



Power Systems

Road map for installing the 5790 and 7311-D11 expansion units

GI11-2913-02





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Note

Before using this information and the product it supports, read the information in “Notices,” on page 3, “Safety notices” on page v, the *IBM Systems Safety Notices* manual, G229-9054, and the *IBM Environmental Notices and User Guide*, Z125-5823.

This edition applies to IBM Power Systems™ servers that contain the POWER6™ processor and to all associated models.

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Safety notices

Safety notices may be printed throughout this guide:

- **DANGER** notices call attention to a situation that is potentially lethal or extremely hazardous to people.
- **CAUTION** notices call attention to a situation that is potentially hazardous to people because of some existing condition.
- **Attention** notices call attention to the possibility of damage to a program, device, system, or data.

World Trade safety information

Several countries require the safety information contained in product publications to be presented in their national languages. If this requirement applies to your country, a safety information booklet is included in the publications package shipped with the product. The booklet contains the safety information in your national language with references to the U.S. English source. Before using a U.S. English publication to install, operate, or service this product, you must first become familiar with the related safety information in the booklet. You should also refer to the booklet any time you do not clearly understand any safety information in the U.S. English publications.

German safety information

Das Produkt ist nicht für den Einsatz an Bildschirmarbeitsplätzen im Sinne § 2 der Bildschirmarbeitsverordnung geeignet.

Laser safety information

IBM® servers can use I/O cards or features that are fiber-optic based and that utilize lasers or LEDs.

Laser compliance

All lasers are certified in the U.S. to conform to the requirements of DHHS 21 CFR Subchapter J for class 1 laser products. Outside the U.S., they are certified to be in compliance with IEC 60825 as a class 1 laser product. Consult the label on each part for laser certification numbers and approval information.

CAUTION:

This product might contain one or more of the following devices: CD-ROM drive, DVD-ROM drive, DVD-RAM drive, or laser module, which are Class 1 laser products. Note the following information:

- **Do not remove the covers. Removing the covers of the laser product could result in exposure to hazardous laser radiation. There are no serviceable parts inside the device.**
- **Use of the controls or adjustments or performance of procedures other than those specified herein might result in hazardous radiation exposure.**

(C026)

CAUTION:

Data processing environments can contain equipment transmitting on system links with laser modules that operate at greater than Class 1 power levels. For this reason, never look into the end of an optical fiber cable or open receptacle. (C027)

CAUTION:

This product contains a Class 1M laser. Do not view directly with optical instruments. (C028)

CAUTION:

Some laser products contain an embedded Class 3A or Class 3B laser diode. Note the following information: laser radiation when open. Do not stare into the beam, do not view directly with optical instruments, and avoid direct exposure to the beam. (C030)

Power and cabling information for NEBS (Network Equipment-Building System) GR-1089-CORE

The following comments apply to the IBM servers that have been designated as conforming to NEBS (Network Equipment-Building System) GR-1089-CORE:

The equipment is suitable for installation in the following:

- Network telecommunications facilities
- Locations where the NEC (National Electrical Code) applies

The intrabuilding ports of this equipment are suitable for connection to intrabuilding or unexposed wiring or cabling only. The intrabuilding ports of this equipment *must not* be metallically connected to the interfaces that connect to the OSP (outside plant) or its wiring. These interfaces are designed for use as intrabuilding interfaces only (Type 2 or Type 4 ports as described in GR-1089-CORE) and require isolation from the exposed OSP cabling. The addition of primary protectors is not sufficient protection to connect these interfaces metallically to OSP wiring.

Note: All Ethernet cables must be shielded and grounded at both ends.

The ac-powered system does not require the use of an external surge protection device (SPD).

The dc-powered system employs an isolated DC return (DC-I) design. The DC battery return terminal *shall not* be connected to the chassis or frame ground.

Road map for installing the 5790 and 7311-D11 expansion units

Follow the steps outlined in this road map for installing your expansion unit.

Note: This document is provided in printed form as a high-level overview of tasks for installing the 5790 and 7311-D11 expansion units. For best results, use the online version of this document at Road map for installing the 5790 and 7311-D11 expansion units (<http://publib.boulder.ibm.com/infocenter/systems/scope/hw/topic/arecm/arecmroadmap.htm>).

To install the 5790 and 7311-D11 expansion units, you must perform the following tasks. These tasks are arranged in a series of chronological steps for installing your expansion unit. Where appropriate links are available to provide you with additional detail related to performing these tasks. **At the completion of each task, return to this road map for guidance related to performing the next task.**

1. **Unpack the expansion unit and complete a parts inventory.** For details, select this link and complete steps 1 and 2 at Installing the 5790, 5796, 7311-D11, or 7314-G30 expansion unit in a rack(<http://publib.boulder.ibm.com/infocenter/systems/scope/hw/topic/iphbf/eu5790.htm>).
2. **Verify the rack.**

Note:

This step is optional. Skip to step 8 for desktop units.

If the rack is not installed, see Installing the rack(<http://publib.boulder.ibm.com/infocenter/systems/scope/hw/topic/iphbf/installrack.htm>).

3. **Power off the system and remove power.** For details, see Powering off the system and removing power(<http://publib.boulder.ibm.com/infocenter/systems/scope/hw/topic/iphbf/poweroff7311.htm>).
4. **Determine where to install the expansion unit in the rack.** Use one of these procedures to mark the location:

Note: If you are installing a drawer into an existing shell, skip this step and continue with step 7.

- a. If you have a rack-mounting template, see Marking the location using the rack-mounting template(<http://publib.boulder.ibm.com/infocenter/systems/scope/hw/topic/iphbf/step47311.htm>).
 - b. If you do not have a rack-mounting template, see Marking the location without a rack-mounting template(<http://publib.boulder.ibm.com/infocenter/systems/scope/hw/topic/iphbf/notemplate7311.htm>).
5. **Install the rail assembly into the rack.** Use one of these procedures to install the rails:
 - a. To install the standard (fixed length) rails, see Installing the standard (fixed length) rails(<http://publib.boulder.ibm.com/infocenter/systems/scope/hw/topic/iphbf/installtherails7311.htm>).
 - b. To install the expandable rails and extension bracket into the rack, see Installing the expandable rails and extension bracket into the rack(<http://publib.boulder.ibm.com/infocenter/systems/scope/hw/topic/iphbf/attachmounting7311.htm>).
 6. **Install the shell.** For details, see Installing the shell(<http://publib.boulder.ibm.com/infocenter/systems/scope/hw/topic/iphbf/installtheshell7311.htm>).
 7. **Install the expansion unit onto the shell.** For details, see Installing the system(<http://publib.boulder.ibm.com/infocenter/systems/scope/hw/topic/iphbf/step77311.htm>).
 8. **Cable the expansion unit to the server:**

Note:

This unit uses remote input/output (RIO) and system power control network (SPCN) cables to connect to the server.

You may need to power off the server before connecting the cables.

Do not perform remote input/output and high-speed Link (RIO/HSL) configuration changes, such as moving existing expansion units to different GX adapters, at the same time you add new expansion units.

If you are adding a new expansion unit or migrating expansion units from another IBM POWER® server, you may not be able to allocate the expansion unit resources to logical partitions on the new server until an SPCN firmware update is completed for the expansion units.

For detailed procedures related to preparing to connect your expansion units, see Prepare to connect your expansion units(<http://publib.boulder.ibm.com/infocenter/systems/scope/hw/topic/ipham/prepare.htm>) and perform all applicable prerequisites for installing your expansion units.

For a detailed procedure that helps you connect your expansion units to the system, see Connect your expansion units(<http://publib.boulder.ibm.com/infocenter/systems/scope/hw/topic/ipham/iphamsetup.htm>).

9. **Connect power cables and apply power.** For details, see Powering on the system(<http://publib.boulder.ibm.com/infocenter/systems/scope/hw/topic/iphbf/poweron7311.htm>).
10. **Verify that the SPCN is functioning correctly.** For details, see Verify the System Power Control Network(<http://publib.boulder.ibm.com/infocenter/systems/scope/hw/topic/ipham/verifyspcn.htm>).
11. **Verify that the new expansion unit configuration is functioning properly.** For details, see Verify that the new configuration is functioning(<http://publib.boulder.ibm.com/infocenter/systems/scope/hw/topic/ipham/verify.htm>).

Appendix. Notices

This information was developed for products and services offered in the U.S.A.

The manufacturer may not offer the products, services, or features discussed in this document in other countries. Consult the manufacturer's representative for information on the products and services currently available in your area. Any reference to the manufacturer's product, program, or service is not intended to state or imply that only that product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any intellectual property right of the manufacturer may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any product, program, or service.

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All statements regarding the manufacturer's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

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This information is for planning purposes only. The information herein is subject to change before the products described become available.

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The manufacturer has prepared this information for use with the specific machines indicated. The manufacturer makes no representations that it is suitable for any other purpose.

The manufacturer's computer systems contain mechanisms designed to reduce the possibility of undetected data corruption or loss. This risk, however, cannot be eliminated. Users who experience unplanned outages, system failures, power fluctuations or outages, or component failures must verify the accuracy of operations performed and data saved or transmitted by the system at or near the time of the outage or failure. In addition, users must establish procedures to ensure that there is independent data verification before relying on such data in sensitive or critical operations. Users should periodically check the manufacturer's support websites for updated information and fixes applicable to the system and related software.

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Electronic emission notices

Class A Notices

The following Class A statements apply to the IBM servers that contain the POWER6 processor.

Federal Communications Commission (FCC) statement

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. IBM is not responsible for any radio or television interference caused by using other than

recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Industry Canada Compliance Statement

This Class A digital apparatus complies with Canadian ICES-003.

Avis de conformité à la réglementation d'Industrie Canada

Cet appareil numérique de la classe A respecte est conforme à la norme NMB-003 du Canada.

European Community Compliance Statement

This product is in conformity with the protection requirements of EU Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility. IBM cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of non-IBM option cards.

This product has been tested and found to comply with the limits for Class A Information Technology Equipment according to European Standard EN 55022. The limits for Class A equipment were derived for commercial and industrial environments to provide reasonable protection against interference with licensed communication equipment.

European Community contact:
IBM Technical Regulations
Pascalstr. 100, Stuttgart, Germany 70569
Tele: 0049 (0)711 785 1176
Fax: 0049 (0)711 785 1283
E-mail: tjahn@de.ibm.com

Warning: This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

VCCI Statement - Japan

この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

VCCI-A

The following is a summary of the VCCI Japanese statement in the box above:

This is a Class A product based on the standard of the VCCI Council. If this equipment is used in a domestic environment, radio interference may occur, in which case, the user may be required to take corrective actions.

**Japanese Electronics and Information Technology Industries Association (JEITA)
Confirmed Harmonics Guideline (products less than or equal to 20 A per phase)**

高調波ガイドライン適合品

**Japanese Electronics and Information Technology Industries Association (JEITA)
Confirmed Harmonics Guideline with Modifications (products greater than 20 A per phase)**

高調波ガイドライン準用品

Electromagnetic Interference (EMI) Statement - People's Republic of China

声 明

此为 A 级产品,在生活环境中,
该产品可能会造成无线电干扰。
在这种情况下,可能需要用户对其
干扰采取切实可行的措施。

Declaration: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may need to perform practical action.

Electromagnetic Interference (EMI) Statement - Taiwan

警告使用者：

這是甲類的資訊產品，在
居住的環境中使用時，可
能會造成射頻干擾，在這
種情況下，使用者會被要
求採取某些適當的對策。

The following is a summary of the EMI Taiwan statement above.

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user will be required to take adequate measures.

IBM Taiwan Contact Information:

台灣IBM 產品服務聯絡方式：
台灣國際商業機器股份有限公司
台北市松仁路7號3樓
電話：0800-016-888

Electromagnetic Interference (EMI) Statement - Korea

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Please note that this equipment has obtained EMC registration for commercial use. In the event that it has been mistakenly sold or purchased, please exchange it for equipment certified for home use.

Germany Compliance Statement

Deutschsprachiger EU Hinweis: Hinweis für Geräte der Klasse A EU-Richtlinie zur Elektromagnetischen Verträglichkeit

Dieses Produkt entspricht den Schutzanforderungen der EU-Richtlinie 2004/108/EG zur Angleichung der Rechtsvorschriften über die elektromagnetische Verträglichkeit in den EU-Mitgliedsstaaten und hält die Grenzwerte der EN 55022 Klasse A ein.

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Dieses Gerät ist berechtigt, in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen.

Verantwortlich für die Konformitätserklärung nach des EMVG ist die IBM Deutschland GmbH, 70548 Stuttgart.

Generelle Informationen:

Das Gerät erfüllt die Schutzanforderungen nach EN 55024 und EN 55022 Klasse A.

Electromagnetic Interference (EMI) Statement - Russia

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Part Number: 29R2161

Printed in USA

GI11-2913-02



(1P) P/N: 29R2161

