Lenovo PC3-8500 1066MHz and PC3-10600 1333MHz DDR3 ECC UDIMM Workstation memory upgrades offer improved performance for your ThinkStation S20 and D20 systems

Table of contents
1 At a glance
1 Overview
1 Key prerequisites
1 Planned availability date
2 Additional information
2 Product number
2 Terms and conditions
2 Announcement countries
2 Supplemental information
4 Prices

At a glance

This new ThinkStation® memory offerings let you upgrade your system's standard memory capacity to improve overall system performance. Features and benefits include:

• Choice of available memory sizes for DDR3 ECC UDIMM memory
• Test-proven 100% compatibility on listed ThinkStation systems
• Meets stringent ThinkStation reliability standards for memory products
• Lenovo® Limited Warranty
• Authenticity seal on every memory module

For more information on Lenovo accessories, including compatibility, visit

http://www.lenovo.com/accessoriesguide

Overview

Help improve the overall performance of your ThinkStation system with 1GB and 2GB PC3-8500 1066MHz or PC3-10600 1333MHz DDR3 ECC UDIMM memory.

Adding additional ThinkStation memory is a cost-effective way to help boost your system's performance and enhance it's ability to run more programs simultaneously.

Key prerequisites

The ThinkStation 1 GB and 2 GB PC3-8500 1066MHz or PC3-10600 1333MHz DDR3 ECC UDIMM memory upgrades are supported on ThinkStation S20 and D20 systems.

Planned availability date

April 3, 2009
Additional information

All offers are subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time without notice. Lenovo is not responsible for photographic or typographic errors.

Lenovo makes no representation or warranty regarding third-party products or services.

Product number

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
<th>EAN Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1GB PC3-8500 1066MHz DDR3 ECC UDIMM Memory</td>
<td>51J0503</td>
<td>0884343-81550-3</td>
</tr>
<tr>
<td>2GB PC3-8500 1066MHz DDR3 ECC UDIMM Memory</td>
<td>51J0504</td>
<td>0884343-81551-0</td>
</tr>
<tr>
<td>1GB PC3-10600 1333MHz DDR3 ECC UDIMM Memory</td>
<td>43R2032</td>
<td>0884343-81552-7</td>
</tr>
<tr>
<td>2GB PC3-10600 1333MHz DDR3 ECC UDIMM Memory</td>
<td>43R2033</td>
<td>0884343-81553-4</td>
</tr>
</tbody>
</table>

Terms and conditions

This product is available from Lenovo under the terms and conditions for purchase.

Warranty and service

- The warranty period is three years.
- Helpware: Contact your Lenovo HelpWare® number, your place of purchase, or your local Lenovo office.

Announcement countries

All European, Middle Eastern, and African countries.

Supplemental information

Product name

- 1GB PC3-8500 1066MHz DDR3 ECC UDIMM Memory (51J0503)
- 2GB PC3-8500 1066MHz DDR3 ECC UDIMM Memory (51J0504)
- 1GB PC3-10600 1333MHz DDR3 ECC UDIMM Memory (43R2032)
- 2GB PC3-10600 1333MHz DDR3 ECC UDIMM Memory (43R2033)

Technical information

Performance specifications

- DDR3 memory offers higher bandwidth and increased performance at low power
- DDR3 offers data transfer rates up to 1600 Mbps
- Lower power consumption of 1.5 volts instead of 1.8 volts by DDR2 memory
- Error Correcting Code (ECC) for greater data integrity and system uptime by protecting against errors in memory
- DDR3 provides an 8-bit prefetch buffer, compared to the 4-bit buffer for DDR2, storing more data before it is needed
- Integrated thermal sensor on the DIMM module signals the chip set to throttle memory traffic to the DIMM if its temperature exceeds a programmable critical trip point
- 240-pin JEDEC/EIA standard UDIMM interface
- Gold-plated leads
**Physical specifications**
- Approximate height: 8 mm (0.3 in)
- Approximate width: 134 mm (5.3 in)
- Approximate depth: 30 mm (1.2 in)
- Approximate weight: 0.1 kg (0.2 lb)

**Operating environment**
- Temperature: 0° to 55° (32° to 131°F)
- Relative humidity: 10% to 90%

**Hardware requirements and compatibility**
These options are supported on the following systems:

<table>
<thead>
<tr>
<th>System name</th>
<th>Machine types</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>ThinkStation S20</td>
<td>4105, 4157, 4217</td>
<td>All</td>
</tr>
<tr>
<td>ThinkStation D20</td>
<td>4155, 4158, 4218</td>
<td>All</td>
</tr>
</tbody>
</table>

Notes:
ThinkStation S20 has 6 UDIMM slots for 48 GB of maximum memory. ThinkStation D20 has 12 UDIMM slots for 96 GB of maximum memory.

**Planning information**

**Cable orders required**
No

**Installation time**
Approximately ten minutes

**Packaging**
One box bearing tamper-evident security seal

**Shipment group**
- Memory module: 1 GB or 2 GB
- Publication

**Security, auditability, and control**
This product uses the security and auditability features of the system on which it is installed. It also includes:

- Tamper-evident packaging bearing the Lenovo logo
- Product serial number on product carton
- ThinkStation bar code serialized memory module
- Authenticity seal applied to the memory module
- Lenovo logo on the memory module bar code label to indicate genuine product

**Terms and conditions**

<table>
<thead>
<tr>
<th>Field-installable</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer setup</td>
<td>Yes</td>
</tr>
<tr>
<td>Warranty period*</td>
<td>3 years</td>
</tr>
<tr>
<td>Service type</td>
<td>CRU</td>
</tr>
<tr>
<td>Maintenance agreement</td>
<td>NO</td>
</tr>
</tbody>
</table>
Optional upgrade No
Licensed programs No

All other terms and conditions are the same as those applicable to the Lenovo machine type in which the feature is installed.

* To obtain copies of the Lenovo Statement of Limited Warranty, contact your reseller or call Lenovo.

Help and service information -- Features and options

During the warranty period, support for a warranty related issue can be obtained by accessing Lenovo’s on-line services (requires internet access account, not included) or calling the Support Center, 8:00 a.m. until 6:00 p.m. business hours, to answer any questions regarding your new Lenovo option. Response time will vary depending on the number and nature of calls received. If you need warranty service, return or exchange is available. In addition, if your Lenovo option is installed in an Lenovo computer, you may be entitled to service at your location. For general questions related to the use of your options, fee-based support is available. Your technical support representative can help you determine the best alternative.

Accessing Lenovo online services

http://www.lenovo.com/support

Placing the call to Lenovo

For technical support, contact your HelpWare number, your place of purchase, or your local sales office.

Prices

For all local charges, contact your sales representative.

Trademarks

ThinkStation and Lenovo are registered trademarks of Lenovo Corporation in the United States, other countries, or both.

HelpWare is a registered trademark 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

Information may be changed or updated without notice. Lenovo may also make improvements or changes in the products or the programs described in this information at any time without notice. Lenovo assumes no responsibility regarding the accuracy of the information that is provided by Lenovo and use of such information is at the recipient's own risk. Information Lenovo publishes on the World Wide Web may contain references or cross references to Lenovo products, programs and services that are not announced or available in your country. Such references do not imply that Lenovo intends to announce such products, programs or services in your country. Consult your local Lenovo business contact for information regarding the products, programs and services which may be available to you. Lenovo's obligations with respect to its products and services are governed solely by the agreements under which they are provided. Additional terms of use are located at