

=====
Linux* Driver Release Notes For Intel(R) Desktop Boards
=====

=====
PRODUCT
=====

Intel Desktop Board Information for users of Red Hat* 9.0
=====

DATE: October 15, 2003

=====
Purpose
=====

This readme provides information on what to do when installing the Red Hat* 9.0 Linux* operating system with kernel 2.4.20-6 or higher on an Intel(R) desktop board based system (see "Hardware Requirements").

=====
Text and Command Conventions for this Document
=====

- Commands are listed either as stand-alone indented lines such as:
 make install
or surrounded by => ____ <= delimiters in sentences such as:
 Enter the => make install <= command.
- Special callouts, buttons, and paths are placed within quote marks. For example:
 Go to the "/root/test" directory and click on the "test.bin" file.
 Always press the "Enter" key after each command entry.
- Bullet items are called out with a double dash "--" prefix at the left side of the page.

=====
Before You Begin
=====

Verify that the following hardware and software requirements are met:

Hardware Requirements

- Intel(R) Desktop Board with Intel(R) D865 or Intel(R) D875 chipsets, or
- Intel(R) Desktop Board D845GVA (Note: this board does not support Intel Hyper-Threading technology).

Software Requirements

- Red Hat* 9.0 Linux* with kernel 2.4.20.6 and newer.
- Check that the BIOS version is the most recent release.
- Check that you have all Linux kernel source files and any needed compiling tools.
- If your system uses Intel Hyper-Threading (HT) technology, verify that it is enabled in BIOS.
- If you plan to installing this operating system on a Serial ATA (SATA) disk drive, please set the device configuration to run in "Legacy Mode" through the BIOS. Note: When in Legacy Mode, you are limited to a combination of 4 storage devices. For example, 2 SATA and/or 2 Parallel ATA (PATA) disk drives, or up to 4 PATA disk drives).

=====
Device Support under Red Hat* 9.0 Linux*
=====

The following lists devices that either have integrated support for the listed Intel desktop boards, or require additional drivers with the Linux software/kernel. Note that the SMP kernel upgrade is built into this distribution of Linux. But your hardware, processor, chipset, and BIOS must support Intel Hyper-Threading technology. After installing Red Hat 9.0, you may install additional device drivers in any desired order. To obtain the latest drivers for your Intel desktop board, go to:

<http://developer.intel.com/design/motherbd>

- Intel's Hyper-Threading Technology requires that the Symmetrical Multiprocessing Support (SMP) kernel be installed. Note that System BIOS settings for HT support must be enabled BEFORE you install Red Hat 9.0. Then a Red Hat 9.0 installation will automatically include the SMP kernel upgrade. If BIOS is not previously set for HT support, then a later Red Hat 9.0 installation will not include the SMP kernel.
- Currently Red Hat 9.0 does not natively support Serial ATA disk drive configurations running in "Enhanced" mode. You must set the Intel(R) desktop board to run in "Legacy" mode to install the operating system on a SATA disk drive. NOTE: When in "Legacy" mode you are limited to a combination of 4 storage devices (for example, 2 SATA and/or 2 PATA disk drives, or 4 PATA disk drives).
- Intel 865G Graphics is supported by Red Hat* 9.0.
- Intel Pro 100 LAN Adapter or Intel Pro 1000 LAN Adapter will not function properly after a normal installation of Red Hat 9.0. Red Hat 9.0 (kernels

earlier than 2.4.20-9) will attempt to install the appropriate LAN drivers and it may appear that the LAN drivers install the LAN device, but the device does not work properly. Download the appropriate driver for the desktop board being used and install it using the instructions provided with the driver.

-- ADI* 1985 AC'97 audio will not function properly after a normal installation of Red Hat 9.0. Red Hat 9.0 will attempt to install and load AC'97 audio drivers and it will appear that the audio solution is properly configured when it really is not. Download the appropriate driver for the desktop board being used and install them using the instructions provided with the driver. Also note that Support for 2-channels of stereo audio is all that is currently provided by this audio driver. Also After installation of the audio driver, the mixer device for master volume and PCM are zeroed to their lowest setting. Adjust these appropriately or no audio will be heard.

-- SigmaTel* ST9750 AC'97 Audio is supported by Red Hat* 9.0 for Intel Desktop Board D845GVA.

-- On-Board 1394 Controllers are supported by Red Hat* 9.0.

-- IDE UDMA devices and proper IDE UDMA settings are supported by Red Hat* 9.0. (Support for DMA up to UDMA-100 is available depending on the specific hard disk being used. See the known issues section below for SATA specific information.)

-- USB 2.0 Devices are supported by Red Hat* 9.0.

=====
Important Notice
=====

All information and software contained herein is provided "AS IS" to Intel customers. Intel Corporation disclaims all express or implied warranties and liabilities for the use of this document, the software and the information contained herein, and assumes no responsibility for any errors which may appear in this document or the software, nor does Intel make a commitment to update the information or software contained herein. Intel reserves the right to make changes to this document or software at any time, without notice. Please contact the distribution vendor for specific Linux version support.

Hyper-Threading requires a computer system with an Intel Pentium(R) 4 processor supporting this technology, a chipset and BIOS that utilizes this technology, and an operating system that includes optimizations for this technology. Performance will vary depending on the specific hardware and software you use. See www.intel.com/info/hyperthreading for information.

Intel, Pentium, and the Intel logo are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

* Other names and brands may be claimed as the property of others.

Copyright (c) 2003 Intel Corporation.