Synway Voice Board

CTILinux Driver Installation Manual

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Chapter 1 Driver Installation

1.1 Brief Introduction

This document describes how to use CTILinux 5.0.0.0 and above versions for those people who need to install the driver for any voice board from Synway in a Linux operating system.

1.2 Driver Installation Procedure

Step 1:

Login to the system (users with root access only).

Step 2:

Copy the driver installation package CtiLinux5.0.00-2.6.18-4-686-i686.tar.bz2 from the CD to your current directory.

Step 3:

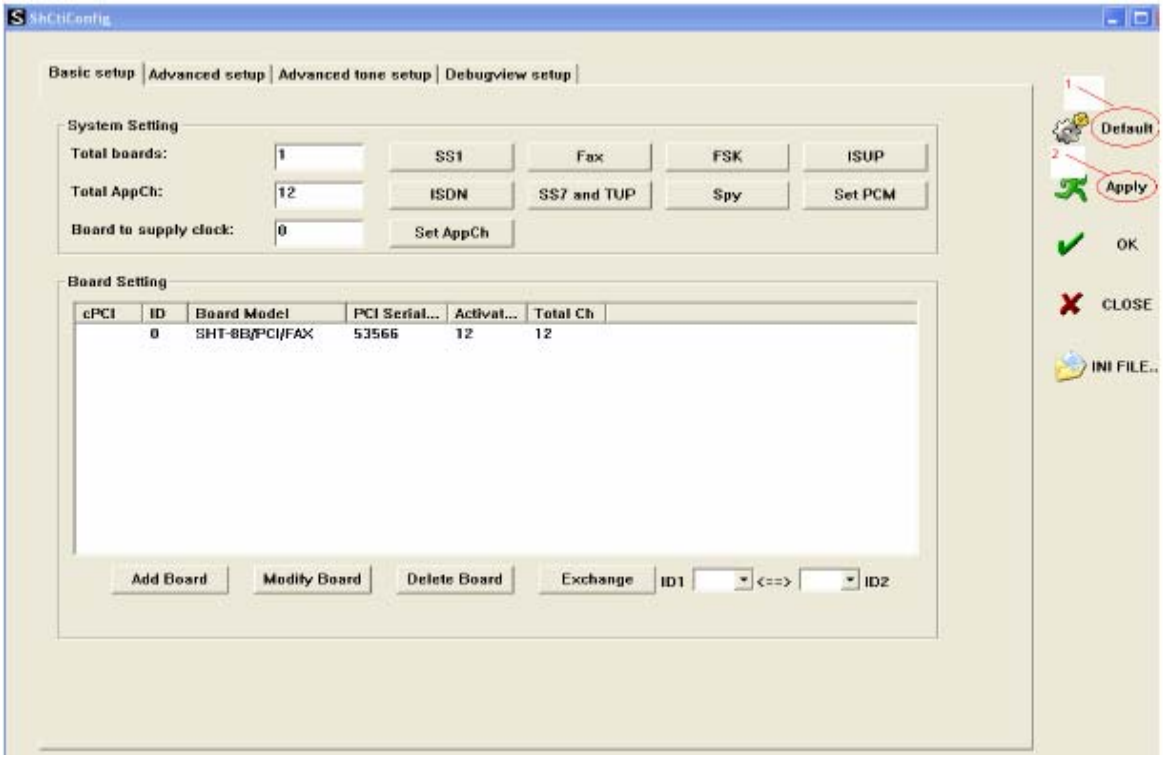
Execute the command ‘tar -xjvf CtiLinux5.0.00-2.6.18-4-686-i686.tar.bz2’ to decompress the compressed file and create the directory ‘CtiLinux5.0.00-2.6.18-4-686-i686’.

Step 4:

Run install.linux under the directory ‘CtiLinux5.0.00-2.6.18-4-686-i686’. After the installation, a folder ‘shcti’ will be created under the directory ‘/usr/local/lib’ to save the driver files; and under the directory ‘/usr/local/lib/shcti/ver5.0.00/inifile/’ are stored the system configuration files ShConfig.ini, ShIndex.ini and Ss7Server.ini.

Note: The file ShConfig.ini varies for different boards and therefore needs to be modified in a real practice according to the board model and the serial number. If you are not familiar with the driver provided by Synway, we suggest you install the SynCTI driver in a Windows operating system first and run ShCtiConfig.exe under the system directory ‘C:\shcti\’ upon installation. Below is the main interface appearing after the launch of ShCtiConfig.exe. Click on the button ‘Default’ and then the button ‘Apply’ on the interface

to complete the default setting. Now copy the configuration file ShConfig.ini which has been well configured to your application directory.



Step 5:

Under the directory ‘CtiLinux5.0.00-2.6.18-4-686-i686/k26/lkm’, execute the command ‘insmod shdpci.ko’ for boards with PCI bus, the command ‘insmod shdcpci.ko’ for boards with cPCI bus and the command ‘insmod shdusb.ko’ for boards with USB bus.

Step 6:

Use the command ‘lsmod’ to check if the driver has been installed successfully.

Step 7:

Upon a successful installation of the driver, the device file pci9000-XXXXX in which XXXXX indicates the board serial number will be created under the directory ‘/dev/shd/’.

Step 8:

To run the Etest program under the directory ‘/usr/local/lib/shcti/test’, use the command ‘make’ to compile it first and then execute the command ‘./test’, or directly execute the command ‘./test’ under the directory ‘/usr/local/lib/shcti/ver5.0.00/Test/gtk2.4_test/src/’.

Step 9:

When you are running your own applications, don’t forget to load the path of the

configuration files (ShConfig.ini, ShIndex.ini).

Key Tips:

(1) For the detailed description of configuration files and items in the driver program, refer to Chapter 3 'SynCTI Driver Configuration' in *SynCTI Programmer's Manual*.

(2) Make sure to load kernel module files every time before running the Synway board application program. Go to the directory of a specified kernel version under 'lkm' and execute the command 'insmod shdpci.ko/shdcpci.ko'. What's more, you may modify the setting of '/etc/rc.local' (add to the end the command of loading corresponding ko file, such as 'insmod/usr/local/lib/shcti/ver5.0.00/lkm/k2.6.18-128.el5xen/shdpci.ko') to enable the automatic loading of kernel modules upon each start of your Linux system.

1.3 Directory Structure

After the driver installation, the directory structure is as follows.

File list under the directory '/usr/local/lib/shcti/ver5.0.00/inifile':

- ShConfig.ini *Board configuration file*
- ShIndex.ini *Configuration file for a form where list voice files by index*
- Ss7Server.ini *Configuration file for SS7 server*

Structure of the directory '/usr/local/lib/shcti':

- demovoc *Symbol linkage to voice files used in the demo program*
- fireware *Symbol linkage to bin files*
- ver5.0.00 *Driver files*

Structure of the directory 'ver5.0.00':

- out/ *Directory of configuration files, storing shared library files*
- lkm/ *Subdirectory of loadable kernel module*
- fireware/ *bin files*
- demovoc/ *Voice files used in the demo program*
- demo/ *Demo program codes*
- ss7/ *Directory of SS7 Server*
- Test/ *Test program as well as the demo program under the console*
- ReleaseNote.txt *Driver upgrade information*
- Readme.txt *Instruction on driver installation program*

Shared library files under the subdirectory 'out':

- libBmpUtil.so.5.0.00 *Graphic processing component for faxing*

- libIsdnNet.so.5.0.00 *ISDN network side processing component*
- libIsdnUser.so.5.0.00 *ISDN user side processing component*
- libMtp3.so.5.0.00 *SS7 MTP3 component*
- libshdpci.so.5.0.00 *Hardware driver program for SHD-60A-CT voice board*
- libShInitPci.so.5.0.00 *Board model and licensed number querying component*
- libshpa3.so.5.0.00 *API component*
- libSs7Server.so.5.0.00 *SS7 sever scheduling component*
- libTcpClnt.so.5.0.00 *SS7 client-to-server communication component (TCP/IP)*
- libTcpServer.so.5.0.00 *SS7 server-to- client communication component (TCP/IP)*
- libDSTDecode.so.5.0.00 *Digital station tap board component*
- libSccp.so.5.0.00 *Signaling connection control part*
- libTcap.so.5.0.00 *Transaction control application part*
- libshpcmhandle.so.5.0.00 *Transcoding component for PCM files*
- libH323.so.5.0.00 *H.323 message processing component*
- libSynSip.so.5.0.00 *SIP signaling processing component*
- libuserno7.so.5.0.00 *SS7 client without using Synway boards*

Directory of SS7 Server:

- ss7d *SS7 server under the console*

Directory of DEMO:

- atrk4 *DTMF receive/transmit test*
- atrkfax *Basic faxing test*
- call *Call in test*
- dial *Call out test*
- record *Recording test*
- test *Testing of bus, recording, call and so on*

1.4 Writing PBX Model to DST A Board

Go to the directory '/usr/ local/ lib/ shcti/ ver5.0.00/ cpld_lib/' and execute the following commands.

./cpld_demo --settype=PBXtype --SN =serialNum

./cpld_demo -s PBXtype -S serialNum

For example, if you want to write the Alcatel PBX to the board numbered 99999, run one of the following commands.

./cpld_demo --settype=alcatel --SN=99999

./cpld_demo -s alcatel -S 99999

Chapter 2 Driver Uninstallation

Follow the steps below to uninstall the driver.

Step 1:

Close both the board and user application programs as well as the ss7d program when necessary.

Step 2:

Run the command ‘rmmod shdpci’ or ‘rmmod shdcpci’ or ‘rmmod shdusb’ (according to your board model).

Step 3:

Execute the command ‘lsmod’ to check if the driver has been uninstalled successfully. In case of success, the item ‘shdpci’ will not appear in the displayed command execution results.

Step 4:

Execute the command ‘rm –rf shcti’ to delete the ‘shcti’ folder under the directory ‘/usr/local/lib’.

Appendix A Technical/sales Support

Thank you for choosing Synway. Please contact us should you have any inquiry regarding our products. We shall do our best to help you.

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