

Mandrake Linux 10.0 Audio Driver Installation Guide

Version 0.8, July 1, 2004

Copyright © 2001-2004 VIA Technologies, INC.

1. Summary

This document describes three methods of installing the audio driver for VIA south bridge chips VT8231, VT8233, VT8233A, VT8235 and VT8237 in Mandrake Linux 10.0. These methods include:

- (1) Mandrake Linux 10.0 kernel built-in driver
- (2) Mandrake Linux 10.0 kernel built-in ALSA driver
- (3) OSS driver from 4Front Technologies

The step-by-step instruction for each method and a comparison of their respective features are provided. The information in this document is provided “AS IS,” without guarantee of any kind.

2. File description

This package requires 2 files as described below.

oss3991d-linux-i386-v26.tar.gz	06/30/04	13:19	2,804,861	OSS Driver
Readme				this file

The Open Sound System (OSS) driver is maintained by 4Front Technologies, and users may download the latest evaluation version from <http://www.opensound.com/>; however, using the OSS driver may require a fee.

3. Prior to installation preparation

Before installing any audio driver, users should do two things. First, remove the previously installed driver by following the steps below.

- (1) Mandrake Linux 10.0 kernel built-in audio driver

```
#modprobe -r via82cxxx_audio
```

- (2) Mandrake Linux 10.0 kernel built-in ALSA driver

```
#/etc/init.d/alsa stop (remove all ALSA driver modules from kernel)
```

- (3) OSS driver

```
#cd /usr/lib/oss/bin  
#./soundoff (turn off the OSS audio driver)
```

It is important to backup the “`/etc/modprobe.conf`” file. In case any mistake is made, users can always use the file to restore the system back to the initial configuration. In addition, before removing the previously installed driver, terminate any sound related applications and make sure the sound card is no longer in use. Run the “`#lsmod`” command to confirm whether the audio driver is loaded.

4. Kernel built-in audio driver

The OS will automatically detect the on-chip audio controller and install the driver for it. By default, Mandrake Linux 10.0 utilizes the ALSA audio driver (1.0.2c). To use the OS kernel audio driver, make sure the built-in ALSA driver is removed first. Refer to Section 3-2 above for how to remove the driver. To install the OS built-in driver, run the command “`#modprobe via82cxxx_audio`”. To verify whether the driver is installed, run “`#lsmod`” in the command line to check if the audio module is loaded into kernel. If it was loaded, the list will show the module named “`via82cxxx_audio`” and its size.

5. Kernel Built-in ALSA driver

Mandrake Linux 10.0 utilizes the ALSA audio driver as the default audio driver. After installing the OS, the modules will be loaded automatically. After enter the system, run the “`#lsmod`” command to check if the audio module is loaded into kernel. If the modules are not loaded automatically, follow the two options below:

```
#/etc/init.d/alsa start
Starting ALSA version 1.0.2c: via82xx.      [ OK ]
Doing alsactl to restore mixer settings... [ OK ]
```

6. OSS driver

Download an evaluation version and use “`oss3991d-linux-i386-v26.tar.gz`” or later. Run the following two commands in the command shell to decompress and install the audio driver package.

```
#tar zxvf oss3991d-linux-i386-v26.tar.gz
#./oss-install
```

The first command will decompress six files. The second will install the driver. If other audio or other third-party modules are loaded in the kernel, the OSS program may abort the install process. It’s important to make sure any previously installed audio driver or modules are removed before installing the OSS driver.

Navigate through the GUI interface to install audio driver; choose the target

directory located at the decompressed OSS packages; remember to save the changes and exit. Next, change the directory to the target directory, “`#cd /usr/lib/oss/bin`”. Run “`#./soundon`” to load the related audio modules into kernel. Run “`#./soundoff`” anytime to disable the sound. The audio modules will not be loaded after restarting the system. If users want to have audio devices work properly every time when boot up the system, follow the instruction in the OSS driver release notes.

7. Driver feature comparison

The driver features supported by each installation method are described below. The recorder used is the built-in **Gnome Sound Recorder** and **Sound Studio**. The MIDI player used is **timidity**.

(1) VT8231

	CD player	Sound Recorder	Sound Studio	MIDI	WAV	MP3	Real Player	MPlayer
OS kernel	○	○ (*)	○	○	○	○	○	○
Built-in ALSA	○	Fail (1)	○ (*)	○	○	○	○	○
OSS	○	○	○	○	○	○	○	○

(2) VT8233

	CD player	Sound Recorder	Sound Studio	MIDI	WAV	MP3	Real Player	MPlayer
OS kernel	○	Fail (2)	Fail (2)	○	○	○	○	○
Built-in ALSA	○	○	○	○	Fail (3)	○	○	○
OSS	○	○	○	○	○	○	○	○

(3) VT8233A

	CD player	Sound Recorder	Sound Studio	MIDI	WAV	MP3	Real Player	MPlayer
OS kernel	○	Fail (4)	Fail (4)	○	○	○	○	○
Built-in ALSA	○	Fail (1)	Fail (1)	○	○	○	○	○
OSS	○	○	○	○	○	○	○	○

(4) VT8235

	CD player	Sound Recorder	Sound Studio	MIDI	WAV	MP3	Real Player	MPlayer
OS kernel	○	Fail (2)	Fail (2)	○	○	○	○	○
Built-in ALSA	○	○	○	○	○	○	○	○
OSS	○	○	○	○	○	○	○	○

(5) VT8237

	CD player	Sound Recorder	Sound Studio	MIDI	WAV	MP3	Real Player	MPlayer
OS kernel	○	Fail (2)	Fail (2)	○	○	○	○	○
Built-in ALSA	○	○	○	○	○	○	○	○
OSS	○	○	○	○	○	○	○	○

(*) – The output is louder than the input. Sometimes it accompanies a noise.

Fail (1) – When recording the sound, the output has no sound.

Fail (2) – When recording the sound, it accompanies a noise and the output only has

abnormal sound.

Fail (3) – When playing the WAV file, the output is speeded up.

Fail (4) – When pressing the “Record” button, the application hangs.

8. Test configuration

The following systems were used for test.

(1) VT8231

Mother Board	EPIA-V800A (Twister+VT8231)
CPU	VIA C3 600MHz
Memory	256 MB PC133 SDRAM

(2) VT8233

Mother Board	VT5572C (KM266 + VT8233)
CPU	AMD Duron 800 MHz
Memory	128 MB DDR RAM

(3) VT8233A

Mother Board	VT5668A1 (Pro266T + VT8233A)
CPU	VIA C3 Nehemiah 1.0GHz
Memory	128 MB DDR RAM

(4) VT8235

Mother Board	EPIA-MII 10000 (CLE266 + VT8235)
CPU	VIA C3 Nehemiah 1 GHz
Memory	128 MB DDR RAM

(5) VT8237

Mother Board	EPIA-SP (CN400 + VT8237)
CPU	VIA C3 Nehemiah 1.0GHz
Memory	256 MB DDR RAM