



IBM 7042-CR9 Rack-mount Hardware Management Console enables you to configure and manage system resources on IBM Power Systems servers

Table of contents

1 Overview	6 Publications
2 Key prerequisites	7 Technical information
2 Planned availability date	10 Terms and conditions
2 Description	15 Prices
2 Product number	16 AP distribution

At a glance

The 7042-CR9 Rack-mount Hardware Management Console (HMC) is a dedicated-function device used solely for the control and service functions of Power Systems™ servers. It is designed to deliver management support for IBM® POWER6®^(R), or later, technology-based servers.

The new HMC has the following standard hardware attributes:

- 2.4 GHz Intel Xeon™ Processor E5-2620 v3
- 16 GB (1 x 16 GB) of 2.133 GHz DDR4 system memory
- 500 GB SATA SFF HDD
- SATA CD/RW - DVD-RAM
- Four Ethernet ports
- Six USB ports (two front, four rear)
- One PCIe slot

Overview

The IBM 7042, the underlying appliance hardware of the HMC, is updated to stay current with updates in hardware technology. The 7042-CR8 system is being replaced with the 7042-CR9.

RAID 1 HMCs continue to offer a high-availability feature. The new 7042-CR9, by default, includes two hard disk drives (HDD) with RAID 1 configured. If you prefer not to have RAID 1 enabled on the HMC, you can override it in the ordering system and remove the additional HDD from the order.

RAID 1 is also offered on the 7042-CR7, 7042-CR8, and 7042-CR9 as an MES upgrade option.

RAID 1 uses data mirroring. Two physical drives are combined into an array and the same data is written to both drives. This makes the drives a "mirror image" of each other. If one of the drives experiences a failure, it is taken offline and the HMC continues operating with the other drive.

The 7042-CR9 HMC does not offer an internal or external modem or support for these.

A new feature is memory that is expandable to 192 GB.

Key prerequisites

The 7042-CR9 HMC requires a minimum HMC code level of 8.4.0.

Planned availability date

November 20, 2015

Description

The 7042-CR9 HMC is a dedicated rack-mounted workstation that allows clients to configure and manage system resources on Power Systems servers using POWER6, or later, processors. The HMC provides basic virtualization management through support for configuring logical partitions (LPARs) and dynamic resource allocation, including processor and memory settings for selected Power Systems servers. The HMC also supports advanced service functions, including guided Repair and Verify, concurrent firmware updates for managed systems, and around-the-clock error reporting with Electronic Service Agent™ for faster support.

The HMC management features help to improve server utilization, simplify systems management, and accelerate provisioning of server resources using the PowerVM® virtualization technology and capacity on demand (CoD) features for temporary and permanent resource activation. An HMC is required for temporary CoD. An HMC is also recommended for permanent CoD, but the ASMI interface can also be used.

Multiple partitions and servers can be supported by a single HMC, which can be physically attached to a server or logically attached over a LAN. A second HMC for redundancy is recommended for clients who have significant high-availability requirements.

The HMC user interface is designed to reduce the time and effort of resource management by providing task navigation with more consistent task placement and categorization, as well as the display of additional information in the main resource views.

The HMC provides a rich set of REST APIs that are used by advanced virtualization managers such as PowerVC to provide simplified advanced virtualization and cloud deployments for PowerVM based systems.

IBM recommends that clients upgrade the support level of the HMC to be consistent with the support provided on the servers to which it is attached. Customer replaceable unit (CRU) support is standard with the HMC. The client has the option to upgrade this support level to IBM On-Site support to be consistent with other Power Systems servers.

Product number

The following are newly announced features on the specific models of the IBM Power Systems 7042 machine type:

Description	Machine type	Model	Feature number
Rack-mount Hardware Management Console	7042	CR9	
500 GB 7.2K RPM SFF SATA Disk Drive	7042	CR9	3740

HMC CR9 Redundant Power ^(R) Supply, 550 W	7042	CR9	ECR9
Indicator Assembled and Tested in China	7042	CR9	ECS0
16 GB DDR4 Memory	7042	CR9	EM20

The following are features already announced for the IBM Power Systems 7042 machine type:

Description	Machine type	Model	Feature number
One CSC Billing Unit	7042	CR9	0010
Ten CSC Billing Units	7042	CR9	0011
Hardware Management Console Licensed Machine Code	7042	CR9	0962
Custom Service Specify, Rochester Minn, USA	7042	CR9	1140
8GB Pluggable USB Memory Option	7042	CR9	1208
Widescreen LCD Monitor	7042	CR9	3632
IBM T120 Flat Panel Monitor	7042	CR9	3643
IBM T119 Flat Panel Monitor	7042	CR9	3644
IBM T117 Flat Panel Monitor	7042	CR9	3645
1.8 M (6-ft) Extender Cable for Displays (15-pin D-shell to 15-pin D-shell)	7042	CR9	4242
Extender Cable - USB Keyboards, 1.8M	7042	CR9	4256
One and only one rack indicator feature is required on all orders (#4650 to #4666).			
Rack Indicator- Not Factory Integrated	7042	CR9	4650
Rack Indicator, Rack #1	7042	CR9	4651
Rack Indicator, Rack #2	7042	CR9	4652
Rack Indicator, Rack #3	7042	CR9	4653
Rack Indicator, Rack #4	7042	CR9	4654
Rack Indicator, Rack #5	7042	CR9	4655
Rack Indicator, Rack #6	7042	CR9	4656
Rack Indicator, Rack #7	7042	CR9	4657
Rack Indicator, Rack #8	7042	CR9	4658
Rack Indicator, Rack #9	7042	CR9	4659
Rack Indicator, Rack #10	7042	CR9	4660
Rack Indicator, Rack #11	7042	CR9	4661
Rack Indicator, Rack #12	7042	CR9	4662
Rack Indicator, Rack #13	7042	CR9	4663
Rack Indicator, Rack #14	7042	CR9	4664
Rack Indicator, Rack #15	7042	CR9	4665
Rack Indicator, Rack #16	7042	CR9	4666
RFID Tags for Servers, Blades, BladeCenters, Racks, and HMCs	7042	CR9	5524
Full width Keyboard -- USB, US English, #103P	7042	CR9	5951
Full width Keyboard -- USB, French, #189	7042	CR9	5952
Full width Keyboard -- USB, Italian, #142	7042	CR9	5953
Full width Keyboard -- USB, German/Austrian, #129	7042	CR9	5954
Full width Keyboard -- USB, UK English, #166P	7042	CR9	5955
Full width Keyboard -- USB, Spanish, #172	7042	CR9	5956
Full width Keyboard -- USB, Japanese, #194	7042	CR9	5957
Full width keyboard -- USB, Brazilian Portuguese, #275	7042	CR9	5958
Full width Keyboard -- USB, Hungarian, #208	7042	CR9	5959
Full width Keyboard -- USB, Korean, #413	7042	CR9	5960
Full width Keyboard -- USB, Chinese, #467	7042	CR9	5961
Full width keyboard -- USB, French Canadian, #445	7042	CR9	5962
Full width Keyboard -- USB, Canadian French, #058	7042	CR9	5963
Full width Keyboard -- USB, Belgian/UK, #120	7042	CR9	5964
Full width Keyboard -- USB, Swedish/Finnish, #153	7042	CR9	5965
Full width Keyboard -- USB, Danish, #159	7042	CR9	5966
Full width keyboard -- USB, Bulgarian, #442	7042	CR9	5967
Full width Keyboard -- USB, Swiss/French/German, #150	7042	CR9	5968
Full width Keyboard -- USB, Norwegian, #155	7042	CR9	5969
Full width Keyboard -- USB, Dutch, #143	7042	CR9	5970
Full width keyboard -- USB, Portuguese, #163	7042	CR9	5971
Full width Keyboard -- USB, Greek, #319	7042	CR9	5972
Full width Keyboard -- USB, Hebrew, #212	7042	CR9	5973
Full width Keyboard -- USB, Polish, #214	7042	CR9	5974

Full width Keyboard -- USB, Slovakian, #245	7042	CR9	5975
Full width Keyboard -- USB, Czech, #243	7042	CR9	5976
Full width Keyboard -- USB, Turkish, #179	7042	CR9	5977
Full width Keyboard -- USB, LA Spanish, #171	7042	CR9	5978
Full width Keyboard -- USB, Arabic, #253	7042	CR9	5979
Full width Keyboard -- USB, Thai, #191	7042	CR9	5980
Full width Keyboard -- USB, Russian, #443	7042	CR9	5981
Full width Keyboard -- USB, Slovenian, #234	7042	CR9	5982
Full width Keyboard -- USB, US English Euro, #103P	7042	CR9	5983
Power Cord 4.3m (14-ft), Drawer to Wall/IBM PDU (250V/10A)	7042	CR9	6458
Power Cord 4.3m (14-ft), Drawer To OEM PDU (125V, 15A)	7042	CR9	6460
Power Cord 4.3m (14-ft), Drawer to Wall/OEM PDU (250V/15A) U. S.	7042	CR9	6469
Power Cord 1.8m (6-ft), Drawer to wall (125V/15A)	7042	CR9	6470
Power Cord 2.7m (9-ft), Drawer to Wall/OEM PDU (125V/15A)	7042	CR9	6471
Power Cord 2.7m (9-ft), Drawer to Wall/OEM PDU (250V/16A)	7042	CR9	6472
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU (250V/10A)	7042	CR9	6473
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (250V/13A)	7042	CR9	6474
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (250V/16A)	7042	CR9	6475
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (250V/10A)	7042	CR9	6476
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (250V/16A)	7042	CR9	6477
Power Cord 2.7 M(9-foot), To wall/OEM PDU, (250V, 16A)	7042	CR9	6478
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (125V/15A or 250V/10A)	7042	CR9	6488
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (250V/10A)	7042	CR9	6493
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (250V/10A)	7042	CR9	6494
Power Cord 2.7m (9-foot), To wall/OEM PDU, (250V, 10A)	7042	CR9	6495
Power Cord 2.7M (9-foot), To wall/OEM PDU, (250V, 10A)	7042	CR9	6496
Power Cable - Drawer to IBM PDU, 200-240V/10A	7042	CR9	6577
Power Cord 2.7M (9-foot), To wall/OEM PDU, (125V, 15A)	7042	CR9	6651
Power Cord 2.7M (9-foot), To wall/OEM PDU, (250V, 15A)	7042	CR9	6659
Power Cord 4.3m (14-ft), Drawer to wall/OEM PDU (125V/15A)	7042	CR9	6660
Power Cord 2.8m (9.2-ft), Drawer to wall/IBM PDU, (250V/10A)	7042	CR9	6665
Power Cord 4.3M (14-foot), Drawer to OEM PDU, (250V, 15A)	7042	CR9	6669
Power Cord (6-foot), To Wall (125V, 15A), PT #59	7042	CR9	6670
Power Cord 2.7M (9-foot), Drawer to IBM PDU, 250V/10A	7042	CR9	6671
Power Cord 2M (6.5-foot), Drawer to IBM PDU, 250V/10A	7042	CR9	6672
Power Cord 2.7m (9-ft), Drawer to wall/OEM PDU, (250V/10A)	7042	CR9	6680
Power Cord 1.8m (6-foot), To wall, (250V, 15A)	7042	CR9	6687
Ethernet Cable, 6M, Hardware Management Console to System Unit	7042	CR9	7801
Ethernet Cable, 15m, Hardware Management Console to System Unit	7042	CR9	7802
Mouse - USB, with keyboard Attachment Cable	7042	CR9	8841
USB Mouse	7042	CR9	8845
HMC/Server Order Linkage Indicator	7042	CR9	9069
Order Routing Indicator- System Plant	7042	CR9	9169
Language Group Specify - US English	7042	CR9	9300
Month Indicator	7042	CR9	9461
Day Indicator	7042	CR9	9462
Hour Indicator	7042	CR9	9463

Minute Indicator	7042	CR9	9464
Qty Indicator	7042	CR9	9465
Countable Member Indicator	7042	CR9	9466
Language Group Specify - Dutch	7042	CR9	9700
Language Group Specify - French	7042	CR9	9703
Language Group Specify - German	7042	CR9	9704
Language Group Specify - Polish	7042	CR9	9705
Language Group Specify - Norwegian	7042	CR9	9706
Language Group Specify - Portuguese	7042	CR9	9707
Language Group Specify - Spanish	7042	CR9	9708
Language Group Specify - Italian	7042	CR9	9711
Language Group Specify - Canadian French	7042	CR9	9712
Language Group Specify - Japanese	7042	CR9	9714
Language Group Specify - Traditional Chinese (Taiwan)	7042	CR9	9715
Language Group Specify - Korean	7042	CR9	9716
Language Group Specify - Turkish	7042	CR9	9718
Language Group Specify - Hungarian	7042	CR9	9719
Language Group Specify - Slovakian	7042	CR9	9720
Language Group Specify - Russian	7042	CR9	9721
Language Group Specify - Simplified Chinese (PRC)	7042	CR9	9722
Language Group Specify - Czech	7042	CR9	9724
Language Group Specify -- Romanian	7042	CR9	9725
Language Group Specify - Croatian	7042	CR9	9726
Language Group Specify -- Slovenian	7042	CR9	9727
Language Group Specify - Brazilian Portuguese	7042	CR9	9728
Language Group Specify - Thai	7042	CR9	9729
ServicePac Not Selected	7042	CR9	B0LG
Service Renewal Requested	7042	CR9	B0LH
SP WAMO 3Y 24x7 SD	7042	CR9	B0UW
SP HDR/MR POWER ^(R) 3Y	7042	CR9	B0VH
SP HDR/MR POWER 5Y	7042	CR9	B0VT
RAID 1 Upgrade for HMC Disk	7042	CR9	EB2S
Custom Service Specify, Shenzhen, China	7042	CR9	ECSC
NeuCloud Indicator/Specify	7042	CR9	ECSJ
Custom Service Specify, Mexico	7042	CR9	ECSM
Custom Service Specify, Poughkeepsie, USA	7042	CR9	ECSP
Integrated Solution Packing	7042	CR9	ECSS
Full width Keyboard -- USB, US English, #103P	7042	CR9	EK51
Full width Keyboard -- USB, French, #189	7042	CR9	EK52
Full width Keyboard -- USB, Italian, #142	7042	CR9	EK53
Full width Keyboard -- USB, German/Austrian, #129	7042	CR9	EK54
Full width Keyboard -- USB, UK English, #166P	7042	CR9	EK55
Full width Keyboard -- USB, Spanish, #172	7042	CR9	EK56
Full width Keyboard -- USB, Japanese, #194	7042	CR9	EK57
Full width Keyboard -- USB, Brazilian Portuguese, #275	7042	CR9	EK58
Full width Keyboard -- USB, Hungarian, #208	7042	CR9	EK59
Full width Keyboard -- USB, Korean, #413	7042	CR9	EK60
Full width Keyboard -- USB, Chinese, #467	7042	CR9	EK61
Full width Keyboard -- USB, French Canadian, #445	7042	CR9	EK62
Full width Keyboard -- USB, Belgian/UK, #120	7042	CR9	EK64
Full width Keyboard -- USB, Swedish/Finnish, #153	7042	CR9	EK65
Full width Keyboard -- USB, Danish, #159	7042	CR9	EK66
Full width Keyboard -- USB, Bulgarian, #442	7042	CR9	EK67
Full width Keyboard -- USB, Swiss/French/German, #150	7042	CR9	EK68
Full width Keyboard -- USB, Norwegian, #155	7042	CR9	EK69
Full width Keyboard -- USB, Dutch, #143	7042	CR9	EK70
Full width Keyboard -- USB, Portuguese, #163	7042	CR9	EK71
Full width Keyboard -- USB, Greek, #319	7042	CR9	EK72
Full width Keyboard -- USB, Hebrew, #212	7042	CR9	EK73
Full width Keyboard -- USB, Polish, #214	7042	CR9	EK74
Full width Keyboard -- USB, Slovakian, #245	7042	CR9	EK75
Full width Keyboard -- USB, Czech, #243	7042	CR9	EK76
Full width Keyboard -- USB, Turkish, #179	7042	CR9	EK77
Full width Keyboard -- USB, LA Spanish, #171	7042	CR9	EK78
Full width Keyboard -- USB, Arabic, #253	7042	CR9	EK79
Full width Keyboard -- USB, Thai, #191	7042	CR9	EK80
Full width Keyboard -- USB, Russian, #443	7042	CR9	EK81
Full width Keyboard -- USB, Slovenian, #234	7042	CR9	EK82

Full width Keyboard -- USB, US English Euro, #103P	7042	CR9	EK83
RFID Tags for Servers, Compute Nodes, Chassis, Racks, and HMCs	7042	CR9	ERF1
S&H - No Charge	7042	CR9	ESCO
S&H	7042	CR9	ESC3

Publications

No publications are shipped with the announced products.

IBM Power Systems hardware documentation provides you with the following topical information:

- System overview
- Planning for the system
- Installing and configuring the system
- Working with consoles, terminals, and interfaces
- Managing system resources
- Working with operating systems and software applications
- Troubleshooting the system (Service and support)

You can access the product documentation at

<http://www.ibm.com/support/knowledgecenter/>

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

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. The IBM Systems Information Center is at

<http://publib14.boulder.ibm.com/infocenter/systems>

The IBM Publications Center Portal is located at

<http://www.ibm.com/shop/publications/order>

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

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 visit

<http://www.ibm.com/services/>

For details on available IBM Business Continuity and Recovery Services, contact your IBM representative or visit

<http://www.ibm.com/services/continuity>

For details on education offerings related to specific products, visit

http://www.ibm.com/services/learning/ites.wss/zz/en?pageType=tp_search_new

Technical information

EMC conformance

- Taiwan BSMI CNS13438 (Taiwan EMC Standard)
- ACA C-Tick (Australia and New Zealand)

Specified operating environment

Physical specifications

- Width: 429 mm (16.9 in.)
- Depth: 734 mm (28.9 in.)
- Height: 43 mm (1.7 in.)
- Weight: 15.9 kg (35 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:
 - System on: 5° to 40°C (41° to 104°F)
 - System off: 5° to 45°C (41° to 113°F)
- Relative humidity:
 - System on: 8% to 85%
 - System off: 8% to 85%
- Acoustical noise emission:
 - Idle: 6.1 bels
 - Operating: 6.1 bels
- Maximum altitude: 3050 m (10,000 ft)

Power requirements

- Operating voltage: Sine-wave input (50 or 60 Hz) required; input voltage and frequency ranges automatically selected
 - Low range: 100 to 127 V ac
 - High range: 200 to 240 V ac
- Power source loading:
 - Minimum: 0.14 kVA
 - Maximum: 0.724 kVA
- Thermal output:
 - Minimum: 460.62 Btu/hr (135 watts)
 - Maximum: 3490 Btu/hr (1023 watts)

Equipment approvals and safety

- FCC - Verified to comply with Part 15 of the FCC Rules, Class A
- Canada ICES-003, issue 4, Class A
- UL/IEC 60950-1
- CSA C22.2 No. 60950-1
- NOM-019
- Argentina IEC60950-1

Homologation

- Each HMC must have access to a display, a keyboard, and a mouse.
- If you need redundant HMC function, the servers can be attached to two separate HMCs to address availability requirements. Environments may include 7042-CR8, 7042-C08, or 7042-CR9 HMCs. All HMCs must have the same level of HMC Licensed Machine Code.
- Management of multiple servers from an HMC may require the use of an Ethernet hub. An Ethernet hub will provide a physical connection from the HMC to each server rather than a logical Ethernet connection over a LAN.
- Each console must be configured with feature number 0962.

Limitations

- The HMC is a dedicated-function device used only for the control and service functions of the Power servers. It is not available for use as a general purpose computing resource.
- The CR9 HMC requires a minimum HMC code level of 8.4.0. This code level restricts the CR9 to management of POWER6, or later, servers.

The HMC user interface is available in the following languages:

- Brazilian Portuguese
- Catalan
- Czech
- Dutch
- English
- French
- French/Canadian
- German
- Hungarian
- Italian
- Japanese
- Korean
- Polish
- Portuguese
- Russian
- Simplified Chinese
- Slovakian
- Spanish
- Traditional Chinese

However, integrated Repair and Verify for CRUs is available at this time in English only. Clients who want access to the translated services guides will be directed to an external website from their HMC.

If additional assistance is required with interpreting English Repair and Verify:

- Contact the IBM Hardware Support Center (using the method you would normally use to obtain support for your hardware), and ask for Hardware Support. Be sure to have your HMC machine type and serial number available. Indicate that you have problems with translated Repair and Verify.
- An IBM Service Support Representative (SSR) may be dispatched to your site to assist with your Repair and Verify activity.
- The HMC and attached servers may not be accessible to you while the SSR is working.

Homologation

Each HMC must have access to a display, a keyboard, and a mouse.

If you need redundant HMC function, the servers can be attached to two separate HMCs to address availability requirements. Environments may include 7042-CR8, 7042-C08, or 7042-CR9 HMCs. All HMCs must have the same level of HMC Licensed Machine Code.

Management of multiple servers from an HMC may require the use of an Ethernet hub. An Ethernet hub will provide a physical connection from the HMC to each server rather than a logical Ethernet connection over a LAN.

Each console must be configured with feature number 0962.

Software requirements

The following web browsers have been tested for connection support with the HMC Licensed Machine Code 8.4.0:

- Microsoft™ Internet Explorer 11.0
- Firefox versions ESR 31 and 38 are supported
- Chrome 43 and Java™ 8 Runtime Environment
- Safari

Planning information

Cable orders

One Ethernet cable is required to attach the HMC to the system CPC. This cable can be customer-supplied or purchased from IBM.

Security, auditability, and control

This product uses the security and auditability features of the server operating system.

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

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, visit

<http://www.ibm.com/support/electronic>

Terms and conditions

Volume orders

Contact your IBM representative.

Products - terms and conditions

Warranty period

One year

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.

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

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.

The following parts have been designated as Tier 1 CRUs:

- AC power cord
- Battery
- Covers, front and side
- Cooling fan
- Disk drive
- Display
- DVD drive cable
- DVD drive
- External cables
- Heat/Fan sink
- Keyboard
- Memory DIMM
- Mouse
- PCI adapters
- SAS riser and signal cable
- System bezel
- System labels
- Tape, diagnostics, and firmware media
- USB cable

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 5:00 PM local time in order to qualify for next-business-day response.

Warranty services

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.

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:

- 9 hours per day, Monday through Friday, excluding public or national holidays, same business day response. Calls must be received by 12:00 local time in order to qualify for same business day response.
- 24 hours per day, 7 days a week, 6 hour average, same day response.

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, via an IBM website. Certain machines contain remote support capabilities for direct problem reporting, remote problem determination, and resolution with IBM. You must follow the problem determination and resolution procedures that IBM specifies. Following problem determination, if IBM determines on-site service is required, scheduling of service will depend upon the time of your call, machine technology and redundancy, and availability of parts. Service levels are response-time objectives and are not guaranteed. The specified level of maintenance service may not be available in all worldwide locations. Additional charges may apply outside IBM's normal service area. Contact your local IBM representative or your reseller for country-specific and location-specific information. The following service selections are available as maintenance options for your machine type.

On-site Service

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

Service levels are:

- 9 hours per day, Monday through Friday, excluding public or national holidays, next-business-day response. Calls must be received by 15:00 local time in order to qualify for next-business-day response.
- 9 hours per day, Monday through Friday, excluding public or national holidays, same-business-day response. Calls must be received by 12:00 local time in order to qualify for same-business-day response.
- 24 hours per day, 7 days a week, 6-hour average, same-day response.

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.

Based upon availability, CRUs will be shipped for next-business-day delivery. 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.

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

The following parts and features have been designated as Tier 1 CRUs:

- AC power cord
- Battery
- Covers, front and side
- Cooling fan
- Disk drive
- Display
- DVD drive cable
- DVD drive
- External cables
- Heat/Fan sink
- Keyboard
- Memory DIMM
- Mouse
- PCI adapters
- SAS riser and signal cable
- System bezel
- System labels
- Tape, diagnostics, and firmware media
- USB cable

Feature codes or models for which there is a maintenance charge:

7042-CR9

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

Customer setup. Customers are responsible for installation according to the instructions IBM provides with the machine.

Graduated program license charges apply

No

Licensed Machine Code

IBM Machine Code is licensed for use by a customer 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 customer. You can obtain the agreement by contacting your IBM representative or visiting

http://www.ibm.com/servers/support/machine_warranties/machine_code.html

Machine using HMC Type Model 7042-CR9

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

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

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

The educational allowance is 5% for the products in this announcement.

Prices

For all local charges, contact your IBM representative.

Annual minimum maintenance charges

Not applicable

IBM Global Financing

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

<http://www.ibm.com/financing>

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

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

AP distribution

Country/Region	Announced
AP IOT	
ASEAN *	Yes
India/South Asia **	Yes
Australia	Yes
Hong Kong	Yes
Macao	Yes
New Zealand	Yes
People's Republic of China	Yes
South Korea	Yes
Taiwan	Yes
Japan IOT	
Japan	Yes

* Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Philippines, Singapore, Thailand, Timor-Leste, and Vietnam

** Bangladesh, Bhutan, India, Maldives, Nepal, and Sri Lanka

Trademarks

Power Systems and Electronic Service Agent are trademarks of IBM Corporation in the United States, other countries, or both.

IBM, POWER6, PowerVM, Power, POWER and Global Technology Services are registered trademarks of IBM Corporation in the United States, other countries, or both.

Intel Xeon is a trademark of Intel Corporation or its subsidiaries in the United States and other countries.

Microsoft is a trademark of Microsoft Corporation in the United States, other countries, or both.

Oracle and Java are trademarks of Oracle and/or its affiliates 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. Reference to other products in this announcement does not necessarily imply those products are announced, or intend to be announced, in your country. 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 visit the IBM worldwide contacts page

<http://www.ibm.com/planetwide/>