IBM 9910 Uninterruptible Power Systems safeguard your equipment and data from power problems

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At a glance

The IBM® 9910 Uninterruptible Power Systems™ offer you:

- Models that are tested and approved by IBM
- An extended Eaton-Powerware warranty supported by IBM
- A premium service package (including battery)
- Enhanced conditioning of utility power and battery backup

Overview

All IBM 9910 Uninterruptible Power Systems have passed IBM's testing procedures and are intended to provide a convenient, single source for protection of IBM servers. These new 9910 products are compatible with the power requirements of:

- IBM Power Systems, POWER6™ and POWER7™
- IBM System i5® and p5 servers
- IBM eServer™ iSeries®, pSeries®, and OpenPower® servers
- IBM TotalStorage® solutions

All 9910 Uninterruptible Power Systems include a premium Eaton-Powerware three-year warranty package that is designed to enhance the potential for a return on investment as compared to other power supplies available on the market today. In addition, the warranty:

- Extends coverage of the device (refer to the specific product warranty period)
- Provides remote problem determination and next-day exchange (if available) by the device manufacturer (when necessary)
- Offers a single point of contact through the IBM Call Center

For a complete description of each device, refer to the Description section of this announcement.

Key prerequisites

The key prerequisites consist of the operating system and the selected applications that are required for your business.
Planned availability date

April 22, 2011

Description

With today's announcement, IBM offers the following Eaton-Powerware devices:

IBM 9910 Model E36 (Powerware 9910) is a 3000 VA, 230 to 240 V ac, single-phase Uninterruptible Power System that helps protect equipment up to 2700 watts. This line interactive device features load segments for scheduled shutdowns, extended run times, and a 3U design to be rack-mounted. Under normal power conditions, the E36 can operate in high-efficiency mode at up to 97 percent efficiency, thus decreasing utility and cooling bills. The ability to add up to one extended battery module (feature number 6651) extends battery run times. An AS/400/(i-OS) Relay-Serial Card (optional) provides the standard communication to the server. The Network Management Card (optional) expands control and monitoring of the power system and network devices.

Powerware offers the Network Management Card (feature number 2945) to provide enhanced monitoring capabilities with IBM Active Energy Manager for i5, iSeries, or AS/400® and p5, pSeries, or RS/6000® rack clients with Microsoft® Windows®, i5/OS®, AIX®, Linux®, or other operating system servers. The Relay-Serial Card (feature number 2944) provides the relay contact interface commonly used with servers with i-OS (AS/400).

Product number

<table>
<thead>
<tr>
<th>Description</th>
<th>Machine</th>
<th>Model</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powerware PW-9910I3kVA 230VXL3U Rack</td>
<td>9910</td>
<td>E36</td>
<td></td>
</tr>
<tr>
<td>Powerware PW-9910 3kVA Ext. Battery Mod.</td>
<td>9910</td>
<td>E36</td>
<td>6651</td>
</tr>
<tr>
<td>Powerware Relay-Serial Card</td>
<td>9910</td>
<td>E36</td>
<td>2944</td>
</tr>
<tr>
<td>Powerware Network Management Card</td>
<td>9910</td>
<td>E36</td>
<td>2945</td>
</tr>
<tr>
<td>Rack Cont. Specify: 9910/E36-3EIA</td>
<td>7014</td>
<td>T00, T42, S25, B42</td>
<td>0393</td>
</tr>
<tr>
<td>Rack Cont. Specify: 9910/6651-3EIA</td>
<td>7014</td>
<td>T00, T42, S25, B42</td>
<td>0394</td>
</tr>
</tbody>
</table>

The following 9910 UPS machine type, model, and feature numbers were previously announced for pSeries and iSeries models:

<table>
<thead>
<tr>
<th>Description</th>
<th>Machine</th>
<th>Model</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDU to UPS Output Cord, UTG/Burndy to IEC-320(C20)P 6ft.</td>
<td>9910</td>
<td>E35, E36</td>
<td>2974</td>
</tr>
<tr>
<td>Factory Install for rack UPS for pSeries</td>
<td>9910</td>
<td>E36</td>
<td>9010</td>
</tr>
<tr>
<td>Field Install for rack UPS for pSeries</td>
<td>9910</td>
<td>E36</td>
<td>9011</td>
</tr>
<tr>
<td>Factory Install for rack UPS for iSeries</td>
<td>9910</td>
<td>E36</td>
<td>9012</td>
</tr>
<tr>
<td>Field Install for rack UPS for iSeries</td>
<td>9910</td>
<td>E36</td>
<td>9013</td>
</tr>
<tr>
<td>IEC Input Power Cord (32A P+N+G, Type 46) for E36</td>
<td>9910</td>
<td>E36</td>
<td>2976</td>
</tr>
<tr>
<td>Power Cord Type 18 CEE 7 VII</td>
<td>9910</td>
<td>E36</td>
<td>9866</td>
</tr>
<tr>
<td>Power Cord Type 22 SABS 164 BS 546</td>
<td>9910</td>
<td>E36</td>
<td>9867</td>
</tr>
<tr>
<td>Power Cord Type 25 C19 to CEI 23-16 16A (Type 25) 4.3M</td>
<td>9910</td>
<td>E36</td>
<td>9868</td>
</tr>
<tr>
<td>Power Cord Type 32 SII 32-1971</td>
<td>9910</td>
<td>E36</td>
<td>9872</td>
</tr>
<tr>
<td>Power Cord Type 46 IEC 309 P+N+G 16A</td>
<td>9910</td>
<td>E36</td>
<td>9871</td>
</tr>
<tr>
<td>Power Cord/Redundant Power Source</td>
<td>9910</td>
<td>E36</td>
<td>9874</td>
</tr>
<tr>
<td>IBM Plug Type 54 14 ft.</td>
<td>9910</td>
<td>E36</td>
<td></td>
</tr>
<tr>
<td>Power Cord/Redundant Power Source</td>
<td>9910</td>
<td>E36</td>
<td></td>
</tr>
</tbody>
</table>
Publications

Product-specific publications are shipped with the products. Additional copies are available from the associated UPS supplier.

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


Select your country, and then select the product as the category.

Technical information

Specified operating environment

Physical specifications

Physical specifications are subject to change. More detailed specifications can be obtained from your IBM representative or at the following website

http://www.eaton.com/ibm

Model E36 (3000 VA, 2700 W)

- Width: 438 mm (17.2 in)
- Depth: 528 mm (20.8 in)
- Height: 127 mm (5.0 in), 3 EIA units
- Weight: 40.9 kg (90.2 lb)

Feature 6651 (Extended Battery Module)

- Width: 438 mm (17.2 in)
- Depth: 508 mm (20 in)
- Height: 127 mm (5.0 in), 3 EIA units
- Weight: 52.2 kg (115.1 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**

**Model E36**

- Temperature: 0 to 40 degrees C (32 to 104 degrees F)
- Relative humidity: 0% to 95% noncondensing
- Audible noise at one meter: <55 dBA
- Operation elevation: 0 - +3000 m (0 - 10,000 ft)
- Input voltage: E36 - 230V (voltage range - 160-286 V ac)
- Output voltage: E35 - 208V

**Software requirements**

If the relay-serial card (feature number 2944) is used, no software is required. IBM has a platform managed solution that allows the relay card signals from the UPS to be broadcast to IBM i, AIX, and Linux partitions. Each partition has a default shutdown time.

IBM UPS Manager software can be used with the network management card (feature number 2945) or the UPS RS232 serial port. AIX 6 and AIX 7 are supported as well as several versions of Red Hat Enterprise Linux 4 and Red Hat Enterprise Linux 5.

For a listing of current supported operating systems and information about Powerware power system, network, and enterprisewide monitoring and control software, refer to the following website

http://www.powerware.com/software/products.asp

**Planning information**

**Customer responsibilities**

The 9910 Model E36 is designated as customer setup.

If the model is not ordered with the iSeries and pSeries rack, the client will be responsible for the installation of external cables, the power system module, and the battery module. Clients who request IBM service personnel to perform these activities are subject to a charge. Client responsibilities include:

- Adequate site and system planning, and preparation
- Receipt, unpacking, and placement of the system unit
- Ordering, installing, and maintaining cables with associated parts for attaching to the pSeries model
- Using and following the problem determination procedures in the operators guide
- Installing power system management software and setting power system run-time parameters
- Installing feature number 2945 and 2944 interface cards

**Cable orders**

**9910 Model E35/E36**

**Power (electrical) cables**

The input (mains) power connection to the 9910-E35/E36 is an IEC C20 16 amp connector. The input (mains) power cord from the power system to the utility (mains) is determined based upon the country or locality. Refer to the following 9910-E35/E36 input power cord table:
<table>
<thead>
<tr>
<th>Feature number</th>
<th>Plug type</th>
<th>Plug description</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>2975</td>
<td>12</td>
<td>NEMA L6-30</td>
<td>6 ft/1.8 m</td>
</tr>
<tr>
<td>2976</td>
<td>46</td>
<td>IEC309 (P+N+G)32A</td>
<td>14 ft/4.4 m</td>
</tr>
<tr>
<td>9860</td>
<td>11</td>
<td>NEMA L6-20</td>
<td>14 ft/4.4 m</td>
</tr>
<tr>
<td>9866</td>
<td>18</td>
<td>CEE7 VII</td>
<td>14 ft/4.4 m</td>
</tr>
<tr>
<td>9867</td>
<td>22</td>
<td>SABS 164</td>
<td>14 ft/4.4 m</td>
</tr>
<tr>
<td>9868</td>
<td>25</td>
<td>CEI 23-16</td>
<td>14 ft/4.4 m</td>
</tr>
<tr>
<td>9871</td>
<td>46</td>
<td>IEC309 (P+N+G) 16A</td>
<td>14 ft/4.4 m</td>
</tr>
<tr>
<td>9872</td>
<td>32</td>
<td>SII 32-1971</td>
<td>14 ft/4.4 m</td>
</tr>
<tr>
<td>9874</td>
<td>54</td>
<td>SAA-AS 3112</td>
<td>14 ft/4.4 m</td>
</tr>
<tr>
<td>9875</td>
<td>64</td>
<td>IEC 60083-A5</td>
<td>14 ft/4.4 m</td>
</tr>
</tbody>
</table>

Feature number 2975 can plug into a 30A L6-30 outlet. The cord has a "breaker" to protect the E35 to 20A input. Feature number 2976 can plug into a 30A IEC 309 outlet. The cord has a "breaker" to protect the E36 to 20A input. The 2975 is available for ordering with the 9910-E35. The 2976 is available for ordering with the 9910-E36. The E35 and E36 have two C20 outlets that can be used to support two Rack PDU via feature numbers 9910-2974. The E35 has two IEC-C13 outlets and two NEMA L6-20 outlets that will support power cords from units in a rack directly to the E35. The E36 has eight IEC-C13 outlets that will support power cords from units in a rack directly to the E36.

**Feature 6651 (external battery module)**

The input power to the 6651 is DC and is provided by the E34 and E35. Connection of the 6651 DC cable (Anderson type DC connector) is the responsibility of the customer and is performed at installation. Feature number 6651 is installed in the rack with the E35 and E36.

**Communication cables**

One RS-232 cable is included with each E35 and E36. The other communications cables are included with the optional Network Management Card (feature number 2945) or Relay-Serial Card (feature number 2944).

Power electrical cable installation diagrams are at the following website

[http://www.eaton.com/ibm](http://www.eaton.com/ibm)

**Security, auditability, and control**

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

**Global Technology Services**

Contact your IBM representative for the list of selected services available in your country, either as standard or customized offerings, for the efficient installation, implementation, and/or integration of this product.

**Terms and conditions**

**Warranty period**

This product is available from IBM under the Terms and Conditions for Purchase.

Models E36 has a three-year Advanced Element Exchange Warranty (including battery) provided by Eaton with IBM as point of contact.

When a type of service involves the exchange of a machine part, the replacement may not be new, but will be considered equivalent to new.
Warranty service

IBM 9910 Model E36 provides a premium Element Exchange Warranty. In case of problems with the UPS, contact IBM Service Support. IBM will coordinate remote diagnostics and manage the Element Exchange Warranty, if necessary.

If a replacement element is required, the UPS manufacturer will process and ship the request the same day if the request is received before noon (12:00 p.m.) local time. After noon, the replacement element will be shipped the following business day. The replacement element will be next-day air service (same type of carrier used in the US, for example, Federal Express®, Airborne Express). The shipping costs to and from the client location are the responsibility of the UPS manufacturer.

Advanced Element Exchange Warranties DO NOT include onsite service unless specifically noted in writing at the time of equipment sale.

Client responsibility

For 9910 Model E36 the clients' responsibilities for element exchange are:

- Receipt, unpacking, installation, and exchange of the defective element.
- Packaging of the defective element in the container received with the replacement element.
- Following the instructions provided for return of the defective element. Returning the defective element so that it is received at Powerware UPS depot center within the established time from the arrival of the replacement.

Technical information can also be accessed at the following website

http://www.eaton.com/ibm

Warranty service is available from your local IBM services provider.

Extended Warranty Service

Not applicable

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.
• 18 hours per day, Monday through Saturday, excluding public or national holidays, same business day response. Calls must be received by 18:00 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.

ESA and SSU customers: 2 hour coverage extension at no additional charge, 9 hours per day, Monday through Friday, excluding holidays, same business day response. Calls must be received by 12:00 local time in order to qualify for same business 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 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.
• 18 hours per day, Monday through Saturday, excluding public or national holidays, same business day response. Calls must be received by 18:00 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.
• ESA and SSU customers: 2 hour coverage extension at no additional charge, 9 hours per day, Monday through Friday, excluding holidays, next business day response. Calls must be received by 15:00 local time in order to qualify for next business day response.

or
• ESA and SSU customers: 2 hour coverage extension at no additional charge, 9 hours per day, Monday through Friday, excluding holidays, same business day response. Calls must be received by 12:00 local time in order to qualify for same business 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:

- Hard disk drive
- Optical drive
- Fan
- I/O adapters
- Operator panel
- PCI adapters
- Power cord
- Power supply
- Processor power regulator
- Service processor

**CRU and Courier or Depot Service**

At IBM’s discretion you will receive CRU service or you must disconnect the failing machine for collection arranged by IBM. IBM will provide you with a shipping container for you to return your machine to a designated service center. A courier will pick up your machine and deliver it to the designated service center. Following its repair or exchange, IBM will arrange the return delivery of the machine to your location. You are responsible for its installation and verification.

Service level is Courier Repair, fourth business day turnaround time, 9 hours per day, Monday through Friday, excluding public or national holidays.

**CRU and Customer Carry-In or Mail-In Service**

At IBM’s discretion you will receive CRU service or you will deliver or mail, as IBM specifies (prepaid, unless IBM specifies otherwise) the failing machine suitably packaged to a location IBM designates. After IBM has repaired or exchanged the machine, IBM will make it available for your collection or, for mail-in service, IBM will return it to you at IBM’s expense, unless IBM specifies otherwise. You are responsible for the subsequent installation and verification of the machine.

Service levels are:

- Customer Carry-in Repair, fourth business day turnaround time, 9 hours per day, Monday through Friday, excluding public or national holidays
• Courier Exchange, next business day response time, latest call registration 15:00, 9 hours per day, Monday through Friday, excluding public or national holidays
• Customer Exchange, next business day parts arrival time, call registration 15:00, 9 hours per day, Monday through Friday, excluding public or national holidays

Committed Services (CS) for Europe

For service options with a committed level of service or any other special service option, contact your local business representative.

Additional reference for Europe

Refer to the following European documents:

- 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
- European HW Operations Guide and Service Level Description Table available at http://www-5.ibm.com/services/europe/maintenance/

CRU and Machine Exchange Service

At IBM’s discretion you will receive CRU service or IBM will initiate shipment of a replacement machine to your location. You are responsible for its installation and verification of operation. You must pack the failed machine into the shipping container that contained the replacement machine and return the failed machine to IBM. Transportation charges, both ways, are paid by IBM. You may be charged for the replacement machine if IBM does not receive the failed machine within 15 days of your receipt of the replacement.

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.

Warranty service upgrades

Usage plan machine

No

IBM hourly service rate classification

Three

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

Maintenance service offerings
These machines are eligible under Terms and Conditions of the IBM ServiceSuite or the IBM Enterprise Service Agreement (ESA), or under the IBM Maintenance Agreement. Consult your IBM representative for details.

**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 Internal Code and Licensed Machine Code**
These products do not contain Licensed Internal Code or Licensed Machine Code.

**Europe Business Partner terms and conditions**
Category: The products are added the discount category A.

Exhibit: The products are added to the System z® hardware product exhibit.

**Pricing**

For all local charges, contact your IBM representative.

**Announcement countries**

All European, Middle Eastern, and African countries.

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