IBM DS8880 Gen 2 models deliver new features and additional functions

Table of contents

At a glance

IBM(R) DS8880 Generation 2 models now support zHyperLink read functionality. For customers that use or are interested in using transparent cloud tiering connectivity, a new 10 Gb Ethernet adapter is available to increase the bandwidth of data transmission to the cloud.

Overview

IBM DS8880 Gen 2 family offers:

- An additional 6-core processor per central electronics complexes (CEC) for business-class configurations to enable zHyperLink read capability
- zHyperLink read support on DS8884 models with 12 cores per CEC, DS8886 models with 16 or 24 cores per CEC, and DS8888 models attached to IBM z14
- 10 Gb Ethernet adapters to increase the bandwidth of transparent cloud tiering connections

The zHyperLink enhancements in this release partially fulfill the Statements of General Direction found in Hardware Announcement 117-003, dated January 10, 2017.

Key prerequisites

All announced features and functions that are supported on the IBM DS8000(R) series require DS8000 LMC 8.8.33.xx.xx (bundle version 88.33.xxx.xx), or later.

Planned availability date

April 20, 2018

Description

zHyperLink read support for the DS8880 Gen 2 family

zHyperLink dramatically reduces latency to less than 20 microseconds with point to point interconnections between a IBM Z 14 processor and a DS8880 I/O. This can help organizations accelerate their core transaction processes while expanding their

business operations into next-generation applications using artificial intelligence to extract value to data.

Initial support of zHyperLink has been increased to include business-class and analytics-class configurations, as well as enterprise-class models with 24 cores per CEC configuration.

DS8884

DS8884 now supports four physical zHyperLink connections.

The following is required to support zHyperLink in DS8884 configurations:

- An additional 6-core processor (feature number 4425) for a total of 12 cores per CEC
- I/O enclosure pair PCIe G3 (feature number 1303)
- Latest version of Licensed Machine Code (LMC) R8.3, or higher

The additional 6-core processor is required exclusively for zHyperLink support and can only be ordered with zHyperLink hardware.

Two or four physical zHyperLink connections are supported at the system level.

DS8886

DS8886 models now support zHyperLink in configurations with 16 or 24 cores per CEC. Configurations with 8 cores per CEC are required to upgrade to 16 or 24 cores per CEC to support zHyperLink.

The following is required to support zHyperLink in DS8886 configurations:

- 16 core (feature number 4423) or 24 core (feature number 4424) per CEC processors
- I/O enclosure pair PCIe G3 (feature number 1303)
- Latest version of LMC R8.3, or higher

In 16 core per CEC configurations, two, four, six, or eight physical zHyperLink connections are supported at the system level.

In 24 core per CEC configurations, two, four, six, eight, ten, or twelve physical zHyperLink connections can be supported at the system level.

DS8888

DS8888 now supports up to 16 physical zHyperLink connections.

The following is required to support zHyperLink in DS8888 configurations:

- I/O enclosure pair PCIe G3 (feature number 1303)
- Latest version of LMC R8.3, or higher

In 24 core per CEC configurations, two, four, six, or eight physical zHyperLink connections can be supported at the system level.

In 48 core per CEC configurations, two, four, six, eight, ten, twelve, fourteen, or sixteen physical zHyperLink connections can be supported at the system level.

Transparent Cloud Tiering for IBM Z environments

Transparent Cloud Tiering, in conjunction with DFSMShsm, efficiently moves less frequently used data to multicloud environments, reducing costs while keeping customer and corporate information protected and available.

In addition to the two RJ-45 copper 1 Gb ports existing in the CECs, two 10 Gb Ethernet adapters (one for each CEC) are available to improve Transparent Cloud Tiering bandwidth for a native cloud storage tier in IBM Z environments.

These new four-port adapters include two SFP+ optical 10 Gb ports and two RJ-45 copper 1 Gb ports dedicated to Transparent Cloud Tiering. 10 Gb Ethernet adapters can be installed into new or existing DS8880 systems.

Hardware Management Console update

Newer versions of the Hardware Management Console are now available.

Accessibility by people with disabilities

A US Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be found on the IBM Accessibility website.

Section 508 of the US Rehabilitation Act

IBM DS8880 storage family is capable as of April 20, 2018, when used in accordance with IBM's associated documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it. A US Section 508 Voluntary Product Accessibility Template (VPAT) can be found on the IBM Accessibility website.

Reference information

For more information about available function authorizations, see Hardware Announcement 115-138, dated October 20, 2015.

For the IBM statement on compliance with the European Union Directive on Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment (2002/95/EC) (RoHS), go to the IBM and the Environment website.

Product number

The following are newly announced features on the specified models of IBM System Storage^(R) 2831, 2832, 2833, and 2834 machine types:

Description	Machine type	Model	Feature
40m zHyperLink cable	2831	84E	1450
150m zHyperLink cable	2831	84E	1451
zHyperLink adapter	2831	84E	3500
Management console - Primary v2	2831	984	1141
Management console - Secondary v2	2831	984	1151
40m zHyperLink cable	2831	984	1450
150m zHyperLink cable	2831	984	1451
zHyperLink adapter	2831	984	3500
Transparent cloud tiering 10Gb/1Gb	2831	984	3600

Description	Machine type	Model	Feature
Ethernet pair for 2U controllers			
6 to 12 Core processor upgrade	2831	984	4425
Management console - Primary v2	2831	985	1141
Management console - Secondary v2	2831	985	1151
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 4U controllers	2831	985	3601
Management console - Primary v2	2831	986	1141
Management console - Secondary v2	2831	986	1151
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 4U controllers	2831	986	3601
40m zHyperLink cable	2832	84E	1450
150m zHyperLink cable	2832	84E	1451
zHyperLink adapter	2832	84E	3500
Management console - Primary v2	2832	984	1141
Management console - Secondary v2	2832	984	1151
40m zHyperLink cable	2832	984	1450
150m zHyperLink cable	2832	984	1451
zHyperLink adapter	2832	984	3500
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 2U controllers	2832	984	3600
6 to 12 Core processor upgrade	2832	984	4425
Management console - Primary v2	2832	985	1141
Management console - Secondary v2	2832	985	1151
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 4U controllers	2832	985	3601
Management console - Primary v2	2832	986	1141
Management console - Secondary v2	2832	986	1151

Description	Machine type	Model	Feature
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 4U controllers	2832	986	3601
40m zHyperLink cable	2833	84E	1450
150m zHyperLink cable	2833	84E	1451
zHyperLink adapter	2833	84E	3500
Management console - Primary v2	2833	984	1141
Management console - Secondary v2	2833	984	1151
40m zHyperLink cable	2833	984	1450
150m zHyperLink cable	2833	984	1451
zHyperLink adapter	2833	984	3500
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 2U controllers	2833	984	3600
6 to 12 Core processor upgrade	2833	984	4425
Management console - Primary v2	2833	985	1141
Management console - Secondary v2	2833	985	1151
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 4U controllers	2833	985	3601
Management console - Primary v2	2833	986	1141
Management console - Secondary v2	2833	986	1151
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 4U controllers	2833	986	3601
40m zHyperLink cable	2834	84E	1450
150m zHyperLink cable	2834	84E	1451
zHyperLink adapter	2834	84E	3500
Management console - Primary v2	2834	984	1141
Management console - Secondary v2	2834	984	1151
40m zHyperLink cable	2834	984	1450
150m zHyperLink cable	2834	984	1451

Description	Machine type	Model	Feature
zHyperLink adapter	2834	984	3500
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 2U controllers	2834	984	3600
6 to 12 Core processor upgrade	2834	984	4425
Management console - Primary v2	2834	985	1141
Management console - Secondary v2	2834	985	1151
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 4U controllers	2834	985	3601
Management console - Primary v2	2834	986	1141
Management console - Secondary v2	2834	986	1151
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 4U controllers	2834	986	3601

Business Partner information

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

BP Attachment for Announcement Letter 118-033

Publications

DS8000 publications are available at the IBM Publications Center.

You can search, view, and collaborate with documentation using IBM Knowledge Center. IBM Knowledge Center is an IBM-wide view of technical information with multiple sources of offerings in a single location.

IBM Knowledge Center provides a centralized and consolidated way to access the information you need to use IBM products and also provides innovative ways to find information and to create your own set of information to cater to your needs. You will be able to personalize views, build customer documents, and interact with other information.

To access the IBM Publications Center Portal, go to the IBM Publications Center website.

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

Services

IBM Systems Lab Services

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

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

For details on available services, contact your IBM representative or go to the Lab Services website.

Global Technology Services

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

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

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

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

Details on education offerings related to specific products can be found on the IBM authorized training website.

Technical information

Specified operating environment

Hardware requirements

Licensed Machine Code

All announced features and functions that are supported on the IBM DS8000 series require DS8000 LMC 8.8.33.xx.xx (bundle version 88.33.xxx.xx), or later.

Some DS8000 series features and functions may not be available or supported in all environments. Current information on supported environments, prerequisites, and minimum operating system levels is available at the IBM System Storage Interoperation Center.

Limitations

None.

Planning information

Customer responsibilities

Physical configuration planning

Physical configuration planning is a customer responsibility. A marketing specialist can help plan and select the DS8000 series physical configuration and features. Introductory information, including required and optional features, can be found in the *IBM DS8880 Introduction and Planning Guide* (GC27-8525).

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

Installation planning

Installation planning is a customer responsibility. Information about planning the installation of a DS8000 series, including equipment, site, and power requirements, can be found in the *IBM DS8880 Introduction and Planning Guide* (GC27-8525).

Logical configuration planning and application

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

Application of the initial logical configuration and all subsequent modifications to the logical configuration is a customer responsibility. The logical configuration can be created, applied, and modified using the DS Storage Manager, DS CLI, or DS Open API, and also the DS8000 GUI.

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

Licensed Machine Code planning and application

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

Calculating physical and effective capacity

See the *IBM DS8880 Introduction and Planning Guide* (GC27-8525) for capacity calculation guidelines.

Encryption planning

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

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

IBM Storage Appliance planning

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

According to encryption best practices, DS8880 requires at least two storage appliances and associated software for each site which has one or more encryption-enabled DS8000 system. One server must be isolated and the others can be of any supported appliance configuration. Any site that operates independently of other sites must have storage appliances for the encryption-enabled DS8000 systems at that site.

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

Dual storage appliance server planning

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

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

IBM SKLM planning

The DS8000 series supports IBM SKLM V2.5, or later.

Program number	VRM	Program name
5724-T60	2.5.0	IBM Security Key Lifecycle Manager for Distributed
5641-KL1/3	2.6.0	IBM Security Key Lifecycle Manager for Distributed
5698-B35	1.1.0	IBM Security Key Lifecycle Manager for z/OS[R]
5698-B42	1.1.0	IBM Security Key Lifecycle Manager for Storage

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

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

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

Isolated key server ordering options

- **Single/dual storage appliance server - Feature numbers 1761 and 1762 are available through machine-type model 2421-AP1:** New storage appliance server options are available in addition to the existing SKLM isolated key manager (feature number #0204).
- **Customer acquired isolated key server:** See the *IBM Security Key Lifecycle Manager Installation and Configuration Guide* (SC27-5335) for hardware and operating system requirements.

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

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

IBM Security Key Lifecycle Manager, V2.6 English publications may be viewed online on the electronic availability date in IBM Knowledge Center.

To access the IBM Publications Center portal, go to IBM Publications Center website.

Encryption activation review planning

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

Send email to

   storsvcs@us.ibm.com

Go to the Storage Services website and click on **Contact now** to submit your inquiry or request.

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

Cable orders

Cables are required to connect DS8000 series 8 Gbps or 16 Gbps FCP/FICON$^{(R)}$ host adapter ports to server or fabric ports. Cables can be purchased using DS8000 series feature numbers. Additional cable options, along with product support services such as installation, are offered by IBM Global Services' Networking Services.

Fibre Channel/FICON (shortwave)

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

Fibre Channel/FICON (longwave)

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

Cables are required to connect a zHyperLink adapter port from a DS8880 to a server or port of the zHyperLink Express$^{(R)}$ feature in a IBM z14.

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

Two fiber distances are available as DS8880 feature codes for the zHyperLink Express:

- Feature #1450 - 150 m zHyperLink cable: OM4 50/125 micrometer multimode fiber optic cable with a fiber bandwidth at wavelength: 4.7 GHz-km at 850 nm
- Feature #1451 - 40 m zHyperLink cable: OM4 50/125 micrometer multimode fiber optic cable with a fiber bandwidth at wavelength: 2.0 GHz-km at 850 nm

Direct customer support

Direct customer support for the DS8000 series is provided by IBM Operational Support Services - Support Line. This fee service can enhance your productivity by providing voice and electronic access into the IBM support organization. IBM

Operational Support Services - Support Line will help answer questions pertaining to product and feature usage (how to), configuration, and product compatibility for eligible products. For a list of supported products, go to the Support Line website.

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

Security, auditability, and control

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

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

IBM Systems Lab Services

For details on available services, contact your IBM representative or go to the Lab Services website.

IBM Electronic Services

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

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

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

To learn how Electronic Services can work for you, go to the IBM Electronic Support website.

Terms and conditions

MES discount applicable

No

Field installable feature

Yes

Warranty period

Machine type 2831: One year

Machine type 2832: Two years

Machine type 2833: Three years

Machine type 2834: Four years

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

Customer setup

No

Machine code

Same license terms and conditions as base machine

Prices

The following are newly announced features on the specified models of the IBM System Storage 2831 machine type:

Description	Model number	Feature numbers	Initial / MES / Both / Support	CSU	RP MES
40m zHyperLink cable	84E	1450	Both	No	No
150m zHyperLink cable	84E	1451	Both	No	No
zHyperLink adapter	84E	3500	Both	No	Yes
Management console - Primary v2	984	1141	Initial	No	Yes
Management console - Secondary v2	984	1151	Both	No	Yes
40m zHyperLink cable	984	1450	Both	No	No
150m zHyperLink cable	984	1451	Both	No	No
zHyperLink adapter	984	3500	Both	No	Yes
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 2U controllers	984	3600	Both	No	Yes
6 to 12 Core	984	4425	Both	No	Yes

Description	Model number	Feature numbers	Initial / MES / Both / Support	CSU	RP MES
processor upgrade					
Management console - Primary v2	985	1141	Initial	No	Yes
Management console - Secondary v2	985	1151	Both	No	Yes
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 4U controllers	985	3601	Both	No	Yes
Management console - Primary v2	986	1141	Initial	No	Yes
Management console - Secondary v2	986	1151	Both	No	Yes
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 4U controllers	986	3601	Both	No	Yes

The following are newly announced features on the specified models of the IBM System Storage 2832 machine type:

Description	Model number	Feature numbers	Initial / MES / Both / Support	CSU	RP MES
40m zHyperLink cable	84E	1450	Both	No	No
150m zHyperLink cable	84E	1451	Both	No	No
zHyperLink adapter	84E	3500	Both	No	Yes
Management console - Primary v2	984	1141	Initial	No	Yes
Management console - Secondary v2	984	1151	Both	No	Yes
40m zHyperLink cable	984	1450	Both	No	No
150m zHyperLink cable	984	1451	Both	No	No
zHyperLink adapter	984	3500	Both	No	Yes
Transparent cloud tiering 10Gb/1Gb	984	3600	Both	No	Yes

Description	Model number	Feature numbers	Initial / MES / Both / Support	CSU	RP MES
Ethernet pair for 2U controllers					
6 to 12 Core processor upgrade	984	4425	Both	No	Yes
Management console - Primary v2	985	1141	Initial	No	Yes
Management console - Secondary v2	985	1151	Both	No	Yes
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 4U controllers	985	3601	Both	No	Yes
Management console - Primary v2	986	1141	Initial	No	Yes
Management console - Secondary v2	986	1151	Both	No	Yes
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 4U controllers	986	3601	Both	No	Yes

The following are newly announced features on the specified models of the IBM System Storage 2833 machine type:

Description	Model number	Feature numbers	Initial / MES / Both / Support	CSU	RP MES
40m zHyperLink cable	84E	1450	Both	No	No
150m zHyperLink cable	84E	1451	Both	No	No
zHyperLink adapter	84E	3500	Both	No	Yes
Management console - Primary v2	984	1141	Initial	No	Yes
Management console - Secondary v2	984	1151	Both	No	Yes
40m zHyperLink cable	984	1450	Both	No	No
150m zHyperLink cable	984	1451	Both	No	No

Description	Model number	Feature numbers	Initial / MES / Both / Support	CSU	RP MES
zHyperLink adapter	984	3500	Both	No	Yes
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 2U controllers	984	3600	Both	No	Yes
6 to 12 Core processor upgrade	984	4425	Both	No	Yes
Management console - Primary v2	985	1141	Initial	No	Yes
Management console - Secondary v2	985	1151	Both	No	Yes
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 4U controllers	985	3601	Both	No	Yes
Management console - Primary v2	986	1141	Initial	No	Yes
Management console - Secondary v2	986	1151	Both	No	Yes
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 4U controllers	986	3601	Both	No	Yes

The following are newly announced features on the specified models of the IBM System Storage 2834 machine type:

Description	Model number	Feature numbers	Initial / MES / Both / Support	CSU	RP MES
40m zHyperLink cable	84E	1450	Both	No	No
150m zHyperLink cable	84E	1451	Both	No	No
zHyperLink adapter	84E	3500	Both	No	Yes
Management console - Primary v2	984	1141	Initial	No	Yes
Management console - Secondary v2	984	1151	Both	No	Yes

Description	Model number	Feature numbers	Initial / MES / Both / Support	CSU	RP MES
40m zHyperLink cable	984	1450	Both	No	No
150m zHyperLink cable	984	1451	Both	No	No
zHyperLink adapter	984	3500	Both	No	Yes
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 2U controllers	984	3600	Both	No	Yes
6 to 12 Core processor upgrade	984	4425	Both	No	Yes
Management console - Primary v2	985	1141	Initial	No	Yes
Management console - Secondary v2	985	1151	Both	No	Yes
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 4U controllers	985	3601	Both	No	Yes
Management console - Primary v2	986	1141	Initial	No	Yes
Management console - Secondary v2	986	1151	Both	No	Yes
Transparent cloud tiering 10Gb/1Gb Ethernet pair for 4U controllers	986	3601	Both	No	Yes

CSU = Customer setup

RP MES = Returnable parts MES

Trademarks

Electronic Service Agent is a trademark of IBM Corporation in the United States, other countries, or both.
IBM, DS8000, PartnerWorld, Global Technology Services, System Storage, Tivoli, z/OS, FICON and Express are registered trademarks of IBM Corporation in the United States, other countries, or both.
Other company, product, and service names may be trademarks or service marks of others.

Terms of use

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

Terms of use

For the most current information regarding IBM products, consult your IBM representative or reseller, or go to the IBM worldwide contacts page

IBM United States