

IBM Power System S924 server is enhanced to provide superior on-premises infrastructure for a hybrid multicloud IT platform, delivering high security and reliability, industry-leading PCIe Gen4 I/O, and a built-in cloud-optimized hypervisor

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At a glance

The refreshed IBM^(R) Power^(R) System S924 (9009-42G) server easily integrates into your organization's cloud and cognitive strategy and delivers industry-leading price and performance for your mission-critical workloads.

- Gain faster insights from your data with up to 4 TB of in-memory database capabilities for SAP HANA, IBM Db2^(R), Oracle, and a variety of open-source databases.
- Deliver superior price and performance for your mission-critical applications with room to scale in IBM AIX^(R), IBM i, and Linux^(R) environments.
- Prevent security threats with advanced security features combined with unmatched reliability and resiliency.
- Harness the integrated virtualization capabilities of the server to rapidly deploy, optimize, and recover workloads.
- Migrate from previous IBM Power Systems servers with Live Partition Mobility (LPM) capabilities. Every new Power S924 server comes with a temporary IBM PowerVM^(R) license for your old server to support a seamless move to IBM POWER9TM technology-based servers.
- Use this cloud-enabled server to build an agile, containerized cloud on a server platform that is optimized for data and cognitive services.
- Extend IBM i, the integrated operating system, and connect to the cognitive capabilities of the IBM Cloud^(R) using secure APIs.
- Twice more bandwidth for a seamless integration between on-premises and public clouds with a new back-end PCIe Gen4 switch.
- Introducing Shared Utility Capacity for pay-per-use computing and multisystems resource sharing through IBM Power Enterprise Pools 2.0.
- More NVMe adapters with ten PCIe Gen4 slots in the back plus four PCIe Gen4 capable U.2 front-accessible drives.
- Up to 89.6 TB of NVMe Enterprise Class Storage capacity.
- New cost-effective 800 GB data center PCIe Gen3 NVMe device supported for AIX, IBM VIOS, or Linux environments.
- Boot from PCIe Gen4 NVMe devices supported for native IBM i deployments.

Overview

IBM Power Systems has always been focused on reliability and performance. The Power System S924 server is primed with a POWER9 processor, displaying a technology designed from the ground up for data-intensive workloads, such as operational databases, advanced analytics, and business applications. The system is built with innovations that deliver the highest security and reliability standards for future-driven enterprises.

When it comes to virtualization technology, Power Systems is unmatched. With a built-in IBM PowerVM hypervisor, clients have been relying on IBM for years to provide consumability and agility in IT data centers. Today, leveraging IBM's unique, comprehensive approach to the cloud, from on-premises IT to public cloud provider, we are taking one step forward.

The new Power System S924, powered by PCIe Gen4 switches, delivers a seamless and lightspeed throughput I/O between multiple on-premises and public cloud applications, as well as cloud-like agility and economics by supporting Enterprise Pools 2.0.

The Power S924 (9009-42G) server has been refreshed to provide:

Superior on-premises infrastructure for hybrid cloud

- Twice as fast back-end I/O enables seamless maximum speed and throughput between on-premises and multiple public cloud infrastructures with high availability.
- Largest memory bandwidth and memory storage in the market combined with up to 14 (four U.2 NVMe plus up to ten PCIe add in cards) NVMe adapters allows a huge VM, containers, and bare metal consolidation, saving data center space and networking costs.
- Supports multiple OS instances without processing overhead in the server.
- PowerVM hypervisor is built in at no extra charge, so every POWER9 workload is virtualized, mobile, and cloud ready.
- IBM VM Recovery Manager, built on PowerVM, provides easy, low-cost solutions for high availability (HA) and disaster recovery (DR) operations.
- IBM PowerHA^(R) for AIX and IBM i are the low-cost, highly automated solutions to deliver high availability features to your mission critical applications.

Introducing Shared Utility Capacity for pay-per-use compute experience by the minute

- Provides flexible consumption with a pay-per-use compute through Power Enterprise Pools 2.0. There are no fixed monthly fees: you pay for what you use.
- Enables multisystem resource sharing across a collection of IBM scale-out servers - pool processors, AIX, and IBM i license entitlements.
- Offers a lower initial system price with a higher value-added proposition. Systems may be configured with only a single core active and 256 GB memory.
- Delivers an on-premises cloud-like agility and economics experience with leadership business continuity and security hardware.
- Industry-leading monitoring and metering through the IBM Cloud Management Console (CMC) with granular real-time and historical views of consumption of resources by the LPAR and system.

Increased performance and flexibility for your key workloads

- Upgrade AIX and IBM i installations to speed up your journey to a hybrid multcloud
- Benefit from an increased I/O architecture on IBM Db2 Mirror for i
- Optimize performance and license costs with Oracle applications through Shared Utility Capacity
- Red Hat^(R) Enterprise Linux and Red Hat OpenShift^(R) deployments
- Increased performance and reduced footprint to run IBM Cloud Paks
- Epic Healthcare Solution Edition

- High performance for IBM Spectrum^(R) Scale offerings
- SAP HANA environments with external storage or multiple nodes

Key features

The Power System S924 server is a robust 2-socket system that meets today's growth and tomorrow's processing needs. It ships with up to 24 powerful cores and I/O configuration flexibility in a 19-inch rackmount, 4U (EIA units) form factor. The server supports:

- One or two processor sockets populated with the following POWER9 processor modules:
 - 8-core typical 3.8 to 4.0 GHz (max)
 - 10-core typical 3.5 to 3.9 GHz (max)
 - 11-core typical 3.45 to 3.9 GHz (max)
 - 12-core typical 3.4 to 3.9 GHz (max)
 - Power Management mode is set to Max Performance by default in the system. This mode can dynamically optimize the processor frequency at any given time based on CPU utilization and operating environmental conditions. For a description of this feature and other power management options available for this server, see the [IBM EnergyScale for POWER9 Processor-Based Systems](#) website.
- Up to 4.0 TB of system memory distributed across 32 DDR4 DIMM slots. Supports different memory DIMMs sizes such as 16 GB, 32 GB, 64 GB, and 128 GB, running at different speeds of 2133, 2400, and 2666 Mbps.
- Multiple I/O options:
 - Three x16 Gen4 full-height, half-length slots (CAPI)
 - One x8 Gen4 full-height, half-length slots (with x16 connectors) (CAPI)
 - One x8 Gen4 full-height, half-length slots (with x16 connectors)
 - Two x16 Gen4 full-height, half-length slots
 - Four x8 Gen4 full-height, half-length slots (One of these slots is used for the required base LAN adapter.)
- Storage feature and backplane options:
 - Storage backplane with six SFF-3 bays and two front PCIe Gen4 capable NVMe U.2 drive slots
 - Storage backplane with two or four front PCIe Gen4 capable NVMe U.2 drive slots
 - Twelve or eighteen 2.5-in. SFF-3 (Gen3 carrier) disk bays
 - Base 12 SFF-3 bays/RDX bay
 - RAID 0, 5, 6, 10, 5T2, 6T2, and 10T2 support
 - One RDX bay (only available with x12 disk bays, not available with x18 disk bays)
 - Split feature to 6+6 SFF bays: Add a second SAS controller
 - Expanded function 18 SFF-3 bays/dual IOA with write cache and optional external SAS port
 - Expanded function 12 SFF-3 bays/RDX Bay and optional external SAS port
 - Expansion capabilities for the EXP12SX/EXP24SX SFF Gen2-bay drawer
 - Hot-plug PCIe Gen4 capable U.2 slots
- Integrated technologies and features:
 - Service processor
 - EnergyScale
 - Hot-plug and redundant cooling
 - One front and two rear USB 3.0 ports
 - Two HMC ports

- One system port with RJ45 connector
- 2+2 redundant hot-plug AC power supplies in each enclosure
- PowerVM integrated virtualization with minimum processing overhead

Feature exchange

Not applicable

Key requirements

An IBM i, or AIX, or Linux operating system. See the [Software requirements](#) section for details.

Planned availability date

July 24, 2020

Description

The POWER9 scale-out family is the first set of servers that comes completely cloud enabled out of the box with integrated PowerVM Enterprise capabilities. These servers have a native hypervisor included at no additional license cost. Additionally, on-chip analytics and algorithms combined with a sophisticated PCIe Gen4 I/O architecture help clients run their workloads at an optimized processor frequency for performance and throughput. In combination with the DDR4 memory footprint of 4 TB, IBM provides a system that is unmatched by the competition in terms of memory scaling as well as the core-to-memory ratio needed for data-centric and in-memory workloads. LPM capabilities help you migrate from previous Power Systems. Every new S924 also has the option of a temporary PowerVM license for your old server to support a seamless move of workloads to POWER9. The Power System S924 server has built-in security that can help you to be ready for current and future security threats.

Summary of standard features for the Power S924 server:

- POWER9 processor modules:
 - 8-core typical 3.8 to 4.0 GHz (max) POWER9 processor (#EP5E)
 - 10-core typical 3.5 to 3.9 GHz (max) POWER9 processor (#EP5F)
 - 11-core typical 3.45 to 3.9 GHz (max) POWER9 processor (#EP5H)
 - 12-core typical 3.4 to 3.9 GHz (max) POWER9 processor (#EP5G)
- High-performance Mbps DDR4 ECC memory
 - 16 GB (#EM62), 32 GB (#EM63), 64 GB (#EM64), or 128 GB (#EM65) memory features - different sizes/configurations run at different frequencies of 2133, 2400, and 2666 Mbps
 - Up to 4 TB of DDR4 memory with two Power Systems processors
 - Up to 2 TB of DDR4 memory with one Power Systems processor
- Storage backplane feature:
 - Storage backplane with six SFF-3 bays and two PCIe Gen4 capable NVMe U.2.
 - Storage backplane with two or four PCIe Gen4 capable NVMe U.2 drive slots.
 - Base 12 SFF-3 bays/RDX bay.
 - Optionally, split the above SFF-3 bays and add a second integrated SAS controller without cache.

- Expanded function 18 SFF-3 bays/dual IOA with write cache and optional external SAS port.
- Expanded function 12 SFF-3 bays/RDX bay/Dual IOA with write cache and optional external SAS port.
- Optionally, attach an EXP12SX/EXP24SX SAS HDD/SSD expansion drawer to the dual IOA.
- PCIe slots with single processor:
 - One x16 Gen4 full-height, half-length slots (CAPI)
 - One x8 Gen4 full-height, half-length slots (with x16 connectors) (CAPI)
 - Two x16 Gen4 full-height, half-length slots
 - Four x8 Gen4 full-height, half-length slots (One of these slots is used for the required base LAN adapter.)
- PCIe slots with two processors:
 - Three x16 Gen4 full-height, half-length slots (CAPI)
 - One x8 Gen4 full-height, half-length slots (with x16 connectors) (CAPI)
 - One x8 Gen4 full-height, half-length slots (with x16 connectors)
 - Two x16 Gen4 full-height, half-length slots
 - Four x8 Gen4 full-height, half-length slots (One of these slots is used for the required base LAN adapter.)
- Integrated:
 - Service processor
 - EnergyScale technology
 - Hot-swap and redundant cooling
 - One front USB 3.0 ports
 - Two rear USB 3.0 ports
 - Two HMC 1 GbE RJ45 ports
 - One system port with RJ45 connector
 - Four hot-plug, redundant power supplies
 - 19-inch rack-mounting hardware (4U)

PowerVM

PowerVM, which delivers industrial-strength virtualization for AIX and Linux environments on POWER[®] processor-based systems, provides a virtualization-oriented performance monitor, and performance statistics are available through the HMC. These performance statistics can be used to understand the workload characteristics and to prepare for capacity planning.

Power S924 Capacity Backup (CBU) for IBM i

The Power S924 (9009-42G) CBU designation enables you to temporarily transfer IBM i processor license entitlements and IBM i user license entitlements purchased for a primary machine to a secondary CBU-designated system for HA and DR operations. Temporarily transferring these resources instead of purchasing them for your secondary system may result in significant savings. Processor activations cannot be transferred.

The CBU specify feature 0444 is available only as part of a new server purchase. Certain system prerequisites must be met, and system registration and approval are required before the CBU specify feature can be applied on a new server. Standard IBM i terms and conditions do not allow either IBM i processor license entitlements or IBM i user license entitlements to be transferred permanently or temporarily. These entitlements remain with the machine they were ordered for. When you register the association between your primary and on-order CBU system, you must agree to certain terms and conditions regarding the temporary transfer.

After a new CBU system is registered as a pair with the proposed primary system and the configuration is approved, you can temporarily move your optional IBM i processor license entitlement and IBM i user license entitlements from the primary system to the CBU system when the primary system is down or while the primary system processors are inactive. The CBU system can then support failover and role swapping for a full range of test, disaster recovery, and high availability scenarios. Temporary entitlement transfer means that the entitlement is a property transferred from the primary system to the CBU system and may remain in use on the CBU system as long as the registered primary and CBU system are in deployment for the high availability or disaster recovery operation. The intent of the CBU offering is to enable regular role-swap operations.

Before you can temporarily transfer IBM i processor license entitlements from the registered primary system, you must have more than one IBM i processor license on the primary machine and at least one IBM i processor license on the CBU server. To be in compliance, the CBU will be configured in a such a manner that there will be no out-of-compliance messages prior to a failover. An activated processor(s) must be available on the CBU server to use the transferred entitlement. You can then transfer any IBM i processor entitlements above the minimum one, assuming the total IBM i workload on the primary system does not require the IBM i entitlement you would like to transfer during the time of the transfer. During this temporary transfer, the CBU system's internal records of its total number of IBM i processor license entitlements are not updated, and you may see IBM i license noncompliance warning messages from the CBU system. These warning messages in this situation do not mean you are not in compliance.

Before you can temporarily transfer 5250 Enterprise Enablement entitlements, you must have more than one 5250 Enterprise Enablement entitlement on the primary server and at least one 5250 Enterprise Enablement entitlement on the CBU system. You can then transfer the entitlements that are not required on the primary server during the time of transfer and that are above the minimum of one entitlement. The minimum number of permanent entitlements on the CBU is one; however, you are required to license all permanent workload, such as replication workload. If, for example, the replication workload consumes four processor cores at peak workload, then you are required to permanently license four cores on the CBU.

The servers with P20 or higher software tiers do not have user entitlements that can be transferred, and only processor license entitlements can be transferred.

The following are eligible primary systems for a Power S924 CBU:

- Power S924 (9009-42G)
- Power S924 (9009-42A)
- Power S824 (8286-42A)
- Power E870 (9119-MME)
- Power E880 (9119-MHE)
- Power E870C (9080-MME)
- Power E880C (9080-MHE)

Power S924 SW tier for IBM i on 9009-42G

- The 8-core processor (#EP5E, QPRCFEAT EP5E) is IBM i SW tier P20.
- The 10-core processor (#EP5F, QPRCFEAT EP5F) is IBM i SW tier P20.
- The 11-core processor (#EP5H, QPRCFEAT EP5H) is IBM i SW tier P20.
- The 12-core processor (#EP5G, QPRCFEAT EP5G) is IBM i SW tier P20.

For example, if you have a 12-core Power S924 server as your primary system with six IBM i processor license entitlements (five above the minimum) and two 5250 Enterprise Enablement entitlements (one above the minimum), you can temporarily transfer up to five IBM i entitlements and one 5250 Enterprise Enablement entitlement. During the temporary transfer, the CBU system's internal

records of its total number of IBM i processor entitlements are not updated, and you may see IBM i license noncompliance warning messages from the CBU system.

If your primary or CBU machine is sold or discontinued from use, any temporary entitlement transfers must be returned to the machine on which they were originally acquired. For CBU registration, terms and conditions, and further information, see the [IBM Power Systems: Capacity BackUp](#) website.

Processor modules

A maximum of two processors of the same type is allowed. The following defines the allowed quantities of processor activation entitlements:

- One 8-core, typical 3.8 to 4.0 GHz (max) processor (#EP5E) requires that eight processor activation codes be ordered. A maximum of eight processor activations (#EP6E) is allowed.
- Two 8-core, typical 3.8 to 4.0 GHz (max) processors (#EP5E) require that sixteen processor activation codes be ordered. A maximum of 16 processor activations (#EP6E) is allowed.
- One 10-core, typical 3.5 to 3.9 GHz (max) processor (#EP5F) requires that ten processor activation codes be ordered. A maximum of 10 processor activation code features (#EP6F) is allowed.
- Two 10-core, typical 3.5 to 3.9 GHz (max) processors (#EP5F) require that twenty processor activation codes be ordered. A maximum of 20 processor activation code features (#EP6F) is allowed.
- One 11-core, typical 3.45 to 3.9 GHz (max) processors (#EP5H) require that eleven processor activation codes be ordered. A maximum of 11 processor activation code features (#EP6H) is allowed.
- Two 11-core, typical 3.45 to 3.9 GHz (max) processors (#EP5H) require that twenty-two processor activation codes be ordered. A maximum of 22 processor activation code features (#EP6H) is allowed.
- One 12-core, typical 3.4 to 3.9 GHz (max) processors (#EP5G) require that twelve processor activation codes be ordered. A maximum of 12 processor activation code features (#EP6G) is allowed.
- Two 12-core, typical 3.4 to 3.9 GHz (max) processors (#EP5G) require that twenty-four processor activation codes be ordered. A maximum of 24 processor activation code features (#EP6G) is allowed.

System memory

- A minimum 32 GB of memory is required on the Power S924 system.
- Memory upgrades require memory pairs. Base memory is two 16 GB DDR4 memory modules (#EM62).

Plans for future memory upgrades should be taken into account when deciding which memory feature size to use at the time of initial system order.

Feature description	Feature number	Minimum DIMM quantity	Maximum DIMM quantity
16 GB DDR4 Memory	EM62	0	32
32 GB DDR4 Memory	EM63	0	32
64 GB DDR4 Memory	EM64	0	32
128 GB DDR4 Memory	EM65	0	32

Note: Different sizes/configurations run at different frequencies of 2133, 2400, and 2666 Mbps.

Power supply

- Four power supplies supporting a rack: 1+1 1400 Watt 200 - 240 Volt (#EB2M)

Redundant fans

Redundant fans are standard.

Power cords

Four power cords are required. The Power S924 server supports power cord 4.3 m (14 ft), Drawer to Wall/IBM PDU (250V/10A) in the base shipment group. See the feature listing for other options.

PCIe slots

The Power S924 server has up to 14 (four U.2 NVMe plus up to ten PCIe add in cards) PCIe hot-plug slots, providing excellent configuration flexibility and expandability. For more information about PCIe slots, see the Rack-integrated system with I/O expansion drawer section below.

With two POWER9 processor single-chip modules (SCM), eleven PCIe slots are available, three are x16 Gen4 full-height, half-length slots (CAPI), One is x8 Gen4 full-height, half-length slots (with x16 connectors) (CAPI), One is x8 Gen4 full-height, half-length slots (with x16 connectors), two are x16 Gen4 full-height, half-length slots, and four are x8 Gen4 full-height, half-length slots (one of these slots is used for the required base LAN adapter).

With one POWER9 processor SCM, eight PCIe slots are available. One is x16 Gen4 full-height, half-length slot (CAPI), one is x8 Gen4 full-height, half-length slot (with x16 connector) (CAPI), two are x16 Gen4 full-height, half-length slots, and four are x8 Gen4 full-height, half-length slots (one of these slots is used for the required base LAN adapter).

The x16 slots can provide up to twice the bandwidth of x8 slots because they offer twice as many PCIe lanes. PCIe Gen4 slots can support up to twice the bandwidth of a PCIe Gen3 slot, and PCIe Gen3 slots can support up to twice the bandwidth of a PCIe Gen2 slot, assuming an equivalent number of PCIe lanes.

At least one PCIe Ethernet adapter is required on the server by IBM to ensure proper manufacture, test, and support of the server. One of the x8 PCIe slots is used for this required adapter.

These servers are smarter about energy efficiency when cooling the PCIe adapter environment. They sense which IBM PCIe adapters are installed in their PCIe slots and, if an adapter requires higher levels of cooling, they automatically speed up fans to increase airflow across the PCIe adapters. Note that faster fans increase the sound level of the server. Higher wattage PCIe adapters include the PCIe3 SAS adapters and SSD/flash PCIe adapters (#EJ10, #EJ14, and #EJ0J).

NVMe drive slots, SAS bays, and storage backplane options

- Storage backplane with 6 SFF-3 Bays and 2 PCIe Gen4 capable NVMe U.2 (#EJ1S)
- Storage backplane with 2 PCIe Gen4 capable NVMe U.2 drive slots (#EJ1T)
- Storage backplane with 4 PCIe Gen4 capable NVMe U.2 drive slots (#EJ1U)
- Base storage backplane 12 SFF-3 bays/RDX bay (#EJ1C)
- Feature EJ1E (6 +6 SFF-3 bays split backplane for #EJ1C)
- Expanded function storage backplane 18 SFF-3 bays/dual IOA with write cache and optional external SAS port (#EJ1D)
- Expanded function storage backplane 12 SFF-3 bays/RDX bay/dual IOA with write cache and optional external SAS port (#EJ1M)

The backplane options provide SFF-3 SAS bays in the system unit. These 2.5-inch or small form factor (SFF) SAS bays can contain SAS drives (HDD or SSD) mounted on a Gen3 tray or carrier. Thus the drives are designated SFF-3. SFF-1 or SFF-2 drives do not fit in an SFF-3 bay. All SFF-3 bays support concurrent maintenance or hot-plug capability.

These backplane options use leading-edge, integrated SAS RAID controller technology designed and patented by IBM. A custom-designed PowerPC[®]-based ASIC chip is the basis of these SAS RAID controllers and provides RAID 5 and RAID 6 performance levels, especially for SSD. Internally, SAS ports are implemented and provide plenty of bandwidth. The integrated SAS controllers are placed in dedicated slots and do not reduce the number of available PCIe slots.

The feature EJ1C base storage backplane option provides twelve SFF-3 bays and one SAS controller with zero write cache.

By optionally adding the feature EJ1E split backplane, a second integrated SAS controller with no write cache is provided, and the twelve SFF-3 bays are logically divided into two sets of six bays. Each SAS controller independently runs one of the six-bay sets of drives.

This backplane option supports HDDs or SSDs or a mixture of HDDs and SSDs in the SFF-3 bays. Mixing HDDs and SSDs applies even within a single set of six bays of the split backplane option. Note, if mixing HDDs and SSDs, they must be in separate arrays.

This backplane option can offer different drive protection options: RAID 0, RAID 5, RAID 6, or RAID 10. RAID 5 requires a minimum of three drives of the same capacity. RAID 6 requires a minimum of four drives of the same capacity. RAID 10 requires a minimum of two drives. Hot spare capability is supported with RAID 5, or RAID 6, or RAID 10.

Note that RAID 5 and RAID 6 result in more drive write activity than mirroring or than unprotected drives.

This backplane option is supported by AIX, Linux, VIOS, and IBM i. It is highly recommended but not required that the drives be protected. With IBM i all drives are required to be protected by either RAID or mirroring.

If the client needs a change after the server is installed, the backplane option can be changed. For example, the feature EJ1E split backplane feature can be added to an existing feature EJ1C backplane.

Unlike the hot-plug PCIe slots and SAS bays, concurrent maintenance is not available for the integrated SAS controllers. Scheduled downtime is required if a service action is required for these integrated resources.

In addition to supporting HDDs and SSDs in the SFF-3 SAS bays, the expanded function storage backplanes (#EJ1D and #EJ1M) support the optional attachment of an EXP12SX/EXP24SX drawer in mode 1. For these expanded function backplanes, all bays are accessed by both of the integrated SAS controllers. The bays support concurrent maintenance (hot-plug).

Cable management arm

A folding arm is attached to the server's rails at the rear of the server. The server's power cords and the cables from the PCIe adapters or integrated ports run through the arm and into the rack. The arm enables the server to be pulled forward on its rails for service access to PCIe slots, memory, processors, and so on without disconnecting the cables from the server. Approximately 1 meter (3 feet) of cord or cable length is needed for the arm.

Integrated I/O ports

In addition to the integrated SAS controllers and SAS ports associated with the storage backplane, there are two HMC ports, one system port, and three USB ports. The two HMC ports are RJ45 supporting 1 Gb Ethernet connections.

The one system port is RJ45 and is supported by AIX and Linux for attaching serial devices such as an asynchronous device like a console. If the device does not have an RJ45 connection, a converter cable such as feature 3930 can provide a 9-pin D-shell connection. Note that serial devices can have very individual characteristics

(different pin outs), and the feature 3930 may not be appropriate for all possible devices. In this case, the user should acquire an OEM converter cable appropriate for their device.

Three USB-3 ports are available for general client use; one is located in front and two in the rear. Additionally, there are two USB-2 ports in the service processor located in the rear of the system. These ports are for limited client use. A converter cable ECCF provides a USB-to-9-pin D-Shell connection for this function.

Rack-integrated system with I/O expansion drawer

Regardless of the rack-integrated system to which the PCIe Gen3 I/O expansion drawer is attached, if the expansion drawer is ordered as factory integrated, the PDUs in the rack will be placed horizontally by default to enhance cable management.

Expansion drawers complicate the access to vertical PDUs if located at the same height. IBM recommends accommodating PDUs horizontally on racks containing one or more PCIe Gen3 I/O expansion drawers.

After the rack with expansion drawers is delivered to the client, the client is allowed to rearrange the PDUs from horizontal to vertical. However, the configurator will continue to consider the PDUs as being placed horizontally for the matter of calculating the free space still available in the rack.

Vertical PDUs can be used only if CSRP (#0469) is on the order. When specifying CSRP, the client will provide the locations where the PCIe Gen3 I/O Expansion Drawers must be placed, avoiding locating those adjacent to vertical PDU locations, EIA 6 through 16 and 21 through 31.

The I/O expansion drawer can be migrated from a POWER8[®] to a POWER9 processor-based system. Only I/O cards supported on POWER9 in the I/O expansion drawer are allowed. Clients migrating the I/O expansion drawer configuration might have one or two PCIe3 6-slot fanout modules (#EMXF or #EMXG) installed in the rear of the I/O expansion drawer.

For a 4U server configuration with one processor module, up to one I/O expansion drawer and one fanout module (#EMXF or #EMXG) connected to one optical cable adapter (#EJ08) are supported (the right PCIe module bay must be populated by a filler module).

For a 4U server configuration with one processor module, up to one I/O expansion drawer and one fanout module (#EMXH) connected to one optical cable adapter (#EJ20) are supported (the right PCIe module bay must be populated by a filler module).

Limitations:

- Mixing of prior PCIe3 fanout modules (#EMXF or #EMXG) with PCIe3 fanout module (#EMXH) in the same I/O expansion drawer is not allowed.
- Mixing of I/O expansion drawer with prior PCIe3 fanout modules (#EMXF or #EMXG) and I/O expansion drawer with PCIe3 fanout module (#EMXH) in same configuration is allowed.
- PCIe3 optical cable adapters (#EJ20) requires the use of optical cables (#ECCX or ECCY) or copper cable (#ECCS).

RDX docking station

The RDX docking station EUA4 accommodates RDX removable disk cartridges of any capacity. The disk is in a protective rugged cartridge enclosure that plugs into the docking station. The docking station holds one removable rugged disk drive/cartridge at a time. The rugged removable disk cartridge and docking station performs saves, restores, and backups similar to a tape drive. This docking station can be an excellent entry capacity/performance option.

EXP24SX SAS storage enclosure (#ESLS)

The EXP24SX is a storage expansion enclosure with twenty-four 2.5-inch SFF SAS bays. It supports up to 24 hot-plug HDDs or SSDs in only 2 EIA of space in a 19-inch rack. The EXP24SX SFF bays use SFF Gen2 (SFF-2) carriers or trays.

The EXP24SX drawer feature ESLS is supported on the Power S914, Power S922, and Power S924 servers by AIX, IBM i, Linux, and VIOS.

With AIX/Linux/VIOS, the EXP24SX can be ordered with four sets of 6 bays (mode 4), two sets of 12 bays (mode 2), or one set of 24 bays (mode 1). With IBM i, only one set of twenty-four bays (mode 1) is supported. It is possible to change the mode setting in the field using software commands along with a specifically documented procedure. The predecessor EXP24S did not support this mode change in the field.

Important: When changing modes, a skilled, technically qualified person should follow the special documented procedures. Improperly changing modes can potentially destroy existing RAID sets, prevent access to existing data, or allow other partitions to access another partition's existing data. Hire an expert to assist if you are not familiar with this type of reconfiguration work.

Four mini-SAS HD ports on the EXP24SX are attached to PCIe Gen3 SAS adapters or attached to an integrated SAS controller in a POWER9 scale-out server such as the Power H922 or Power H924 servers. The following PCIe3 SAS adapters support the EXP24SX:

- PCIe3 RAID SAS Adapter Quad-port 6 Gb x8 (#EJ0J)
- PCIe3 12 GB Cache RAID Plus SAS Adapter Quad-port 6 Gb x8 (#EJ14)

Earlier generation PCIe2 or PCIe1 SAS adapters are not supported with the EXP24SX.

The attachment between the EXP24SX and the PCIe3 SAS adapters or integrated SAS controllers is through SAS YO12 or X12 cables. X12 and YO12 cables are designed to support up to 12 Gb SAS. The PCIe Gen3 SAS adapters support up to 6 Gb throughput. The EXP24SX has been designed to support up to 12 Gb throughput if future SAS adapters support that capability. All ends of the YO12 and X12 cables have mini-SAS HD narrow connectors. Cable options are:

- X12 cable: 3-meter copper (#ECDJ)
- YO12 cables: 1.5-meter copper (#ECDT), 3-meter copper (#ECDU)
- 3M 100 GbE Optical Cable QSFP28 (AOC) (#EB5R)
- 5M 100 GbE Optical Cable QSFP28 (AOC) (#EB5S)
- 10M 100 GbE Optical Cable QSFP28 (AOC) (#EB5T)
- 15M 100 GbE Optical Cable QSFP28 (AOC) (#EB5U)
- 20M 100 GbE Optical Cable QSFP28 (AOC) (#EB5V)
- 30M 100 GbE Optical Cable QSFP28 (AOC) (#EB5W)
- 50M 100 GbE Optical Cable QSFP28 (AOC) (#EB5X)
- 100M 100 GbE Optical Cable QSFP28 (AOC) (#EB5Y)

An AA12 cable interconnecting a pair of PCIe3 12 GB cache adapters (two #EJ14) is not attached to the EXP24SX. These higher-bandwidth cables could support 12 Gb throughput if future adapters support that capability. Copper feature ECE0 is 0.6 meters long, feature ECE3 is 3 meters long, and optical AA12 feature ECE4 is 4.5 meters long.

One no-charge specify code is used with each EXP24SX I/O drawer (#ESLS) to communicate to IBM configurator tools and IBM Manufacturing which mode setting, adapter, and SAS cable are needed. With this specify code, no hardware is shipped. The physical adapters, controllers, and cables must be ordered with their own chargeable feature numbers. There are more technically supported configurations than are represented by these specify codes. IBM Manufacturing

and IBM configurator tools such as e-config only understand and support EXP24SX configurations represented by these specify codes.

Specify code	Mode	Adapter/ Controller	Cable to drawer	Environment
#EJW0	Mode 1	CEC SAS Ports	2 YO12 cables	AIX/IBM i/ Linux/VIOS
#EJW1	Mode 1	One (unpaired) #EJ0J/#EJ0M	1 YO12 cable	AIX/IBM i/ Linux/VIOS
#EJW2	Mode 1	Two (one pair) #EJ0J/ #EJ0M	2 YO12 cables	AIX/IBM i/ Linux/VIOS
#EJW3	Mode 2	Two (unpaired) #EJ0J/#EJ0M	2 X12 cables	AIX/Linux/ VIOS
#EJW4	Mode 2	Four (two pair) #EJ0J/ #EJ0M	2 X12 cables	AIX/Linux/ VIOS
#EJW5	Mode 4	Four (unpaired) #EJ0J/#EJ0M	2 X12 cables	AIX/Linux/ VIOS
#EJW6	Mode 2	One (unpaired) #EJ0J/#EJ0M	2 YO12 cables	AIX/Linux/ VIOS
#EJW7	Mode 2	Two (unpaired) #EJ0J/#EJ0M	2 YO12 cables	AIX/Linux/ VIOS
#EJWF	Mode 1	Two (one pair) #EJ14	2 YO12 cables	AIX/IBM i/ Linux/VIOS
#EJWG	Mode 2	Two (one pair) #EJ14	2 X12 cables	AIX/Linux/ VIOS
#EJWJ	Mode 2	Four (two pair) #EJ14	2 X12 cables	AIX/Linux/ VIOS
#EJWU	Mode 1	Controller EJ1G	1 YO12 cables	Linux/AIX

All of the above EXP24SX specify codes assume a full set of adapters and cables able to run all the SAS bays configured. The following specify codes communicate to IBM Manufacturing a lower-cost partial configuration is to be configured where the ordered adapters and cables can run only a portion of the SAS bays. The future MES addition of adapters and cables can enable the remaining SAS bays for growth. The following specify codes are used:

Specify	Mode	Adapter/ Controller	Cable to drawer	Environment
#EJWA (1/2 of #EJW7)	Mode 2	One (unpaired) #EJ0J/#EJ0M	1 YO12 cables	AIX/Linux/ VIOS
#EJWB (1/2 of #EJW4)	Mode 2	Two (one pair) #EJ0J/ #EJ0M	1 X12 cable	AIX/Linux/ VIOS
#EJWC (1/4 of #EJW5)	Mode 4	One (unpaired) #EJ0J/#EJ0M	1 X12 cable	AIX/Linux/ VIOS
#EJWD (1/2 of #EJW5)	Mode 4	Two (unpaired) #EJ0J/#EJ0M	1 X12 cables	AIX/Linux/ VIOS
#EJWE (3/4 of #EJW5)	Mode 4	Three (unpaired) #EJ0J/#EJ0M	2 X12 cables	AIX/Linux/ VIOS
#EJWH (1/2 of #EJWJ)	Mode 2	Two (one pair) #EJ14	1 X12 cables	AIX/Linux/ VIOS

An EXP24SX drawer in mode 4 can be attached to two or four SAS controllers and provide a great deal of configuration flexibility. For example, if using unpaired

feature EJ0J adapters, these EJ0J adapters could be in the same server in the same partition, same server in different partitions, or even different servers.

An EXP24SX drawer in mode 2 has similar flexibility. If the I/O drawer is in mode 2, then half of its SAS bays can be controlled by one pair of PCIe3 SAS adapters, such as a 12 GB write cache adapter pair (#EJ14), and the other half can be controlled by a different PCIe3 SAS 12 GB write cache adapter pair or by zero-write-cache PCIe3 SAS adapters.

Note that for simplicity, IBM configurator tools such as e-config assume that the SAS bays of an individual I/O drawer are controlled by one type of SAS adapter. As a client, you have more flexibility than e-config understands.

A maximum of twenty-four 2.5-inch SSDs or 2.5-inch HDDs is supported in the EXP24SX 24 SAS bays. There can be no mixing of HDDs and SSDs in the same mode 1 drawer. HDDs and SSDs can be mixed in a mode 2 or mode 4 drawer, but they cannot be mixed within a logical split of the drawer. For example, in a mode 2 drawer with two sets of 12 bays, one set could hold SSDs and one set could hold HDDs, but you cannot mix SSDs and HDDs in the same set of 12 bays.

The indicator feature EHS2 helps IBM Manufacturing understand where SSDs are placed in a mode 2 or a mode 4 EXP24SX drawer. On one mode 2 drawer, use a quantity of one feature EHS2 to have SSDs placed in just half the bays, and use two EHS2 features to have SSDs placed in any of the bays. Similarly, on one mode 4 drawer, use a quantity of one, two, three, or four EHS2 features to indicate how many bays can have SSDs. With multiple EXP24SX orders, IBM Manufacturing will have to guess which quantity of feature ESH2 is associated with each EXP24SX. Consider using CSP (#0456) to reduce guessing.

Two-and-a-half-inch small form factor (SFF) SAS HDDs and SSDs are supported in the EXP24SX. All drives are mounted on Gen2 carriers/trays and thus named SFF-2 drives.

The EXP24SX drawer has many high-reliability design points:

- SAS drive bays that support hot swap
- Redundant and hot-plug-capable power and fan assemblies
- Dual line cords
- Redundant and hot-plug enclosure service modules (ESMs)
- Redundant data paths to all drives
- LED indicators on drives, bays, ESMs, and power supplies that support problem identification
- Through the SAS adapters/controllers, drives that can be protected with RAID and mirroring and hot-spare capability

Order two ESLA features for AC power supplies. The enclosure is shipped with adjustable depth rails and can accommodate 19-inch rack depths from 59.5 - 75 cm (23.4 - 29.5 in.). Slot filler panels are provided for empty bays when initially shipped from IBM.

EXP12SX SAS storage enclosure (#ESLL)

The EXP12SX is a storage expansion enclosure with twelve 3.5-inch LFF SAS bays. It supports up to 12 hot-plug HDDs in only 2 EIA of space in a 19-inch rack. The EXP12SX SFF bays use LFF Gen1 (LFF-1) carriers/trays. The 4k byte sector drives (#4096 or #4224) are supported. SSDs are not supported.

The EXP12SX drawer feature ESLL is supported on the Power S914, Power S922, and Power S924 servers by AIX, Linux, and VIOS.

With AIX/Linux/VIOS, the EXP12SX enclosure can be ordered with four sets of 3 bays (mode 4), two sets of 6 bays (mode 2), or one set of 12 bays (mode 1). The mode setting can be changed in the field using software commands along with a specifically documented procedure.

Important: When changing modes, it is very important that you follow the documented procedures. Improperly changing modes can potentially destroy existing RAID sets, prevent access to existing data, or allow other partitions to access another partition's existing data. Hire an expert to assist if you are not familiar with this type of reconfiguration work.

Four mini-SAS HD ports on the EXP12SX are attached to PCIe Gen3 SAS adapters or attached to an integrated SAS controller in a POWER9 scale-out server such as the Power S914, Power S922, or Power S924 server. The following PCIe3 SAS adapters support the EXP12SX:

- PCIe3 RAID SAS Adapter Quad-port 6 Gb x8 (#EJ0J)
- PCIe3 12 GB Cache RAID Plus SAS Adapter Quad-port 6 Gb x8 (#EJ14)

Earlier generation PCIe2 or PCIe1 SAS adapters are not supported with the EXP12SX drawer.

The EXP12SX drawer and the PCIe3 SAS adapters or integrated SAS controllers are attached through SAS YO12 or X12 cables. X12 and YO12 cables are designed to support up to 12 Gb. The PCIe Gen3 SAS adapters support up to 6 Gb throughput. The EXP12SX has been designed to support up to 12 Gb throughput if future SAS adapters support that capability. All ends of the YO12 and X12 cables have mini-SAS HD narrow connectors. Cable options are:

- X12 cable: 3-meter copper (#ECDJ)
- YO12 cables: 1.5-meter copper (#ECDT), 3-meter copper (#ECDU)
- 3M 100 GbE Optical Cable QSFP28 (AOC) (#EB5R)
- 5M 100 GbE Optical Cable QSFP28 (AOC) (#EB5S)
- 10M 100 GbE Optical Cable QSFP28 (AOC) (#EB5T)
- 15M 100 GbE Optical Cable QSFP28 (AOC) (#EB5U)
- 20M 100 GbE Optical Cable QSFP28 (AOC) (#EB5V)
- 30M 100 GbE Optical Cable QSFP28 (AOC) (#EB5W)
- 50M 100 GbE Optical Cable QSFP28 (AOC) (#EB5X)
- 100M 100 GbE Optical Cable QSFP28 (AOC) (#EB5Y)

An AA12 cable interconnecting a pair of PCIe3 12 GB cache adapters (two #EJ14) is not attached to the EXP12SX drawer. These higher-bandwidth cables could support 12 Gb throughput if future adapters support that capability. Copper feature ECE0 is 0.6 meters long, feature ECE3 is 3 meters long, and optical AA12 feature ECE4 is 4.5 meters long.

One no-charge specify code is used with each EXP12SX I/O drawer (#ESLL) to communicate to IBM configurator tools and IBM Manufacturing which mode setting, adapter, and SAS cable are needed. With this specify code, no hardware is shipped. The physical adapters, controllers, and cables must be ordered with their own chargeable feature numbers. There are more technically supported configurations than are represented by these specify codes. IBM Manufacturing and IBM configurator tools such as e-config only understand and support EXP12SX configurations represented by these specify codes.

Specify	Mode	Adapter/ Controller	Cable to drawer	Environment
#EJV0	Mode 1	CEC SAS Ports	2 YO12 cables	AIX/Linux/ VIOS
#EJV1	Mode 1	One (unpaired) #EJ0J/#EJ0M	1 YO12 cable	AIX/Linux/ VIOS
#EJV2	Mode 1	Two (unpaired) #EJ0J/#EJ0M	2 YO12 cables	AIX/Linux/ VIOS

Specify	Mode	Adapter/ Controller	Cable to drawer	Environment
#EJV3	Mode 2	Two (one pair) #EJ0J/ #EJ0M	2 X12 cables	AIX/Linux/ VIOS
#EJV4	Mode 2	Four (two pair) #EJ0J/ #EJ0M	2 X12 cables	AIX/Linux/ VIOS
#EJV5	Mode 4	Four (unpaired) #EJ0J/#EJ0M	2 X12 cables	AIX/Linux/ VIOS
#EJV6	Mode 2	One (unpaired) #EJ0J/#EJ0M	2 YO12 cables	AIX/Linux/ VIOS
#EJV7	Mode 2	Two (unpaired) #EJ0J/#EJ0M	2 YO12 cables	AIX/Linux/ VIOS
#EJVF	Mode 1	Two #EJ14 (one pair)	2 YO12 cables	AIX/Linux/ VIOS
#EJVG	Mode 2	Two #EJ14 (one pair)	2 X12 cables	AIX/Linux/ VIOS
#EJVJ	Mode 2	Four #EJ14 (two pair)	2 X12 cable	AIX/Linux/ VIOS
#EJVU	Mode 1	Controller #EJ1G/ #EL67	1 YO12 cables	Linux

All of the above EXP12SX specify codes assume a full set of adapters and cables able to run all the SAS bays configured. The following specify codes communicate to IBM Manufacturing a lower cost, partial configuration is to be configured where the ordered adapters and cables can run only a portion of the SAS bays. The future MES addition of adapters and cables can enable the remaining SAS bays for growth. The following specify codes are used:

Specify	Mode	Adapter/ Controller	Cable to drawer	Environment
#EJVA (1/2 of #EJV7)	Mode 2	One (unpaired) #EJ0J/#EJ0M	1 YO12 cables	AIX/Linux/ VIOS
#EJVB (1/2 of #EJV4)	Mode 2	One pair #EJ0J/#EJ0M	1 X12 cable	AIX/Linux/ VIOS
#EJVC (1/4 of #EJV5)	Mode 4	One (unpaired) #EJ0J/#EJ0M	1 X12 cable	AIX/Linux/ VIOS
#EJVD (2/4 of #EJV5)	Mode 4	Two (unpaired) #EJ0J/#EJ0M	1 X12 cables	AIX/Linux/ VIOS
#EJVE (3/4 of #EJV5)	Mode 4	Three (unpaired) #EJ0J/#EJ0M	2 X12 cables	AIX/Linux/ VIOS

An EXP12SX drawer in mode 4 can be attached to two or four SAS controllers and provide a great deal of configuration flexibility. For example, if using unpaired feature EJ0J adapters, these EJ0J adapters could be in the same server in the same partition, same server in different partitions, or even different servers.

An EXP12SX drawer in mode 2 has similar flexibility. If the I/O drawer is in mode 2, then half of its SAS bays can be controlled by one pair of PCIe3 SAS adapters, such as a 12 GB write cache adapter pair (#EJ14), and the other half can be controlled by a different PCIe3 SAS 12 GB write cache adapter pair or by zero-write-cache PCIe3 SAS adapters.

Note that for simplicity, IBM configurator tools such as e-config assume that the SAS bays of an individual I/O drawer are controlled by one type of SAS adapter. As a client, you have more flexibility than e-config understands.

The 3.5-inch large form factor (LFF) SAS HDDs are supported in the EXP24SX. All drives are mounted on Gen1 carriers/trays and thus named LFF-1 drives. Only 4k byte sector drives are supported in the EXP24SX drawer. The 5xx byte sector drives are not announced or planned. Drives are 7200 rpm and sometimes referred to as *nearline*. These drives provide excellent cost per gigabyte. Note that formatting or rebuilding arrays on large disk drives can take hours. If higher performance is required, consider higher rpm disks or SSDs in the EXP24SX drawer.

The EXP12SX drawer has many high-reliability design points:

- SAS bays that support hot swap
- Redundant and hot-plug power and fan assemblies
- Dual line cords
- Redundant and hot-plug ESMs
- Redundant data paths to all drives
- LED indicators on drives, bays, ESMs, and power supplies that support problem identification
- Through the SAS adapters/controllers, drives that can be protected with RAID and mirroring and hot-spare capability

Order two ESLA features for AC power supplies. The enclosure is shipped with adjustable depth rails and can accommodate 19-inch rack depths from 59.5 - 75 cm (23.4 - 29.5 in.). Slot filler panels are provided for empty bays when initially shipped from IBM.

EXP24SX and EXP12SX enclosures can be mixed on the same server. EXP24SX and EXP12SX enclosures can be mixed on the same PCIe3 adapter.

PCIe Gen3 I/O drawer cabling option

A copper cabling option (#ECCS) is available for the scale-out servers. The cable option offers a much lower-cost connection between the server and the PCIe Gen3 I/O drawer fanout modules. The currently available Active Optical Cable (AOC) offers much longer length cables, providing rack placement flexibility. Plus, AOC cables are much thinner and have tighter bend radius and thus are much easier to cable in the rack.

The 3M Copper CXP Cable Pair (#ECCS) has the same performance and same reliability, availability, and serviceability (RAS) characteristics as the AOC cables. One copper cable length of 3 meters is offered. Note that the cable management arm of the scale-out servers requires about 1 meter of cable.

Like the AOC cable pair, the copper pair is cabled in the same manner. One cable attaches to the top CXP port in the PCIe adapter in the x16 PCIe slot in the server system unit and then attaches to the top CXP port in the fanout module in the I/O drawer. Its cable pair attaches to the bottom CXP port of the same PCIe adapter and to the bottom CXP port of the same fanout module. Note that the PCIe adapter providing the CXP ports on the server was named a PCIe3 "Optical" Cable Adapter. In hindsight, this naming was unfortunate as the adapter's CXP ports are not unique to optical. But at the time, optical cables were the only connection option planned.

Copper and AOC cabling can be mixed on the same server. However, they cannot be mixed on the same PCIe Gen3 I/O drawer or mixed on the same fanout module.

Copper cables have the same operating system software prerequisites as AOC cables.

High-function (switched and monitored) power distribution units (PDUs)

The high-function PDUs provide switching, better monitoring, and 50% more C19 receptacles than previous Power Systems PDUs. Depending on country wiring standards, either two or four full-price features are orderable.

	208 V 3-phase delta	200 V - 240 V 1-phase or 3-phase wye
12xC13	#EPTQ	#EPTN
9xC19	#EPTL	#EPTJ

These PDUs can be mounted vertically in rack-side pockets or they can be mounted horizontally. If mounted horizontally, they each use 1 EIA (1U) of rack space. See feature EPTH for horizontal mounting hardware, which is used when IBM Manufacturing doesn't automatically factory-install the PDU. Two RJ45 ports on the front of the PDU enable the client to monitor each receptacle's electrical power usage and to remotely switch any receptacle on or off. The PDU is shipped with a generic PDU password, and IBM strongly urges clients to change it upon installation. These PDUs do provide the same low price as the low-function 12xC13 PDU feature (#7188).

High-function (switched and monitored) PDUs plus

Hardware

- IEC 62368-1 and IEC 60950 safety standard
- A new product safety approval
- No China 5000 m altitude or tropical restrictions
- Detachable inlet for 3-phase delta-wired PDU with 30A, 50A, and 60A wall plugs
- IBM Technology and Qualification approved components, such as anti-sulfur resistors (ASRs)
- Ethernet 10/100/1000 Mb/s

Software

- IPv4 and IPv6 support
- SSH command line
- Ability to change passwords over a network

PDU description	208 V 3-phase delta	200 V - 240 V 1-phase or 3-phase wye
12xC13	#ECJQ/#ECJP	#ECJN/#ECJM
9xC19	#ECJL/#ECJK	#ECJJ/#ECJG

These PDUs can be mounted vertically in rack-side pockets or they can be mounted horizontally. If mounted horizontally, they each use one EIA (1U) of rack space. See feature EPTH for horizontal mounting hardware, which is used when IBM Manufacturing doesn't automatically factory-install the PDU. Two RJ45 ports on the front of the PDU enable the client to monitor each receptacle's electrical power usage and to remotely switch any receptacle on or off.

Recommendation: The PDU is shipped with a generic PDU password. IBM strongly urges clients to change it upon installation.

Existing and new high-function (switched and monitored) PDUs have the same physical dimensions. New high-function (switched and monitored) PDUs can be supported in the same racks as existing PDUs. Mixing of PDUs in a rack on new orders is not allowed.

Also, all factory-integrated orders must have the same PDU line cord.

The PDU features ECJQ/ECJP and ECJL/ECJK with the Amphenol inlet connector require new PDU line cords:

- #ECJ5 - 4.3 m (14-Ft) PDU to Wall 3PH/24A 200-240V Delta-wired Power Cord
- #ECJ7 - 4.3 m (14-Ft) PDU to Wall 3PH/48A 200-240V Delta-wired Power Cord

No pigtail (like feature ELC0) is available because an Amphenol male inline connector is unavailable.

The PDU features ECJJ/ECJG and ECJN/ECJM with the UTG624-7SKIT4/5 inlet connector use the existing PDU line cord features 6653, 6667, 6489, 6654, 6655, 6656, 6657, 6658, 6491, or 6492.

High-function 12xC13 PDU plus 3-phase delta (#ECJQ/#ECJP)

This is an intelligent, switched 200 - 240 volt 3-phase delta AC PDU plus with twelve C13 receptacles on the front of the PDU. The PDU is mounted on the rear of the rack, making the twelve C13 receptacles easily accessible. Each receptacle has a 20 amp circuit breaker. Three-phase delta-wired connectors have 4-pins and use three line conductors and a protective earth. The input is 200 - 240 volt line-to-line, and the output is 200 - 240 volt line-to-line for three-phase delta PDUs.

The PDU can be mounted vertically in rack-side pockets, or it can be mounted horizontally. If mounted horizontally, it uses one EIA (1U) of rack space. See feature EPTH for horizontal mounting hardware.

Device power cords with a C20 plug connect to C19 PDU receptacles and are ordered separately. One wall line cord is also ordered separately and attaches to the Amphenol inlet connector. Supported line cords include features ECJ5 and ECJ7.

Two RJ45 ports on the front of the PDU enable clients to monitor the electrical power usage of each receptacle and to remotely switch any receptacle on or off.

Recommendation: The PDU is shipped with a generic PDU password. IBM strongly urges clients to change it upon installation.

Features ECJP and ECJQ are identical PDUs. Up to one lower-priced feature ECJP can be ordered with a new 7014-T42/T00 rack in place of a no-charge feature 9188 PDU.

For comparison, this is most like the earlier generation feature EPTP PDU.

Limitation: Some configurations of the Elastic Storage Server (ESS) are delivered with an Intelligent PDU. At this time, the intelligent management capabilities of this PDU are not configured or used by the ESS system. If the ESS customer would like to use this capability, it is the customer's responsibility to configure this PDU. In any case, the Ethernet port on the Intelligent PDU must not be connected to the ESS Management switch.

High-function 9xC19 PDU plus 3-phase delta (#ECJL/#ECJK)

This is an intelligent, switched 200 - 240 volt 3-phase delta AC PDU plus with nine C19 receptacles on the front of the PDU. The PDU is mounted on the rear of the rack making the nine C19 receptacles easily accessible. Each receptacle has a 20 amp circuit breaker. Three-phase delta-wired connectors have 4-pins and use three line conductors and a protective earth. The input is 200 - 240 volt line-to-line and the output is 200 - 240 volt line-to-line for three-phase delta PDUs.

The PDU can be mounted vertically in rack-side pockets, or it can be mounted horizontally. If mounted horizontally, it uses one EIA (1U) of rack space. See feature EPTH for horizontal mounting hardware.

Device power cords with a C20 plug connect to C19 PDU receptacles and are ordered separately. One wall line cord is also ordered separately and attaches to the Amphenol inlet connector. Supported line cords include features ECJ5 and ECJ7.

Two RJ45 ports on the front of the PDU enable clients to monitor the electrical power usage of each receptacle and to remotely switch any receptacle on or off.

Recommendation: The PDU is shipped with a generic PDU password. IBM strongly urges clients to change it upon installation.

There are also three C13 receptacles on the rear of the PDU positioned toward the middle of the rack. These are not easily accessed, and therefore IBM does not generally recommend their use.

Features ECJK and ECJL are identical PDUs. Up to one lower-priced feature ECJK can be ordered with a new 7014-T42/T00 rack in place of a no-charge feature 9188 PDU.

For comparison, this is most like the earlier generation feature EPTL PDU.

Limitation: Some configurations of the ESS are delivered with an Intelligent PDU. At this time, the intelligent management capabilities of this PDU are not configured or used by the ESS system. If the ESS customer would like to use this capability, it is the customer's responsibility to configure this PDU. In any case, the Ethernet port on the Intelligent PDU must not be connected to the ESS Management switch.

High-function 9xC19 single-phase or 3-phase wye PDU plus (#ECJJ/#ECJG)

This is an intelligent, switched 200 - 240 volt single-phase or 380 - 415/220 - 240 volt three-phase wye AC PDU plus with nine C19 receptacles on the front of the PDU. The PDU is mounted on the rear of the rack, making the nine C19 receptacles easily accessible. Each receptacle has a 20 amp circuit breaker. Depending on country wiring standards, the PDU is single-phase or three-phase wye. Three-phase wye-wired connectors have 5-pins and use three line conductors, a neutral, and a protective earth. The input is 380 - 415 volt line-to-line, and the output is 220 - 240 volt line-to-neutral for three-phase wye PDUs.

The PDU can be mounted vertically in rack-side pockets, or it can be mounted horizontally. If mounted horizontally, it uses one EIA (1U) of rack space. See feature EPTH for horizontal mounting hardware.

Device power cords with a C20 plug connect to C19 PDU receptacles and are ordered separately. One country-specific wall line cord is also ordered separately and attaches to a UTG524-7 connector on the front of the PDU. Supported line cords include features 6489, 6491, 6492, 6653, 6654, 6655, 6656, 6657, 6658, and 6667.

Two RJ45 ports on the front of the PDU enable clients to monitor the electrical power usage of each receptacle and to remotely switch any receptacle on or off.

Recommendation: The PDU is shipped with a generic PDU password. IBM strongly urges clients to change it upon installation.

There are also three C13 receptacles on the rear of the PDU positioned toward the middle of the rack. These are not easily accessed, and therefore IBM does not generally recommend their use.

Features ECJG and ECJJ are identical PDUs. Up to one lower-priced feature ECJG can be ordered with a new 7014-T42/T00 rack in place of a no-charge feature 9188 PDU.

For comparison, this is most like the earlier generation feature EPTJ PDU.

Limitation: Some configurations of the ESS are delivered with an Intelligent PDU. At this time, the intelligent management capabilities of this PDU are not configured or used by the ESS system. If the ESS customer would like to use this capability, it is the customer's responsibility to configure this PDU. In any case, the Ethernet port on the Intelligent PDU must not be connected to the ESS Management switch.

High-function 12xC13 single-phase or 3-phase wye PDU plus (#ECJN/#ECJM)

This is an intelligent, switched 200 - 240 volt single-phase or 380 - 415/220 - 240 volt three-phase wye AC PDU plus with twelve C13 receptacles on the front of the PDU. The PDU is mounted on the rear of the rack making the twelve C13 receptacles easily accessible. Each receptacle has a 20 amp circuit breaker. Depending on country wiring standards the PDU is single-phase or three-phase wye. Three-phase wye-wired connectors have 5-pins and use three line conductors, a neutral, and a protective earth. The input is 380 - 415 volt line-to-line, and the output is 220 - 240 volt line-to-neutral for three-phase wye PDUs.

See 3-phase #ECJP/#ECJQ for countries that do not use wye wiring.

The PDU can be mounted vertically in rack-side pockets, or it can be mounted horizontally. If mounted horizontally, it uses one EIA (1U) of rack space. See feature EPTH for horizontal mounting hardware.

Device power cords with a C14 plug connect to C13 PDU receptacles and are ordered separately. One country-specific wall line cord is also ordered separately and attaches to a UTG524-7 connector on the front of the PDU. Supported line cords include features 6489, 6491, 6492, 6653, 6654, 6655, 6656, 6657, 6658, and 6667.

Two RJ45 ports on the front of the PDU enable clients to monitor the electrical power usage of each receptacle and to remotely switch any receptacle on or off.

Recommendation: The PDU is shipped with a generic PDU password. IBM strongly urges clients to change it upon installation.

Features ECJM and ECJN are identical PDUs. Up to one lower-priced feature ECJM can be ordered with a new 7014-T42/T00 rack in place of a no-charge feature 9188 PDU.

For comparison, this is most like the earlier generation feature EPTN PDU.

Limitation: Some configurations of the ESS are delivered with an Intelligent PDU. At this time, the intelligent management capabilities of this PDU are not configured or used by the ESS system. If the ESS customer would like to use this capability, it is the customer's responsibility to configure this PDU. In any case, the Ethernet port on the Intelligent PDU must not be connected to the ESS Management switch.

Power S924 Epic Solution configuration for 42G

Power S924 Epic Solution Edition provides a more cost-effective solution to small-to-medium hospitals ordering a new Power S924 server. The following features help eligible Epic clients to order and effectively price the configuration:

- Epic Solution Indicator for 42G (#EHLQ)
- 512 GB (16 x 32 GB) Memory DIMMs bundle (#EM67)

The above features are available only with a new server order. MES orders can use the regular feature numbers with their regular pricing.

A Power S924 Epic Solution configuration is a 22-core, 2-socket server running AIX. An initial hardware order includes the following components:

Feature	Description	Default	Min	Max	Rules/ Comments
EHLQ	POWER9 Epic Solution Indicator for 42G		1	1	
EM67	512 GB (16 x 32 GB) Memory DIMMs bundle for EPIC Solution Edition		1	1	Reduce price bundled feature for memory is required. If additional memory is desired on an initial order, only allow quantity of 16 of #EM63 (32 GB).
EP5H	11-core Typical		2	2	

Feature	Description	Default	Min	Max	Rules/ Comments
	3.45 to 3.9 Ghz (max) POWER9 Processor				
EP6H	One Processor Core Activation for #EP5H		22	22	
EC5B	PCIe3 x8 1.6 TB NVMe Flash Adapter for AIX/Linux	2			Defaulted but customer allowed to replace with other NVMe Bolt features. If Boot from SAN (#0837) is on the order, then no drives required.
EN0A	PCIe3 16Gb 2-port Fibre Channel Adapter	2			Default #EN0A Qty 2. Qty 2 of 16 GB or higher Fibre Channel cards are required. Allowed to replace or add from available 16 GB or higher Fibre Channel cards.
EN0H	PCIe3 4-port (10Gb FCoE & 1GbE) SR&RJ45	2			Default #EN0H Qty 2. Qty 2 of 10 GB or higher LAN cards are required. Allowed to replace or add from available 10 GB or higher LAN cards.
2146	Primary OS -AIX		1		
4650	Rack Indicator-Not Factory Integrated		1		
5000	Software Preload	1			Defaulted but can be deselected--there is no minimum required.

Feature	Description	Default	Min	Max	Rules/ Comments
5228	PowerVM Enterprise Edition		22		
9440	New AIX License Core Counter		22		

Note:

- Additional hardware components can be added as desired following normal supported configuration rules. The above is the predefined configuration.
- Additional software and maintenance can be added as desired following normal supported configuration rules.

To see if you are eligible to order this solution edition, see the [IBM Power Solution Editions for healthcare](#) website. Also, the sales channel can register each server using this solution edition at this website.

Reliability, Availability, and Serviceability

Reliability, fault tolerance, and data correction

The reliability of systems starts with components, devices, and subsystems that are designed to be highly reliable. During the design and development process, subsystems go through rigorous verification and integration testing processes. During system manufacturing, systems go through a thorough testing process to help ensure the highest level of product quality.

Memory subsystem RAS

The memory has error detection and correction circuitry designed such that the failure of any one specific memory module within an ECC word by itself can be corrected absent any other fault.

Mutual surveillance

The service processor monitors the operation of the firmware during the boot process and also monitors the hypervisor for termination. The hypervisor monitors the service processor and reports a service reference code when it detects surveillance loss. In the PowerVM environment, it will perform a reset/reload if it detects the loss of the service processor.

Environmental monitoring functions

The Power Systems family does ambient and over temperature monitoring and reporting.

POWER9 processor functions

As in POWER8, the POWER9 processor has the ability to do processor instruction retry for some transient errors.

Cache availability

The L2 and L3 caches in the POWER9 processor in the memory buffer chip are protected with double-bit detect, single-bit correct error detection code (ECC). In addition, a threshold of correctable errors detected on cache lines can result in the data in the cache lines being purged and the cache lines removed from further operation without requiring a reboot in the PowerVM environment.

Modified data would be handled through Special Uncorrectable Error handling. L1 data and instruction caches also have a retry capability for intermittent errors and a cache set delete mechanism for handling solid failures.

Special Uncorrectable Error handling

Special Uncorrectable Error (SUE) handling prevents an uncorrectable error in memory or cache from immediately causing the system to terminate. Rather, the system tags the data and determines whether it will ever be used again. If the error is irrelevant, it will not force a check stop. If the data is used, termination may be limited to the program/kernel or hypervisor owning the data; or the I/O adapters controlled by an I/O hub controller would freeze if data were transferred to an I/O device.

PCI extended error handling

PCI extended error handling (EEH)-enabled adapters respond to a special data packet generated from the affected PCI slot hardware by calling system firmware, which will examine the affected bus, allow the device driver to reset it, and continue without a system reboot. For Linux, EEH support extends to the majority of frequently used devices, although some third-party PCI devices may not provide native EEH support.

Uncorrectable error recovery

When the auto-restart option is enabled, the system can automatically restart following an unrecoverable software error, hardware failure, or environmentally induced (AC power) failure.

Serviceability

The purpose of serviceability is to efficiently repair the system while attempting to minimize or eliminate impact to system operation. Serviceability includes system installation, MES (system upgrades/downgrades), and system maintenance/repair. Depending upon the system and warranty contract, service may be performed by the client, an IBM representative, or an authorized warranty service provider.

The serviceability features delivered in this system help provide a highly efficient service environment by incorporating the following attributes:

Service environment

In the PowerVM environment, the HMC is a dedicated server that provides functions for configuring and managing servers for either partitioned or full-system partition using a GUI or command-line interface (CLI) or REST API. An HMC attached to the system allows support personnel (with client authorization) to remotely, or locally to the physical HMC that is in proximity of the server being serviced, log in to review error logs and perform remote maintenance if required.

The POWER9 processor-based platforms support several service environments:

- Attachment to one or more HMCs or vHMCs is a supported option by the system with PowerVM. This is the default configuration for servers supporting logical partitions with dedicated or virtual I/O. In this case, all servers have at least one logical partition.
- For non-HMC systems.
 - Full-system partition with PowerVM: A single partition owns all the server resources and only one operating system may be installed. The primary service interface is through the operating system and the service processor.

Service interface

Support personnel can use the service interface to communicate with the service support applications in a server using an operator console, a graphical user interface on the management console or service processor, or an operating system terminal. The service interface helps to deliver a clear, concise view of available service applications, helping the support team to manage system resources and service

information in an efficient and effective way. Applications available through the service interface are carefully configured and placed to give service providers access to important service functions.

Different service interfaces are used, depending on the state of the system, hypervisor, and operating environment. The primary service interfaces are:

- LEDs
- Operator Panel
- Service Processor menu
- Operating system service menu
- Service Focal Point on the HMC or vHMC with PowerVM

In the light path LED implementation, the system can clearly identify components for replacement by using specific component-level LEDs, and can also guide the servicer directly to the component by signaling (turning on solid) the amber system fault LED, enclosure fault LED, and component FRU fault LED. The servicer can also use the identify function to blink the FRU-level LED. When this function is activated, a roll-up to the blue enclosure locate and system locate LEDs will occur. These enclosure LEDs will turn on solid and can be used to follow the light path from the system to the enclosure and down to the specific FRU in the PowerVM environment.

First Failure Data Capture and error data analysis

First Failure Data Capture (FFDC) is a technique that helps ensure that when a fault is detected in a system, the root cause of the fault will be captured without the need to re-create the problem or run any sort of extending tracing or diagnostics program. For the vast majority of faults, a good FFDC design means that the root cause can also be detected automatically without servicer intervention.

FFDC information, error data analysis, and fault isolation are necessary to implement the advanced serviceability techniques that enable efficient service of the systems and to help determine the failing items.

In the rare absence of FFDC and Error Data Analysis, diagnostics are required to re-create the failure and determine the failing items.

Diagnostics

General diagnostic objectives are to detect and identify problems so they can be resolved quickly. Elements of IBM's diagnostics strategy include:

- Provide a common error code format equivalent to a system reference code with PowerVM, system reference number, checkpoint, or firmware error code.
- Provide fault detection and problem isolation procedures. Support remote connection ability to be used by the IBM Remote Support Center or IBM Designated Service.
- Provide interactive intelligence within the diagnostics with detailed online failure information while connected to IBM's back-end system.

Automatic diagnostics

Because of the FFDC technology designed into IBM servers, it is not necessary to perform re-create diagnostics for failures or require user intervention. Solid and intermittent errors are designed to be correctly detected and isolated at the time the failure occurs. Runtime and boot-time diagnostics fall into this category.

Stand-alone diagnostics with PowerVM

As the name implies, stand-alone or user-initiated diagnostics requires user intervention. The user must perform manual steps, including:

- Booting from the diagnostics CD, DVD, USB, or network
- Interactively selecting steps from a list of choices

Concurrent maintenance

The determination of whether a firmware release can be updated concurrently is identified in the readme information file that is released with the firmware. An HMC is required for the concurrent firmware update with PowerVM. In addition, concurrent maintenance of PCIe adapters is supported with PowerVM. Concurrent maintenance of the Operator Panel is supported through ASMI. Additional concurrent maintenance includes power supplies, fans, and HDD/SSD drives.

Service labels

Service providers use these labels to assist them in performing maintenance actions. Service labels are found in various formats and positions and are intended to transmit readily available information to the servicer during the repair process. Following are some of these service labels and their purpose:

- **Location diagrams:** Location diagrams are located on the system hardware, relating information regarding the placement of hardware components. Location diagrams may include location codes, drawings of physical locations, concurrent maintenance status, or other data pertinent to a repair. Location diagrams are especially useful when multiple components such as DIMMs, CPUs, processor books, fans, adapter cards, LEDs, and power supplies are installed.
- **Remove/replace procedures:** Service labels that contain remove/replace procedures are often found on a cover of the system or in other spots accessible to the servicer. These labels provide systematic procedures, including diagrams detailing how to remove or replace certain serviceable hardware components.
- **Arrows:** Numbered arrows are used to indicate the order of operation and the serviceability direction of components. Some serviceable parts such as latches, levers, and touch points need to be pulled or pushed in a certain direction and in a certain order for the mechanical mechanisms to engage or disengage. Arrows generally improve the ease of serviceability.

QR labels

QR labels are placed on the system to provide access to key service functions through a mobile device. Once the QR label is scanned, it will go to a landing page specific to that server which contains many of the service functions of interest while physically located at the server. These include things such as installation and repair instructions, service diagrams, reference code look up, and so on.

Packaging for service

The following service enhancements are included in the physical packaging of the systems to facilitate service:

- **Color coding (touch points):** Blue-colored touch points delineate touchpoints on service components where the component can be safely handled for service actions such as removal or installation.
- **Tool-less design:** Selected IBM systems support tool-less or simple tool designs. These designs require no tools or simple tools such as flathead screw drivers to service the hardware components.
- **Positive retention:** Positive retention mechanisms help to assure proper connections between hardware components such as cables to connectors, and between two cards that attach to each other. Without positive retention, hardware components run the risk of becoming loose during shipping or installation, preventing a good electrical connection. Positive retention mechanisms like latches, levers, thumb-screws, pop Nylatches (U-clips), and

cables are included to help prevent loose connections and aid in installing (seating) parts correctly. These positive retention items do not require tools.

Error handling and reporting

In the event of system hardware or environmentally induced failure, the system runtime error capture capability systematically analyzes the hardware error signature to determine the cause of failure. The analysis result will be stored in system NVRAM. When the system can be successfully restarted either manually or automatically, or if the system continues to operate, the error will be reported to the operating system. Hardware and software failures are recorded in the system log. When an HMC is attached in the PowerVM environment, an ELA routine analyzes the error, forwards the event to the Service Focal Point (SFP) application running on the HMC, and notifies the system administrator that it has isolated a likely cause of the system problem. The service processor event log also records unrecoverable checkstop conditions, forwards them to the SFP application, and notifies the system administrator.

The system has the ability to call home through the operating system to report platform-recoverable errors and errors associated with PCI adapters/devices.

In the HMC-managed environment, a call home service request will be initiated from the HMC and the pertinent failure data with service parts information and part locations will be sent to an IBM service organization. Customer contact information and specific system-related data such as the machine type, model, and serial number, along with error log data related to the failure, are sent to IBM Service.

Live Partition Mobility

With Live Partition Mobility, users can migrate an AIX or IBM i partition running on one POWER partition system to another POWER system without disrupting services. The migration transfers the entire system environment, including processor state, memory, attached virtual devices, and connected users. It provides continuous operating system and application availability during planned partition outages for repair of hardware and firmware faults.

Service processor

The service processor provides the capability to diagnose, check the status of, and sense the operational conditions of a system. It runs on its own power boundary and does not require resources from a system processor to be operational to perform its tasks.

Under PowerVM, the service processor supports surveillance of the connection to the HMC and to the system firmware (hypervisor). It also provides several remote power control options, environmental monitoring, reset, restart, remote maintenance, and diagnostic functions, including console mirroring. The service processors menus (ASMI) can be accessed concurrently with system operation, allowing nondisruptive abilities to change system default parameters.

Call home

Call home refers to an automatic or manual call from a client location to the IBM support structure with error log data, server status, or other service-related information. Call home invokes the service organization in order for the appropriate service action to begin. Call home can be done through HMC or most non-HMC-managed systems through Electronic Service Agent running on top of the operating system. While configuring call home is optional, clients are encouraged to implement this feature in order to obtain service enhancements such as reduced problem determination and faster and potentially more accurate transmittal of error information. In general, using the call home feature can result in increased system availability. The Electronic Service Agent application can be configured for automated call home. See the next section for specific details on this application.

IBM Electronic Services

Electronic Service Agent and the IBM Electronic Services web portal comprise the IBM Electronic Services solution, which is dedicated to providing fast, exceptional support to IBM clients. IBM Electronic Service Agent is a no-charge tool that proactively monitors and reports hardware events such as system errors, performance issues, and inventory. Electronic Service Agent can help focus on the client's company business initiatives, save time, and spend less effort managing day-to-day IT maintenance issues.

System configuration and inventory information collected by Electronic Service Agent also can be viewed on the secure Electronic Services web portal and used to improve problem determination and resolution between the client and the IBM support team. As part of an increased focus to provide even better service to IBM clients, Electronic Service Agent tool configuration and activation comes standard with the system. In support of this effort, a new HMC External Connectivity security whitepaper has been published, which describes data exchanges between the HMC and the IBM Service Delivery Center (SDC) and the methods and protocols for this exchange. To read the whitepaper and prepare for Electronic Service Agent installation, see the "Security" section at the [IBM Electronic Service Agent](#) website.

Select your country. Click "IBM Electronic Service Agent Connectivity Guide."

Benefits: increased uptime

Electronic Service Agent is designed to enhance the warranty and maintenance service by potentially providing faster hardware error reporting and uploading system information to IBM Support. This can optimize the time monitoring the symptoms, diagnosing the error, and manually calling IBM Support to open a problem record. And 24x7 monitoring and reporting means no more dependency on human intervention or off-hours client personnel when errors are encountered in the middle of the night.

Security: The Electronic Service Agent tool is designed to help secure the monitoring, reporting, and storing of the data at IBM. The Electronic Service Agent tool is designed to help securely transmit either through the internet (HTTPS or VPN) or modem to provide clients a single point of exit from their site. Communication is one way. Activating Electronic Service Agent does not enable IBM to call into a client's system.

For additional information, see the [IBM Electronic Service Agent](#) website.

More accurate reporting

Because system information and error logs are automatically uploaded to the IBM Support Center in conjunction with the service request, clients are not required to find and send system information, decreasing the risk of misreported or misdiagnosed errors. Once inside IBM, problem error data is run through a data knowledge management system, and knowledge articles are appended to the problem record.

Customized support

By using the IBMid entered during activation, clients can view system and support information in the "My Systems" and "Premium Search" sections of the Electronic Services website.

The Electronic Services web portal is a single internet entry point that replaces the multiple entry points traditionally used to access IBM internet services and support. This web portal enables you to gain easier access to IBM resources for assistance in resolving technical problems. The newly improved My Systems and Premium Search functions make it even easier for Electronic Service Agent-enabled clients to track system inventory and find pertinent fixes.

My Systems provides valuable reports of installed hardware and software using information collected from the systems by IBM Electronic Service Agent. Reports are available for any system associated with the client's IBMid. Premium Search combines the function of search and the value of Electronic Service Agent

information, providing advanced search of the technical support knowledgebase. Using Premium Search and the Service Agent information that has been collected from the system, clients are able to see search results that apply specifically to their systems.

For more information on how to utilize the power of IBM Electronic Services, see the following website or contact an [IBM Systems Services Representative](#).

Section 508 of the US Rehabilitation Act

The IBM Power System S924 is capable as of July 24, 2020, when used in accordance with associated IBM documentation, of satisfying the applicable standards, including the Worldwide Consortium Web Content Accessibility Guidelines, European Standard EN 301 349, and US Section 508, provided that any assistive technology used with the product properly interoperates with it. An Accessibility Conformance Statement can be requested on the [Product accessibility information](#) website.

Product number

The following are newly announced features on the specific models of the IBM Power Systems 9009 machine type:

Description	Machine type	Model number	Feature number
IBM Power System S924	9009	42G	
Enterprise 6.4 TB SSD PCIe4 NVMe U.2 module for AIX/Linux	9009	42G	EC5V
Enterprise 6.4 TB SSD PCIe4 NVMe U.2 module for IBM i	9009	42G	EC5W
Mainstream 800 GB SSD PCIe3 NVMe U.2 module for AIX/Linux	9009	42G	EC5X
POWER9 Epic Solution indicator for 42G	9009	42G	EHLQ
NVMe U.2 Passthru adapter Gen4 capable	9009	42G	EJ1Q
Storage backplane 6 SFF-3 Bays and 2 front PCIe Gen4 capable NVMe U.2 drive slots	9009	42G	EJ1S
Storage backplane with two front PCIe Gen4 capable NVMe U.2 drive slots	9009	42G	EJ1T
Storage backplane with four front PCIe Gen4 capable NVMe U.2 drive slots	9009	42G	EJ1U
Front IBM Bezel for 6 SAS + 4 NVMe Bays BackPlane	9009	42G	EJUK
Front OEM Bezel for 6 SAS + 4 NVMe-Bays BackPlane	9009	42G	EJUL
ES1F Load Source Specify (1.6 TB 4K NVMe U.2 SSD PCIe4 for IBM i)	9009	42G	ELS3
ES1H Load Source Specify (3.2 TB 4K NVMe U.2 SSD for IBM i)	9009	42G	ELSQ
EC5W Load Source Specify (6.4 TB 4K NVMe U.2 SSD for IBM i)	9009	42G	ELUW
PCIe3 2-Port 16Gb Fibre Channel Adapter	9009	42G	EN1G
200 GB IBM i NVMe Load Source Namespace size	9009	42G	ENSA
400 GB IBM i NVMe Load Source Namespace size	9009	42G	ENSB
8-core Typical 3.8 to 4.0 Ghz (max) POWER9 Processor	9009	42G	EP5E
10-core Typical 3.5 to 3.9 Ghz (max) POWER9 Processor	9009	42G	EP5F
12-core Typical 3.4 to 3.9 Ghz (max) POWER9 Processor	9009	42G	EP5G
11-core Typical 3.45 to 3.9 Ghz (max) POWER9 Processor	9009	42G	EP5H
One Processor Core Activation for #EP5E	9009	42G	EP6E
One Processor Core Activation for #EP5F	9009	42G	EP6F
One Processor Core Activation for #EP5G	9009	42G	EP6G
One Processor Core Activation for #EP5H	9009	42G	EP6H
Enterprise 1.6 TB SSD PCIe4 NVMe U.2 module for AIX/Linux	9009	42G	ES1E
Enterprise 1.6 TB SSD PCIe4 NVMe U.2 module for IBM i	9009	42G	ES1F

Enterprise 3.2 TB SSD PCIe4 NVMe U.2 module for AIX/Linux	9009	42G	ES1G
Enterprise 3.2 TB SSD PCIe4 NVMe U.2 module for IBM i	9009	42G	ES1H

The following are features already announced for the IBM Power Systems 9009 machine type:

Description	Machine type	Model number	Feature number
One CSC Billing Unit	9009	42G	0010
Ten CSC Billing Units	9009	42G	0011
Mirrored System Disk Level, Specify Code	9009	42G	0040
Device Parity Protection-All, Specify Code	9009	42G	0041
Mirrored System Bus Level, Specify Code	9009	42G	0043
Device Parity RAID-6 All, Specify Code	9009	42G	0047
RISC-to-RISC Data Migration	9009	42G	0205
AIX Partition Specify	9009	42G	0265
Linux Partition Specify	9009	42G	0266
IBM i Operating System Partition Specify	9009	42G	0267
Specify Custom Data Protection	9009	42G	0296
Mirrored Level System Specify Code	9009	42G	0308
RAID Hot Spare Specify	9009	42G	0347
V.24/EIA232 6.1m (20-Ft) PCI Cable	9009	42G	0348
V.35 6.1m (20-Ft) PCI Cable	9009	42G	0353
X.21 6.1m (20-Ft) PCI Cable	9009	42G	0359
CBU Specify	9009	42G	0444
Customer Specified Placement	9009	42G	0456
19 inch, 1.8 meter high rack	9009	42G	0551
19 inch, 2.0 meter high rack	9009	42G	0553
Rack Filler Panel Kit	9009	42G	0599
Load Source Not in CEC	9009	42G	0719
EXP24S SFF Gen2 Load Source Specify (#5887 or #EL1S)	9009	42G	0728
SAN Load Source Specify	9009	42G	0837
#1948 Load Source Specify (283GB 15k RPM SAS SFF-2 Disk)	9009	42G	0872
#1962 Load Source Specify (571GB 10k RPM SAS SFF-2 Disk)	9009	42G	0875
#ESD2 Load Source Specify (1.1TB 10k SFF-2)	9009	42G	0911
US TAA Compliance Indicator	9009	42G	0983
Product assembled in USA manufacturing plant	9009	42G	0984
Modem Cable - US/Canada and General Use	9009	42G	1025
USB 500 GB Removable Disk Drive	9009	42G	1107
Custom Service Specify, Rochester Minn, USA	9009	42G	1140
Quantity 150 of #1962	9009	42G	1817
Quantity 150 of #1964	9009	42G	1818
Quantity 150 of #1948	9009	42G	1927
Quantity 150 of #1953	9009	42G	1929
283GB 15k RPM SAS SFF-2 Disk Drive (IBM i)	9009	42G	1948
300GB 15k RPM SAS SFF-2 Disk Drive (AIX/Linux)	9009	42G	1953
571GB 10k RPM SAS SFF-2 Disk Drive (IBM i)	9009	42G	1962
600GB 10k RPM SAS SFF-2 Disk Drive (AIX/Linux)	9009	42G	1964
Primary OS - IBM i	9009	42G	2145
Primary OS - AIX	9009	42G	2146
Primary OS - Linux	9009	42G	2147
Factory Deconfiguration of 1-core	9009	42G	2319
2M LC-SC 50 Micron Fiber Converter Cable	9009	42G	2456
2M LC-SC 62.5 Micron Fiber Converter Cable	9009	42G	2459
PCIe 2-Line WAN w/Modem	9009	42G	2893

3M Asynchronous Terminal/Printer Cable EIA-232	9009	42G	2934
Asynchronous Cable EIA-232/V.24 3M	9009	42G	2936
Serial-to-Serial Port Cable for Drawer/Drawer-3.7M	9009	42G	3124
Serial-to-Serial Port Cable for Rack/Rack- 8M	9009	42G	3125
Widescreen LCD Monitor	9009	42G	3632
0.3M Serial Port Converter Cable, 9-Pin to 25-Pin	9009	42G	3925
Serial Port Null Modem Cable, 9-pin to 9-pin, 3.7M	9009	42G	3927
Serial Port Null Modem Cable, 9-pin to 9-pin, 10M	9009	42G	3928
System Serial Port Converter Cable	9009	42G	3930
1.8 M (6-ft) Extender Cable for Displays (15-pin D-shell to 15-pin D-shell)	9009	42G	4242
Extender Cable - USB Keyboards, 1.8M	9009	42G	4256
VGA to DVI Connection Converter	9009	42G	4276
Rack Integration Services	9009	42G	4649
One and only one rack indicator feature is required on all orders (#4650 to #4666).			
Rack Indicator- Not Factory Integrated	9009	42G	4650
Rack Indicator, Rack #1	9009	42G	4651
Rack Indicator, Rack #2	9009	42G	4652
Rack Indicator, Rack #3	9009	42G	4653
Rack Indicator, Rack #4	9009	42G	4654
Rack Indicator, Rack #5	9009	42G	4655
Rack Indicator, Rack #6	9009	42G	4656
Rack Indicator, Rack #7	9009	42G	4657
Rack Indicator, Rack #8	9009	42G	4658
Rack Indicator, Rack #9	9009	42G	4659
Rack Indicator, Rack #10	9009	42G	4660
Rack Indicator, Rack #11	9009	42G	4661
Rack Indicator, Rack #12	9009	42G	4662
Rack Indicator, Rack #13	9009	42G	4663
Rack Indicator, Rack #14	9009	42G	4664
Rack Indicator, Rack #15	9009	42G	4665
Rack Indicator, Rack #16	9009	42G	4666
Power Active Memory Expansion Enablement	9009	42G	4794
One Processor of 5250 Enterprise Enablement	9009	42G	4970
Full 5250 Enterprise Enablement	9009	42G	4974
Software Preload Required	9009	42G	5000
PowerVM Enterprise Edition	9009	42G	5228
Sys Console on HMC	9009	42G	5550
System Console-Ethernet LAN adapter	9009	42G	5557
PCIe2 8Gb 4-port Fibre Channel Adapter	9009	42G	5729
8 Gigabit PCI Express ^(R) Dual Port Fibre Channel Adapter	9009	42G	5735
POWER ^(R) GXT145 PCI Express Graphics Accelerator	9009	42G	5748
4 Port Async EIA-232 PCIe Adapter	9009	42G	5785
EXP24S SFF Gen2-bay Drawer	9009	42G	5887
PCIe2 4-port 1GbE Adapter	9009	42G	5899
Opt Front Door for 1.8m Rack	9009	42G	6068
Opt Front Door for 2.0m Rack	9009	42G	6069
1.8m Rack Acoustic Doors	9009	42G	6248
2.0m Rack Acoustic Doors	9009	42G	6249
1.8m Rack Trim Kit	9009	42G	6263
2.0m Rack Trim Kit	9009	42G	6272
Power Cord 4.3m (14-ft), Drawer to IBM PDU (250V/10A)	9009	42G	6458
Power Cord 4.3m (14-ft), Drawer To OEM PDU (125V, 15A)	9009	42G	6460
Power Cord 4.3m (14-ft), Drawer to wall/OEM PDU (250V/15A) U. S.	9009	42G	6469
Power Cord 1.8m (6-ft), Drawer to wall (125V/15A)	9009	42G	6470
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU (250V/10A)	9009	42G	6471
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU (250V/16A)	9009	42G	6472
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU (250V/10A)	9009	42G	6473
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (250V/13A)	9009	42G	6474
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (250V/16A)	9009	42G	6475
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU,			

(250V/10A)	9009	42G	6476
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (250V/16A)	9009	42G	6477
Power Cord 2.7 M(9-foot), To wall/OEM PDU, (250V, 16A)	9009	42G	6478
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (125V/15A or 250V/10A)	9009	42G	6488
4.3m (14-Ft) 3PH/32A 380-415V Power Cord	9009	42G	6489
4.3m (14-Ft) 1PH/63A 200-240V Power Cord	9009	42G	6491
4.3m (14-Ft) 1PH/48A 200-240V Power Cord	9009	42G	6492
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (250V/10A)	9009	42G	6493
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (250V/10A)	9009	42G	6494
Power Cord 2.7M (9-foot), To wall/OEM PDU, (250V, 10A)	9009	42G	6496
Power Cable - Drawer to IBM PDU, 200-240V/10A	9009	42G	6577
Optional Rack Security Kit	9009	42G	6580
Power Cord 2.7M (9-foot), To wall/OEM PDU, (125V, 15A)	9009	42G	6651
4.3m (14-Ft) 3PH/16A 380-415V Power Cord	9009	42G	6653
4.3m (14-Ft) 1PH/24A Power Cord	9009	42G	6654
4.3m (14-Ft) 1PH/24A WR Power Cord	9009	42G	6655
4.3m (14-Ft) 1PH/32A Power Cord	9009	42G	6656
4.3m (14-Ft) 1PH/32A Power Cord	9009	42G	6657
4.3m (14-Ft) 1PH/24A Power Cord-Korea	9009	42G	6658
Power Cord 2.7M (9-foot), To wall/OEM PDU, (250V, 15A)	9009	42G	6659
Power Cord 4.3m (14-ft), Drawer to wall/OEM PDU (125V/15A)	9009	42G	6660
Power Cord 2.8m (9.2-ft), Drawer to IBM PDU, (250V/10A)	9009	42G	6665
4.3m (14-Ft) 3PH/32A 380-415V Power Cord-Australia	9009	42G	6667
Power Cord 4.3M (14-foot), Drawer to OEM PDU, (250V, 15A)	9009	42G	6669
Power Cord 2.7M (9-foot), Drawer to IBM PDU, 250V/10A	9009	42G	6671
Power Cord 2M (6.5-foot), Drawer to IBM PDU, 250V/10A	9009	42G	6672
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (250V/10A)	9009	42G	6680
Intelligent PDU+, 1 EIA Unit, Universal UTG0247 Connector	9009	42G	7109
Environmental Monitoring Probe	9009	42G	7118
Power Distribution Unit	9009	42G	7188
Power Distribution Unit (US) - 1 EIA Unit, Universal, Fixed Power Cord	9009	42G	7196
Ethernet Cable, 15m, Hardware Management Console to System Unit	9009	42G	7802
Linux Software Preinstall	9009	42G	8143
Linux Software Preinstall (Business Partners)	9009	42G	8144
USB Mouse	9009	42G	8845
Order Routing Indicator- System Plant	9009	42G	9169
Language Group Specify - US English	9009	42G	9300
Specify mode-1 & CEC SAS port for EXP24 #5887/ELIS	9009	42G	9387
New AIX License Core Counter	9009	42G	9440
New IBM i License Core Counter	9009	42G	9441
New Red Hat License Core Counter	9009	42G	9442
New SUSE License Core Counter	9009	42G	9443
Other AIX License Core Counter	9009	42G	9444
Other Linux License Core Counter	9009	42G	9445
3rd Party Linux License Core Counter	9009	42G	9446
VIOS Core Counter	9009	42G	9447
Other License Core Counter	9009	42G	9449
Ubuntu Linux License Core Counter	9009	42G	9450
Month Indicator	9009	42G	9461
Day Indicator	9009	42G	9462
Hour Indicator	9009	42G	9463
Minute Indicator	9009	42G	9464
Qty Indicator	9009	42G	9465
Countable Member Indicator	9009	42G	9466
Language Group Specify - Dutch	9009	42G	9700

Language Group Specify - French	9009	42G	9703
Language Group Specify - German	9009	42G	9704
Language Group Specify - Polish	9009	42G	9705
Language Group Specify - Norwegian	9009	42G	9706
Language Group Specify - Portuguese	9009	42G	9707
Language Group Specify - Spanish	9009	42G	9708
Language Group Specify - Italian	9009	42G	9711
Language Group Specify - Canadian French	9009	42G	9712
Language Group Specify - Japanese	9009	42G	9714
Language Group Specify - Traditional Chinese (Taiwan)	9009	42G	9715
Language Group Specify - Korean	9009	42G	9716
Language Group Specify - Turkish	9009	42G	9718
Language Group Specify - Hungarian	9009	42G	9719
Language Group Specify - Slovakian	9009	42G	9720
Language Group Specify - Russian	9009	42G	9721
Language Group Specify - Simplified Chinese (PRC)	9009	42G	9722
Language Group Specify - Czech	9009	42G	9724
Language Group Specify - Romanian	9009	42G	9725
Language Group Specify - Croatian	9009	42G	9726
Language Group Specify - Slovenian	9009	42G	9727
Language Group Specify - Brazilian Portuguese	9009	42G	9728
Language Group Specify - Thai	9009	42G	9729
QSFP+ 40GbE Base-SR Transceiver	9009	42G	EB27
1m (3.3-ft), IBM Passive QSFP+ to QSFP+ Cable (DAC)	9009	42G	EB2B
3m (9.8-ft), IBM Passive QSFP+ to QSFP+ Cable (DAC)	9009	42G	EB2H
10m (30.3-ft), IBM Passive QSFP+ MTP Optical Cable	9009	42G	EB2J
30m (90.3-ft), IBM Passive QSFP+ MTP Optical Cable	9009	42G	EB2K
AC Power Supply - 1400w for Server (200-240 VAC)	9009	42G	EB2M
Lift tool based on GenieLift GL-8 (standard)	9009	42G	EB3Z
10GbE optical Transceiver SFP+ SR	9009	42G	EB46
25GbE optical Transceiver SFP28	9009	42G	EB47
0.5m SFP28/25GbE copper Cable	9009	42G	EB4J
1.0m SFP28/25GbE copper Cable	9009	42G	EB4K
1.5m SFP28/25GbE copper Cable	9009	42G	EB4L
2.0m SFP28/25GbE copper Cable	9009	42G	EB4M
2.0m QSFP28/100GbE copper split Cable to SFP28 4x25GbE	9009	42G	EB4P
Service wedge shelf tool kit for EB3Z	9009	42G	EB4Z
0.5m EDR IB Copper Cable QSFP28	9009	42G	EB50
1.0m EDR IB Copper Cable QSFP28	9009	42G	EB51
2.0M EDR IB Copper Cable QSFP28	9009	42G	EB52
1.5M EDR IB Copper Cable QSFP28	9009	42G	EB54
100GbE optical Transceiver QSFP28	9009	42G	EB59
3M EDR IB Optical Cable QSFP28	9009	42G	EB5A
5M EDR IB Optical Cable QSFP28	9009	42G	EB5B
10M EDR IB Optical Cable QSFP28	9009	42G	EB5C
15M EDR IB Optical Cable QSFP28	9009	42G	EB5D
20M EDR IB Optical Cable QSFP28	9009	42G	EB5E
30M EDR IB Optical Cable QSFP28	9009	42G	EB5F
50M EDR IB optical Cable QSFP28	9009	42G	EB5G
100M EDR IB optical Cable QSFP28	9009	42G	EB5H
0.5M 100GbE Copper Cable QSFP28	9009	42G	EB5J
1.0M 100GbE Copper Cable QSFP28	9009	42G	EB5K
1.5M 100GbE Copper Cable QSFP28	9009	42G	EB5L
2.0M 100GbE copper Cable QSFP28	9009	42G	EB5M
25M EDR IB optical Cable QSFP28	9009	42G	EB5N
3M 100GbE optical Cable QSFP28 (AOC)	9009	42G	EB5R
5M 100GbE optical cable QSFP28 (AOC)	9009	42G	EB5S
10M 100GbE optical Cable QSFP28 (AOC)	9009	42G	EB5T
15M 100GbE optical Cable QSFP28 (AOC)	9009	42G	EB5U
20M 100GbE optical Cable QSFP28 (AOC)	9009	42G	EB5V
30M 100GbE Optical Cable QSFP28 (AOC)	9009	42G	EB5W
50M 100GbE optical cable QSFP28 (AOC)	9009	42G	EB5X
100M 100GbE optical Cable QSFP28 (AOC)	9009	42G	EB5Y
IBM i 7.2 Indicator	9009	42G	EB72
IBM i 7.3 Indicator	9009	42G	EB73
IBM i 7.4 Indicator	9009	42G	EB74
Slim Rear Acoustic Door	9009	42G	EC07
Slim Front Acoustic Door	9009	42G	EC08

PCIe3 2-Port 10Gb NIC&ROCE SR/Cu Adapter	9009	42G	EC2S
PCIe3 2-Port 25/10Gb NIC&ROCE SR/Cu Adapter	9009	42G	EC2U
PCIe3 2-port 10GbE NIC&ROCE SFP+ Copper Adapter	9009	42G	EC38
PCIe3 2-Port 40GbE NIC RoCE QSFP+ Adapter	9009	42G	EC3B
PCIe3 2-port 100Gb EDR IB Adapter x16	9009	42G	EC3F
PCIe3 2-port 100GbE (NIC&RoCE) QSFP28 Adapter x16	9009	42G	EC3M
PCIe3 1-port 100Gb EDR IB Adapter x16	9009	42G	EC3U
PCIe2 4-Port USB 3.0 Adapter	9009	42G	EC46
PCIe3 x8 1.6 TB NVMe Flash Adapter for AIX/Linux	9009	42G	EC5B
PCIe3 x8 3.2 TB NVMe Flash Adapter for AIX/Linux	9009	42G	EC5D
PCIe3 x8 6.4 TB NVMe Flash Adapter for AIX/Linux	9009	42G	EC5F
PCIe4 1-port 100Gb EDR IB CAPI adapter	9009	42G	EC63
PCIe4 2-port 100Gb EDR IB CAPI adapter	9009	42G	EC65
PCIe4 2-port 100Gb ROCE EN adapter	9009	42G	EC66
PCIe3 x8 1.6 TB NVMe Flash Adapter for IBM i	9009	42G	EC6V
PCIe3 x8 3.2 TB NVMe Flash Adapter for IBM i	9009	42G	EC6X
PCIe3 x8 6.4 TB NVMe Flash Adapter for IBM i	9009	42G	EC6Z
SAS X Cable 3m - HD Narrow 6Gb 2-Adapters to Enclosure	9009	42G	ECBJ
SAS X Cable 6m - HD Narrow 6Gb 2-Adapters to Enclosure	9009	42G	ECBK
SAS X Cable 10m - HD Narrow 6Gb 2-Adapters to Enclosure	9009	42G	ECBL
SAS X Cable 15m - HD Narrow 3Gb 2-Adapters to Enclosure	9009	42G	ECBM
5m (16.4-ft), IBM Passive QSFP+ to QSFP+ Cable (DAC)	9009	42G	ECBN
SAS YO Cable 1.5m - HD Narrow 6Gb Adapter to Enclosure	9009	42G	ECBT
SAS YO Cable 3m - HD Narrow 6Gb Adapter to Enclosure	9009	42G	ECBU
SAS YO Cable 6m - HD Narrow 6Gb Adapter to Enclosure	9009	42G	ECBV
SAS YO Cable 10m - HD Narrow 6Gb Adapter to Enclosure	9009	42G	ECBW
SAS YO Cable 15m - HD Narrow 3Gb Adapter to Enclosure	9009	42G	ECBX
SAS AE1 Cable 4m - HD Narrow 6Gb Adapter to Enclosure	9009	42G	ECBY
SAS YE1 Cable 3m - HD Narrow 6Gb Adapter to Enclosure	9009	42G	ECBZ
3M Optical Cable Pair for PCIe3 Expansion Drawer	9009	42G	ECC7
10M Optical Cable Pair for PCIe3 Expansion Drawer	9009	42G	ECC8
System Port Converter Cable for UPS	9009	42G	ECCF
3M Copper CXP Cable Pair for PCIe3 Expansion Drawer	9009	42G	ECCS
3M Active Optical Cable Pair for PCIe3 Expansion Drawer	9009	42G	ECCX
10M Active Optical Cable Pair for PCIe3 Expansion Drawer	9009	42G	ECCY
3.0M SAS X12 Cable (Two Adapter to Enclosure)	9009	42G	ECDJ
4.5M SAS X12 Active Optical Cable (Two Adapter to Enclosure)	9009	42G	ECDK
10M SAS X12 Active Optical Cable (Two Adapter to Enclosure)	9009	42G	ECDL
1.5M SAS Y012 Cable (Adapter to Enclosure)	9009	42G	ECDT
3.0M SAS Y012 Cable (Adapter to Enclosure)	9009	42G	ECDU
4.5M SAS Y012 Active Optical Cable (Adapter to Enclosure)	9009	42G	ECDV
10M SAS Y012 Active Optical Cable (Adapter to Enclosure)	9009	42G	ECDW
0.6M SAS AA12 Cable (Adapter to Adapter)	9009	42G	ECE0
3.0M SAS AA12 Cable	9009	42G	ECE3
4.5M SAS AA12 Active Optical Cable (Adapter to Adapter)	9009	42G	ECE4
4.3m (14-Ft) PDU to wall 3PH/24A 200-240V Delta-wired Power Cord	9009	42G	ECJ5
4.3m (14-Ft) PDU to wall 3PH/48A 200-240V Delta-wired Power Cord	9009	42G	ECJ7
High Function 9xC19 Single-Phase or Three-Phase wye PDU plus	9009	42G	ECJJ
High Function 9xC19 PDU plus 3-Phase Delta	9009	42G	ECJL
High Function 12xC13 Single-Phase or Three-Phase wye PDU plus	9009	42G	ECJN

High Function 12xC13 PDU plus 3-Phase Delta	9009	42G	ECJQ
Cloud Private Solution	9009	42G	ECP0
2.0 Meter Slim Rack	9009	42G	ECR0
Rack Front Door High-End appearance	9009	42G	ECRF
Rack Rear Door Black	9009	42G	ECRG
Rack Side Cover	9009	42G	ECRJ
Rack Rear Extension 5-In	9009	42G	ECRK
Rack Front Door for Rack (Black/Flat)	9009	42G	ECRM
Custom Service Specify, Montpellier, France	9009	42G	ECSF
Custom Service Specify, Mexico	9009	42G	ECSM
Custom Service Specify, Poughkeepsie, USA	9009	42G	ECSF
Integrated Solution Packing	9009	42G	ECSS
Optical wrap Plug	9009	42G	ECW0
1x HW Subscription Increment	9009	42G	EHB1
10x HW Subscription Increment	9009	42G	EHB2
100x HW Subscription Increment	9009	42G	EHB3
SAP HANA TRACKING FEATURE	9009	42G	EHKV
IBM Power Systems for SAS Viya (Linux)	9009	42G	EHLU
IBM Power Systems for SAS 9.4 Grid (AIX)	9009	42G	EHLV
Boot Drive / Load Source in EXP12SX Specify (in #ESLL or #ELLL)	9009	42G	EHR1
Boot Drive / Load Source in EXP24SX Specify (in #ESLS or #ELLS)	9009	42G	EHR2
SSD Placement Indicator - #ESLS/#ELLS	9009	42G	EHS2
PCIe3 Optical Cable Adapter for PCIe3 Expansion Drawer	9009	42G	EJ08
PCIe3 RAID SAS Adapter Quad-port 6Gb x8	9009	42G	EJ0J
PCIe3 12GB Cache RAID SAS Adapter Quad-port 6Gb x8	9009	42G	EJ0L
SAS Ports/Cabling for Dual IOA BackPlane	9009	42G	EJ0W
PCIe3 SAS Tape/DVD Adapter Quad-port 6Gb x8	9009	42G	EJ10
PCIe3 12GB Cache RAID PLUS SAS Adapter Quad-port 6Gb x8	9009	42G	EJ14
Base Storage Backplane 12 SFF-3 Bays/RDX Bay	9009	42G	EJ1C
Expanded Function Storage Backplane 18 SFF-3 Bays/Dual IOA with Write Cache/Opt Ext SAS port	9009	42G	EJ1D
Split #EJ1C to 6+6 SFF-3 Bays: Add 2nd SAS Controller	9009	42G	EJ1E
Expanded Function Storage Backplane 12 SFF-3 Bays/RDX Bay/Opt Ext SAS port	9009	42G	EJ1M
PCIe1 SAS Tape/DVD Dual-port 3Gb x8 Adapter	9009	42G	EJ1P
PCIe x16 to CXP Optical or CU converter Adapter for PCIe3 Expansion Drawer	9009	42G	EJ20
PCIe3 Crypto Coprocessor no BSC 4767	9009	42G	EJ32
PCIe3 Crypto Coprocessor BSC-Gen3 4767	9009	42G	EJ33
Specify Mode-1 & (1)EJ0J/EJ0M/EL3B for EXP24S (#5887/EL1S)	9009	42G	EJR1
Specify Mode-1 & (2)EJ0J/EJ0M/EL3B for EXP24S (#5887/EL1S)	9009	42G	EJR2
Specify Mode-2 & (2)EJ0J/EJ0M/EL3B & (2) X for EXP24S (#5887/EL1S)	9009	42G	EJR3
Specify Mode-2 & (4)EJ0J/EJ0M/EL3B for EXP24S (#5887/EL1S)	9009	42G	EJR4
Specify Mode-4 & (4)EJ0J/EJ0M/EL3B for EXP24S (#5887/EL1S)	9009	42G	EJR5
Specify Mode-2 & (1)EJ0J/EJ0M/EL3B & (2) YO for EXP24S (#5887/EL1S)	9009	42G	EJR6
Specify Mode-2 & (2)EJ0J/EJ0M/EL3B & (2) YO for EXP24S (#5887/EL1S)	9009	42G	EJR7
Specify Mode-2 & (1)EJ0J/EJ0M/EL3B & (1) YO for EXP24S (#5887/EL1S)	9009	42G	EJRA
Specify Mode-2 & (2)EJ0J/EJ0M/EL3B & (1) X for EXP24S (#5887/EL1S)	9009	42G	EJRB
Specify Mode-4 & (1)EJ0J/EJ0M/EL3B for EXP24S (#5887/EL1S)	9009	42G	EJRC
Specify Mode-4 & (2)EJ0J/EJ0M/EL3B for EXP24S (#5887/EL1S)	9009	42G	EJRD
Specify Mode-4 & (3)EJ0J/EJ0M/EL3B for EXP24S (#5888/EL1S)	9009	42G	EJRE
Specify Mode-1 & (2)EJ14 for EXP24S (#5887/EL1S)	9009	42G	EJRF
Specify Mode-2 & (2)EJ14 & (2) X for EXP24S (#5887/EL1S)	9009	42G	EJRG
Specify Mode-2 & (2)EJ14 & (1) X for EXP24S (#5887/EL1S)	9009	42G	EJRH

Specify Mode-2 & (4)EJ14 for EXP24S (#5887/EL1S)	9009	42G	EJRJ
Non-paired Indicator EJ14 PCIe SAS RAID+ Adapter	9009	42G	EJRL
Specify Mode-1 & (2)EJ0L for EXP24S (#5887/EL1S)	9009	42G	EJRP
Specify mode-2 & (4) EJ0L for EXP24S #5887/EL1S	9009	42G	EJRR
Specify Mode-2 & (2)EJ0L & (2) X for EXP24S (#5887/EL1S)	9009	42G	EJRS
Specify Mode-2 & (2)EJ0L & (1) X for EXP24S (#5887/EL1S)	9009	42G	EJRT
Non-paired Indicator EJ0L PCIe SAS RAID Adapter	9009	42G	EJRU
Front IBM Bezel for 12-Bay BackPlane	9009	42G	EJU3
Front OEM Bezel for 12-Bay BackPlane	9009	42G	EJU4
Front IBM Bezel for 18-Bay BackPlane	9009	42G	EJUG
Front OEM Bezel for 18-Bay BackPlane	9009	42G	EJUH
Specify Mode-1 & CEC SAS Ports & (2)Y012 for EXP12SX #ESLL/ELLL	9009	42G	EJV0
Specify Mode-1 & (1)EJ0J/EJ0M/EL3B/EL59 & (1)Y012 for EXP12SX #ESLL/ELLL	9009	42G	EJV1
Specify Mode-1 & (2)EJ0J/EJ0M/EL3B/EL59 & (2)Y012 for EXP12SX #ESLL/ELLL	9009	42G	EJV2
Specify Mode-2 & (2)EJ0J/EJ0M/EL3B/EL59 & (2)X12 for EXP12SX #ESLL/ELLL	9009	42G	EJV3
Specify Mode-2 & (4)EJ0J/EJ0M/EL3B/EL59 & (2)X12 for EXP12SX #ESLL/ELLL	9009	42G	EJV4
Specify Mode-4 & (4)EJ0J/EJ0M/EL3B/EL59 & (2)X12 for EXP12SX #ESLL/ELLL	9009	42G	EJV5
Specify Mode-2 & (1)EJ0J/EJ0M/EL3B/EL59 & (2)Y012 for EXP12SX #ESLL/ELLL	9009	42G	EJV6
Specify Mode-2 & (2)EJ0J/EJ0M/EL3B/EL59 & (2)Y012 for EXP12SX #ESLL/ELLL	9009	42G	EJV7
Specify Mode-2 & (1)EJ0J/EJ0M/EL3B/EL59 & (1)Y012 for EXP12SX #ESLL/ELLL	9009	42G	EJVA
Specify Mode-2 & (2)EJ0J/EJ0M/EL3B/EL59 & (1)X12 for EXP12SX #ESLL/ELLL	9009	42G	EJVB
Specify Mode-4 & (1)EJ0J/EJ0M/EL3B/EL59 & (1)X12 for EXP12SX #ESLL/ELLL	9009	42G	EJVC
Specify Mode-4 & (2)EJ0J/EJ0M/EL3B/EL59 & (1)X12 for EXP12SX #ESLL/ELLL	9009	42G	EJVD
Specify Mode-4 & (3)EJ0J/EJ0M/EL3B/EL59 & (2)X12 for EXP12SX #ESLL/ELLL	9009	42G	EJVE
Specify Mode-1 & (2)EJ14 & (2)Y012 for EXP12SX #ESLL/ELLL	9009	42G	EJVF
Specify Mode-1 & (2)EJ0L & (2)Y012 for EXP12SX #ESLL/ELLL	9009	42G	EJVP
Specify Mode-1 & CEC SAS Ports & (2)Y012 for EXP24SX #ESLS/ELLS	9009	42G	EJW0
Specify Mode-1 & (1)EJ0J/EJ0M/EL3B/EL59 & (1)Y012 for EXP24SX #ESLS/ELLS	9009	42G	EJW1
Specify Mode-1 & (2)EJ0J/EJ0M/EL3B/EL59 & (2)Y012 for EXP24SX #ESLS/ELLS	9009	42G	EJW2
Specify Mode-2 & (2)EJ0J/EJ0M/EL3B/EL59 & (2)X12 for EXP24SX #ESLS/ELLS	9009	42G	EJW3
Specify Mode-2 & (4)EJ0J/EJ0M/EL3B/EL59 & (2)X12 for EXP24SX #ESLS/ELLS	9009	42G	EJW4
Specify Mode-4 & (4)EJ0J/EJ0M/EL3B/EL59 & (2)X12 for EXP24SX #ESLS/ELLS	9009	42G	EJW5
Specify Mode-2 & (1)EJ0J/EJ0M/EL3B/EL59 & (2)Y012 for EXP24SX #ESLS/ELLS	9009	42G	EJW6
Specify Mode-2 & (2)EJ0J/EJ0M/EL3B/EL59 & (2)Y012 for EXP24SX #ESLS/ELLS	9009	42G	EJW7
Specify Mode-2 & (1)EJ0J/EJ0M/EL3B/EL59 & (1)Y012 for EXP24SX #ESLS/ELLS	9009	42G	EJWA
Specify Mode-2 & (2)EJ0J/EJ0M/EL3B/EL59 & (1)X12 for EXP24SX #ESLS/ELLS	9009	42G	EJWB
Specify Mode-4 & (1)EJ0J/EJ0M/EL3B/EL59 & (1)X12 for EXP24SX #ESLS/ELLS	9009	42G	EJWC
Specify Mode-4 & (2)EJ0J/EJ0M/EL3B/EL59 & (1)X12 for EXP24SX #ESLS/ELLS	9009	42G	EJWD
Specify Mode-4 & (3)EJ0J/EJ0M/EL3B/EL59 & (2)X12 for EXP24SX #ESLS/ELLS	9009	42G	EJWE
Specify Mode-1 & (2)EJ14 & (2)Y012 for EXP24SX #ESLS/ELLS	9009	42G	EJWF
Specify Mode-2 & (2)EJ14 & (2)X12 for EXP24SX #ESLS/ELLS	9009	42G	EJWG
Specify Mode-2 & (2)EJ14 & (1)X12 for EXP24SX	9009	42G	EJWG

#ESLS/ELLS	9009	42G	EJWH
Specify Mode-2 & (4)EJ14 & (2)X12 for EXP24SX			
#ESLS/ELLS	9009	42G	EJWJ
Specify Mode-1 & (2)EJ0L & (2)Y012 for EXP24SX			
#ESLS/ELLS	9009	42G	EJWP
Specify Mode-2 & (4)EJ0L & (2)X12 for EXP24SX			
#ESLS/ELLS	9009	42G	EJWR
Specify Mode-2 & (2)EJ0L & (2)X12 for EXP24SX			
#ESLS/ELLS	9009	42G	EJWS
Specify Mode-2 & (2)EJ0L& (1)X12 for EXP24SX			
#ESLS/ELLS	9009	42G	EJWT
PDU Access Cord 0.38m	9009	42G	ELC0
Power Cable - Drawer to IBM PDU (250V/10A)	9009	42G	ELC5
#ESD4 Load Source Specify (571GB 10K RPM SAS SFF-3 for IBM i)	9009	42G	ELS4
#ESDA Load Source Specify (283GB 15K RPM SAS SFF-3 for IBM i)	9009	42G	ELSA
#ESDN Load Source Specify (571GB 15K RPM SFF-2)	9009	42G	ELSN
#ES0R Load Source Specify (387GB SSD SFF-2 4K)	9009	42G	ELSR
#ES0T Load Source Specify (775GB SSD SFF-2 4K)	9009	42G	ELST
#ESFU Load Source Specify (1.7TB HDD SFF-3)	9009	42G	ELT0
#ES81 Load Source Specify (1.9TB SFF-2 SSD)	9009	42G	ELT1
#ESF2 Load Source Specify (1.1TB HDD SFF-2)	9009	42G	ELT2
#ESF4 Load Source Specify (571GB HDD SFF-3)	9009	42G	ELT4
#ES86 Load Source Specify (387GB SFF-2 SSD 4k for IBM i)	9009	42G	ELT6
#ESF8 Load Source Specify (1.1TB HDD SFF-3)	9009	42G	ELT8
#ES79 Load Source Specify (387GB SFF-2 SSD 5xx for IBM i)	9009	42G	ELT9
#ESFA Load Source Specify (283GB 15K RPM SAS SFF-3 4K Block - 4224)	9009	42G	ELTA
#ES8D Load Source Specify (775GB SFF-2 SSD 4k for IBM i)	9009	42G	ELTD
#ESFE Load Source Specify (571GB 15K RPM SAS SFF-3 4K Block - 4224)	9009	42G	ELTE
#ES7F Load Source Specify (775GB SFF-2 SSD 5xx for IBM i)	9009	42G	ELTF
#ES8G Load Source Specify (1.55TB SFF-2 SSD 4k for IBM i)	9009	42G	ELTG
#ES8K Load Source Specify (1.9TB SFF-3 SSD)	9009	42G	ELTK
#ES7L Load Source Specify (387GB SFF-3 SSD 5xx for IBM i)	9009	42G	ELTL
#ESFN Load Source Specify (571GB 15K RPM SAS SFF-2 4K Block - 4224)	9009	42G	ELTN
#ES8P Load Source Specify (387GB SFF-3 SSD 4k for IBM i)	9009	42G	ELTP
#ES7Q Load Source Specify (775GB SFF-3 SSD 5xx for IBM i)	9009	42G	ELTQ
#ES8R Load Source Specify (775GB SFF-3 SSD 4k for IBM i)	9009	42G	ELTR
#ESFS Load Source Specify (1.7TB HDD SFF-2)	9009	42G	ELTS
#ESEU Load Source Specify (571GB HDD SFF-2)	9009	42G	ELTU
#ES8W Load Source Specify (1.55TB SFF-3 SSD 4k for IBM i)	9009	42G	ELTW
#ESEY Load Source Specify (283GB 15K RPM SAS SFF-2 4K Block - 4224)	9009	42G	ELTY
#ESNJ Load Source Specify (283GB HDD SFF-3)	9009	42G	ELUJ
#ESNL Load Source Specify (283GB HDD SFF-2)	9009	42G	ELUL
#ESNN Load Source Specify (571GB HDD SFF-3)	9009	42G	ELUN
#ESNQ Load Source Specify (571GB HDD SFF-2)	9009	42G	ELUQ
ES91 Load Source Specify (387GB SSD SFF-3)	9009	42G	ELZ1
#ESE2 Load Source Specify (3.72TB SSD SFF-3)	9009	42G	ELZ2
#ES93 Load Source Specify (1.86TB SSD SFF-3)	9009	42G	ELZ3
#ES84 Load Source Specify (931GB SSD SFF-3)	9009	42G	ELZ4
ES95 Load source specify (387GB SSD SFF-2)	9009	42G	ELZ5
#ESG6 Load Source Specify (387GB SSD SFF-2)	9009	42G	ELZ6
#ES97 Load Source Specify (1.86TB SSD SFF-2)	9009	42G	ELZ7
#ESE8 Load Source Specify (3.72TB SSD SFF-2)	9009	42G	ELZ8
#ESM9 Load Source Specify (3.72 TB SSD 4k SFF-2)	9009	42G	ELZ9
#ESGA Load Source Specify (387GB SSD SFF-3)	9009	42G	ELZA
ESNB Load source specify (775GB SSD SFF-2)	9009	42G	ELZB
#ESGC Load Source Specify (387GB SSD SFF-2)	9009	42G	ELZC
ESND Load source specify (775GB SSD SFF-3)	9009	42G	ELZD
#ESGE Load Source Specify (387GB SSD SFF-3)	9009	42G	ELZE

ESNF Load Source Specify (1.55TB SSD SFF-2)	9009	42G	ELZF
#ESGG Load Source Specify (775GB SSD SFF-2)	9009	42G	ELZG
ESNH Load Source Specify (1.55TB SSD SFF-3)	9009	42G	ELZH
#ESGJ Load Source Specify (775GB SSD SFF-3)	9009	42G	ELZJ
#ESHK Load Source Specify (931 GB SSD 4k SFF-2)	9009	42G	ELZK
#ESGL Load Source Specify (775GB SSD SFF-2)	9009	42G	ELZL
#ESHM Load Source Specify (1.86 TB SSD 4k SFF-2)	9009	42G	ELZM
#ESGN Load Source Specify (775GB SSD SFF-3)	9009	42G	ELZN
#ESGQ Load Source Specify (1.55TB SSD SFF-2)	9009	42G	ELZQ
#ESMR Load Source Specify (3.72 TB SSD 4k SFF-3)	9009	42G	ELZR
#ESGS Load Source Specify (1.55TB SSD SFF-3)	9009	42G	ELZS
#ESHT Load Source Specify (931 GB SSD 4k SFF-3)	9009	42G	ELZT
#ESHV Load Source Specify (1.86 TB SSD 4k SFF-3)	9009	42G	ELZV
#ES8Z Load Source Specify (931GB SSD SFF-2)	9009	42G	ELZZ
8 GB DDR4 Memory	9009	42G	EM60
16 GB DDR4 Memory	9009	42G	EM62
32 GB DDR4 Memory	9009	42G	EM63
64 GB DDR4 Memory	9009	42G	EM64
128 GB DDR4 Memory	9009	42G	EM65
512GB (16x32GB) Memory DIMMs bundle for EPIC Solution Edition	9009	42G	EM67
PCIe Gen3 I/O Expansion Drawer	9009	42G	EMX0
AC Power Supply Conduit for PCIe3 Expansion Drawer	9009	42G	EMXA
PCIe3 6-slot Fanout Module for PCIe3 Expansion Drawer	9009	42G	EMXF
PCIe3 6-slot Fanout Module for PCIe3 Expansion Drawer	9009	42G	EMXG
PCIe3 6-slot Fanout Module for PCIe3 Expansion Drawer	9009	42G	EMXH
1m (3.3-ft), 10Gb E'Net Cable SFP+ Act Twinax Copper	9009	42G	EN01
3m (9.8-ft), 10Gb E'Net Cable SFP+ Act Twinax Copper	9009	42G	EN02
5m (16.4-ft), 10Gb E'Net Cable SFP+ Act Twinax Copper	9009	42G	EN03
PCIe3 16Gb 2-port Fibre Channel Adapter	9009	42G	EN0A
PCIe2 8Gb 2-Port Fibre Channel Adapter	9009	42G	EN0G
PCIe3 4-port (10Gb FCoE & 1GbE) SR&RJ45	9009	42G	EN0H
PCIe3 4-port (10Gb FCoE & 1GbE) SFP+Copper&RJ45	9009	42G	EN0K
PCIe2 4-Port (10Gb+1GbE) SR+RJ45 Adapter	9009	42G	EN0S
PCIe2 4-port (10Gb+1GbE) Copper SFP+RJ45 Adapter	9009	42G	EN0U
PCIe2 2-port 10/1GbE BaseT RJ45 Adapter	9009	42G	EN0W
PCIe2 8Gb 4-port Fibre Channel Adapter	9009	42G	EN12
Not withdrawn in Japan until August 7, 2018			
PCIe 1-port Bisync Adapter	9009	42G	EN13
PCIe3 4-port 10GbE SR Adapter	9009	42G	EN15
PCIe3 32Gb 2-port Fibre Channel Adapter	9009	42G	EN1A
PCIe3 16Gb 4-port Fibre Channel Adapter	9009	42G	EN1C
188 GB IBM i NVMe Load Source Namespace size	9009	42G	ENS1
393 GB IBM i NVMe Load Source Namespace size	9009	42G	ENS2
Deactivation of LPM (Live Partition Mobility)	9009	42G	EPA0
Horizontal PDU Mounting Hardware	9009	42G	EPTH
High Function 9xC19 PDU: Switched, Monitoring	9009	42G	EPTJ
High Function 9xC19 PDU 3-Phase: Switched, Monitoring	9009	42G	EPTL
High Function 12xC13 PDU: Switched, Monitoring	9009	42G	EPTN
High Function 12xC13 PDU 3-Phase: Switched, Monitoring	9009	42G	EPTQ
Quantity 150 of #ES0Q 387GB SFF-2 4k SSD (AIX/Linux)	9009	42G	EQ0Q
Quantity 150 of #ES0R 387GB SFF-2 4k SSD (IBM i)	9009	42G	EQ0R
Quantity 150 of #ES0S 775GB SFF-2 4k SSD (AIX/Linux)	9009	42G	EQ0S
Quantity 150 of #ES0T 775GB SFF-2 4k SSD (IBM i)	9009	42G	EQ0T
Quantity 150 of #ES62 3.86-4.0 TB 7200 rpm 4k LFF-1 Disk	9009	42G	EQ62
Quantity 150 of #ES64 7.72-8.0 TB 7200 rpm 4k LFF-1 Disk	9009	42G	EQ64
Quantity 150 of #ES78 387GB SFF-2 SSD 5xx	9009	42G	EQ78
Quantity 150 of #ES79 387GB SFF-2 SSD 5xx	9009	42G	EQ79
Quantity 150 of #ES7E 775GB SFF-2 SSD 5xx	9009	42G	EQ7E

Quantity 150 of #ES7F 775GB SFF-2 SSD 5xx	9009	42G	EQ7F
Quantity 150 of #ES80 1.9TB SFF-2 SSD 4k	9009	42G	EQ80
Quantity 150 of ES81 1.9TB SFF-2 SSD 4k	9009	42G	EQ81
Quantity 150 of #ES85 387GB SFF-2 SSD 4k	9009	42G	EQ85
Quantity 150 of #ES86 387GB SFF-2 SSD 4k	9009	42G	EQ86
Quantity 150 of #ES8C 775GB SFF-2 SSD 4k	9009	42G	EQ8C
Quantity 150 of #ES8D 775GB SFF-2 SSD 4k	9009	42G	EQ8D
Quantity 150 of #ES8F 1.55TB SFF-2 SSD 4k	9009	42G	EQ8F
Quantity 150 of #ES8G 1.55TB SFF-2 SSD 4k	9009	42G	EQ8G
Quantity 150 of #ES8Y 931GB SFF-2 SSD 4k	9009	42G	EQ8Y
Quantity 150 of ES8Z 931GB SFF-2 SSD 4k	9009	42G	EQ8Z
Quantity 150 of ES96 1.86TB SFF-2 SSD 4k	9009	42G	EQ96
Quantity 150 of ES97 1.86TB SFF-2 SSD 4k	9009	42G	EQ97
Quantity 150 of #ESD2 (1.1TB 10k SFF-2)	9009	42G	EQD2
Quantity 150 of #ESD3 (1.2TB 10k SFF-2)	9009	42G	EQD3
Quantity 150 of #ESDN (571GB 15K RPM SAS SFF-2 for IBM i)	9009	42G	EQDN
Quantity 150 of #ESDP (600GB 15K RPM SAS SFF-2 for AIX/LINUX)	9009	42G	EQDP
Quantity 150 of #ESE7 3.72TB SFF-2 SSD 4k	9009	42G	EQE7
Quantity 150 of ESE8 3.72TB SFF-2 SSD 4k	9009	42G	EQE8
Quantity 150 of #ESEU (571GB 10k SFF-2)	9009	42G	EQEU
Quantity 150 of #ESEV (600GB 10k SFF-2)	9009	42G	EQEV
Quantity 150 of #ESEY (283 GB SFF-2)	9009	42G	EQEY
Quantity 150 of #ESEZ (300GB SFF-2)	9009	42G	EQEZ
Quantity 150 of #ESF2 (1.1TB 10k SFF-2)	9009	42G	EQF2
Quantity 150 of #ESF3 (1.2TB 10k SFF-2)	9009	42G	EQF3
Quantity 150 of #ESFN (571GB SFF-2)	9009	42G	EQFN
Quantity 150 of #ESFP (600GB SFF-2)	9009	42G	EQFP
Quantity 150 of #ESFS (1.7TB 10k SFF-2)	9009	42G	EQFS
Quantity 150 of #ESFT (1.8TB 10k SFF-2)	9009	42G	EQFT
Quantity 150 of #ESG5 (387GB SAS 5xx)	9009	42G	EQG5
Quantity 150 of #ESG6 (387GB SAS 5xx)	9009	42G	EQG6
Quantity 150 of #ESGB (387GB SAS 4k)	9009	42G	EQGB
Quantity 150 of #ESGC (387GB SAS 4k)	9009	42G	EQGC
Quantity 150 of #ESGF (775GB SAS 5xx)	9009	42G	EQGF
Quantity 150 of #ESGG (775GB SAS 5xx)	9009	42G	EQGG
Quantity 150 of #ESGK (775GB SAS 4k)	9009	42G	EQGK
Quantity 150 of #ESGL (775GB SAS 4k)	9009	42G	EQGL
Quantity 150 of #ESGP (1.55TB SAS 4k)	9009	42G	EQGP
Quantity 150 of #ESGQ (1.55TB SAS 4k)	9009	42G	EQGQ
Quantity 150 of ES94 387GB SAS 4k	9009	42G	ER94
Quantity 150 of ES95 387GB SAS 4k	9009	42G	ER95
RFID Tags for Servers, Compute Nodes, Chassis, Racks, and HMCs	9009	42G	ERF1
Rear rack extension	9009	42G	ERG0
Quantity 150 of ESGV 387GB SSD 4k	9009	42G	ERGV
Quantity 150 of ESGZ 775GB SSD 4k	9009	42G	ERGZ
Quantity 150 of #ESHJ 931 GB SSD 4k SFF-2	9009	42G	ERHJ
Quantity 150 of #ESHK 931 GB SSD 4k SFF-2	9009	42G	ERHK
Quantity 150 of #ESHL 1.86 TB SSD 4k SFF-2	9009	42G	ERHL
Quantity 150 of #ESHM 1.86 TB SSD 4k SFF-2	9009	42G	ERHM
Quantity 150 of #ESHN 7.45 TB SSD 4k SFF-2	9009	42G	ERHN
Quantity 150 of ESJ0 931GB SAS 4k	9009	42G	ERJ0
Quantity 150 of ESJ1 931GB SAS 4k	9009	42G	ERJ1
Quantity 150 of ESJ2 1.86TB SAS 4k	9009	42G	ERJ2
Quantity 150 of ESJ3 1.86TB SAS 4k	9009	42G	ERJ3
Quantity 150 of ESJ4 3.72TB SAS 4k	9009	42G	ERJ4
Quantity 150 of ESJ5 3.72TB SAS 4k	9009	42G	ERJ5
Quantity 150 of ESJ6 7.45TB SAS 4k	9009	42G	ERJ6
Quantity 150 of ESJ7 7.45TB SAS 4k	9009	42G	ERJ7
Quantity 150 of #ESM8 3.72 TB SSD 4k SFF-2	9009	42G	ERM8
Quantity 150 of #ESM9 3.72 TB SSD 4k SFF-2	9009	42G	ERM9
Quantity 150 of ESNA 775GB SSD 4k	9009	42G	ERNA
Quantity 150 of ESNB 775GB SSD 4k	9009	42G	ERNB
Quantity 150 of ESNE 1.55TB SSD 4k	9009	42G	ERNE
Quantity 150 of ESNF 1.55TB SSD 4k	9009	42G	ERNF
387GB SFF-2 4k SSD for AIX/Linux	9009	42G	ES0Q
387GB SFF-2 4k SSD for IBM i	9009	42G	ES0R
775GB SFF-2 4k SSD for AIX/Linux	9009	42G	ES0S
775GB SFF-2 4k SSD for IBM i	9009	42G	ES0T
3.86-4.0 TB 7200 RPM 4K SAS LFF-1 Nearline Disk Drive (AIX/Linux)	9009	42G	ES62
7.72-8.0 TB 7200 RPM 4K SAS LFF-1 Nearline Disk			

Drive (AIX/Linux)	9009	42G	ES64
387GB SFF-2 SSD 5xx eMLC4 for AIX/Linux	9009	42G	ES78
387GB SFF-2 SSD 5xx eMLC4 for IBM i	9009	42G	ES79
775GB SFF-2 SSD 5xx eMLC4 for AIX/Linux	9009	42G	ES7E
775GB SFF-2 SSD 5xx eMLC4 for IBM i	9009	42G	ES7F
387GB SFF-3 SSD 5xx eMLC4 for AIX/Linux	9009	42G	ES7K
387GB SFF-3 SSD 5xx eMLC4 for IBM i	9009	42G	ES7L
775GB SFF-3 SSD 5xx eMLC4 for AIX/Linux	9009	42G	ES7P
775GB SFF-3 SSD 5xx eMLC4 for IBM i	9009	42G	ES7Q
1.9TB Read Intensive SAS 4k SFF-2 SSD for AIX/ Linux	9009	42G	ES80
1.9TB Read Intensive SAS 4k SFF-2 SSD for IBM i	9009	42G	ES81
931GB Mainstream SAS 4k SFF-3 SSD for AIX/Linux	9009	42G	ES83
931GB Mainstream SAS 4k SFF-3 SSD for IBM i	9009	42G	ES84
387GB SFF-2 SSD 4k eMLC4 for AIX/Linux	9009	42G	ES85
387GB SFF-2 SSD 4k eMLC4 for IBM i	9009	42G	ES86
775GB SFF-2 SSD 4k eMLC4 for AIX/Linux	9009	42G	ES8C
775GB SFF-2 SSD 4k eMLC4 for IBM i	9009	42G	ES8D
1.55TB SFF-2 SSD 4k eMLC4 for AIX/Linux	9009	42G	ES8F
1.55TB SFF-2 SSD 4k eMLC4 for IBM i	9009	42G	ES8G
1.9TB Read Intensive SAS 4k SFF-3 SSD for AIX/ Linux	9009	42G	ES8J
1.9TB Read Intensive SAS 4k SFF-3 SSD for IBM i	9009	42G	ES8K
387GB SFF-3 SSD 4k eMLC4 for AIX/Linux	9009	42G	ES8N
387GB SFF-3 SSD 4k eMLC4 for IBM i	9009	42G	ES8P
775GB SFF-3 SSD 4k eMLC4 for AIX/Linux	9009	42G	ES8Q
775GB SFF-3 SSD 4k eMLC4 for IBM i	9009	42G	ES8R
1.55TB SFF-3 SSD 4k eMLC4 for AIX/Linux	9009	42G	ES8V
1.55TB SFF-3 SSD 4k eMLC4 for IBM i	9009	42G	ES8W
931GB Mainstream SAS 4k SFF-2 SSD for AIX/Linux	9009	42G	ES8Y
931GB Mainstream SAS 4k SFF-2 SSD for IBM i	9009	42G	ES8Z
387GB Enterprise SAS 4k SFF-3 SSD for AIX/Linux	9009	42G	ES90
387GB Enterprise SAS 4k SFF-3 SSD for IBM i	9009	42G	ES91
1.86TB Mainstream SAS 4k SFF-3 SSD for AIX/Linux	9009	42G	ES92
1.86TB Mainstream SAS 4k SFF-3 SSD for IBM i	9009	42G	ES93
387GB Enterprise SAS 4k SFF-2 SSD for AIX/Linux	9009	42G	ES94
387GB Enterprise SAS 4k SFF-2 SSD for IBM i	9009	42G	ES95
1.86TB Mainstream SAS 4k SFF-2 SSD for AIX/Linux	9009	42G	ES96
1.86TB Mainstream SAS 4k SFF-2 SSD for IBM i	9009	42G	ES97
387GB Enterprise SAS 5xx SFF-3 SSD for AIX/Linux	9009	42G	ESB0
387GB Enterprise SAS 5xx SFF-2 SSD for AIX/Linux	9009	42G	ESB2
775GB Enterprise SAS 5xx SFF-3 SSD for AIX/Linux	9009	42G	ESB4
775GB Enterprise SAS 5xx SFF-2 SSD for AIX/Linux	9009	42G	ESB6
387GB Enterprise SAS 4k SFF-3 SSD for AIX/Linux	9009	42G	ESB8
387GB Enterprise SAS 4k SFF-3 SSD for IBM i	9009	42G	ESB9
387GB Enterprise SAS 4k SFF-2 SSD for AIX/Linux	9009	42G	ESBA
387GB Enterprise SAS 4k SFF-2 SSD for IBM i	9009	42G	ESBB
775GB Enterprise SAS 4k SFF-3 SSD for AIX/Linux	9009	42G	ESBE
775GB Enterprise SAS 4k SFF-3 SSD for IBM i	9009	42G	ESBF
775GB Enterprise SAS 4k SFF-2 SSD for AIX/Linux	9009	42G	ESBG
775GB Enterprise SAS 4k SFF-2 SSD for IBM i	9009	42G	ESBH
1.55TB Enterprise SAS 4k SFF-3 SSD for AIX/Linux	9009	42G	ESBJ
1.55TB Enterprise SAS 4k SFF-3 SSD for IBM i	9009	42G	ESBK
1.55TB Enterprise SAS 4k SFF-2 SSD for AIX/Linux	9009	42G	ESBL
1.55TB Enterprise SAS 4k SFF-2 SSD for IBM i	9009	42G	ESBM
S&H - No Charge	9009	42G	ESC0
S&H-b	9009	42G	ESC6
1.1TB 10K RPM SAS SFF-2 Disk Drive (IBMi)	9009	42G	ESD2
1.2TB 10K RPM SAS SFF-2 Disk Drive (AIX/Linux)	9009	42G	ESD3
571GB 10K RPM SAS SFF-3 Disk Drive (IBM i)	9009	42G	ESD4
600GB 10K RPM SAS SFF-3 Disk Drive (AIX/Linux)	9009	42G	ESD5
283GB 15K RPM SAS SFF-3 Disk Drive (IBM i)	9009	42G	ESDA
300GB 15K RPM SAS SFF-3 Disk Drive (AIX/Linux)	9009	42G	ESDB
571GB 15K RPM SAS SFF-2 Disk Drive - 528 Block (IBM i)	9009	42G	ESDN
600GB 15K RPM SAS SFF-2 Disk Drive - 5xx Block (AIX/Linux)	9009	42G	ESDP
3.72TB Mainstream SAS 4k SFF-3 SSD for AIX/Linux	9009	42G	ESE1
3.72TB Mainstream SAS 4k SFF-3 SSD for IBM i	9009	42G	ESE2
3.72TB Mainstream SAS 4k SFF-2 SSD for AIX/Linux	9009	42G	ESE7
3.72TB Mainstream SAS 4k SFF-2 SSD for IBM i	9009	42G	ESE8
571GB 10K RPM SAS SFF-2 Disk Drive 4K Block - 4224	9009	42G	ESEU
600GB 10K RPM SAS SFF-2 Disk Drive 4K Block -			

4096		9009	42G	ESEV
283GB	15K RPM SAS SFF-2 4K Block - 4224 Disk Drive	9009	42G	ESEY
300GB	15K RPM SAS SFF-2 4K Block - 4096 Disk Drive	9009	42G	ESEZ
1.1TB	10K RPM SAS SFF-2 Disk Drive 4K Block - 4224	9009	42G	ESF2
1.2TB	10K RPM SAS SFF-2 Disk Drive 4K Block - 4096	9009	42G	ESF3
571GB	10K RPM SAS SFF-3 Disk Drive 4K Block - 4224	9009	42G	ESF4
600GB	10K RPM SAS SFF-3 Disk Drive 4K Block - 4096	9009	42G	ESF5
1.1TB	10K RPM SAS SFF-3 Disk Drive 4K Block - 4224	9009	42G	ESF8
1.2TB	10K RPM SAS SFF-3 Disk Drive 4K Block - 4096	9009	42G	ESF9
283GB	15K RPM SAS SFF-3 4K Block - 4224 Disk Drive	9009	42G	ESFA
300GB	15K RPM SAS SFF-3 4K Block - 4096 Disk Drive	9009	42G	ESFB
571GB	15K RPM SAS SFF-3 4K Block - 4224 Disk Drive	9009	42G	ESFE
600GB	15K RPM SAS SFF-3 4K Block - 4096 Disk Drive	9009	42G	ESFF
571GB	15K RPM SAS SFF-2 4K Block - 4224 Disk Drive	9009	42G	ESFN
600GB	15K RPM SAS SFF-2 4K Block - 4096 Disk Drive	9009	42G	ESFP
1.7TB	10K RPM SAS SFF-2 Disk Drive 4K Block - 4224	9009	42G	ESFS
1.8TB	10K RPM SAS SFF-2 Disk Drive 4K Block - 4096	9009	42G	ESFT
1.7TB	10K RPM SAS SFF-3 Disk Drive 4K Block - 4224	9009	42G	ESFU
1.8TB	10K RPM SAS SFF-3 Disk Drive 4K Block - 4096	9009	42G	ESFV
387GB	Enterprise SAS 5xx SFF-2 SSD for AIX/Linux	9009	42G	ESG5
387GB	Enterprise SAS 5xx SFF-2 SSD for IBM i	9009	42G	ESG6
387GB	Enterprise SAS 5xx SFF-3 SSD for AIX/Linux	9009	42G	ESG9
387GB	Enterprise SAS 5xx SFF-3 SSD for IBM i	9009	42G	ESGA
387GB	Enterprise SAS 4k SFF-2 SSD for AIX/Linux	9009	42G	ESGB
387GB	Enterprise SAS 4k SFF-2 SSD for IBM i	9009	42G	ESGC
387GB	Enterprise SAS 4k SFF-3 SSD for AIX/Linux	9009	42G	ESGD
387GB	Enterprise SAS 4k SFF-3 SSD for IBM i	9009	42G	ESGE
775GB	Enterprise SAS 5xx SFF-2 SSD for AIX/Linux	9009	42G	ESGF
775GB	Enterprise SAS 5xx SFF-2 SSD for IBM i	9009	42G	ESGG
775GB	Enterprise SAS 5xx SFF-3 SSD for AIX/Linux	9009	42G	ESGH
775GB	Enterprise SAS 5xx SFF-3 SSD for IBM i	9009	42G	ESGJ
775GB	Enterprise SAS 4k SFF-2 SSD for AIX/Linux	9009	42G	ESGK
775GB	Enterprise SAS 4k SFF-2 SSD for IBM i	9009	42G	ESGL
775GB	Enterprise SAS 4k SFF-3 SSD for AIX/Linux	9009	42G	ESGM
775GB	Enterprise SAS 4k SFF-3 SSD for IBM i	9009	42G	ESGN
1.55TB	Enterprise SAS 4k SFF-2 SSD for AIX/Linux	9009	42G	ESGP
1.55TB	Enterprise SAS 4k SFF-2 SSD for IBM i	9009	42G	ESGQ
1.55TB	Enterprise SAS 4k SFF-3 SSD for AIX/Linux	9009	42G	ESGR
1.55TB	Enterprise SAS 4k SFF-3 SSD for IBM i	9009	42G	ESGS
387GB	Enterprise SAS 5xx SFF-3 SSD for AIX/Linux	9009	42G	ESGT
387GB	Enterprise SAS 5xx SFF-2 SSD for AIX/Linux	9009	42G	ESGV
775GB	Enterprise SAS 5xx SFF-3 SSD for AIX/Linux	9009	42G	ESGX
775GB	Enterprise SAS 5xx SFF-2 SSD for AIX/Linux	9009	42G	ESGZ
931 GB	Mainstream SAS 4k SFF-2 SSD for AIX/Linux	9009	42G	ESHJ
931 GB	Mainstream SAS 4k SFF-2 SSD for IBM i	9009	42G	ESHK
1.86 TB	Mainstream SAS 4k SFF-2 SSD for AIX/Linux	9009	42G	ESHL
1.86 TB	Mainstream SAS 4k SFF-2 SSD for IBM i	9009	42G	ESHM
7.45 TB	Mainstream SAS 4k SFF-2 SSD for AIX/Linux	9009	42G	ESHN
931 GB	Mainstream SAS 4k SFF-3 SSD for AIX/Linux	9009	42G	ESHS
931 GB	Mainstream SAS 4k SFF-3 SSD for IBM i	9009	42G	ESHT
1.86 TB	Mainstream SAS 4k SFF-3 SSD for AIX/Linux	9009	42G	ESHU
1.86 TB	Mainstream SAS 4k SFF-3 SSD for IBM i	9009	42G	ESHV
7.45 TB	Mainstream SAS 4k SFF-3 SSD for AIX/Linux	9009	42G	ESHW
931GB	Mainstream SAS 4k SFF-2 SSD for AIX/Linux	9009	42G	ESJ0
931GB	Mainstream SAS 4k SFF-2 SSD for IBM i	9009	42G	ESJ1
1.86TB	Mainstream SAS 4k SFF-2 SSD for AIX/Linux	9009	42G	ESJ2

1.86TB Mainstream SAS 4k SFF-2 SSD for IBM i	9009	42G	ESJ3
3.72TB Mainstream SAS 4k SFF-2 SSD for AIX/Linux	9009	42G	ESJ4
3.72TB Mainstream SAS 4k SFF-2 SSD for IBM i	9009	42G	ESJ5
7.45TB Mainstream SAS 4k SFF-2 SSD for AIX/Linux	9009	42G	ESJ6
7.45TB Mainstream SAS 4k SFF-2 SSD for IBM i	9009	42G	ESJ7
931GB Mainstream SAS 4k SFF-3 SSD for AIX/Linux	9009	42G	ESJ8
931GB Mainstream SAS 4k SFF-3 SSD for IBM i	9009	42G	ESJ9
1.86TB Mainstream SAS 4k SFF-3 SSD for AIX/Linux	9009	42G	ESJA
1.86TB Mainstream SAS 4k SFF-3 SSD for IBM i	9009	42G	ESJB
3.72TB Mainstream SAS 4k SFF-3 SSD for AIX/Linux	9009	42G	ESJC
3.72TB Mainstream SAS 4k SFF-3 SSD for IBM i	9009	42G	ESJD
7.45TB Mainstream SAS 4k SFF-3 SSD for AIX/Linux	9009	42G	ESJE
7.45TB Mainstream SAS 4k SFF-3 SSD for IBM i	9009	42G	ESJF
ESB9 Load Source Specify (387GB SSD SFF-3)	9009	42G	ESL9
Specify AC Power Supply for EXP12SX/EXP24SX Storage Enclosure	9009	42G	ESLA
ESBB Load Source Specify (387GB SSD SFF-2)	9009	42G	ESLB
ESBF Load Source Specify (775GB SSD SFF-3)	9009	42G	ESLF
ESBH Load Source Specify (775GB SSD SFF-2)	9009	42G	ESLH
ESBK Load Source Specify (1.55TB SSD SFF-3)	9009	42G	ESLK
EXP12SX SAS Storage Enclosure	9009	42G	ESLL
ESBM Load Source Specify (1.55TB SSD SFF-2)	9009	42G	ESLM
EXP24SX SAS Storage Enclosure	9009	42G	ESLS
Load Source Specify for EC6V (NVMe 1.6 TB SSD for IBM i)	9009	42G	ESLV
Load Source Specify for EC6X (NVMe 3.2 TB SSD for IBM i)	9009	42G	ESLX
Load Source Specify for EC6Z (NVMe 6.4 TB SSD for IBM i)	9009	42G	ESLZ
3.72 TB Mainstream SAS 4k SFF-2 SSD for AIX/Linux	9009	42G	ESM8
3.72 TB Mainstream SAS 4k SFF-2 SSD for IBM i	9009	42G	ESM9
3.72 TB Mainstream SAS 4k SFF-3 SSD for AIX/Linux	9009	42G	ESMQ
3.72 TB Mainstream SAS 4k SFF-3 SSD for IBM i	9009	42G	ESMR
775GB Enterprise SAS 4k SFF-2 SSD for AIX/Linux	9009	42G	ESNA
775GB Enterprise SAS 4k SFF-2 SSD for IBM i	9009	42G	ESNB
775GB Enterprise SAS 4k SFF-3 SSD for AIX/Linux	9009	42G	ESNC
775GB Enterprise SAS 4k SFF-3 SSD for IBM i	9009	42G	ESND
1.55TB Enterprise SAS 4k SFF-2 SSD for AIX/Linux	9009	42G	ESNE
1.55TB Enterprise SAS 4k SFF-2 SSD for IBM i	9009	42G	ESNF
1.55TB Enterprise SAS 4k SFF-3 SSD for AIX/Linux	9009	42G	ESNG
1.55TB Enterprise SAS 4k SFF-3 SSD for IBM i	9009	42G	ESNH
283GB 15K RPM SAS SFF-3 4k Block Cached Disk Drive (IBM i)	9009	42G	ESNJ
300GB 15K RPM SAS SFF-3 4k Block Cached Disk Drive (AIX/Linux)	9009	42G	ESNK
283GB 15K RPM SAS SFF-2 4k Block Cached Disk Drive (IBM i)	9009	42G	ESNL
300GB 15K RPM SAS SFF-2 4k Block Cached Disk Drive (AIX/Linux)	9009	42G	ESNM
571GB 15K RPM SAS SFF-3 4k Block Cached Disk Drive (IBM i)	9009	42G	ESNN
600GB 15K RPM SAS SFF-3 4k Block Cached Disk Drive (AIX/Linux)	9009	42G	ESNP
571GB 15K RPM SAS SFF-2 4k Block Cached Disk Drive (IBM i)	9009	42G	ESNQ
600GB 15K RPM SAS SFF-2 4k Block Cached Disk Drive (AIX/Linux)	9009	42G	ESNR
Quantity 150 of #ESNL (283GB 15k SFF-2)	9009	42G	ESPL
Quantity 150 of #ESNM (300GB 15k SFF-2)	9009	42G	ESPM
Quantity 150 of #ESNQ (571GB 15k SFF-2)	9009	42G	ESPQ
Quantity 150 of #ESNR (600GB 15k SFF-2)	9009	42G	ESPR
Quantity 150 of ESB2 387GB SAS 4k	9009	42G	ESQ2
Quantity 150 of ESB6 775GB SAS 4k	9009	42G	ESQ6
Quantity 150 of ESBA 387GB SAS 4k	9009	42G	ESQA
Quantity 150 of ESB8 387GB SAS 4k	9009	42G	ESQB
Quantity 150 of ESBG 775GB SAS 4k	9009	42G	ESQG
Quantity 150 of ESBH 775GB SAS 4k	9009	42G	ESQH
Quantity 150 of ESBL 1.55TB SAS 4k	9009	42G	ESQL
Quantity 150 of ESBM 1.55TB SAS 4k	9009	42G	ESQM
RDX USB Internal Docking Station for Removable Disk Cartridge	9009	42G	EU00
1TB Removable Disk Drive Cartridge	9009	42G	EU01
Not available in US, EMEA, and Japan			
RDX USB External Docking Station for Removable			

Disk Cartridge	9009	42G	EU04
RDX 320 GB Removable Disk Drive	9009	42G	EU08
Operator Panel LCD Display	9009	42G	EU0B
1.5TB Removable Disk Drive Cartridge	9009	42G	EU15
Cable Ties & Labels	9009	42G	EU19
Order Placed Indicator	9009	42G	EU29
2TB Removable Disk Drive Cartridge (RDX)	9009	42G	EU2T
ESJ1 Load Source Specify (931GB SSD SFF-2)	9009	42G	EU41
ESJ3 Load Source Specify (1.86TB SSD SFF-2)	9009	42G	EU43
ESJ5 Load Source Specify (3.72TB SSD SFF-2)	9009	42G	EU45
ESJ7 Load Source Specify (7.45TB SSD SFF-2)	9009	42G	EU47
ESJ9 Load Source Specify (931GB SSD SFF-3)	9009	42G	EU49
ESJB Load Source Specify (1.86TB SSD SFF-3)	9009	42G	EU4B
ESJD Load Source Specify (3.72TB SSD SFF-3)	9009	42G	EU4D
ESJF Load Source Specify (7.45TB SSD SFF-3)	9009	42G	EU4F
RDX USB External Docking Station	9009	42G	EUA4

Standalone USB DVD drive w/cable	9009	42G	EUA5
Core Use HW Feature	9009	42G	EUC6
Core Use HW Feature 10X	9009	42G	EUC7
BP Post-Sale Services: 1 Day	9009	42G	SVBP
IBM Systems Lab Services Post-Sale Services: 1 Day	9009	42G	SVCS
Other IBM Post-Sale Services: 1 Day	9009	42G	SVNN

The following are newly announced features on the specific models of the IBM Power Systems 7014 and 7965 machine type:

Planned Availability Date July 24, 2020

New Feature

Description	Machine type	Model number	Feature number
Rack Content Specify: 9009-42G - 4EIA	7014	T00	ER35
	7014	T42	
	7965	S42	

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 9009-42G adapters features:

From FC:	To FC:	Return parts
EJ32 - PCIe3 Crypto Coprocessor no BSC 4767	EJ33 - PCIe3 Crypto Coprocessor BSC-Gen3 4767	No

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 ID and password are required (use IBMid).

Publications

Power Systems hardware documentation provides clients with the following topical information:

- Licenses, notices, safety, and warranty information
- Planning for the system
- Installing and configuring the system
- Troubleshooting, service, and support
- Installing, configuring, and managing consoles, terminals, and interfaces
- Installing operating systems
- Creating a virtual computing environment
- Enclosures and expansion units
- Glossary

You can access the product documentation at [IBM Knowledge Center](#).

Product documentation is also available on DVD (SK5T-7087).

The following information is shipped with the Power S924 server:

- Power Hardware Information DVD SK5T-7087
- Installing the 9009-42G
- Important Notices
- Warranty Information
- License Agreement for Machine Code

Hardware documentation such as installation instructions, user's information, and service information is available to download or view at the [IBM Support](#) website.

You can access IBM i documentation at the [IBM](#) website.

You can access AIX documentation at the [AIX](#) website.

You can access documentation about Linux on IBM systems at the [Linux information for IBM systems](#) website.

The IBM Systems Information Center provides you with a single information center where you can access product documentation for IBM systems hardware, operating systems, and server software. Through a consistent framework, you can efficiently find information and personalize your access. See the IBM Systems Information Center, at [IBM Knowledge Center](#).

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

The Publications Center is a worldwide central repository for IBM product publications and marketing material with a catalog of 70,000 items. Extensive search facilities are provided. A large number of publications are available online in various file formats, which can currently be downloaded.

Services

IBM Systems Lab Services

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

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

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

Global Technology Services

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

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

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

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

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

Technical information

Specified operating environment

Physical specifications

- Width: 482 mm (18.97 in.)
- Depth: 769.6 mm (30.3 in.)
- Height: 173.3 mm (6.8 in.)
- Weight: 39.9 kg (88 lb)

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

Operating environment

- Temperature: (nonoperating) 5 to 45 degrees C (41 to 113 F); recommended temperature (operating) 18 to 27 degrees C (64 to 80 F); allowable operating temperature 5 to 40 degrees C (41 to 104 F)
- Relative humidity: 8% - 85% (allowable operating humidity range); recommended 5.5 degrees C (42 F) dew point to 60% RH and 15 degrees C (59 F) dew point
- Maximum dew point: 24 degrees C (75 F) (allowable operating)
- Operating voltage: 1400 W PSU: 200 - 240 V AC
- Operating frequency: 47/63 Hz

- Maximum power consumption: 2750 watts (maximum)
- Power factor: 0.98
- Thermal output: 9,386 Btu/hour (maximum)
- Power-source loading
 - 2.835 kVa (maximum configuration)
 - Maximum altitude: 3,050 m (10,000 ft)

Note: The maximum measured value is the worst case power consumption expected from a fully populated server under an intensive workload. The maximum measured value also accounts for component tolerance and non-ideal operating conditions. Power consumption and heat load vary greatly by server configuration and utilization. The [IBM Systems Energy Estimator](#) should be used to obtain a heat output estimate based on a specific configuration.

Noise levels and declared A-weighted sound power level

- Rack-mount system: 6.4 bels operating; 5.2 bels idling

See the **Installation Planning Guide** in [IBM Knowledge Center](#) for additional detail.

For example, the actual sound power noise level is impacted by multiple factors, including:

- Enablement of Maximum Performance mode increases fan speed, which increases power noise levels
- Usage of Maximum Performance mode further increases fan speed, which further increases power noise levels
- Using higher wattage PCIe adapters increases fan speed, which increases power noise levels.
- Placing multiple servers in a rack increases the total power noise level.
- Placing servers in racks with acoustic doors reduces the power noise levels.

EMC conformance classification

This equipment is subject to FCC rules and shall comply with the appropriate FCC rules before final delivery to the buyer or centers of distribution.

- US: FCC Class A
- Europe: CISPR 22 Class A
- Japan: VCCI-A
- Korea: Korean Requirement Class A
- China: People's Republic of China commodity inspection law Class A

Homologation -- Telecom environmental testing (Safety and EMC):

Homologation approval for specific countries has been initiated with the IBM Homologation and Type Approval (HT&A) organization in LaGaude, France. This Power Systems model and applicable features meet the environmental testing requirements of the country telecom and have been designed and tested in compliance with the Full Quality Assurance Approval (FQAA) process as delivered by the British Approval Board for Telecom (BABT), the UK Telecom regulatory authority.

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

Product safety/Country testing/Certification

- UL 60950-1:2007 Underwriters Laboratory, Safety Information

- CSA C22.2 No. 60950-1-07, Canadian Standards Association
- EN60950 European Norm
- IEC 60950, Edition 1, International Electrotechnical Commission, Safety Information
- Nordic deviations to IEC 60950-1 1st Edition

General requirements:

The product is in compliance with IBM Corporate Bulletin C-B 0-2594-000 Statement of Conformity of IBM Product to External Standard (Suppliers Declaration).

Homologation

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

Hardware requirements

Power S924 system configuration

The minimum Power S924 initial order must include a processor module, two 16 GB DIMMs, four power supplies and line cords, an operating system indicator, a cover set indicator, and a Language Group Specify. Also, it must include one of these storage options and one of these network options:

Storage options:

- For boot from NVMe: One NVMe drive slot and one NVMe drive or one PCIe NVMe add in adapter.
- For boot from direct attach storage SFF-3 / SFF-2 HDD or SSD: One storage backplane and one SFF-3 / SFF-2 HDD or SSD.
- For boot from SAN: Internal HDD or SSD and RAID card are *not* required if feature 0837 (Boot from SAN) is selected. A Fibre Channel adapter must be ordered if feature 0837 is selected.

Network options:

- One PCIe2 4-port 1 Gb Ethernet adapter
- One of the supported 10 Gb Ethernet adapters

AIX or Linux is the primary operating system. The minimum defined initial order configuration is as follows:

Feature number	Description	Quantity	Notes
EU0B	Operator Panel LCD Display	1	Optional with AIX or Linux
Processors			
EP5E	8-core typical 3.8 to 4.0 GHz (max) POWER9 Processor	1	
or			
EP5F	10-core typical 3.5 to 3.9 GHz (max) POWER9 Processor	1	
or			
EP5H	11-core Typical 3.45 to 3.9 Ghz (max) POWER9 Processor	1	
or			

Feature number	Description	Quantity	Notes
EP5G	12-core Typical 3.4 to 3.9 Ghz (max) POWER9 Processor	1	
Processor activations			
EP6E	One Processor Core Activation for #EP5E	8	
or			
EP6F	One Processor Core Activation for #EP5F	10	
or			
EP6H	One Processor Core Activation for #EP5H	11	
or			
EP6G	One Processor Core Activation for #EP5G	12	
Memory DIMMs			
EM62	16 GB DDR4 Memory	2	
or			
EM63	32 GB DDR4 Memory	2	
or			
EM64	64 GB DDR4 Memory	2	
or			
EM65	128 GB DDR4 Memory	2	
Storage Backplane			
EJ1S	Storage Backplane with 6 SFF-3 Bays and 2 PCIe Gen4 capable NVMe U.2 drive slots	1	See Note 2 and Note 4
or			
EJ1T	Storage Backplane with 2 PCIe Gen4 capable NVMe U.2 drive slots	1	Optional EJ1Q as MES to allow 4 NVMe U.2 drives. See Note 2 and Note 4.
or			
EJ1U	Storage Backplane with 4 PCIe Gen4 capable NVMe U.2 drive slots	1	See Note 2 and Note 4
Disk Drive			
ESDB	300 GB 15K RPM SAS SFF-3 Disk Drive (AIX/Linux)	1	
LAN Adapter			
5899	PCIe2 LP 4-port 1GbE Adapter	1	See Note 3
Power Supplies/ Power cord			

Feature number	Description	Quantity	Notes
EB2M	AC Power Supply - 1400 W for Server (200 - 240 V AC)	4	EB2M - (default)
6458	Power Cord 4.3 m (14 ft), Drawer to IBM PDU (250V/10A)	4	6458 - (default)
9300/97xx	Language Group Specify	1	9300 - (default)
Front Bezel			Default Front Bezel is #EJU3 when no DASD Backplane is ordered.
EJUK	Front IBM Bezel for 6 SAS + 4 NVMe Bays BackPlane	1	
or			
EJUL	Front OEM Bezel for 6 SAS + 4 NVMe-Bays BackPlane	1	
Primary operating system			
2146	Primary Operating System Indicator - AIX	1	
or			
2147	Primary Operating System Indicator - Linux	1	

1. The racking approach for the initial order must be either a 7014-T00, 7014-T42, 7965-S42, or 7953-94Y. If an additional rack is required for I/O expansion drawers as an MES to an existing system, either a feature 0551, 0553, or ER05 rack must be ordered.
2. Must order, at a minimum, one #ES1E/#ES1G/#EC5V/#EC5X (NVMe U.2 drive) with backplane #EJ1S, #EJ1T, or #EJ1U. Maximum of two #ES1E/#ES1G/#EC5V/#EC5X per one #EJ1S/#EJ1T. Maximum of four #ES1E/#ES1G/#EC5V/#EC5X per one #EJ1U. Mixing of #ES1E, #ES1G, #EC5V, or #EC5X is allowed on a backplane.
3. One PCIe2 4-port 1 GbE Adapter (#5899) is defaulted. Options for servers with AIX and Linux as the primary operating system are one of a 10 Gb Ethernet adapter, either feature EC2S, EC2U, EN0H, EN0K, EN0S, EN0U, EN0W, or EN15.
4. Storage backplane features EJ1C, EJ1D, EJ1E, and EJ1M are also available (selected Front Bezel are required).

The minimum defined initial order configuration, if no choice is made, when IBM i is the primary operating system, is:

Feature number	Description	Quantity	Notes
EU0B	Operator Panel LCD Display	1	
Processors			
EP5E	8-core typical 3.8 to 4.0 GHz (max) POWER9 Processor	1	
or			
EP5F	10-core typical 3.5 to 3.9 GHz (max) POWER9 Processor	1	
or			
EP5H	11-core Typical 3.45 to 3.9 Ghz	1	

Feature number	Description	Quantity	Notes
	(max) POWER9 Processor		
	or		
EP5G	12-core Typical 3.4 to 3.9 Ghz (max) POWER9 Processor	1	
	Processor activations		
EP6E	One Processor Core Activation for #EP5E	8	
	or		
EP6F	One Processor Core Activation for #EP5F	10	
	or		
EP6H	One Processor Core Activation for #EP5H	11	
	or		
EP6G	One Processor Core Activation for #EP6G	12	
	Memory DIMMs		
EM62	16 GB DDR4 Memory	2	
	or		
EM63	32 GB DDR4 Memory	2	
	or		
EM64	64 GB DDR4 Memory	2	
	or		
EM65	128 GB DDR4 Memory	2	
	Storage Backplane		See Note 3
EJ1S	Storage Backplane with 6 SFF-3 Bays and 2 PCIe Gen4 capable NVMe U.2	1	See Note 2 and Note 4
	or		
EJ1T	Storage Backplane with 2 PCIe Gen4 capable NVMe U.2 drive slots	1	Optional EJ1Q as MES to allow 4 NVMe U.2 drives. See Note 2 and Note 4.
	or		
EJ1U	Storage Backplane with 4 PCIe Gen4 capable NVMe U.2 drive slots	1	See Note 2 and Note 4
	Disk Drive		
ESNJ	283GB 15K RPM SAS SFF-3 4k Block Cached Disk Drive (IBM i)	2	One system data protection specify code required
	LAN Adapter		
5899	PCIe2 LP 4-port 1 GbE Adapter	1	
	or		

Feature number	Description	Quantity	Notes
EN15	PCIe3 4-port 10 GbE SR Adapter	1	
or			
EC2S	PCIe3 2-Port 10Gb NIC&ROCE SR/Cu Adapter	1	
or			
EC2U	PCIe3 2-Port 25/10Gb NIC&ROCE SR/Cu Adapter	1	
Power supplies/ Power cord			
EB2M	AC Power Supply - 1400 W for Server (200 - 240 V AC)	4	EB2M - (default)
6458	Power Cord 4.3 m (14 ft), Drawer to IBM PDU (250V/10A)	4	6458 - (default)
9300/97xx	Language Group Specify	1	9300 - (default)
Front Bezel			Default Front Bezel is #EJU3 when no DASD Backplane is ordered.
EJUK	Front IBM Bezel for 6 SAS + 4 NVMe Bays BackPlane	1	
System Data Protection Specify			
0040	Mirrored System Disk Level, Specify Code	1	One system data protection specify code required. #0040 is the default.
System Console Specify			
5550	System console on HMC	1	
or			
5557	System Console-Ethernet LAN adapter	1	
Primary operating system			
2145	Primary Operating System Indicator - IBM i	1	Feature EB73 or EB74 is required.

1. The racking approach for the initial order must be either a 7014-T00, 7014-T42, 7965-S42, or 7953-94Y. If an additional rack is required for I/O expansion drawers as an MES to an existing system, either a feature 0551, 0553, or ER05 rack must be ordered.
2. Must order, at a minimum, two #ES1F/#ES1H/#EC5W (NVMe U.2 drive) with backplane #EJ1S, #EJ1T, or #EJ1U. Maximum of two #ES1F/#ES1H/#EC5W per one #EJ1S/#EJ1T. Maximum of four #ES1F/#ES1H/#EC5W per one #EJ1U. Mixing of #ES1F, #ES1H, or #EC5W is allowed in pairs.
3. IBM i operating system performance: Clients with write-sensitive disk/HDD workloads should upgrade from the feature EJ1C/EJ1E base storage backplane to the feature EJ1M/EJ1D expanded function storage backplanes to gain the performance advantage of write cache, or upgrade to use NVMe devices to gain the advantage of NVMe.

4. Storage backplane features EJ1C, EJ1D, EJ1E, and EJ1M are also available (selected Front Bezel are required).

Hardware Management Console (HMC) machine code

An HMC is required to manage the Power S924 server implementing partitioning. Multiple POWER7^(R), POWER8^(R), and POWER9 processor-based servers can be supported by a single HMC.

Planned HMC hardware and software support:

- X86 based - 7042-CR7, 7042-CR8, 7042-CR9
 - vHMC x86
- POWER8 based Open Power: 7063-CR1
 - vHMC PowerVM based LPAR

If you are attaching an HMC to a new server or adding function to an existing server that requires a firmware update, the HMC machine code may need to be updated because HMC code must always be equal to or higher than the managed server's firmware. Access to firmware and 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 at its discretion.

To determine the HMC machine code level required for the firmware level on any server, go to the following web page to access the Fix Level Recommendation Tool (FLRT) on or after the planned availability date for this product. FLRT will identify the correct HMC machine code for the selected system firmware level; see the website [Fix Level Recommendation Tool](#).

If a single HMC is attached to multiple servers, the HMC machine code level must be updated to be at or higher than the server with the most recent firmware level. All prior levels of server firmware are supported with the latest HMC machine code level.

The HMC code latest level contains the following:

- Support for managing Power S922, Power S924, and Power S914 systems.
- Support for the new HMC model 7063-CR1.
- Support for PowerVM functions such as the new HMC GUI interface for VIOS management.
- GUI for HMC's Performance and Capacity Monitoring function.
- An HMC command to initiate a remote restart operation. This removes the requirement of VMControl for the PowerVM Remote Restart function.
- For PowerVM GUI functions, VIOS is recommended.

For clients installing systems higher than the EIA 29 position (location of the rail that supports the rack-mounted server) in any IBM or non-IBM rack, acquire approved tools outlined in the server specifications section at [IBM Knowledge Center](#).

In situations where IBM service is required and the recommended tools are not available, there could be delays in repair actions.

Software requirements

If installing the Linux operating system LPAR:

- Red Hat Enterprise Linux 8 for Power LE, version 8.1, or later
- SUSE Linux Enterprise Server 15 Service Pack 1, or later

If installing the Linux operating systems LPAR in non-production SAP implementations:

- SUSE Linux Enterprise Server for SAP with SUSE Linux Enterprise Server 15 Service Pack 1, or later
- Red Hat Enterprise Linux for SAP with Red Hat Enterprise Linux 8 for Power LE version 8.1, or later

If installing IBM i, the IBM i operating system levels supported are:

- IBM i 7.4 TR2, or later
- IBM i 7.3 TR8, or later
- IBM i 7.2 with 7.2 Licensed Machine Code - RS 720-Q, or later

If installing the AIX operating system LPAR with any I/O configuration (one of these):

- AIX Version 7.2 with the 7200-04 Technology Level and Service Pack 7200-04-02-2028, or later
- AIX Version 7.1 with the 7100-05 Technology Level and Service Pack 7100-05-06-2028, or later
- AIX Version 7.2 with the 7200-03 Technology Level and Service Pack 7 (Planned Availability February 19, 2021)

If installing the AIX operating system Virtual I/O only LPAR (one of these):

- AIX Version 7.2 with the 7200-04 Technology Level, or later
- AIX Version 7.2 with the 7200-03 Technology Level, or later
- AIX Version 7.2 with the 7200-02 Technology Level and Service Pack 7200-02-02-1832, or later
- AIX Version 7.1 with the 7100-05 Technology Level and Service Pack 7100-05-02-1832, or later

If installing VIOS:

- VIOS 3.1.1.25, or later
- VIOS 2.2.6.65, or later

Limitations

- Integrated system port is not supported under AIX or Linux when the HMC ports are connected to an HMC. Either the HMC ports or the integrated system ports can be used, but not both. The FSP2 USB 2.0 port is used for communication to a UPS.
- The integrated system port is supported for modem and TTY terminal connections by AIX or Linux. Any other application using serial ports requires a serial port adapter to be installed in a PCI slot. The integrated system port does not support HACMP configurations.

Boot requirements

- If IBM i (#2145) is selected as the primary operating system and SAN boot is not selected (#0837), one of the load source specify codes for SAS drives or NVMe devices in Special Features - Initial Orders - Specify codes section must be specified.
- If IBM i (#2145) is selected and the load source disk unit is not in the system unit (CEC), one of the following specify codes must also be selected:
 - #0719 Load Source Not in CEC and are to be placed in I/O drawers or in external SAN-attached disk
 - #EHR2 Load Source Specifies DASD are placed in an EXP24SX SFF Gen2 bay Drawer (#ESLS or #ELLS)
 - #0837 SAN Operating System Load Source Specify
- If IBM i (#2145) is selected, one of the following system console specify codes must be selected:

- #5550 -- System Console on HMC
- #5557 -- System Console - Internal LAN

Planning information

Cable orders

No cables required.

Security, auditability, and control

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

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

IBM Systems Lab Services

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

Terms and conditions

Volume orders

Contact your IBM representative.

IBM Global Financing

Yes

Products - terms and conditions

Warranty period

Warranty and additional coverage options:	Coverage summary⁽¹⁾:
Warranty Period:	3 years
Service Level:	IBM CRU & On-Site, 9x5 Next Business Day
Service Upgrade Options :	
Warranty Service Upgrade	IBM On-Site Repair, 9x5 Same Day ⁽²⁾ and 24x7 Same Day options
Maintenance Services (Post-Warranty):	IBM On-Site Repair, Next Business Day and Same Day options
IBM Hardware Maintenance Services - committed maintenance ⁽³⁾ :	Y

⁽¹⁾ See complete coverage details below.

⁽²⁾ Offered in US and EMEA only.

⁽³⁾ Not offered in the US.

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.

IBM Solid State Drive (SSD) and Non-Volatile Memory Express^(R) (NVMe) devices identified in this document may have a maximum number of write cycles. IBM SSD and NVMe device failures will be replaced during standard warranty and maintenance period for devices that have not reached the maximum number of write cycles. Devices that reach this limit may fail to operate according to specifications and must be replaced at the client's expense. Individual service life may vary and can be monitored using an operating system command.

The IBM warranty covers feature number EB4Z. For warranty terms associated with feature number EB3Z and the Lift tool based on GenieLift GL-8, see the separate warranty terms provided by Genie found in the Genie Operator's Manual at the [Genie website](#).

For clients installing systems higher than the EIA 29 position (location of the rail that supports the rack-mounted server) in any IBM or non-IBM rack, acquire approved tools outlined in the server specifications section at [IBM Knowledge Center](#). In situations where IBM service is required and the recommended tools are not available, there could be delays in repair actions.

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 Customer 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.

CRU Service

IBM provides replacement CRUs to you for you to install. CRU information and replacement instructions are shipped with your machine and are available from IBM upon your request. CRUs are designated as being either a Tier 1 (mandatory) or a Tier 2 (optional) CRU.

Tier 1 (mandatory) CRU

Installation of Tier 1 CRUs, as specified in this announcement, is your responsibility. If IBM installs a Tier 1 CRU at your request, you will be charged for the installation.

The following parts have been designated as Tier 1 CRUs:

- DASD SFF Drive
- DASD SSD Drive
- RDX Drive
- Enclosure
- Power Cable

- NVMe U.2
- SAS Card
- Op Panel -- Base
- Op Panel -- LCD
- Memory DIMM
- All PCI Adapters
- FAN
- Upper Fan cable
- TPM Card
- Power Supplies
- Service Processor Card/FSP
- TOD Battery
- Air Baffle
- Bezel
- SAS Cable
- Front Heatsink
- Service Cover
- DASD Backplane Power Cable
- DASD Backplane Signal Cable

Tier 2 (optional) CRU

You may install a Tier 2 CRU yourself or request IBM to install it, at no additional charge.

Based upon availability, CRUs will be shipped for next-business-day (NBD) delivery. IBM specifies, in the materials shipped with a replacement CRU, whether a defective CRU must be returned to IBM. When return is required, return instructions and a container are shipped with the replacement CRU. You may be charged for the replacement CRU if IBM does not receive the defective CRU within 15 days of your receipt of the replacement.

CRU and On-site Service

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

Service level is:

- 9 hours per day, Monday through Friday, excluding holidays, next-business-day response. Calls must be received by 3:00 PM local time in order to qualify for next-business-day response.

Warranty service

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

International Warranty Service

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

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

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

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

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

Warranty service upgrades

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

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

Maintenance service options

CRU and On-site Service

At IBM's discretion, you will receive CRU service or IBM will repair the failing machine at your location and verify its operation. You must provide a suitable working area to allow disassembly and reassembly of the IBM machine. The area must be clean, well-lit, and suitable for the purpose. The following on-site response-time objectives are available as warranty service upgrades for your machine. Available offerings are:

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

Customer Replaceable Units (CRUs) may be provided as part of the machine's standard warranty CRU Service except that you may install a CRU yourself or request IBM installation, at no additional charge, under the CRU and On-site Service level specified above. For additional information on the CRU Service, see the warranty information.

Maintenance services

If required, IBM provides repair or exchange service depending on the types of maintenance service specified for the machine. IBM will attempt to resolve your problem over the telephone or electronically, 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. Service levels are response-time objectives and are not guaranteed. The specified level of maintenance service may not be available in all worldwide locations. Additional charges may apply outside IBM's normal service area. Contact your local IBM representative or your reseller for country-specific and location-specific information.

The following service selections are available as maintenance options, at additional cost, for your machine type.

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

On-site Service

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

Customer Replaceable Unit (CRU) Service

If your problem can be resolved with a CRU (for example, keyboard, mouse, speaker, memory, or hard disk drive), and depending upon the maintenance service offerings in your geography, IBM will ship the replacement CRU to you for you to install. CRU information and replacement instructions are shipped with your machine and are available from IBM upon your request.

CRUs will be shipped based upon availability. IBM specifies, in the materials shipped with a replacement CRU, whether a defective CRU must be returned to IBM. When return is required, 1) return instructions and a container are shipped with the replacement CRU, and 2) you may be charged for the replacement CRU if IBM does not receive the defective CRU within 15 days of your receipt of the replacement.

CRUs are designated as being either a Tier 1 (mandatory) or a Tier 2 (optional) CRU.

Tier 1 (mandatory) CRUs: Installation of Tier 1 CRUs, as specified in this announcement, is your responsibility. If IBM installs a Tier 1 CRU at your request, you will be charged for the installation.

For machines with On-site Same-day Response Service, IBM will replace a Tier 1 CRU part at your request, at no additional charge.

The following parts have been designated as Tier 1 CRUs:

- DASD SFF Drive
- DASD SSD Drive
- RDX Drive
- Enclosure
- Power Cable
- NVMe U.2
- SAS Card
- Op Panel -- Base
- Op Panel -- LCD
- Memory DIMM
- All PCI Adapters
- FAN

- Upper Fan cable
- TPM Card
- Power Supplies
- Service Processor Card/FSP
- TOD Battery
- Air Baffle
- Bezel
- SAS Cable Front
- Heatsink
- Service Cover
- DASD Backplane Power Cable
- DASD Backplane Signal Cable

Tier 2 (optional) CRUs: You may install a Tier 2 CRU yourself or request IBM to install it, at no additional charge.

Additional reference for Europe

The following European documents can be found on the [IBM Maintenance and Technical Support Services](#) website.

- European Announcement Letter ZS03-0150 for IBM Customer Agreement (ICA)
- European Announcement Letter ZS04-0135 for Enterprise Agreement Contract
- European Announcement Letter ZS98-0118 for ServiceSuite Contract

Non-IBM parts service

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

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

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

Usage plan machine

No

IBM hourly service rate classification

Two

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

General terms and conditions

Field-installable features

Yes

Model conversions

No

Machine installation

Client setup. Clients are responsible for installation according to the instructions IBM provides with the machine.

Graduated program license charges apply

Yes

The applicable processor group is: Small.

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 by contacting your IBM representative. It can also be found on the [License Agreement for Machine Code and Licensed Internal Code](#)

Machine using LMC Type Model 9009-42G

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

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 8% for the products in this announcement.

Prices

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

Product charges

The following are newly announced features on the specific models of the IBM Power Systems 9009 machine type:

Description	Model number	Feature number	Purchase price	Minimum Initial/Monthly charge	RP CSU
IBM Power System S924	42G			Monthly MES/Both/ support	Yes
One CSC Billing Unit					

Ten CSC Billing Units	42G	0010	Both	Yes	No
Mirrored System Disk Level, Sp	42G	0011	Both	Yes	No
Device Parity Protection All	42G	0040	Both	Yes	No
Mirrored System Bus Level	42G	0041	Both	Yes	No
Device Parity RAID 6 All	42G	0043	Both	Yes	No
	42G	0047	Both	Yes	No
RISC to RISC Data Migration					
AIX Partition Specify	42G	0205	Initial	N/A	No
Linux Partition Specify	42G	0265	Both	Yes	No
IBM i Partition Specify	42G	0266	Both	Yes	No
Specify Custom Data Protection	42G	0267	Both	Yes	No
Mirrored Level system Specify	42G	0296	Both	Yes	No
RAID Hot Spare Specify	42G	0308	Both	Yes	No
V.24/EIA232 6.1m (20 Ft) PCI C	42G	0347	Both	Yes	No
V.35 6.1m (20 Ft) PCI Cable	42G	0348	Both	Yes	No
X.21 6.1m (20 Ft) PCI Cable	42G	0353	Both	Yes	No
	42G	0359	Both	Yes	No
CBU Specify					
Customer Specified Placement	42G	0444	Initial	N/A	No
19 inch, 1.8 meter high rack	42G	0456	Initial	N/A	No
19 inch, 2.0 meter high rack	42G	0551	MES	Yes	No
Rack Filler Panel Kit	42G	0553	MES	Yes	No
Load Source Not in CEC	42G	0599	Both	Yes	No
5887/EL1S Load Source Specify	42G	0719	Both	Yes	No
SAN Load Source Specify	42G	0728	MES	Yes	No
1948 Load Source Specify	42G	0837	Both	Yes	No
1962 Load Source Specify	42G	0872	MES	Yes	No
ESD2 Load Source Specify	42G	0875	MES	Yes	No
	42G	0911	MES	Yes	No
US TAA Compliance Indicator					
Asm in USA manufacturing plant	42G	0983	Both	Yes	No
	42G	0984	Both	Yes	No
Modem Cable US/Canada and GU					
USB 500 GB Removable Disk Dr	42G	1025	Both	Yes	No
Custom Serv. Specify, Roch	42G	1107	Both	Yes	No
Quantity 150 of 1962	42G	1140	Both	Yes	No
	42G	1817	Support	Yes	No

Quantity 150 of #1964					
	42G	1818		Both	Yes No
Quantity 150 of 1948					
	42G	1927		Support	Yes No
Quantity 150 of #1953					
	42G	1929		Both	Yes No
283GB 15k RPM SAS SFF-2 Disk					
	42G	1948		Support	Yes No
300GB 15k RPM SAS SFF-2 Disk					
	42G	1953		Both	Yes No
571GB 10k RPM SAS SFF-2 Disk					
	42G	1962		Support	Yes No
600GB 10k RPM SAS SFF-2 Disk					
	42G	1964		Both	Yes No
Primary OS - IBM i					
	42G	2145		Both	Yes No
Primary OS AIX					
	42G	2146		Both	Yes No
Primary OS Linux					
	42G	2147		Both	Yes No
Factory Deconfiguration of 1 c					
	42G	2319		Initial	N/A No
LC-SC 50 Micron Fiber Conv Cab					
	42G	2456		Both	Yes No
LC-SC 62.5 Mic.Fib.Conv.Cable					
	42G	2459		Both	Yes No
PCIe 2 Line WAN w/Modem					
	42G	2893		Support	Yes No
Asynch.Termin/Print.Cbl EIA232					
	42G	2934		Both	Yes No
Asynchronous Cable EIA 232/V					
	42G	2936		Both	Yes No
Ser to Ser Port Cab Draw/Draw					
	42G	3124		Both	Yes No
Serial to Se.Port Cbl Rack 8M					
	42G	3125		Both	Yes No
Widescreen LCD Monitor					
	42G	3632		Support	Yes No
0.3M Serial Prt Converter Cbl					
	42G	3925		Both	Yes No
Serial Port Null Mod Cab 3.7M					
	42G	3927		Both	Yes No
Ser.Port Null Modem Cable,10M					
	42G	3928		Both	Yes No
System Serial Port Converter C					
	42G	3930		Both	Yes No
6Foot Extend.Cbl for Displays					
	42G	4242		Support	Yes No
Extender Cable USB keybo 1.8M					
	42G	4256		Both	Yes No
VGA to DVI Connection Converter					
	42G	4276		Both	Yes No
Rack Integration Services					
	42G	4649		Initial	N/A No
One and only one rack indicator feature is required on all orders (#4650 to #4666).					
No Factory Integration Ind.					
	42G	4650		Initial	N/A No
Rack Indicator, Rack 1					
	42G	4651		Initial	N/A No
Rack Indicator, Rack 2					
	42G	4652		Initial	N/A No
Rack Indicator, Rack 3					
	42G	4653		Initial	N/A No
Rack Indicator, Rack 4					
	42G	4654		Initial	N/A No
Rack Indicator, Rack 5					
	42G	4655		Initial	N/A No
Rack Indicator, Rack 6					
	42G	4656		Initial	N/A No
Rack Indicator, Rack 7					
	42G	4657		Initial	N/A No

Rack Indicator, Rack 8	42G	4658	Initial	N/A	No
Rack Indicator, Rack 9	42G	4659	Initial	N/A	No
Rack Indicator, Rack 10	42G	4660	Initial	N/A	No
Rack Indicator, Rack 11	42G	4661	Initial	N/A	No
Rack Indicator, Rack 12	42G	4662	Initial	N/A	No
Rack Indicator, Rack 13	42G	4663	Initial	N/A	No
Rack Indicator, Rack 14	42G	4664	Initial	N/A	No
Rack Indicator, Rack 15	42G	4665	Initial	N/A	No
Rack Indicator, Rack 16	42G	4666	Initial	N/A	No
Power Active Memory Expansion	42G	4794	Both	Yes	No
One Processor of 5250 Enterprise	42G	4970	Both	Yes	No
Full 5250 Enterprise Enablement	42G	4974	Both	Yes	No
Software Preload Required	42G	5000	Initial	N/A	No
PowerVM Enterprise Edition	42G	5228	Both	Yes	No
Sys Console On HMC	42G	5550	Both	Yes	No
Sys Console-Ethernet LAN	42G	5557	Initial	N/A	No
PCIe2 8Gb 4-port Fibre Channel	42G	5729	Support	Yes	No
8 Gigabit PCI Express Dual Port	42G	5735	Support	Yes	No
POWER ^(R) GXT145 PCI Express Graph	42G	5748	Both	Yes	No
4 Port Async EIA 232 PCIe Adapter	42G	5785	Support	Yes	No
EXP24S SFF Gen2-bay Drawer	42G	5887	Support	Yes	No
PCIe2 4-port 1GbE Adapter	42G	5899	Both	Yes	No
Opt Front Door for 1.8m Rack	42G	6068	MES	Yes	No
Opt Front Door for 2.0m Rack	42G	6069	MES	Yes	No
1.8m Rack Acoustic Doors	42G	6248	MES	Yes	No
2.0m Rack Acoustic Doors	42G	6249	MES	Yes	No
1.8m Rack Trim Kit	42G	6263	MES	Yes	No
2.0m Rack Trim Kit	42G	6272	MES	Yes	No
Pwr Crd 4.3m 14ft to IBM PDU	42G	6458	Both	Yes	No
Pwr Crd (14FT), Drwr - OEM PDU	42G	6460	Both	Yes	No
Pwr Crd 4.3m 14ft wall OEM PDU	42G	6469	Both	Yes	No
Pwr Crd 1.8m 6ft wall 125V/15A	42G	6470	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	42G	6471	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	42G	6472	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	42G	6473	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	42G	6474	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU					

	42G	6475	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	42G	6476	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	42G	6477	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	42G	6478	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	42G	6488	Both	Yes	No
4.3m 14 Ft 3PH/32A Pwr Cord	42G	6489	Both	Yes	No
4.3m (14 Ft) 1PH/63A Pwr Cord	42G	6491	Both	Yes	No
4.3m (14 Ft) 1PH/48A PwrCord	42G	6492	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	42G	6493	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	42G	6494	Both	Yes	No
Pwr Crd 2.7m 9ft wall 250V,10A	42G	6496	Both	Yes	No
Power Cable Drawer to IBM PD	42G	6577	Both	Yes	No
Optional Rack Security Kit	42G	6580	MES	Yes	No
Pwr Crd 2.7m 9ft wall 125V,15A	42G	6651	Both	Yes	No
4.3m 3PH/16A Power Cord	42G	6653	Both	Yes	No
4.3m 1PH/24A Pwr Cord	42G	6654	Both	Yes	No
4.3m 14Ft 1PH/24A WR Pwr	42G	6655	Both	Yes	No
4.3m 14Ft 1PH/32A Power Cord	42G	6656	Both	Yes	No
4.3m 14Ft 1PH/32A Power Cord	42G	6657	Both	Yes	No
4.3m 14Ft 1PH/24A Pwr Cd Kor	42G	6658	Both	Yes	No
Pwr.Cord(9ft),To wall/OEM PDU	42G	6659	Both	Yes	No
Pwr Crd 14ft 4.3m wallOEM PDU	42G	6660	Both	Yes	No
Pwr Crd 2.8m 9.2ft PDU	42G	6665	Both	Yes	No
4.3m 14Ft 3PH/32A Pwr Cd Aus	42G	6667	Both	Yes	No
Pwr Crd 4.3M, Drwr - OEM PDU	42G	6669	Both	Yes	No
Pwr Crd 2.7m, Drwr - IBM PDU	42G	6671	Both	Yes	No
Pwr Crd 2M, Drwr - IBM PDU	42G	6672	Both	Yes	No
Pwr Crd 2.7m 9ft wall OEM PDU	42G	6680	Both	Yes	No
Intelligent PDU+ 1 EIA Unit	42G	7109	Support	Yes	No
Environmental Monitoring Probe	42G	7118	Both	Yes	No
Power Distribution Unit	42G	7188	Both	Yes	No
PowDistribUnit(US)Fixed PowCrd	42G	7196	Support	Yes	No
Eth Cbl 15M HW Management	42G	7802	Both	Yes	No
Linux Software Preinstall	42G	8143	Initial	N/A	No
Linux Software Preinstall BP	42G	8144	Initial	N/A	No
USB Mouse	42G	8845	Support	Yes	No
Order Routing Indicator System	42G	9169	Initial	N/A	No
Language Group Spcf-US Eng					

Specify mode-1 & CEC SAS port	42G	9300	Initial	N/A	No
New AIX License Core Counter	42G	9387	MES	Yes	No
New IBM i Lic Core Counter	42G	9440	Initial	N/A	No
New Red Hat Lic Core Counter	42G	9441	Initial	N/A	No
New SUSE Lic Core Counter	42G	9442	Initial	N/A	No
Other AIX Lic Core Counter	42G	9443	Initial	N/A	No
Other Linux Lic Core Counter	42G	9444	Initial	N/A	No
3rd Party Linux Lic Core Cnt	42G	9445	Initial	N/A	No
VIOS Core Counter	42G	9446	Initial	N/A	No
Other License Core Counter	42G	9447	Initial	N/A	No
Ubuntu Linux License Core Cntr	42G	9449	Initial	N/A	No
Month Indicator	42G	9450	Initial	N/A	No
Day Indicator	42G	9461	Initial	N/A	No
Hour Indicator	42G	9462	Initial	N/A	No
Minute Indicator	42G	9463	Initial	N/A	No
Qty Indicator	42G	9464	Initial	N/A	No
Countable Member Indicator	42G	9465	Initial	N/A	No
Language Group Spcf-Dutch	42G	9466	Initial	N/A	No
Language Group Spcf-French	42G	9700	Initial	N/A	No
Language Group Spcf-German	42G	9703	Initial	N/A	No
Language Group Spcf-Polish	42G	9704	Initial	N/A	No
Lang Group Specify - Norwegian	42G	9705	Initial	N/A	No
Lang.Group Spcf-Portuguese	42G	9706	Initial	N/A	No
Language Group Spcf-Spanish	42G	9707	Initial	N/A	No
Language Group Spcf-Italian	42G	9708	Initial	N/A	No
Langua Gr Speci Canadian Frenc	42G	9711	Initial	N/A	No
Language Group Spcf-Japanese	42G	9712	Initial	N/A	No
Language Group Specify Tr Chin	42G	9714	Initial	N/A	No
Language Group Spcf-Korean	42G	9715	Initial	N/A	No
Language Group Spcf-Turkish	42G	9716	Initial	N/A	No
Language Group Spcf-Hungarian	42G	9718	Initial	N/A	No
Language Group Spcf-Slovakian	42G	9719	Initial	N/A	No
Language Group Spcf-Russian	42G	9720	Initial	N/A	No
Lang Group Spcf Simpl Chinese	42G	9721	Initial	N/A	No
Language Group Spcf-Czech	42G	9722	Initial	N/A	No
Language Group Spcf-Romanian	42G	9724	Initial	N/A	No
Lang Group Specify - Croatian	42G	9725	Initial	N/A	No

42G 9726	Initial	N/A	No
Language Group Spcf-Slovenian			
42G 9727	Initial	N/A	No
Lang Group Specify - Braz Port			
42G 9728	Initial	N/A	No
Lang Group Specify - Thai			
42G 9729	Initial	N/A	No
QSFP+ 40GbE Transceiver			
42G EB27	Both	Yes	No
1m Passive QSFP+ to QSFP+ Cbl			
42G EB2B	Both	Yes	No
3m Passive QSFP+ to QSFP+ Cbl			
42G EB2H	Both	Yes	No
10m QSFP+ MTP Optical Cable			
42G EB2J	Both	Yes	No
30m QSFP+ MTP Optical Cable			
42G EB2K	Both	Yes	No
Power Supply 1400w 200-240 VAC			
42G EB2M	Both	Yes	No
Lift tool GenieLift GL-8			
42G EB3Z	Both	Yes	No
10GbE Optical Transc SFP+ SR			
42G EB46	Both	Yes	No
25GbE Opt Transceiver SFP28			
42G EB47	Both	Yes	No
0.5 SFP/25GbE CU Cable			
42G EB4J	Both	Yes	No
1.0 SFP/25GbE CU Cable			
42G EB4K	Both	Yes	No
1.5 SFP/25GbE CU Cable			
42G EB4L	Both	Yes	No
2.0 SFP/25GbE CU Cable			
42G EB4M	Both	Yes	No
2.5 QSFP28/100GbE CU Cable			
42G EB4P	Both	Yes	No
Service wedge shelf for EB3Z			
42G EB4Z	Both	No	No
0.5m EDR IB Copper Cable			
42G EB50	Support	Yes	No
1.0m EDR IB Copper Cable			
42G EB51	Both	Yes	No
2.0M EDR IB Copper Cable			
42G EB52	Both	Yes	No
1.5M EDR IB Copper Cable			
42G EB54	Both	Yes	No
100GbE Optic Transc QSFP28			
42G EB59	Both	Yes	No
3M EDR IB Optical Cable			
42G EB5A	Both	Yes	No
5M EDR IB Optical Cable			
42G EB5B	Both	Yes	No
10M EDR IB Optical Cable			
42G EB5C	Both	Yes	No
15M EDR IB Optical Cable			
42G EB5D	Both	Yes	No
20M EDR IB Optical Cable			
42G EB5E	Both	Yes	No
30M EDR IB Optical Cable			
42G EB5F	Both	Yes	No
50M EDR IB Optical Cable			
42G EB5G	Both	Yes	No
100M EDR IB Optical Cable			
42G EB5H	Both	Yes	No
0.5M 100GbE Cu Cable QSFP28			
42G EB5J	Both	Yes	No
1.0M 100GbE Cu Cable QSFP28			
42G EB5K	Both	Yes	No
1.5M 100GbE Cu Cable QSFP28			
42G EB5L	Both	Yes	No
2.0M 100GbE Cu Cable QSFP28			
42G EB5M	Both	Yes	No
25M EDR IB Optical Cable			
42G EB5N	Both	Yes	No
3M 100GbE optic Cable QSFP28			

42G	EB5R	Both	Yes	No	
5M 100GbE optic Cable QSFP28	42G	EB5S	Both	Yes	No
10M 100GbE optic Cable QSFP28	42G	EB5T	Both	Yes	No
15M 100GbE optic Cable QSFP28	42G	EB5U	Both	Yes	No
20M 100GbE optic Cable QSFP28	42G	EB5V	Both	Yes	No
30M 100GbE optic Cable QSFP28	42G	EB5W	Both	Yes	No
50M 100GbE optic Cable QSFP28	42G	EB5X	Both	Yes	No
100M 100GbE optic Cable QSFP28	42G	EB5Y	Both	Yes	No
IBM i 7.2 Indicator	42G	EB72	Support	Yes	No
IBM i 7.3 Indicator	42G	EB73	Both	Yes	No
IBM i 7.4 Indicator	42G	EB74	Both	Yes	No
Slim Rear Acoustic Door	42G	EC07	MES	Yes	No
Slim Front Acoustic Door	42G	EC08	MES	Yes	No
PCIe3 2-Port 10Gb NIC&ROCE	42G	EC2S	Both	Yes	No
PCIe3 2-Port 25/10Gb NIC&Ro	42G	EC2U	Both	Yes	No
PCIe3 2-port 10GbE NIC&RoCE Cu	42G	EC38	Support	Yes	No
PCIe3 2-Port 40GbE NIC RoCE	42G	EC3B	Support	Yes	No
PCIe3 2port 100Gb EDR IB Ad	42G	EC3F	Support	Yes	No
PCIe3 2-port 100GbE Adapterx16	42G	EC3M	Support	Yes	No
PCIe3 1port 100Gb EDR IB Ad	42G	EC3U	Support	Yes	No
PCIe2 4-Port USB 3.0 Adapter	42G	EC46	Both	Yes	No
PCIe3 x8 1.6 TB NVMe AIX/Lin	42G	EC5B	Both	Yes	No
PCIe3 x8 3.2 TB NVMe AIX/Lin	42G	EC5D	Both	Yes	No
PCIe3 x8 6.4 TB NVMe AIX/Lin	42G	EC5F	Both	Yes	No
Enterprise 6.4TB NVMe U.2	42G	EC5V	Both	Yes	No
Enterprise 6.4TB NVMe U.2	42G	EC5W	Both	Yes	No
Mainstream 800GB SSD NVMe	42G	EC5X	Both	Yes	No
PCIe4 1-port 100Gb EDR IB	42G	EC63	Both	Yes	No
PCIe4 2-port 100Gb EDR IB	42G	EC65	Support	Yes	No
PCIe4 2-port 100Gb ROCE EN	42G	EC66	Both	Yes	No
PCIe3 x8 1.6TB NVMe IBMi	42G	EC6V	Both	Yes	No
PCIe3 x8 3.2TB NVMe IBM i	42G	EC6X	Both	Yes	No
PCIe3 x8 6.4TB NVMe IBM i	42G	EC6Z	Both	Yes	No
SAS X Cable 3m - HD Narrow	42G	ECBJ	Both	Yes	No
SAS X Cable 6m - HD Narrow	42G	ECBK	Both	Yes	No
SAS X Cable 10m - HD Narrow	42G	ECBL	Both	Yes	No
SAS X Cable 15m -HD Narrow 3Gb	42G	ECBM	Both	Yes	No
5m Passive QSFP+ to QSFP+ Cbl					

	42G	ECBN	Support	Yes	No
SAS YO Cable 1.5m - HD Narrow	42G	ECBT	Both	Yes	No
SAS YO Cable 3m - HD Narrow	42G	ECBU	Both	Yes	No
SAS YO Cable 6m - HD Narrow	42G	ECBV	Both	Yes	No
SAS YO Cable 10m - HD Narrow	42G	ECBW	Both	Yes	No
SAS YO Cable 15m-HD Narrow 3Gb	42G	ECBX	Both	Yes	No
SAS AE1 Cable 4m - HD Narrow	42G	ECBY	Both	Yes	No
SAS YE1 Cable 3m - HD Narrow	42G	ECBZ	Both	Yes	No
3M Optical Cable Pair	42G	ECC7	Support	Yes	No
10M Optical Cable Pair	42G	ECC8	Support	Yes	No
Port Converter Cable for UPS	42G	ECCF	Both	N/A	No
3M Copper CXP Cable Pair	42G	ECCS	Both	Yes	No
3M Active Optical Cable Pair	42G	ECCX	Both	Yes	No
10M Active Optical Cbl Pair	42G	ECCY	Both	Yes	No
3.0M SAS X12 Cable	42G	ECDJ	Both	Yes	No
4.5M SAS X12 Cable	42G	ECDK	Both	Yes	No
10M SAS X12 Cable	42G	ECDL	Both	Yes	No
1.5M SAS Y012 Cable	42G	ECDT	Both	Yes	No
3.0M SAS Y012 Cable	42G	ECDU	Both	Yes	No
4.5M SAS Y012 Cable	42G	ECDV	Both	Yes	No
10M SAS Y012 Cable	42G	ECDW	Both	Yes	No
0.6M SAS AA12 Cable	42G	ECE0	Both	Yes	No
3.0M SAS AA12 Cable	42G	ECE3	Both	Yes	No
4.5M SAS AA12 Cable	42G	ECE4	Both	Yes	No
4.3m (14-Ft) PDU to wall Pwr	42G	ECJ5	Both	Yes	No
4.3m (14-Ft) PDU to wall Pwr	42G	ECJ7	Both	Yes	No
High Function 9xC19 PDU plus	42G	ECJJ	Both	Yes	No
High Function 9xC19 PDU plus	42G	ECJL	Both	Yes	No
High Function 12xC13 PDU plus	42G	ECJN	Both	Yes	No
High Function 12xC13 PDU plus	42G	ECJQ	Both	Yes	No
Cloud Private Solution	42G	ECP0	Initial	N/A	No
2.0 M Slim Rack	42G	ECR0	MES	Yes	No
Rack Front Door	42G	ECRF	MES	Yes	No
Rack Rear Door Black	42G	ECRG	MES	Yes	No
Rack Side Cover	42G	ECRJ	MES	Yes	No
Rack Rear Extension 5-In	42G	ECRK	MES	Yes	No
Rack Front Door (Black/Flat)	42G	ECRM	MES	Yes	No
Custom Serv. Specify, France					

42G	ECSF	Both	Yes	No
Custom Serv. Specify, Mexico	42G	ECSM	Both	Yes No
Custom Serv. Spec Poughkeepsie	42G	ECSP	Both	Yes No
Integrated Solution Packing	42G	ECSS	Initial	N/A No
Optical wrap Plug	42G	ECW0	Both	Yes No
1x HW Subscription Increment	42G	EHB1	MES	Yes No
10x HW Subscription Increment	42G	EHB2	MES	Yes No
100x HW Subscription Increment	42G	EHB3	MES	Yes No
SAP HANA TRACKING FEAT	42G	EHKV	Both	Yes No
POWER9 Epic Solution for 42G	42G	EHLQ	Initial	N/A No
Power for SAS Viya (Linux)	42G	EHLU	Both	Yes No
Power for SAS 9.4 Grid (AIX)	42G	EHLV	Both	Yes No
Boot Drive in EXP12SX Specify	42G	EHR1	Both	Yes No
Boot / Load in EXP24SX Specify	42G	EHR2	Both	Yes No
SSD Placement Ind- #ESLS/#ELLS	42G	EHS2	Both	Yes No
PCIe3 Optical Cable Adapter	42G	EJ08	Support	Yes No
PCIe3 RAID SAS Adapter 4-port	42G	EJ0J	Both	Yes No
PCIe3 12GB Cache RAID SAS Adap	42G	EJ0L	Support	Yes No
SAS Ports: Dual IOA Backplane	42G	EJ0W	Both	Yes No
PCIe3 SAS Tape/DVD Adapter	42G	EJ10	Both	Yes No
PCIe3 12GB Cache RAID+ SAS Ada	42G	EJ14	Both	Yes No
Backplane 12 SFF & RDX Bay	42G	EJ1C	Both	No No
Backplane 18 SFF & Dual IOA	42G	EJ1D	Both	No No
Split#EJ1C Add 2nd Controller	42G	EJ1E	Both	No No
Backplane 12 SFF & RDX Bay	42G	EJ1M	Both	No No
PCIe1 SAS Tape/DVD 2P 3Gb x8	42G	EJ1P	Both	Yes No
NVMe U.2 Passthru adapter	42G	EJ1Q	MES	Yes No
Backplane 6 SFF-3/2 NVMe U.2	42G	EJ1S	Both	No No
Backplane w/2 Gen4 NVMe U.2	42G	EJ1T	Both	No No
Backplane w/4 Gen4 NVMe U.2	42G	EJ1U	Both	No No
PCIe x16 to CXP Adapter	42G	EJ20	Both	Yes No
PCIe3 Crypto Coproc noBSC 4767	42G	EJ32	Both	Yes No
PCIe3 Crypto Coproc BSC-3 4767	42G	EJ33	Both	Yes No
Specify Mode1 & (1)EJ0J-EXP24S	42G	EJR1	MES	Yes No
Specify Mode1 & (2)EJ0J-EXP24S	42G	EJR2	MES	Yes No
Specify Mode2 & (2)EJ0J-EXP24S	42G	EJR3	MES	Yes No
Specify Mode2 & (4)EJ0J-EXP24S	42G	EJR4	MES	Yes No
Specify Mode4 & (4)EJ0J-EXP24S				

42G EJR5	MES	Yes No
Specify Mode2 & (1)EJ0J-EXP24S		
42G EJR6	MES	Yes No
Specify Mode2 & (2)EJ0J-EXP24S		
42G EJR7	MES	Yes No
Specify Mode2 & (1)EJ0J-EXP24S		
42G EJRA	MES	Yes No
Specify Mode2 & (2)EJ0J-EXP24S		
42G EJRB	MES	Yes No
Specify-Mode4 & (1)EJ0J-EXP24S		
42G EJRC	MES	Yes No
Specify-Mode4 & (2)EJ0J-EXP24S		
42G EJRD	MES	Yes No
Specify-Mode4 & (3)EJ0J-EXP24S		
42G EJRE	MES	Yes No
Specify Mode1 & (2)EJ14-EXP24S		
42G EJRF	MES	Yes No
Specify Mode2 & (2)EJ14-EXP24S		
42G EJRG	MES	Yes No
Specify Mode2 & (2)EJ14-EXP24S		
42G EJRH	MES	Yes No
Specify Mode2 & (4)EJ14+EXP24S		
42G EJRJ	MES	Yes No
Non-paired Indicator EJ0L PCIe		
42G EJRL	Both	Yes No
Specify Mode1 & (2)EJ0L-EXP24S		
42G EJRP	MES	Yes No
Specify Mode2 & (4)EJ0L EXP24S		
42G EJRR	MES	Yes No
Specify Mode2 & (2)EJ0L-EXP24S		
42G EJRS	MES	Yes No
Specify Mode2 & (2)EJ0L-EXP24S		
42G EJRT	MES	Yes No
Non-paired Indicator EJ0L PCIe		
42G EJRU	MES	Yes No
Front IBM Bezel 12-Bay BackP		
42G EJU3	Both	Yes No
Front OEM Bezel 12-Bay BackP		
42G EJU4	Both	Yes No
Front IBM Bezel 18-Bay BackP		
42G EJUG	Both	Yes No
Front OEM Bezel 18-Bay BackP		
42G EJUH	Both	Yes No
Front IBM Bezel 6 SAS/4 NVMe		
42G EJUK	Both	Yes No
Front OEM Bezel 6SAS/4NVMe		
42G EJUL	Both	Yes No
Specify Mode-1 & CEC Ports 2Y0		
42G EJVO	Both	Yes No
Specify Mode-1 for EXP12SX 1&1		
42G EJV1	Both	Yes No
Specify Mode-1 for EXP12SX 2&2		
42G EJV2	Both	Yes No
Specify Mode-2 for EXP12SX 2&2		
42G EJV3	Both	Yes No
Specify Mode-2 for EXP12SX 4&2		
42G EJV4	Both	Yes No
Specify Mode-4 for EXP12SX 4&2		
42G EJV5	Both	Yes No
Specify Mode-2 for EXP12SX 1&2		
42G EJV6	Both	Yes No
Specify Mode-2 for EXP12SX 2&2		
42G EJV7	Both	Yes No
Specify Mode-2 for EXP12SX 1&1		
42G EJVA	Both	Yes No
Specify Mode-2 for EXP12SX 2&1		
42G EJVB	Both	Yes No
Specify Mode-4 for EXP12SX 1&1		
42G EJVC	Both	Yes No
Specify Mode-4 for EXP12SX 2&1		
42G EJVD	Both	Yes No
Specify Mode-4 for EXP12SX 3&2		
42G EJVE	Both	Yes No
Specify Mode-1 for EXP12SX 2&2		

Specify Mode-1 for EXP12SX 2&2	42G EJV F	Both	Yes	No
Specify Mode-1 & CEC Ports 2Y0	42G EJV P	MES	Yes	No
Specify Mode-1 for EXP24SX 1&1	42G EJW 0	Both	Yes	No
Specify Mode-1 for EXP24SX 2&2	42G EJW 1	Both	Yes	No
Specify Mode-2 for EXP24SX 2&2	42G EJW 2	Both	Yes	No
Specify Mode-2 for EXP24SX 4&2	42G EJW 3	Both	Yes	No
Specify Mode-4 for EXP24SX 4&2	42G EJW 4	Both	Yes	No
Specify Mode-2 for EXP24SX 1&2	42G EJW 5	Both	Yes	No
Specify Mode-2 for EXP24SX 2&2	42G EJW 6	Both	Yes	No
Specify Mode-2 for EXP24SX 1&1	42G EJW 7	Both	Yes	No
Specify Mode-2 for EXP24SX 2&1	42G EJW A	Both	Yes	No
Specify Mode-4 for EXP24SX 1&1	42G EJW B	Both	Yes	No
Specify Mode-4 for EXP24SX 2&1	42G EJW C	Both	Yes	No
Specify Mode-4 for EXP24SX 3&2	42G EJW D	Both	Yes	No
Specify Mode-1 for EXP24SX 2&2	42G EJW E	Both	Yes	No
Specify Mode-2 for EXP24SX 2&2	42G EJW F	Both	Yes	No
Specify Mode-2 for EXP24SX 2&1	42G EJW G	Both	Yes	No
Specify Mode-2 for EXP24SX 4&2	42G EJW H	Both	Yes	No
Specify Mode-1 for EXP24SX 2&2	42G EJW J	Both	Yes	No
Specify Mode-2 for EXP24SX 4&2	42G EJW P	MES	Yes	No
Specify Mode-2 for EXP24SX 2&2	42G EJW R	MES	Yes	No
Specify Mode-2 for EXP24SX 2&1	42G EJW S	MES	Yes	No
PDU Access Cord 0.38m	42G EJW T	MES	Yes	No
Power Cord - Drawer to PDU	42G ELC 0	MES	Yes	No
ES1F Load Source Specify	42G ELC 5	Both	Yes	No
#ESD4 Load Source Specify	42G ELS 3	Both	Yes	No
#ESDA Load Source Specify	42G ELS 4	MES	Yes	No
ESDN Load Source Specify	42G ELS A	MES	Yes	No
ES1H Load Source Specify	42G ELS N	MES	Yes	No
ES0R Load Source Specify	42G ELS Q	Both	Yes	No
ES0T Load Source Specify	42G ELS R	MES	Yes	No
#ESFU Load Source Specify	42G ELST	MES	Yes	No
#ES81 Load Source Specify	42G ELT 0	Both	Yes	No
#ESF2 Load Source Specify	42G ELT 1	MES	Yes	No
#ESF4 Load Source Specify	42G ELT 2	Both	Yes	No
#ES86 Load Source Specify	42G ELT 4	Both	Yes	No
#ESF8 Load Source Specify	42G ELT 6	Support	Yes	No

42G	ELT8	Both	Yes	No
ES79 Load Source Specify				
42G	ELT9	Support	Yes	No
#ESFA Load Source Specify				
42G	ELTA	Support	Yes	No
#ES8D Load Source Specify				
42G	ELTD	Support	Yes	No
#ESFE Load Source Specify				
42G	ELTE	Support	Yes	No
ES7F Load Source Specify				
42G	ELTF	Support	Yes	No
#ES8G Load Source Specify				
42G	ELTG	Support	Yes	No
#ES8K Load Source Specify				
42G	ELTK	MES	Yes	No
#ES7L Load Source Specify				
42G	ELTL	Support	Yes	No
#ESFN Load Source Specify	571G			
42G	ELTN	Support	Yes	No
#ES8P Load Source Specify				
42G	ELTP	Support	Yes	No
#ES7Q Load Source Specify				
42G	ELTQ	Support	Yes	No
#ES8R Load Source Specify				
42G	ELTR	Support	Yes	No
#ESFS Load Source Specify				
42G	ELTS	Both	Yes	No
#ESEU Load Source Specify				
42G	ELTU	Both	Yes	No
#ES8W Load Source Specify				
42G	ELTW	Support	Yes	No
#ESEY Load Source Specify	283G			
42G	ELTY	Support	Yes	No
#ESNJ Load Source Specify				
42G	ELUJ	Both	Yes	No
#ESNL Load Source Specify				
42G	ELUL	Both	Yes	No
#ESNN Load Source Specify				
42G	ELUN	Both	Yes	No
#ESNQ Load Source Specify				
42G	ELUQ	Both	Yes	No
EC5W Load Source Specify				
42G	ELUW	Both	Yes	No
ES91 Load Source Specify				
42G	ELZ1	Both	Yes	No
#ESE2 Load Source Specify				
42G	ELZ2	Support	Yes	No
#ES93 Load Source Specify				
42G	ELZ3	Support	Yes	No
#ES84 Load Source Specify				
42G	ELZ4	Support	Yes	No
ES95 Load Source Specify				
42G	ELZ5	Both	Yes	No
ESG6 Load Source Specify				
42G	ELZ6	Support	Yes	No
#ES97 Load Source Specify				
42G	ELZ7	Support	Yes	No
#ESE8 Load Source Specify				
42G	ELZ8	Support	Yes	No
ESM9 Load Source Specify				
42G	ELZ9	Support	Yes	No
#ESGA Load Source Specify				
42G	ELZA	Support	Yes	No
ESNB Load Source Specify				
42G	ELZB	Both	Yes	No
#ESGC Load Source Specify				
42G	ELZC	Support	Yes	No
ESND Load Source Specify				
42G	ELZD	Both	Yes	No
#ESGE Load Source Specify				
42G	ELZE	Support	Yes	No
ESNF Load Source Specify				
42G	ELZF	Both	Yes	No
ESGG Load Source Specify				

42G	ELZG	Support	Yes	No
ESNH Load Source Specify				
42G	ELZH	Both	Yes	No
#ESGJ Load Source Specify				
42G	ELZJ	Support	Yes	No
ESHK Load Source Specify				
42G	ELZK	Support	Yes	No
#ESGL Load Source Specify				
42G	ELZL	Support	Yes	No
ESHM Load Source Specify				
42G	ELZM	Support	Yes	No
#ESGN Load Source Specify				
42G	ELZN	Support	Yes	No
#ESGQ Load Source Specify				
42G	ELZQ	Support	Yes	No
ESMR Load Source Specify				
42G	ELZR	Support	Yes	No
#ESGS Load Source Specify				
42G	ELZS	Support	Yes	No
ESHT Load Source Specify				
42G	ELZT	Support	Yes	No
ESHV Load Source Specify				
42G	ELZV	Support	Yes	No
#ES8Z Load Source Specify				
42G	ELZZ	Support	Yes	No
8 GB DDR4 2666 RDIMM				
42G	EM60	Support	Yes	No
16 GB DDR4 Memory				
42G	EM62	Both	Yes	No
32 GB DDR4 Memory				
42G	EM63	Both	Yes	No
64 GB DDR4 Memory				
42G	EM64	Both	Yes	No
128 GB DDR4 Memory				
42G	EM65	Both	Yes	No
512GB (16x32GB) Memory DIMMs				
42G	EM67	Initial	Yes	No
PCIe Gen3 I/O Expansion Drawer				
42G	EMX0	Both	Yes	No
AC Power Supply Conduit				
42G	EMXA	Both	Yes	No
PCIe3 6-slot Fanout Module				
42G	EMXF	Support	Yes	No
PCIe3 6-slot Fanout Module				
42G	EMXG	Support	Yes	No
PCIe3 6-slot Fanout Mod				
42G	EMXH	Both	Yes	No
1m 10GbE Cable SFP+ Act Twinax				
42G	EN01	Both	Yes	No
3m 10GbE Cable SFP+ Act Twinax				
42G	EN02	Both	Yes	No
5m 10GbE Cable SFP+ Act Twinax				
42G	EN03	Both	Yes	No
PCIe3 16Gb 2-port Fibre Channel				
42G	EN0A	Both	Yes	No
PCIe2 8Gb 2-Port Fibre Channel				
42G	EN0G	Support	Yes	No
PCIe3 4-port 10Gb FCoE & 1GbE				
42G	EN0H	Both	Yes	No
PCIe3 4-port 10GB FCoE & 1GbE				
42G	EN0K	Both	Yes	No
PCIe2 4-pt(10+1 GbE)SR+RJ45				
42G	EN0S	Both	Yes	No
PCIe2 4-pt(10+1GbE)CRSR+RJ45				
42G	EN0U	Both	Yes	No
PCIe2 2-pt 10/1GbE BaseT RJ45				
42G	EN0W	Both	Yes	No
PCIe2 8Gb 4-port Fibre Channel				
42G	EN12	Support	Yes	No
Not withdrawn in Japan until August 7, 2018				
PCIe 1-port Bisync Adapter				
42G	EN13	Support	Yes	No
PCIe3 4-port 10GbE SR Adapter				
42G	EN15	Both	Yes	No

PCIe3 32Gb 2-port FC Adapter	42G	EN1A	Both	Yes	No
PCIe3 16Gb 4-port FC Adapter	42G	EN1C	Both	Yes	No
PCIe3 2-Port 16Gb FC Adapter	42G	EN1G	Both	Yes	No
188 GB IBMi NVMe Load Source	42G	ENS1	Both	Yes	No
393 GB IBMi NVMe Load Source	42G	ENS2	Both	Yes	No
200GB IBM i NVMe Load Source	42G	ENSA	Both	Yes	No
400GB IBM i NVMe Load Source	42G	ENSB	Both	Yes	No
8-core 3.8/4.0 GHZ POWER9	42G	EP5E	Both	No	No
10-core 3.5/3.9 GHZ POWER9	42G	EP5F	Both	No	No
12-core 3.4/3.9 GHZ POWER9	42G	EP5G	Both	No	No
11-core 3.45/3.9 GHZ POWER9	42G	EP5H	Both	No	No
One Proc Activation for EP5E	42G	EP6E	Both	Yes	No
One Proc Activation for EP5F	42G	EP6F	Both	Yes	No
One Proc Activation for EP5G	42G	EP6G	Both	Yes	No
One Proc Activation for EP5H	42G	EP6H	Both	Yes	No
Deactivation of LPM	42G	EPA0	Both	Yes	No
Horizontal PDU Mounting Hardwr	42G	EPTH	Both	Yes	No
High Function 9xC19 PDU	42G	EPTJ	Support	Yes	No
High Function 9xC19 PDU 3Phase	42G	EPTL	Support	Yes	No
High Function 12xC13 PDU	42G	EPTN	Support	Yes	No
High Function 12xC13 PDU 3-Phs	42G	EPTQ	Support	Yes	No
Qty 150 of ES0Q 387GB 4k SSD	42G	EQ0Q	Support	Yes	No
Qty 150 of ES0R 387GB 4k SSD	42G	EQ0R	Support	Yes	No
QTY 150 of ES0S 775GB 4k SSD	42G	EQ0S	Support	Yes	No
Qty 150 of ES0T 775GB 4k SSD	42G	EQ0T	Support	Yes	No
Qty 150 #ES62 3.86TB LFF Dsk	42G	EQ62	Both	Yes	No
Qty 150 #ES64 7.72TB LFF Dsk	42G	EQ64	Both	Yes	No
Qty 150 #ES78 SSD 387GB 5xx	42G	EQ78	Support	Yes	No
Qty 150 ES79 SSD 387GB 5xx	42G	EQ79	Support	Yes	No
Qty 150 #ES7E SSD 775GB 5xx	42G	EQ7E	Support	Yes	No
Qty 150 ES7F SSD 775GB 5xx	42G	EQ7F	Support	Yes	No
Quantity 150 of ES80 1.9TB SSD	42G	EQ80	Support	Yes	No
Quantity 150 of ES81 1.9TB SSD	42G	EQ81	Support	Yes	No
Qty 150 #ES85 SSD 387GB 4k	42G	EQ85	Support	Yes	No
Qty 150 #ES86 SSD 387GB 4k	42G	EQ86	Support	Yes	No
Qty 150 #ES8C SSD 775GB 4k	42G	EQ8C	Support	Yes	No

Qty 150 #ES8D SSD 775GB 4k	42G	EQ8D	Support	Yes	No
Qty 150 #ES8F SSD 1.55TB 4k	42G	EQ8F	Support	Yes	No
Qty 150 #ES8G SSD 1.55TB 4k	42G	EQ8G	Support	Yes	No
Quantity 150 of ES8Y 931GB	42G	EQ8Y	Support	Yes	No
Quantity 150 of ES8Z 931GB	42G	EQ8Z	Support	Yes	No
Quantity 150 of ES96 1.86TB	42G	EQ96	Support	Yes	No
Quantity 150 of ES97 1.86TB	42G	EQ97	Support	Yes	No
Quantity 150 ESD2 1.1TB Disk	42G	EQD2	Support	Yes	No
Quantity 150 ESD3 1.2TB Disk	42G	EQD3	Support	Yes	No
Qty150 of ESDN 571GB 15k HDD	42G	EQDN	Support	Yes	No
Qty150 of ESDP 600GB 15k HDD	42G	EQDP	Support	Yes	No
Quantity 150 of #ESE7 3.72TB	42G	EQE7	Support	Yes	No
Quantity 150 of ESE8 3.72TB	42G	EQE8	Support	Yes	No
Quantity 150 of #ESEU 571GB	42G	EQEU	Both	Yes	No
Quantity 150 of #ESEV 600GB	42G	EQEV	Both	Yes	No
Quantity 150 of #ESEY 283 GB S	42G	EQEY	Support	Yes	No
Quantity 150 of #ESEZ 300GB	42G	EQEZ	Support	Yes	No
Quantity 150 of #ESF2 1.2TB	42G	EQF2	Both	Yes	No
Quantity 150 of #ESF3 1.2TB	42G	EQF3	Both	Yes	No
Quantity 150 of #ESFN 571GB	42G	EQFN	Support	Yes	No
Quantity 150 of #ESFP 600GB	42G	EQFP	Support	Yes	No
Quantity 150 of #ESFS 1.7TB	42G	EQFS	Both	Yes	No
Quantity 150 of #ESFT 1.8TB	42G	EQFT	Both	Yes	No
Quantity 150 of #ESG5	42G	EQG5	Support	Yes	No
Quantity 150 of ESG6	42G	EQG6	Support	Yes	No
Quantity 150 of #ESGB	42G	EQGB	Support	Yes	No
Quantity 150 of #ESGC	42G	EQGC	Support	Yes	No
Quantity 150 of #ESGF	42G	EQGF	Support	Yes	No
Quantity 150 of ESGG	42G	EQGG	Support	Yes	No
Quantity 150 of #ESGK	42G	EQGK	Support	Yes	No
Quantity 150 of #ESGL	42G	EQGL	Support	Yes	No
Quantity 150 of #ESGP	42G	EQGP	Support	Yes	No
Quantity 150 of #ESGQ	42G	EQGQ	Support	Yes	No
Quantity 150 of ES94 387GB	42G	ER94	Both	Yes	No
Quantity 150 of ES95 387GB	42G	ER95	Both	Yes	No
RFID Tags for Compute Nodes	42G	ERF1	Initial	N/A	No
Rear rack extension	42G	ERGO	MES	Yes	No

Quantity 150 of ESGV	387GB 42G	ERGV	Both	Yes	No
Quantity 150 of ESGZ	775GB 42G	ERGZ	Both	Yes	No
Quantity 150 of ESHJ	42G	ERHJ	Support	Yes	No
Quantity 150 of ESHK	42G	ERHK	Support	Yes	No
Quantity 150 of ESHL	42G	ERHL	Support	Yes	No
Quantity 150 of ESHM	42G	ERHM	Support	Yes	No
Quantity 150 of ESHN	42G	ERHN	Support	Yes	No
Quantity 150 of ESJ0	931GB 42G	ERJ0	Both	Yes	No
Quantity 150 of ESJ1	931GB 42G	ERJ1	Both	Yes	No
Quantity 150 of ESJ2	1.86TB 42G	ERJ2	Both	Yes	No
Quantity 150 of ESJ3	1.86TB 42G	ERJ3	Both	Yes	No
Quantity 150 of ESJ4	3.72TB 42G	ERJ4	Both	Yes	No
Quantity 150 of ESJ5	3.72TB 42G	ERJ5	Both	Yes	No
Quantity 150 of ESJ6	7.45TB 42G	ERJ6	Both	Yes	No
Quantity 150 of ESJ7	7.45TB 42G	ERJ7	Both	Yes	No
Quantity 150 of ESM8	42G	ERM8	Support	Yes	No
Quantity 150 of ESM9	42G	ERM9	Support	Yes	No
Quantity 150 of ESNA	775GB 42G	ERNA	Both	Yes	No
Quantity 150 of ESNB	775GB 42G	ERNB	Both	Yes	No
Quantity 150 of ESNE	1.55TB 42G	ERNE	Both	Yes	No
Quantity 150 of ESNF	1.55TB 42G	ERNF	Both	Yes	No
387GB SFF-2 4k SSD AIX/Linux	42G	ES0Q	Support	Yes	No
387GB SFF-2 4k SSD for IBM i	42G	ES0R	Support	Yes	No
775GB SFF-2 4k SSD AIX/Linux	42G	ES0S	Support	Yes	No
775GB SFF-2 4k SSD for IBM i	42G	ES0T	Support	Yes	No
Enterprise 1.6TB NVMe U.2	42G	ES1E	Both	Yes	No
Enterprise 1.6TB NVMe U.2	42G	ES1F	Both	Yes	No
Enterprise 3.2TB NVMe U.2	42G	ES1G	Both	Yes	No
Enterprise 3.2TB NVMe U.2	42G	ES1H	Both	Yes	No
3.86TB 7200 RPM SAS LFF Disk	42G	ES62	Both	Yes	No
7.72TB 7200 RPM SAS LFF Disk	42G	ES64	Both	Yes	No
387GB SFF-2 SSD 5xx for AIX/L	42G	ES78	Support	Yes	No
387GB SFF-2 SSD 5xx for IBM i	42G	ES79	Support	Yes	No
775GB SFF-2 SSD 5xx for AIX/L	42G	ES7E	Support	Yes	No
775GB SFF-2 SSD 5xx for IBM i	42G	ES7F	Support	Yes	No
387GB SFF-3 SSD 5xx for AIX/L	42G	ES7K	Support	Yes	No
387GB SFF-3 SSD 5xx for IBM i	42G	ES7L	Support	Yes	No

775GB SFF-3 SSD 5xx for AIX/L 42G	ES7P	Support	Yes	No
775GB SFF-3 SSD 5xx for IBM i 42G	ES7Q	Support	Yes	No
1.9TB RI SAS 4k SFF-2 SSD AIX 42G	ES80	Support	Yes	No
1.9TB RI SAS 4k SFF-2 SSD IBM 42G	ES81	Support	Yes	No
931GB Mainstream SAS 4k SSD 42G	ES83	Support	Yes	No
931GB Mainstream SAS 4k SSD 42G	ES84	Support	Yes	No
387GB SFF-2 SSD 4k for AIX/Li 42G	ES85	Support	Yes	No
387GB SFF-2 SSD 4k for IBM i 42G	ES86	Support	Yes	No
775GB SFF-2 SSD 4k for AIX/Li 42G	ES8C	Support	Yes	No
775GB SFF-2 SSD 4k for IBM i 42G	ES8D	Support	Yes	No
1.55TB SFF-2 SSD 4k for AIX/L 42G	ES8F	Support	Yes	No
1.55TB SFF-2 SSD 4k for IBM i 42G	ES8G	Support	Yes	No
1.9TB RI SAS 4k SFF-3 SSD AIX 42G	ES8J	Support	Yes	No
1.9TB RI SAS 4k SFF-3 SSD IBM 42G	ES8K	Support	Yes	No
387GB SFF-3 SSD 4k for AIX/Li 42G	ES8N	Support	Yes	No
387GB SFF-3 SSD 4k for IBM i 42G	ES8P	Support	Yes	No
775GB SFF-3 SSD 4k for AIX/Li 42G	ES8Q	Support	Yes	No
775GB SFF-3 SSD 4k for IBM i 42G	ES8R	Support	Yes	No
1.55TB SFF-3 SSD 4k for AIX/L 42G	ES8V	Support	Yes	No
1.55TB SFF-3 SSD 4k for IBM i 42G	ES8W	Support	Yes	No
931GB Mainstream SAS 4k SSD 42G	ES8Y	Support	Yes	No
931GB Mainstream SAS 4k SSD 42G	ES8Z	Support	Yes	No
387GB Enterprise SAS 4k SFF3 42G	ES90	Both	Yes	No
387GB Enterprise SAS 4k SFF3 42G	ES91	Both	Yes	No
1.86TB Mainstream SAS 4k SSD 42G	ES92	Support	Yes	No
1.86TB Mainstream SAS 4k SSD 42G	ES93	Support	Yes	No
387GB Enterprise SAS 4k SFF2 42G	ES94	Both	Yes	No
387GB Enterprise SAS 4k SFF2 42G	ES95	Both	Yes	No
1.86TB Mainstream SAS 4k SSD 42G	ES96	Support	Yes	No
1.86TB Mainstream SAS 4k SSD 42G	ES97	Support	Yes	No
387GB Enterprise SAS 5xxSFF3 42G	ESB0	Both	Yes	No
387GB Enterprise SAS 5xxSFF2 42G	ESB2	Both	Yes	No
775GB Enterprise SAS 5xxSFF3 42G	ESB4	Both	Yes	No
775GB Enterprise SAS 5xxSFF2 42G	ESB6	Both	Yes	No
387GB Enterprise SAS 4k SFF3 42G	ESB8	Both	Yes	No
387GB Enterprise SAS 4k SFF3 42G	ESB9	Both	Yes	No
387GB Enterprise SAS 4k SFF2 42G	ESBA	Both	Yes	No

387GB Enterprise SAS 4k SFF2	42G	ESBB	Both	Yes	No
775GB Enterprise SAS 4k SFF3	42G	ESBE	Both	Yes	No
775GB Enterprise SAS 4k SFF3	42G	ESBF	Both	Yes	No
775GB Enterprise SAS 4k SFF2	42G	ESBG	Both	Yes	No
775GB Enterprise SAS 4k SFF2	42G	ESBH	Both	Yes	No
1.55TB Enterprise SAS 4kSFF3	42G	ESBJ	Both	Yes	No
1.55TB Enterprise SAS 4kSFF3	42G	ESBK	Both	Yes	No
1.55TB Enterprise SAS 4kSFF2	42G	ESBL	Both	Yes	No
1.55TB Enterprise SAS 4kSFF2	42G	ESBM	Both	Yes	No
S&H - No Charge	42G	ESCO	Both	N/A	No
S&H-b	42G	ESC6	Initial	N/A	No
1.1TB 10K RPM SAS SFF-2 Disk	42G	ESD2	Support	Yes	No
1.2TB 10K RPM SAS SFF-2 (AIX/	42G	ESD3	Support	Yes	No
571GB 10K RPM SAS SFF-3 Disk	42G	ESD4	Support	Yes	No
600GB 10K RPM SAS SFF3 Disk	42G	ESD5	Both	Yes	No
283GB 15K RPM SAS SFF-3 Disk	42G	ESDA	Support	Yes	No
300GB 15K RPM SAS SFF-3 Disk	42G	ESDB	Both	Yes	No
571GB 15k SAS SFF-2 Disk Drive	42G	ESDN	Support	Yes	No
600GB 15k SAS SFF-2 Disk Drive	42G	ESDP	Support	Yes	No
3.72TB Mainstream SAS 4k SSD	42G	ESE1	Support	Yes	No
3.72TB Mainstream SAS 4k SSD	42G	ESE2	Support	Yes	No
3.72TB Mainstream SAS 4k SSD	42G	ESE7	Support	Yes	No
3.72TB Mainstream SAS 4k SSD	42G	ESE8	Support	Yes	No
571GB 10K RPM SFF-2 Disk 4K	42G	ESEU	Both	Yes	No
600GB 10K RPM SFF-2 Disk 4K	42G	ESEV	Both	Yes	No
283GB 15K SAS SFF-2 4K BLK HDD	42G	ESEY	Support	Yes	No
300GB 15K SAS SFF-2 4K BLK HDD	42G	ESEZ	Support	Yes	No
1.1TB 10K RPM SFF-2 Disk 4K	42G	ESF2	Both	Yes	No
1.2TB 10K RPM SFF-2 Disk 4K	42G	ESF3	Both	Yes	No
571GB 10K RPM SFF-3 Disk 4K	42G	ESF4	Both	Yes	No
600GB 10K RPM SFF-3 Disk 4K	42G	ESF5	Both	Yes	No
1.1TB 10K RPM SFF-3 Disk 4K	42G	ESF8	Both	Yes	No
1.2TB 10K RPM SFF-3 Disk 4K	42G	ESF9	Both	Yes	No
283GB 15K SAS SFF-3 4K BLK HDD	42G	ESFA	Support	Yes	No
300GB 15K SAS SFF-3 4K BLK HDD	42G	ESFB	Support	Yes	No
571GB 15K SAS SFF-3 4K BLK HDD	42G	ESFE	Support	Yes	No
600GB 15K SAS SFF-3 4K BLK HDD	42G	ESFF	Support	Yes	No

571GB 15K SAS SFF-2 4K BLK HDD			
42G	ESFN	Support	Yes No
600GB 15K SAS SFF-2 4K BLK HDD			
42G	ESFP	Support	Yes No
1.7TB 10K RPM SFF-2 Disk 4K			
42G	ESFS	Both	Yes No
1.8TB 10K RPM SFF-2 Disk 4K			
42G	ESFT	Both	Yes No
1.7TB 10K RPM SFF-3 Disk 4K			
42G	ESFU	Both	Yes No
1.8TB 10K RPM SFF-3 Disk 4K			
42G	ESFV	Both	Yes No
387GB Enterprise SAS 5xx SSD			
42G	ESG5	Support	Yes No
387GB Enterprise SAS 5xx SSD			
42G	ESG6	Support	Yes No
387GB Enterprise SAS 5xx SSD			
42G	ESG9	Support	Yes No
387GB Enterprise SAS 5xx SSD			
42G	ESGA	Support	Yes No
387GB Enterprise SAS 4k SSD			
42G	ESGB	Support	Yes No
387GB Enterprise SAS 4k SSD			
42G	ESGC	Support	Yes No
387GB Enterprise SAS 4k SSD			
42G	ESGD	Support	Yes No
387GB Enterprise SAS 4k SSD			
42G	ESGE	Support	Yes No
775GB Enterprise SAS 5xx SSD			
42G	ESGF	Support	Yes No
775GB Enterprise SAS 5xx SSD			
42G	ESGG	Support	Yes No
775GB Enterprise SAS 5xx SSD			
42G	ESGH	Support	Yes No
775GB Enterprise SAS 5xx SSD			
42G	ESGJ	Support	Yes No
775GB Enterprise SAS 4k SSD			
42G	ESGK	Support	Yes No
775GB Enterprise SAS 4k SSD			
42G	ESGL	Support	Yes No
775GB Enterprise SAS 4k SSD			
42G	ESGM	Support	Yes No
775GB Enterprise SAS 4k SSD			
42G	ESGN	Support	Yes No
1.55TB Enterprise SAS 4k SSD			
42G	ESGP	Support	Yes No
1.55TB Enterprise SAS 4k SSD			
42G	ESGQ	Support	Yes No
1.55TB Enterprise SAS 4k SSD			
42G	ESGR	Support	Yes No
1.55TB Enterprise SAS 4k SSD			
42G	ESGS	Support	Yes No
387GB Enterprise SAS 5xxSFF3			
42G	ESGT	Both	Yes No
387GB Enterprise SAS 5xxSFF2			
42G	ESGV	Both	Yes No
775GB Enterprise SAS 5xxSFF3			
42G	ESGX	Both	Yes No
775GB Enterprise SAS 5xxSFF2			
42G	ESGZ	Both	Yes No
931GB Mainstream SAS 4k SSD			
42G	ESHJ	Support	Yes No
931GB Mainstream SAS 4k SSD			
42G	ESHK	Support	Yes No
1.86TB Mainstream SAS 4k SSD			
42G	ESHL	Support	Yes No
1.86TB Mainstream SAS 4k SSD			
42G	ESHM	Support	Yes No
7.45TB Mainstream SAS 4k SSD			
42G	ESHN	Support	Yes No
931GB Mainstream SAS 4k SSD			
42G	ESHS	Support	Yes No
931GB Mainstream SAS 4k SSD			
42G	ESHT	Support	Yes No

1.86TB Mainstream SAS 4k SSD						
	42G	ESHU		Support	Yes	No
1.86TB Mainstream SAS 4k SSD						
	42G	ESHV		Support	Yes	No
7.45TB Mainstream SAS 4k SSD						
	42G	ESHW		Support	Yes	No
931GB Mainstream SAS 4k SFF2						
	42G	ESJ0		Both	Yes	No
931GB Mainstream SAS 4k SFF2						
	42G	ESJ1		Both	Yes	No
1.86TB Mainstream SAS 4kSFF2						
	42G	ESJ2		Both	Yes	No
1.86TB Mainstream SAS 4kSFF2						
	42G	ESJ3		Both	Yes	No
3.72TB Mainstream SAS 4kSFF2						
	42G	ESJ4		Both	Yes	No
3.72TB Mainstream SAS 4kSFF2						
	42G	ESJ5		Both	Yes	No
7.45TB Mainstream SAS 4kSFF2						
	42G	ESJ6		Both	Yes	No
7.45TB Mainstream SAS 4kSFF2						
	42G	ESJ7		Both	Yes	No
931GB Mainstream SAS 4k SFF3						
	42G	ESJ8		Both	Yes	No
931GB Mainstream SAS 4k SFF3						
	42G	ESJ9		Both	Yes	No
1.86TB Mainstream SAS 4kSFF3						
	42G	ESJA		Both	Yes	No
1.86TB Mainstream SAS 4kSFF3						
	42G	ESJB		Both	Yes	No
3.72TB Mainstream SAS 4kSFF3						
	42G	ESJC		Both	Yes	No
3.72TB Mainstream SAS 4kSFF3						
	42G	ESJD		Both	Yes	No
7.45TB Mainstream SAS 4kSFF3						
	42G	ESJE		Both	Yes	No
7.45TB Mainstream SAS 4kSFF3						
	42G	ESJF		Both	Yes	No
ESB9 Load Source Specify						
	42G	ESL9		Both	Yes	No
Specify AC Power Supply						
	42G	ESLA		Both	Yes	No
ESBB Load Source Specify						
	42G	ESLB		Both	Yes	No
ESBF Load Source Specify						
	42G	ESLF		Both	Yes	No
ESBH Load Source Specify						
	42G	ESLH		Both	Yes	No
ESBK Load Source Specify						
	42G	ESLK		Both	Yes	No
EXP12SX SAS Storage Enclosure						
	42G	ESLL		Both	Yes	No
ESBM Load Source Specify						
	42G	ESLM		Both	Yes	No
EXP24SX SAS Storage Enclosure						
	42G	ESLS		Both	Yes	No
Load Source Specify for EC6V						
	42G	ESLV		Both	Yes	No
Load Source Specify for EC6X						
	42G	ESLX		Both	Yes	No
Load Source Specify for EC6Z						
	42G	ESLZ		Both	Yes	No
3.72TB Mainstream SAS 4k SSD						
	42G	ESM8		Support	Yes	No
3.72TB Mainstream SAS 4k SSD						
	42G	ESM9		Support	Yes	No
3.72TB Mainstream SAS 4k SSD						
	42G	ESMQ		Support	Yes	No
3.72TB Mainstream SAS 4k SSD						
	42G	ESMR		Support	Yes	No
775GB Enterprise SAS 4k SFF2						
	42G	ESNA		Both	Yes	No
775GB Enterprise SAS 4k SFF2						
	42G	ESNB		Both	Yes	No

775GB Enterprise SAS 4k SFF3	42G	ESNC	Both	Yes	No
775GB Enterprise SAS 4k SFF3	42G	ESND	Both	Yes	No
1.55TB Enterprise SAS 4kSFF2	42G	ESNE	Both	Yes	No
1.55TB Enterprise SAS 4kSFF2	42G	ESNF	Both	Yes	No
1.55TB Enterprise SAS 4kSFF3	42G	ESNG	Both	Yes	No
1.55TB Enterprise SAS 4kSFF3	42G	ESNH	Both	Yes	No
283GB 15K SAS SFF-3 4k HDD	42G	ESNJ	Both	Yes	No
300GB 15K SAS SFF-3 4k HDD	42G	ESNK	Both	Yes	No
283GB 15K SAS SFF-2 4K HDD	42G	ESNL	Both	Yes	No
300GB 15K SAS SFF-2 4k HDD	42G	ESNM	Both	Yes	No
571GB 15K SAS SFF-3 4K HDD	42G	ESNN	Both	Yes	No
600GB 15K SAS SFF-3 4k HDD	42G	ESNP	Both	Yes	No
571GB 15K SAS SFF-2 4K HDD	42G	ESNQ	Both	Yes	No
600GB 15K SAS SFF-2 4k HDD	42G	ESNR	Both	Yes	No
Quantity 150 of #ESNL 283GB	42G	ESPL	Both	Yes	No
Quantity 150 of #ESNM 300GB	42G	ESPM	Both	Yes	No
Quantity 150 of #ESNQ 571GB	42G	ESPQ	Both	Yes	No
Quantity 150 of #ESNR 600GB	42G	ESPR	Both	Yes	No
Quantity 150 of ESB2 387GB	42G	ESQ2	Both	Yes	No
Quantity 150 of ESB6 775GB	42G	ESQ6	Both	Yes	No
Quantity 150 of ESBA 387GB	42G	ESQA	Both	Yes	No
Quantity 150 of ESBB 387GB	42G	ESQB	Both	Yes	No
Quantity 150 of ESBG 775GB	42G	ESQG	Both	Yes	No
Quantity 150 of ESBH 775GB	42G	ESQH	Both	Yes	No
Quantity 150 of ESBL 1.55TB	42G	ESQL	Both	Yes	No
Quantity 150 of ESBM 1.55TB	42G	ESQM	Both	Yes	No
RDX USB Internal Docking	42G	EU00	Both	Yes	No
1TB Removable Disk Cartridge	42G	EU01	Both	Yes	No
Not available in US, EMEA, and Japan					
RDX USB External Docking	42G	EU04	Both	Yes	No
RDX 320 GB Removable Disk Driv	42G	EU08	Support	Yes	No
Operator Panel LCD Display	42G	EU0B	Both	Yes	No
1.5TB Removable Disk Cartridge	42G	EU15	Support	Yes	No
Cable Ties & Labels	42G	EU19	Both	Yes	No
Order Placed Indicator	42G	EU29	Both	Yes	No
2TB Removable Disk Cartrdg-RDX	42G	EU2T	Both	Yes	No
ESJ1 Load Source Specify	42G	EU41	Both	Yes	No
ESJ3 Load Source Specify					

ESJ5 Load Source Specify	42G	EU43		Both	Yes	No
ESJ7 Load Source Specify	42G	EU45		Both	Yes	No
ESJ9 Load Source Specify	42G	EU47		Both	Yes	No
ESJB Load Source Specify	42G	EU49		Both	Yes	No
ESJD Load Source Specify	42G	EU4B		Both	Yes	No
ESJF Load Source Specify	42G	EU4D		Both	Yes	No
	42G	EU4F		Both	Yes	No
RDX USB External Docking Sta						
	42G	EUA4		Both	Yes	No
Standalone USB DVD drive w/c						
Core Use HW Feature	42G	EUA5		Both	Yes	No
Core Use HW Feature 10	42G	EUC6		MES	Yes	No
BP Post-Sales Service 1 Day	42G	EUC7		MES	Yes	No
Post-Sales Service 1 Day	42G	SVBP		Both	Yes	No
Other Post-Sale Svcs: 1 Day	42G	SVCS		Both	Yes	No
	42G	SVNN		Both	Yes	No

The following are newly announced features on the specific models of the IBM Power Systems 7014 and 7965 machine type:

Description	Model number	Feature number	Purchase price	Minimum Monthly Maint. charge	Initial/MES/Both/support	RP CSU	MES
Rack Specify 42G - 4EIA	T00	ER35			Initial	N/A	No
	T42				Initial	N/A	No

Description	Model number	Feature number	Purchase price	Minimum Monthly Maint. charge	Initial/MES/Both/support	RP CSU	MES
Rack Specify 42G - 4EIA	S42	ER35			Initial	N/A	No

RP MES = Return parts, miscellaneous equipment specifications
CSU = Customer setup

Pricing terms

Prices in the following PDF prices link are suggested list prices on day of announcement for the U.S. only. They are provided for your information only. Dealer prices may vary, and prices may also vary by country. IBM list price does not include tax or shipping and is subject to change without notice.

[ENUS-120-024-LIST_PRICES_2020_07_14.PDF](#)

Annual minimum maintenance charges

Not applicable

ServiceElect (ESA) charges

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

Feature conversion purchase price

Feature Conversions

Feature conversions for 9009-42G adapters features:

From FC:	To FC:	Parts returned	Purchase price
EJ32 - PCIe3 Crypto Coprocessor no BSC 4767	EJ33 - PCIe3 Crypto Coprocessor BSC-Gen3 4767	No	

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