and license validation in accordance with IBM policy and practice. IBM may verify entitlement through customer number, serial number, electronic restrictions, or any other means or methods employed by IBM in its discretion.

You may also obtain updated code by contacting your IBM representative.

If the machine does not function as warranted and your problem can be resolved through your application of downloadable Machine Code, you are responsible for downloading and installing these designated Machine Code changes as IBM specifies. If you would prefer, you may request IBM to install downloadable Machine Code changes; however, you may be charged for that service.

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.

The following are newly announced features and models on the specified models of the IBM System Storage 5334 machine type:

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|------------------------------|---------------------|------------------------|---------------------------------------|------------|---------------|
| DS8950F Expansion Unit | E96 | | Both | No | |
| DS8910F | 993 | | Both | No | |
| DS8910F | 994 | | Both | No | |
| DS8950F | 996 | | Both | No | |
| PPA Software Order Indicator | 993 | 0017 | Both | No | No |
| DoD Indicator | 993 | 0020 | Initial | No | No |
| JEMT indicator | 993 | 0021 | Initial | No | No |
| Shipping Weight Reduction | 993 | 0200 | Initial | No | No |
| 800GB 2.5" flash encl ind | 993 | 0261 | Both | No | No |
| 1.6TB 2.5" flash encl ind | 993 | 0262 | Both | No | No |
| 3.2TB 2.5" flash encl ind | 993 | 0263 | Both | No | No |
| 1.92 TB 2.5" flash encl ind | 993 | 0264 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|--|---------------------|------------------------|---------------------------------------|------------|---------------|
| 3.8 TB 2.5" flash encl ind | 993 | 0265 | Both | No | No |
| 7.68 TB 2.5" flash encl ind | 993 | 0266 | Both | No | No |
| 15.36 TB 2.5 flash encl ind | 993 | 0267 | Both | No | No |
| Encryption not capable | 993 | 0403 | Initial | No | No |
| TDCPP free indicator | 993 | 0404 | Initial | No | No |
| Flash card sets custom placement indicator | 993 | 0606 | Both | No | No |
| Flash enclosure pair indicator | 993 | 0607 | Both | No | No |
| Safe Guarded Copy Indicator | 993 | 0785 | Both | No | No |
| 5.1 TB to 10 TB capacity | 993 | 0796 | Both | No | No |
| 10.1 TB to 25 TB capacity | 993 | 0797 | Both | No | No |
| 25.1 TB to 50 TB capacity | 993 | 0798 | Both | No | No |
| 50.1 TB to 75 TB capacity | 993 | 0799 | Both | No | No |
| 75.1 TB to 100.0 TB capacity | 993 | 0801 | Both | No | No |
| 100.1 TB to 250 TB capacity | 993 | 0803 | Both | No | No |
| 250.1 TB to 500 TB capacity | 993 | 0804 | Both | No | No |
| 500.1 TB to 1250 TB capacity | 993 | 0806 | Both | No | No |
| 1250.1 TB to 3000 TB capacity | 993 | 0807 | Both | No | No |
| 3000.1 TB to 6000 TB capacity | 993 | 0808 | Both | No | No |
| 6000.1TB TO 12000TB CAPACITY | 993 | 0809 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|---|---------------------|------------------------|---------------------------------------|------------|---------------|
| IBM/ Openwave Alliance | 993 | 0930 | Both | No | No |
| IBM System i ^(R) Indicator | 993 | 0931 | Both | No | No |
| IBM System p Indicator | 993 | 0932 | Both | No | No |
| IBM System x Indicator | 993 | 0933 | Both | No | No |
| IBM System z ^(R) Indicator | 993 | 0934 | Both | No | No |
| IBM System z B/C indicator | 993 | 0935 | Both | No | No |
| IBM System zEnterprise ^(R) Cloud indicator | 993 | 0936 | Both | No | No |
| zFlex Frame Field Merge | 993 | 0937 | Initial | No | No |
| Rockhopper II Field Merge | 993 | 0938 | Initial | No | No |
| Customer Rack Field Merge | 993 | 0939 | Initial | No | No |
| Linux ^(R) Indicator | 993 | 0940 | Both | No | No |
| Storage Appliance indicator | 993 | 0952 | Both | No | No |
| IBM ProtectTIER ^(R) indicator | 993 | 0960 | Both | No | No |
| IBM Storwize ^(R) V7000 indicator | 993 | 0961 | Both | No | No |
| IBM N series indicator | 993 | 0962 | Both | No | No |
| IBM SAN Volume Controller indicator | 993 | 0963 | Both | No | No |
| IBM/EPIC attachment indicator | 993 | 0964 | Both | No | No |
| VMware VAAI indicator | 993 | 0965 | Both | No | No |
| OpenStack indicator | 993 | 0966 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|---|---------------------|------------------------|---------------------------------------|------------|---------------|
| US TAA compliance indicator | 993 | 0983 | Initial | No | No |
| Remote code load exception | 993 | 0990 | Both | No | No |
| Remote code load | 993 | 0991 | Both | No | No |
| Single Phase Power-208V 30A NEMA L6-30P | 993 | 1038 | Both | No | No |
| Single Phase Power-250V 32A IEC 309 | 993 | 1039 | Both | No | No |
| 3 Phase Power-208V 60A IEC 309 (4 pin Delta) | 993 | 1040 | Both | No | No |
| 3 Phase Power-250V 32A IEC 309 (5 pin Wye) | 993 | 1041 | Both | No | No |
| Single Phase Power-250V 32A, Australia/ New Zealand | 993 | 1042 | Both | No | No |
| Single Phase Power-250V 30A, Korea | 993 | 1043 | Both | No | No |
| Single Phase Power-230V 32A, halogen free IEC 390 | 993 | 1044 | Both | No | No |
| Overhead ladder - 5ft | 993 | 1101 | Both | No | No |
| Ladder - Top Expansion - 3ft | 993 | 1102 | Both | No | No |
| Kick Step | 993 | 1103 | Both | No | No |
| I/O enclosure pair PCIe 3 | 993 | 1303 | Both | No | No |
| 50 um Fibre cable (LC) | 993 | 1410 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|--------------------------------------|---------------------|------------------------|---------------------------------------|------------|---------------|
| 50 um Fibre cable (LC/SC) | 993 | 1411 | Both | No | No |
| 50 um Fibre cable (Jumper) | 993 | 1412 | Both | No | No |
| 50 um Fibre cable 3m SW LC | 993 | 1413 | Both | No | No |
| 9 um Fibre cable (LC) | 993 | 1420 | Both | No | No |
| 9 um Fibre cable (LC/SC) | 993 | 1421 | Both | No | No |
| 9 um Fibre cable (Jumper) | 993 | 1422 | Both | No | No |
| 9 um Fibre cable 3m LW LC | 993 | 1423 | Both | No | No |
| 40m zHyperLink cable | 993 | 1450 | Both | No | No |
| 150m zHyperLink cable | 993 | 1451 | Both | No | No |
| 3m zHyperLink cable | 993 | 1452 | Both | No | No |
| HPFE Gen 2 adapter card | 993 | 1604 | Both | No | No |
| HPFE Gen 2 enclosure pair R9 | 993 | 1605 | Both | No | No |
| 800 GB 2.5-inch flash card set | 993 | 1611 | Both | No | No |
| 1600 GB 2.5-inch flash card set | 993 | 1612 | Both | No | No |
| 3200 GB 2.5-inch flash card set | 993 | 1613 | Both | No | No |
| 1.92 TB 2.5-inch high capacity flash | 993 | 1622 | Both | No | No |
| 3.8 TB 2.5-inch high capacity flash | 993 | 1623 | Both | No | No |
| 7.68 TB 2.5-inch high capacity flash | 993 | 1624 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|--|---------------------|------------------------|---------------------------------------|------------|---------------|
| 15.36 TB 2.5-inch high capacity flash | 993 | 1625 | Both | No | No |
| Flash enclosure filler set | 993 | 1699 | Both | No | No |
| 1U Keyboard/ Display | 993 | 1765 | Both | No | No |
| DS8000 LMC R9.0 | 993 | 1890 | Both | No | No |
| Hardware installation MES | 993 | 1999 | MES | No | No |
| 16 Gb 4 port SW FCP/FICON adapter PCIE | 993 | 3353 | Both | No | No |
| 32 Gb 4 port SW FCP/FICON adapter PCIE | 993 | 3355 | Both | No | No |
| 16 Gb 4 port LW FCP/FICON adapter PCIE | 993 | 3453 | Both | No | No |
| 32 Gb 4 port LW FCP/FICON adapter PCIE | 993 | 3455 | Both | No | No |
| zHyperLink adapter | 993 | 3500 | Both | No | Yes |
| Transparent cloud tiering 10Gb/1Gb Ethernet pair V2 for 2U controllers | 993 | 3602 | Both | No | No |
| 8 core processor pair indicator | 993 | 4341 | Initial | No | No |
| 192GB System Cache (8 core) | 993 | 4450 | Initial | No | No |
| 512GB System Cache (8 core) | 993 | 4451 | Both | No | No |
| BF 10TB increments from 0 to 100 TB | 993 | 8151 | Both | No | No |
| BF 15TB increments | 993 | 8152 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|--|---------------------|------------------------|---------------------------------------|------------|---------------|
| from 100.1 TB to 250 TB | | | | | |
| BF 25TB increments from 250.1 TB to 500 TB | 993 | 8153 | Both | No | No |
| BF 75TB increments from 500.1 TB to 1250 TB | 993 | 8154 | Both | No | No |
| BF 175TB increments from 1250.1 TB to 3000 TB | 993 | 8155 | Both | No | No |
| BF 300TB increments from 3000.1 TB to 6000 TB | 993 | 8156 | Both | No | No |
| BF 600TB increments from 6000.1 TB to 12000 TB | 993 | 8160 | Both | No | No |
| CS - Inactive | 993 | 8250 | Both | No | No |
| CS 10TB increments from 0 to 100 TB | 993 | 8251 | Both | No | No |
| CS 15TB increments from 100.1 TB to 250 TB | 993 | 8252 | Both | No | No |
| CS 25TB increments from 250.1 TB to 500 TB | 993 | 8253 | Both | No | No |
| CS 75TB increments from 500.1 TB to 1250 TB | 993 | 8254 | Both | No | No |
| CS 175TB increments from 1250.1 TB to 3000 TB | 993 | 8255 | Both | No | No |
| CS 300TB increments from 3000.1 TB to 6000 TB | 993 | 8256 | Both | No | No |
| CS 600TB increments from 6000.1 TB | 993 | 8260 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|---|---------------------|------------------------|---------------------------------------|------------|---------------|
| to 12000 TB | | | | | |
| zsS - Active | 993 | 8300 | Both | No | No |
| zsS - Inactive | 993 | 8350 | Both | No | No |
| zsS 10TB increments from 0 to 100 TB | 993 | 8351 | Both | No | No |
| zsS 15TB increments from 100.1 TB to 250 TB | 993 | 8352 | Both | No | No |
| zsS 25TB increments from 250.1 TB to 500 TB | 993 | 8353 | Both | No | No |
| zsS 75TB increments from 500.1 TB to 1250 TB | 993 | 8354 | Both | No | No |
| zsS 175TB increments from 1250.1 TB to 3000 TB | 993 | 8355 | Both | No | No |
| zsS 300TB increments from 3000.1 TB to 6000 TB | 993 | 8356 | Both | No | No |
| zsS 600TB increments from 6000.1 TB to 12000 TB | 993 | 8360 | Both | No | No |
| CSM on HMC - Active | 993 | 8451 | Both | No | No |
| IGF transaction indicator | 993 | 8999 | MES | No | No |
| Shipping and Handling NC | 993 | AG00 | Initial | No | No |
| Shipping and handling 993 | 993 | AGAJ | Initial | No | No |
| BP Post-Sale Services | 993 | SVBP | Both | No | No |
| IBM Systems Lab Services Post-Sale Services | 993 | SVCS | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|--|---------------------|------------------------|---------------------------------------|------------|---------------|
| Other IBM Post-Sale Services | 993 | SVNN | Both | No | No |
| PPA Software Order Indicator | 994 | 0017 | Both | No | No |
| DoD Indicator | 994 | 0020 | Initial | No | No |
| JEMT indicator | 994 | 0021 | Initial | No | No |
| Shipping Weight Reduction | 994 | 0200 | Initial | No | No |
| 800GB 2.5" flash encl ind | 994 | 0261 | Both | No | No |
| 1.6TB 2.5" flash encl ind | 994 | 0262 | Both | No | No |
| 3.2TB 2.5" flash encl ind | 994 | 0263 | Both | No | No |
| 1.92 TB 2.5" flash encl ind | 994 | 0264 | Both | No | No |
| 3.8 TB 2.5" flash encl ind | 994 | 0265 | Both | No | No |
| 7.68 TB 2.5" flash encl ind | 994 | 0266 | Both | No | No |
| 15.36 TB 2.5 flash encl ind | 994 | 0267 | Both | No | No |
| Encryption not capable | 994 | 0403 | Initial | No | No |
| TDCPP free indicator | 994 | 0404 | Initial | No | No |
| Flash card sets custom placement indicator | 994 | 0606 | Both | No | No |
| Flash enclosure pair indicator | 994 | 0607 | Both | No | No |
| Safe Guarded Copy Indicator | 994 | 0785 | Both | No | No |
| 5.1 TB to 10 TB capacity | 994 | 0796 | Both | No | No |
| 10.1 TB to 25 TB capacity | 994 | 0797 | Both | No | No |
| 25.1 TB to 50 TB capacity | 994 | 0798 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|--|---------------------|------------------------|---------------------------------------|------------|---------------|
| 50.1 TB to 75 TB capacity | 994 | 0799 | Both | No | No |
| 75.1 TB to 100.0 TB capacity | 994 | 0801 | Both | No | No |
| 100.1 TB to 250 TB capacity | 994 | 0803 | Both | No | No |
| 250.1 TB to 500 TB capacity | 994 | 0804 | Both | No | No |
| 500.1 TB to 1250 TB capacity | 994 | 0806 | Both | No | No |
| 1250.1 TB to 3000 TB capacity | 994 | 0807 | Both | No | No |
| 3000.1 TB to 6000 TB capacity | 994 | 0808 | Both | No | No |
| 6000.1TB TO 12000TB CAPACITY | 994 | 0809 | Both | No | No |
| IBM/ Openwave Alliance | 994 | 0930 | Both | No | No |
| IBM System i Indicator | 994 | 0931 | Both | No | No |
| IBM System p Indicator | 994 | 0932 | Both | No | No |
| IBM System x Indicator | 994 | 0933 | Both | No | No |
| IBM System z Indicator | 994 | 0934 | Both | No | No |
| IBM System z B/C indicator | 994 | 0935 | Both | No | No |
| IBM System zEnterprise Cloud indicator | 994 | 0936 | Both | No | No |
| Linux Indicator | 994 | 0940 | Both | No | No |
| Storage Appliance indicator | 994 | 0952 | Both | No | No |
| IBM ProtecTIER indicator | 994 | 0960 | Both | No | No |
| IBM Storwize V7000 indicator | 994 | 0961 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|---|---------------------|------------------------|---------------------------------------|------------|---------------|
| IBM N series indicator | 994 | 0962 | Both | No | No |
| IBM SAN Volume Controller indicator | 994 | 0963 | Both | No | No |
| IBM/EPIC attachment indicator | 994 | 0964 | Both | No | No |
| VMware VAAI indicator | 994 | 0965 | Both | No | No |
| OpenStack indicator | 994 | 0966 | Both | No | No |
| US TAA compliance indicator | 994 | 0983 | Initial | No | No |
| Remote code load exception | 994 | 0990 | Both | No | No |
| Remote code load | 994 | 0991 | Both | No | No |
| Front & rear door lock kit | 994 | 1014 | Both | No | No |
| Single Phase Power-208V 30A NEMA L6-30P | 994 | 1038 | Both | No | No |
| Single Phase Power-250V 32A IEC 309 | 994 | 1039 | Both | No | No |
| 3 Phase Power-208V 60A IEC 309 (4 pin Delta) | 994 | 1040 | Both | No | No |
| 3 Phase Power-250V 32A IEC 309 (5 pin Wye) | 994 | 1041 | Both | No | No |
| Single Phase Power-250V 32A, Australia/ New Zealand | 994 | 1042 | Both | No | No |
| Single Phase Power-250V 30A, Korea | 994 | 1043 | Both | No | No |
| Single Phase Power-230V 32A, halogen | 994 | 1044 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|-------------------------------------|---------------------|------------------------|---------------------------------------|------------|---------------|
| free IEC 390 | | | | | |
| Overhead ladder - 5ft | 994 | 1101 | Both | No | No |
| Ladder - Top Expansion - 3ft | 994 | 1102 | Both | No | No |
| Kick Step | 994 | 1103 | Both | No | No |
| DS8900F rack doors | 994 | 1105 | Both | No | No |
| SpaceSaver front/rear doors | 994 | 1106 | Both | No | No |
| Rack side cover pair | 994 | 1107 | Both | No | No |
| I/O enclosure pair PCIe 3 | 994 | 1303 | Both | No | No |
| Top exit bracket for fibre cable R9 | 994 | 1401 | Both | No | No |
| 50 um Fibre cable (LC) | 994 | 1410 | Both | No | No |
| 50 um Fibre cable (LC/SC) | 994 | 1411 | Both | No | No |
| 50 um Fibre cable (Jumper) | 994 | 1412 | Both | No | No |
| 50 um Fibre cable 3m SW LC | 994 | 1413 | Both | No | No |
| 9 um Fibre cable (LC) | 994 | 1420 | Both | No | No |
| 9 um Fibre cable (LC/SC) | 994 | 1421 | Both | No | No |
| 9 um Fibre cable (Jumper) | 994 | 1422 | Both | No | No |
| 9 um Fibre cable 3m LW LC | 994 | 1423 | Both | No | No |
| 40m zHyperLink cable | 994 | 1450 | Both | No | No |
| 150m zHyperLink cable | 994 | 1451 | Both | No | No |
| HPFE Gen 2 adapter card | 994 | 1604 | Both | No | No |
| HPFE Gen 2 enclosure pair R9 | 994 | 1605 | Both | No | No |
| 800 GB 2.5-inch | 994 | 1611 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|--|---------------------|------------------------|---------------------------------------|------------|---------------|
| flash card set | | | | | |
| 1600 GB 2.5-inch flash card set | 994 | 1612 | Both | No | No |
| 3200 GB 2.5-inch flash card set | 994 | 1613 | Both | No | No |
| 1.92 TB 2.5-inch high capacity flash | 994 | 1622 | Both | No | No |
| 3.8 TB 2.5-inch high capacity flash | 994 | 1623 | Both | No | No |
| 7.68 TB 2.5-inch high capacity flash | 994 | 1624 | Both | No | No |
| 15.36 TB 2.5-inch high capacity flash | 994 | 1625 | Both | No | No |
| Flash enclosure filler set | 994 | 1699 | Both | No | No |
| 1U Keyboard/ Display | 994 | 1765 | Both | No | No |
| DS8000 LMC R9.0 | 994 | 1890 | Both | No | No |
| Earthquake Kit DS8900F AC156 | 994 | 1907 | Both | No | No |
| Hardware installation MES | 994 | 1999 | MES | No | No |
| 16 Gb 4 port SW FCP/FICON adapter PCIE | 994 | 3353 | Both | No | No |
| 32 Gb 4 port SW FCP/FICON adapter PCIE | 994 | 3355 | Both | No | No |
| 16 Gb 4 port LW FCP/FICON adapter PCIE | 994 | 3453 | Both | No | No |
| 32 Gb 4 port LW FCP/FICON | 994 | 3455 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|---|---------------------|------------------------|---------------------------------------|------------|---------------|
| adapter PCIE | | | | | |
| zHyperLink adapter | 994 | 3500 | Both | No | Yes |
| Transparent cloud tiering 10Gb/1Gb Ethernet pair V2 for 2U controllers | 994 | 3602 | Both | No | No |
| 8 core processor pair indicator | 994 | 4341 | Initial | No | No |
| 192GB System Cache (8 core) | 994 | 4450 | Initial | No | No |
| 512GB System Cache (8 core) | 994 | 4451 | Both | No | No |
| BF 10TB increments from 0 to 100 TB | 994 | 8151 | Both | No | No |
| BF 15TB increments from 100.1 TB to 250 TB | 994 | 8152 | Both | No | No |
| BF 25TB increments from 250.1 TB to 500 TB | 994 | 8153 | Both | No | No |
| BF 75TB increments from 500.1 TB to 1250 TB | 994 | 8154 | Both | No | No |
| BF 175TB increments from 1250.1 TB to 3000 TB | 994 | 8155 | Both | No | No |
| BF 300TB increments from 3000.1 TB to 6000 TB | 994 | 8156 | Both | No | No |
| BF 600TB increments from 6000.1 TB to 12000 TB | 994 | 8160 | Both | No | No |
| CS - Inactive | 994 | 8250 | Both | No | No |
| CS 10TB increments from 0 to 100 TB | 994 | 8251 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|--|---------------------|------------------------|---------------------------------------|------------|---------------|
| CS 15TB increments from 100.1 TB to 250 TB | 994 | 8252 | Both | No | No |
| CS 25TB increments from 250.1 TB to 500 TB | 994 | 8253 | Both | No | No |
| CS 75TB increments from 500.1 TB to 1250 TB | 994 | 8254 | Both | No | No |
| CS 175TB increments from 1250.1 TB to 3000 TB | 994 | 8255 | Both | No | No |
| CS 300TB increments from 3000.1 TB to 6000 TB | 994 | 8256 | Both | No | No |
| CS 600TB increments from 6000.1 TB to 12000 TB | 994 | 8260 | Both | No | No |
| zsS - Active | 994 | 8300 | Both | No | No |
| zsS - Inactive | 994 | 8350 | Both | No | No |
| zsS 10TB increments from 0 to 100 TB | 994 | 8351 | Both | No | No |
| zsS 15TB increments from 100.1 TB to 250 TB | 994 | 8352 | Both | No | No |
| zsS 25TB increments from 250.1 TB to 500 TB | 994 | 8353 | Both | No | No |
| zsS 75TB increments from 500.1 TB to 1250 TB | 994 | 8354 | Both | No | No |
| zsS 175TB increments from 1250.1 TB to 3000 TB | 994 | 8355 | Both | No | No |
| zsS 300TB increments from 3000.1 TB to 6000 TB | 994 | 8356 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|---|---------------------|------------------------|---------------------------------------|------------|---------------|
| zsS 600TB increments from 6000.1 TB to 12000 TB | 994 | 8360 | Both | No | No |
| CSM on HMC - Active | 994 | 8451 | Both | No | No |
| IGF transaction indicator | 994 | 8999 | MES | No | No |
| Shipping and Handling NC | 994 | AG00 | Initial | No | No |
| Shipping and handling 994 | 994 | AGAK | Initial | No | No |
| BP Post-Sale Services | 994 | SVBP | Both | No | No |
| IBM Systems Lab Services Post-Sale Services | 994 | SVCS | Both | No | No |
| Other IBM Post-Sale Services | 994 | SVNN | Both | No | No |
| E96 factory merge | 996 | 0005 | Initial | No | No |
| PPA Software Order Indicator | 996 | 0017 | Both | No | No |
| DoD Indicator | 996 | 0020 | Initial | No | No |
| JEMT indicator | 996 | 0021 | Initial | No | No |
| Shipping Weight Reduction | 996 | 0200 | Initial | No | No |
| E96 - position 1 | 996 | 0245 | Both | No | No |
| 800GB 2.5" flash encl ind | 996 | 0261 | Both | No | No |
| 1.6TB 2.5" flash encl ind | 996 | 0262 | Both | No | No |
| 3.2TB 2.5" flash encl ind | 996 | 0263 | Both | No | No |
| 1.92 TB 2.5" flash encl ind | 996 | 0264 | Both | No | No |
| 3.8 TB 2.5" flash encl ind | 996 | 0265 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|--|---------------------|------------------------|---------------------------------------|------------|---------------|
| 7.68 TB 2.5" flash encl ind | 996 | 0266 | Both | No | No |
| 15.36 TB 2.5 flash encl ind | 996 | 0267 | Both | No | No |
| Encryption not capable | 996 | 0403 | Initial | No | No |
| TDCPP free indicator | 996 | 0404 | Initial | No | No |
| Flash card sets custom placement indicator | 996 | 0606 | Both | No | No |
| Flash enclosure pair indicator | 996 | 0607 | Both | No | No |
| Safe Guarded Copy Indicator | 996 | 0785 | Both | No | No |
| 5.1 TB to 10 TB capacity | 996 | 0796 | Both | No | No |
| 10.1 TB to 25 TB capacity | 996 | 0797 | Both | No | No |
| 25.1 TB to 50 TB capacity | 996 | 0798 | Both | No | No |
| 50.1 TB to 75 TB capacity | 996 | 0799 | Both | No | No |
| 75.1 TB to 100.0 TB capacity | 996 | 0801 | Both | No | No |
| 100.1 TB to 250 TB capacity | 996 | 0803 | Both | No | No |
| 250.1 TB to 500 TB capacity | 996 | 0804 | Both | No | No |
| 500.1 TB to 1250 TB capacity | 996 | 0806 | Both | No | No |
| 1250.1 TB to 3000 TB capacity | 996 | 0807 | Both | No | No |
| 3000.1 TB to 6000 TB capacity | 996 | 0808 | Both | No | No |
| 6000.1TB TO 12000TB CAPACITY | 996 | 0809 | Both | No | No |
| IBM/ Openwave Alliance | 996 | 0930 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|--|---------------------|------------------------|---------------------------------------|------------|---------------|
| IBM System i Indicator | 996 | 0931 | Both | No | No |
| IBM System p Indicator | 996 | 0932 | Both | No | No |
| IBM System x Indicator | 996 | 0933 | Both | No | No |
| IBM System z Indicator | 996 | 0934 | Both | No | No |
| IBM System z B/C indicator | 996 | 0935 | Both | No | No |
| IBM System zEnterprise Cloud indicator | 996 | 0936 | Both | No | No |
| Linux Indicator | 996 | 0940 | Both | No | No |
| Storage Appliance indicator | 996 | 0952 | Both | No | No |
| IBM ProtecTIER indicator | 996 | 0960 | Both | No | No |
| IBM Storwize V7000 indicator | 996 | 0961 | Both | No | No |
| IBM N series indicator | 996 | 0962 | Both | No | No |
| IBM SAN Volume Controller indicator | 996 | 0963 | Both | No | No |
| IBM/EPIC attachment indicator | 996 | 0964 | Both | No | No |
| VMware VAAI indicator | 996 | 0965 | Both | No | No |
| OpenStack indicator | 996 | 0966 | Both | No | No |
| US TAA compliance indicator | 996 | 0983 | Initial | No | No |
| Remote code load exception | 996 | 0990 | Both | No | No |
| Remote code load | 996 | 0991 | Both | No | No |
| Front & rear door lock kit | 996 | 1014 | Both | No | No |
| Single Phase Power-208V 30A | 996 | 1038 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|---|---------------------|------------------------|---------------------------------------|------------|---------------|
| NEMA L6-30P | | | | | |
| Single Phase Power-250V 32A IEC 309 | 996 | 1039 | Both | No | No |
| 3 Phase Power-208V 60A IEC 309 (4 pin Delta) | 996 | 1040 | Both | No | No |
| 3 Phase Power-250V 32A IEC 309 (5 pin Wye) | 996 | 1041 | Both | No | No |
| Single Phase Power-250V 32A, Australia/ New Zealand | 996 | 1042 | Both | No | No |
| Single Phase Power-250V 30A, Korea | 996 | 1043 | Both | No | No |
| Single Phase Power-230V 32A, halogen free IEC 390 | 996 | 1044 | Both | No | No |
| Overhead ladder - 5ft | 996 | 1101 | Both | No | No |
| Ladder - Top Expansion - 3ft | 996 | 1102 | Both | No | No |
| Kick Step | 996 | 1103 | Both | No | No |
| DS8900F rack doors | 996 | 1105 | Both | No | No |
| SpaceSaver front/rear doors | 996 | 1106 | Both | No | No |
| Rack side cover pair | 996 | 1107 | Both | No | No |
| I/O enclosure pair PCIe 3 | 996 | 1303 | Both | No | No |
| Rack management switch pair | 996 | 1310 | Both | No | No |
| Top exit bracket for fibre cable R9 | 996 | 1401 | Both | No | No |
| 50 um Fibre cable (LC) | 996 | 1410 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|--------------------------------------|---------------------|------------------------|---------------------------------------|------------|---------------|
| 50 um Fibre cable (LC/SC) | 996 | 1411 | Both | No | No |
| 50 um Fibre cable (Jumper) | 996 | 1412 | Both | No | No |
| 50 um Fibre cable 3m SW LC | 996 | 1413 | Both | No | No |
| 9 um Fibre cable (LC) | 996 | 1420 | Both | No | No |
| 9 um Fibre cable (LC/SC) | 996 | 1421 | Both | No | No |
| 9 um Fibre cable (Jumper) | 996 | 1422 | Both | No | No |
| 9 um Fibre cable 3m LW LC | 996 | 1423 | Both | No | No |
| 40m zHyperLink cable | 996 | 1450 | Both | No | No |
| 150m zHyperLink cable | 996 | 1451 | Both | No | No |
| HPFE Gen 2 adapter card | 996 | 1604 | Both | No | No |
| HPFE Gen 2 enclosure pair R9 | 996 | 1605 | Both | No | No |
| 800 GB 2.5-inch flash card set | 996 | 1611 | Both | No | No |
| 1600 GB 2.5-inch flash card set | 996 | 1612 | Both | No | No |
| 3200 GB 2.5-inch flash card set | 996 | 1613 | Both | No | No |
| 1.92 TB 2.5-inch high capacity flash | 996 | 1622 | Both | No | No |
| 3.8 TB 2.5-inch high capacity flash | 996 | 1623 | Both | No | No |
| 7.68 TB 2.5-inch high capacity flash | 996 | 1624 | Both | No | No |
| 15.36 TB 2.5-inch high | 996 | 1625 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|--|---------------------|------------------------|---------------------------------------|------------|---------------|
| capacity flash | | | | | |
| Flash enclosure filler set | 996 | 1699 | Both | No | No |
| 1U Keyboard/ Display | 996 | 1765 | Both | No | No |
| DS8000 LMC R9.0 | 996 | 1890 | Both | No | No |
| Earthquake Kit DS8900F AC156 | 996 | 1907 | Both | No | No |
| Hardware installation MES | 996 | 1999 | MES | No | No |
| 16 Gb 4 port SW FCP/FICON adapter PCIE | 996 | 3353 | Both | No | No |
| 32 Gb 4 port SW FCP/FICON adapter PCIE | 996 | 3355 | Both | No | No |
| 16 Gb 4 port LW FCP/FICON adapter PCIE | 996 | 3453 | Both | No | No |
| 32 Gb 4 port LW FCP/FICON adapter PCIE | 996 | 3455 | Both | No | No |
| zHyperLink adapter | 996 | 3500 | Both | No | Yes |
| Transparent cloud tiering 10Gb/1Gb Ethernet pair V2 for 4U controllers | 996 | 3603 | Both | No | Yes |
| 10 cores processor pair indicator | 996 | 4342 | Initial | No | No |
| 2nd 10 core processor pair indicator | 996 | 4343 | Both | No | No |
| 512GB System Cache (10 core) | 996 | 4452 | Initial | No | No |
| 1024GB System Cache (20 core) | 996 | 4453 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|--|---------------------|------------------------|---------------------------------------|------------|---------------|
| 2048GB System Cache (20 core) | 996 | 4454 | Both | No | No |
| BF 10TB increments from 0 to 100 TB | 996 | 8151 | Both | No | No |
| BF 15TB increments from 100.1 TB to 250 TB | 996 | 8152 | Both | No | No |
| BF 25TB increments from 250.1 TB to 500 TB | 996 | 8153 | Both | No | No |
| BF 75TB increments from 500.1 TB to 1250 TB | 996 | 8154 | Both | No | No |
| BF 175TB increments from 1250.1 TB to 3000 TB | 996 | 8155 | Both | No | No |
| BF 300TB increments from 3000.1 TB to 6000 TB | 996 | 8156 | Both | No | No |
| BF 600TB increments from 6000.1 TB to 12000 TB | 996 | 8160 | Both | No | No |
| CS - Inactive | 996 | 8250 | Both | No | No |
| CS 10TB increments from 0 to 100 TB | 996 | 8251 | Both | No | No |
| CS 15TB increments from 100.1 TB to 250 TB | 996 | 8252 | Both | No | No |
| CS 25TB increments from 250.1 TB to 500 TB | 996 | 8253 | Both | No | No |
| CS 75TB increments from 500.1 TB to 1250 TB | 996 | 8254 | Both | No | No |
| CS 175TB increments from 1250.1 TB to 3000 TB | 996 | 8255 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|---|---------------------|------------------------|---------------------------------------|------------|---------------|
| CS 300TB increments from 3000.1 TB to 6000 TB | 996 | 8256 | Both | No | No |
| CS 600TB increments from 6000.1 TB to 12000 TB | 996 | 8260 | Both | No | No |
| zsS - Active | 996 | 8300 | Both | No | No |
| zsS - Inactive | 996 | 8350 | Both | No | No |
| zsS 10TB increments from 0 to 100 TB | 996 | 8351 | Both | No | No |
| zsS 15TB increments from 100.1 TB to 250 TB | 996 | 8352 | Both | No | No |
| zsS 25TB increments from 250.1 TB to 500 TB | 996 | 8353 | Both | No | No |
| zsS 75TB increments from 500.1 TB to 1250 TB | 996 | 8354 | Both | No | No |
| zsS 175TB increments from 1250.1 TB to 3000 TB | 996 | 8355 | Both | No | No |
| zsS 300TB increments from 3000.1 TB to 6000 TB | 996 | 8356 | Both | No | No |
| zsS 600TB increments from 6000.1 TB to 12000 TB | 996 | 8360 | Both | No | No |
| CSM on HMC - Active | 996 | 8451 | Both | No | No |
| IGF transaction indicator | 996 | 8999 | MES | No | No |
| Shipping and Handling NC | 996 | AG00 | Initial | No | No |
| Shipping and handling 996 | 996 | AGAL | Initial | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|---|---------------------|------------------------|---------------------------------------|------------|---------------|
| BP Post-Sale Services | 996 | SVBP | Both | No | No |
| IBM Systems Lab Services Post-Sale Services | 996 | SVCS | Both | No | No |
| Other IBM Post-Sale Services | 996 | SVNN | Both | No | No |
| E96 factory merge | E96 | 0005 | Initial | No | No |
| E96 field merge | E96 | 0006 | Initial | No | No |
| PPA Software Order Indicator | E96 | 0017 | Both | No | No |
| DoD Indicator | E96 | 0020 | Initial | No | No |
| JEMT indicator | E96 | 0021 | Initial | No | No |
| Shipping Weight Reduction | E96 | 0200 | Initial | No | No |
| E96 - position 1 | E96 | 0245 | Both | No | No |
| 800GB 2.5" flash encl ind | E96 | 0261 | Both | No | No |
| 1.6TB 2.5" flash encl ind | E96 | 0262 | Both | No | No |
| 3.2TB 2.5" flash encl ind | E96 | 0263 | Both | No | No |
| 1.92 TB 2.5" flash encl ind | E96 | 0264 | Both | No | No |
| 3.8 TB 2.5" flash encl ind | E96 | 0265 | Both | No | No |
| 7.68 TB 2.5" flash encl ind | E96 | 0266 | Both | No | No |
| 15.36 TB 2.5 flash encl ind | E96 | 0267 | Both | No | No |
| Encryption not capable | E96 | 0403 | Initial | No | No |
| TDCPP free indicator | E96 | 0404 | Initial | No | No |
| Flash card sets custom placement indicator | E96 | 0606 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|--------------------------------|---------------------|------------------------|---------------------------------------|------------|---------------|
| Flash enclosure pair indicator | E96 | 0607 | Both | No | No |
| Safe Guarded Copy Indicator | E96 | 0785 | Both | No | No |
| 5.1 TB to 10 TB capacity | E96 | 0796 | Both | No | No |
| 10.1 TB to 25 TB capacity | E96 | 0797 | Both | No | No |
| 25.1 TB to 50 TB capacity | E96 | 0798 | Both | No | No |
| 50.1 TB to 75 TB capacity | E96 | 0799 | Both | No | No |
| 75.1 TB to 100.0 TB capacity | E96 | 0801 | Both | No | No |
| 100.1 TB to 250 TB capacity | E96 | 0803 | Both | No | No |
| 250.1 TB to 500 TB capacity | E96 | 0804 | Both | No | No |
| 500.1 TB to 1250 TB capacity | E96 | 0806 | Both | No | No |
| 1250.1 TB to 3000 TB capacity | E96 | 0807 | Both | No | No |
| 3000.1 TB to 6000 TB capacity | E96 | 0808 | Both | No | No |
| 6000.1TB TO 12000TB CAPACITY | E96 | 0809 | Both | No | No |
| IBM/ Openwave Alliance | E96 | 0930 | Both | No | No |
| IBM System i Indicator | E96 | 0931 | Both | No | No |
| IBM System p Indicator | E96 | 0932 | Both | No | No |
| IBM System x Indicator | E96 | 0933 | Both | No | No |
| IBM System z Indicator | E96 | 0934 | Both | No | No |
| IBM System z B/C indicator | E96 | 0935 | Both | No | No |
| IBM System | E96 | 0936 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|--|---------------------|------------------------|---------------------------------------|------------|---------------|
| zEnterprise Cloud indicator | | | | | |
| Linux Indicator | E96 | 0940 | Both | No | No |
| Storage Appliance indicator | E96 | 0952 | Both | No | No |
| IBM ProtecTIER indicator | E96 | 0960 | Both | No | No |
| IBM Storwize V7000 indicator | E96 | 0961 | Both | No | No |
| IBM N series indicator | E96 | 0962 | Both | No | No |
| IBM SAN Volume Controller indicator | E96 | 0963 | Both | No | No |
| IBM/EPIC attachment indicator | E96 | 0964 | Both | No | No |
| VMware VAAI indicator | E96 | 0965 | Both | No | No |
| OpenStack indicator | E96 | 0966 | Both | No | No |
| US TAA compliance indicator | E96 | 0983 | Initial | No | No |
| Front & rear door lock kit | E96 | 1014 | Both | No | No |
| Single Phase Power-208V 30A NEMA L6-30P | E96 | 1038 | Both | No | No |
| Single Phase Power-250V 32A IEC 309 | E96 | 1039 | Both | No | No |
| 3 Phase Power-208V 60A IEC 309 (4 pin Delta) | E96 | 1040 | Both | No | No |
| 3 Phase Power-250V 32A IEC 309 (5 pin Wye) | E96 | 1041 | Both | No | No |
| Single Phase Power-250V 32A, Australia/New Zealand | E96 | 1042 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|---|---------------------|------------------------|---------------------------------------|------------|---------------|
| Single Phase Power-250V 30A, Korea | E96 | 1043 | Both | No | No |
| Single Phase Power-230V 32A, halogen free IEC 390 | E96 | 1044 | Both | No | No |
| Overhead ladder - 5ft | E96 | 1101 | Both | No | No |
| Ladder - Top Expansion - 3ft | E96 | 1102 | Both | No | No |
| Kick Step | E96 | 1103 | Both | No | No |
| DS8900F rack doors | E96 | 1105 | Both | No | No |
| SpaceSaver front/rear doors | E96 | 1106 | Both | No | No |
| Rack side cover pair | E96 | 1107 | Both | No | No |
| I/O enclosure pair PCIe 3 | E96 | 1303 | Both | No | No |
| Adjacent 996_E96 PCIE3 Cablesset | E96 | 1340 | Both | No | No |
| 20 meter 996_E96 PCIE3 Cablesset | E96 | 1341 | Both | No | No |
| Top exit bracket for fibre cable R9 | E96 | 1401 | Both | No | No |
| 50 um Fibre cable (LC) | E96 | 1410 | Both | No | No |
| 50 um Fibre cable (LC/SC) | E96 | 1411 | Both | No | No |
| 50 um Fibre cable (Jumper) | E96 | 1412 | Both | No | No |
| 50 um Fibre cable 3m SW LC | E96 | 1413 | Both | No | No |
| 9 um Fibre cable (LC) | E96 | 1420 | Both | No | No |
| 9 um Fibre cable (LC/SC) | E96 | 1421 | Both | No | No |
| 9 um Fibre cable (Jumper) | E96 | 1422 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|---------------------------------------|---------------------|------------------------|---------------------------------------|------------|---------------|
| 9 um Fibre cable 3m LW LC | E96 | 1423 | Both | No | No |
| 40m zHyperLink cable | E96 | 1450 | Both | No | No |
| 150m zHyperLink cable | E96 | 1451 | Both | No | No |
| HPFE Gen 2 adapter card | E96 | 1604 | Both | No | No |
| HPFE Gen 2 enclosure pair R9 | E96 | 1605 | Both | No | No |
| 800 GB 2.5-inch flash card set | E96 | 1611 | Both | No | No |
| 1600 GB 2.5-inch flash card set | E96 | 1612 | Both | No | No |
| 3200 GB 2.5-inch flash card set | E96 | 1613 | Both | No | No |
| 1.92 TB 2.5-inch high capacity flash | E96 | 1622 | Both | No | No |
| 3.8 TB 2.5-inch high capacity flash | E96 | 1623 | Both | No | No |
| 7.68 TB 2.5-inch high capacity flash | E96 | 1624 | Both | No | No |
| 15.36 TB 2.5-inch high capacity flash | E96 | 1625 | Both | No | No |
| Flash enclosure filler set | E96 | 1699 | Both | No | No |
| Earthquake Kit DS8900F AC156 | E96 | 1907 | Both | No | No |
| DS8000 LMC R9.0 indicator | E96 | 1990 | Both | No | No |
| Hardware installation MES | E96 | 1999 | MES | No | No |
| 16 Gb 4 port SW FCP/FICON | E96 | 3353 | Both | No | No |

| Description | Model number | Feature numbers | Initial / MES / Both / Support | CSU | RP MES |
|---|---------------------|------------------------|---------------------------------------|------------|---------------|
| adapter PCIE | | | | | |
| 32 Gb 4 port SW FCP/FICON adapter PCIE | E96 | 3355 | Both | No | No |
| 16 Gb 4 port LW FCP/FICON adapter PCIE | E96 | 3453 | Both | No | No |
| 32 Gb 4 port LW FCP/FICON adapter PCIE | E96 | 3455 | Both | No | No |
| zHyperLink adapter | E96 | 3500 | Both | No | Yes |
| IGF transaction indicator | E96 | 8999 | MES | No | No |
| Shipping and Handling NC | E96 | AG00 | Initial | No | No |
| Shipping and handling E96 | E96 | AGAM | Initial | No | No |
| BP Post-Sale Services | E96 | SVBP | Both | No | No |
| IBM Systems Lab Services Post-Sale Services | E96 | SVCS | Both | No | No |
| Other IBM Post-Sale Services | E96 | SVNN | Both | No | No |

CSU = Customer setup

RP MES = Returnable parts MES

ServiceElect (ESA) charges

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

Feature conversion purchase price

| From feature: | To feature: | Returned parts* | Maintenance |
|--|--|------------------------|--------------------|
| 1038 - Single Phase Power- 208V 30A NEMA L6-30P | 1039 - Single Phase Power- 250V 32A IEC 309 | No | Yes |
| 1040 - 3 Phase Power- 208V 60A IEC 309 (4 pin Delta) | 1041 - 3 Phase Power- 250V 32A IEC 309 (5 pin Wye) | No | Yes |

| From feature: | To feature: | Returned parts* | Maintenance |
|---|--|------------------------|--------------------|
| 1611 - 800 GB 2.5-inch flash card set | 1612 - 1600 GB 2.5-inch flash card set | Yes | Yes |
| 1611 - 800 GB 2.5-inch flash card set | 1613 - 3200 GB 2.5-inch flash card set | Yes | Yes |
| 1612 - 1600 GB 2.5-inch flash card set | 1613 - 3200 GB 2.5-inch flash card set | Yes | Yes |
| 1622 - 1.92 TB 2.5-inch high capacity flash | 1623 - 3.8 TB 2.5- inch high capacity flash | Yes | Yes |
| 1622 - 1.92 TB 2.5-inch high capacity flash | 1624 - 7.68 TB 2.5-inch high capacity flash | Yes | Yes |
| 1623 - 3.8 TB 2.5- inch high capacity flash | 1624 - 7.68 TB 2.5-inch high capacity flash | Yes | Yes |
| 1622 - 1.92 TB 2.5-inch high capacity flash | 1625 - 15.36 TB 2.5-inch high capacity flash | Yes | Yes |
| 1623 - 3.8 TB 2.5- inch high capacity flash | 1625 - 15.36 TB 2.5-inch high capacity flash | Yes | Yes |
| 1624 - 7.68 TB 2.5-inch high capacity flash | 1625 - 15.36 TB 2.5-inch high capacity flash | Yes | Yes |
| 4450 - 192GB System Cache (8 core) | 4451 - 512GB System Cache (8 core) | No | Yes |

| From feature: | To feature: | Returned parts* | Maintenance |
|---|---|------------------------|--------------------|
| 1038 - Single Phase Power- 208V 30A NEMA L6-30P | 1039 - Single Phase Power- 250V 32A IEC 309 | No | Yes |
| 1040 - 3 Phase Power- 208V 60A IEC 309 (4 pin Delta) | 1041 - 3 Phase Power- 250V 32A IEC 309 (5 pin Wye) | No | Yes |
| 1611 - 800 GB 2.5-inch flash card set | 1612 - 1600 GB 2.5-inch flash card set | Yes | Yes |
| 1611 - 800 GB 2.5-inch flash card set | 1613 - 3200 GB 2.5-inch flash card set | Yes | Yes |
| 1612 - 1600 GB 2.5-inch flash card set | 1613 - 3200 GB 2.5-inch flash card set | Yes | Yes |
| 1622 - 1.92 TB 2.5-inch high capacity flash | 1623 - 3.8 TB 2.5- inch high capacity flash | Yes | Yes |
| 1622 - 1.92 TB 2.5-inch high capacity flash | 1624 - 7.68 TB 2.5-inch high capacity flash | Yes | Yes |
| 1623 - 3.8 TB 2.5- inch high capacity flash | 1624 - 7.68 TB 2.5-inch high capacity flash | Yes | Yes |
| 1622 - 1.92 TB 2.5-inch high capacity flash | 1625 - 15.36 TB 2.5-inch high capacity flash | Yes | Yes |
| 1623 - 3.8 TB 2.5- inch high capacity flash | 1625 - 15.36 TB 2.5-inch high capacity flash | Yes | Yes |

| From feature: | To feature: | Returned parts* | Maintenance |
|---|---|------------------------|--------------------|
| 1624 - 7.68 TB 2.5-inch high capacity flash | 1625 - 15.36 TB 2.5-inch high capacity flash | Yes | Yes |
| 4450 - 192GB System Cache (8 core) | 4451 - 512GB System Cache (8 core) | No | Yes |
| From feature: | To feature: | Returned parts* | Maintenance |
| 1038 - Single Phase Power- 208V 30A NEMA L6-30P | 1039 - Single Phase Power- 250V 32A IEC 309 | No | Yes |
| 1040 - 3 Phase Power- 208V 60A IEC 309 (4 pin Delta) | 1041 - 3 Phase Power- 250V 32A IEC 309 (5 pin Wye) | No | Yes |
| 1611 - 800 GB 2.5-inch flash card set | 1612 - 1600 GB 2.5-inch flash card set | Yes | Yes |
| 1611 - 800 GB 2.5-inch flash card set | 1613 - 3200 GB 2.5-inch flash card set | Yes | Yes |
| 1612 - 1600 GB 2.5-inch flash card set | 1613 - 3200 GB 2.5-inch flash card set | Yes | Yes |
| 1623 - 3.8 TB 2.5- inch high capacity flash | 1624 - 7.68 TB 2.5-inch high capacity flash | Yes | Yes |
| 1623 - 3.8 TB 2.5- inch high capacity flash | 1625 - 15.36 TB 2.5-inch high capacity flash | Yes | Yes |
| 1624 - 7.68 TB 2.5-inch high capacity flash | 1625 - 15.36 TB 2.5-inch high capacity flash | Yes | Yes |
| 4452 - 512GB System Cache (10 core) | 4453 - 1024GB System Cache (20 core) | No | Yes |
| 4453 - 1024GB System Cache (20 core) | 4454 - 2048GB System Cache (20 core) | No | Yes |
| From feature: | To feature: | Returned parts* | Maintenance |
| 1038 - Single Phase Power- 208V 30A NEMA L6-30P | 1039 - Single Phase Power- 250V 32A IEC 309 | No | Yes |
| 1040 - 3 Phase Power- 208V 60A IEC 309 (4 pin Delta) | 1041 - 3 Phase Power- 250V 32A IEC 309 (5 pin Wye) | No | Yes |
| 1611 - 800 GB 2.5-inch flash card set | 1612 - 1600 GB 2.5-inch flash card set | Yes | Yes |
| 1611 - 800 GB 2.5-inch flash card set | 1613 - 3200 GB 2.5-inch flash card set | Yes | Yes |
| 1612 - 1600 GB 2.5-inch flash card set | 1613 - 3200 GB 2.5-inch flash card set | Yes | Yes |
| 1623 - 3.8 TB 2.5- inch high capacity flash | 1624 - 7.68 TB 2.5-inch high capacity flash | Yes | Yes |
| 1623 - 3.8 TB 2.5- inch high capacity flash | 1625 - 15.36 TB 2.5-inch high capacity flash | Yes | Yes |

| From feature: | To feature: | Returned parts* | Maintenance |
|---|--|-----------------|-------------|
| 1624 - 7.68 TB 2.5-inch high capacity flash | 1625 - 15.36 TB 2.5-inch high capacity flash | Yes | Yes |

*Parts removed as a result of a feature conversion become the property of IBM.

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Corrections

(Corrected on September 14, 2020)

The table in the [Warranty period](#) section has been updated and [Extended Warranty Service](#) information was added to the [Terms and conditions](#) section.

(Corrected on September 23, 2019)

The [Warranty period](#) section has been updated.