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Audio Driver Release Notes for Intel(R) Desktop Boards
Running Mandriva Linux*
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Intel(R) Desktop Board D101GGC ATI* Radeon* Xpress 200
Chipset

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=========================== PRODUCT ============================
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ALSA* Open Source Audio Driver Package Version 1.0.9b
for the Intel(R) audio controllers

Intel(R) High Definition Audio

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DATE: Jan 6, 2006

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1 – Overview
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This document provides installation information for ALSA* audio
driver package for following audio devices:

Intel(R) High Definition Audio

NOTE: Not all Intel(R) Desktop Boards contain a built in audio
device. Please check the documentation accompanying your product.

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2 - Document Conventions
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To enhance readability, the following conventions are used throughout
the rest of this document:

 -- Commands are listed either as stand-alone indented lines such as:

```
        cd /tmp
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    or surrounded by single quotation marks when used in sentences
such as:

```
        Enter the 'uname' command.
```

 -- Special callouts, buttons, and paths are placed within double
quotation marks. For example:

```
        Onboard audio must be "enabled".
        Always press the "Enter" key after each command entry.
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 -- Bullet items are called out with a double dash "--" prefix at the
left side of the page.

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3 - Supported Linux Distributions
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Intel has performed limited validation to ensure basic functionality
of Intel(R) High Definition Audio driver for the following
distributions:

Distribution	Kernel Version
Mandriva Linux	2.6.12-12mdksmp 2.6.12-12mdk

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4 - Pre-Install Requirements
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Prior to installing the audio driver on an Intel Desktop Board
product, please ensure that your system meets the installation
requirements defined in the following sub-sections.

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4.1 - Platform Hardware Requirements
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Verify that the following hardware requirements are met:

-- On the D101GGC desktop systems, the system must contain an
integrated Intel(R) High Definition Audio.

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4.2 - Platform BIOS Requirements
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The Onboard Audio must be "Enabled" in the system BIOS Advanced
Peripheral Configuration section. Please check any documentation
accompanying your product for instructions on changing BIOS settings.

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4.3 - Platform Software Requirements
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Verify that the following software requirements are met:

Verify that the specific kernel version installed in the system meets
the required kernel version listed in Section 3 for the Linux
distribution you are running. If needed, check the currently running
kernel version using the 'uname' command as follows:

        uname -r

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5 – Installing the Driver Package
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5.1 Determine if you need to install the Driver Package

Log onto the system as root.  Ensure that the speakers are connected
to the audio playback output on your desktop system.

5.2. Go to Section 6 to check if your distribution already supports
audio. If your Linux distribution does not have audio support, go
through the 5.3 and 5.4 steps.

5.3. Go to the directory where you downloaded the driver installation
package. If you downloaded the driver installation package to "/tmp":

        cd /tmp

5.4 Run the sound installation and configuration script as below.
When the installation completes, you will hear audio on the speakers
connected.
            ./audio_install

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6 – Verifying Driver was installed correctly
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6.1 Bring up Mandriva Linux Control Center by selecting Applications-
>System->Configuration->Configure Your Computer. Select 'System' and
then 'Enable/Disable Services'. Check if 'alsa' service is running .


6.2 Check the version of the installed ALSA driver. The result of the
following command will be something like "Driver Version x.x.x"

                cat /proc/asound/version

6.3 Run the following command. The result of the command should
contain the string "Intel HDA" "Azalia" or "ICH4".

                cat /proc/asound/cards

6.4 Test the audio output with the following command.
                speaker-test –c 2 –t 2

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7 – Uninstalling Driver
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Currently, there is no way to uninstall this driver. The only option
is to re-install Mandriva Linux.
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8 – Known Issues/Errata
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8a. The gnome-volume control settings are not retained across system
boot. The workaround is as follows.

Before rebooting the machine, store the current mixer settings as
below:
              alsactl -f mixer.cfg store

After rebooting the machine, restore the mixer settings as below:

              alsactl -f mixer.cfg restore

8b. Volume control from Realplayer* does not work. Other applications
are ok.

8c. When using the front panel for playback or recording, plug in the
Mic into the green jack and the headphone into the pink jack.

Six-channel audio does not appear to function on Intel Desktop Boards
containing three audio jacks,: Only two-channel audio is enabled by
default. No workaround exists for this issue. A fix is currently
under investigation.

Center channel and surround channel audio output are switched on
Intel Desktop Boards based on the Intel 102 chipset: This only occurs
when SUSE Linux Enterprise Desktop Version 10 is installed on an
Intel Desktop Board based on the Intel 102 chipset. The workaround is
to switch the speaker connections between the center audio channel
output and the surround audio channel output on the back of the
system.

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9 – Important Notice
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