

OpenVox B100P Install Manual for dahdi on openSUSE

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Thanks sipi very much!

Notice:

The DAHDI version above 2.5.0.1 from OpenVox official website has included driver module of B100P, so it is unnecessary to make any patches for it.

<http://downloads.openvox.cn/pub/drivers/dahdi-linux-complete/releases/1.3.3/>

<http://bbs.openvox.cn/viewthread.php?tid=1607&extra=page%3D1>

Preface

This is an installation manual that I how installed OpenVox B100P for dahdi to use asterisk and libpri on openSUSE 11.3 x86_64 2.6.34.8-xen kernel.

Card Installation and Configuration

1) Hardware Installation and Setup

Configure the Jumper Settings

Please refer jumper setting for details. To install B100P, user should follow the steps.

A. Setting Card ID Switch

If user wants to install more than one cards of B100P in one pc, you should take care of the card id switch. It has three rules, which user must follow:

1. The card id of the first card must be set to 0, and the second card should be set to 1, and so on.
2. The First Card is a card that will be initialized (i.e installing driver) first when system is booting.
3. At most of cases, Linux will initialize PCI devices according to PCI slot order. The slot is nearest to the CPU will be initialized first; the slot at the far end from CPU will be initialized at last. That is to say, if user has more than one cards of B100P in pc, the one is nearest to CPU should be set to card id 0.

B. Adjusting Termination of S/T Interface (100 ohm)

1. If a port will work on NT mode, user should set jumper to CONNECT (ON).
2. If a port will work on TE mode, Theoretically it should be to OPEN(OFF), but

user might connect to some non-standard isdn terminal equipments that do not have terminal resistors, for such equipments, you should set it to CONNECT(ON).

C. Power Supply Selection

Some newest model PCs do not provide +5V on the PCI slots, at those cases, use has to set the jumper to 3.3v.

Software Installation and Configuration

1) Check the hardware detection

```
lspci -vvvvvvvvvvvvvv
```

User should see the device information, if user can not see that, please move the card to other slots to try.

2) Checking the supporting packages

Note that if there is no kernel source in the system, user should install them. User can use Yast Software Management and install kernel-devel. It is time to check for the availability of some other packages: rpm -q bison

```
rpm -q bison-devel
rpm -q ncurses
rpm -q ncurses-
devel rpm -q
zlib
rpm -q zlib-devel
rpm -q openssl
rpm -q openssl-
devel rpm -q
gnutls-devel rpm
-q gcc
rpm -q gcc-c++
```

If any of those packages is not installed, please install those packages by using Yast.

3) Downloading, unzipping, patching and compiling driver

A. Download the stable version of libpri, dahdi and asterisk from

<http://downloads.asterisk.org/pub/telephony/> and copy the tar files to /usr/src/. Please download libpri-1.4.11.4, which solve the bug.

I download dahdi-linux-complete-2.3.0.1+2.3.0 and asterisk-1.6.2.10

```
cd /usr/src
```

```
wget http://downloads.asterisk.org/pub/telephony/libpri/releases/libpri-1.4.11.4.tar.gz
```

```
wget http://downloads.asterisk.org/pub/telephony/dahdi-linux-complete/releases/dahdi-linux-complete-2.3.0.1+2.3.0.tar.gz
```

```
wget http://downloads.asterisk.org/pub/telephony/asterisk/releases/asterisk-1.6.2.10.tar.gz
```

B. Unzip the tar files to /usr/src

C/1. Download OpenVox patch file and patching dahdi

```
wget http://downloads.openvox.cn/pub/drivers/dahdi-patches/B100P/B100_dahdi_2.3.0.1_complete_patch.extra
```

```
cp B100_dahdi_2.3.0.1_complete_patch.extra /usr/src/dahdi-linux-complete-2.3.0.1+2.3.0/linux
```

```
cd dahdi-linux-complete-2.3.0.1+2.3.0/linux
```

```
patch -p2 < B100_dahdi_2.3.0.1_complete_patch.extra
```

C/2. Patching asterisk

If user wants to use NT mode, please patch the chan_dahdi.c except asterisk

1.8 above version. Please modify the file asterisk-

1.6.2.10/channels/chan_dahdi.c

```
/*ast_log(LOG_WARNING, "How cool would it be if someone implemented this mode! For now, sucks for you. (line %d)\n", v->lineno);*/
```

```
confp->chan.sig = SIG_BRI_PTMP;
confp->pri.nodetype = PRI_NETWORK;
```

If you have an error „implicit declaration of function kzalloc” on dahdi_echocan_oslec.c file when you compile dahdi-linux-complete-2.3.0.1+2.3.0 then you need modify the /usr/src/dahdi-linux-complete-2.3.0.1+2.3.0/linux/dahdi/dahdi_echocan_oslec.c file. Insert #include <linux/slab.h> here.

```
29 #include <linux/kernel.h>
```

```
30 #include <linux/errno.h>
```

```
31 #include <linux/module.h>
```

```
32 #include <linux/init.h>
```

```
33 #include <linux/ctype.h>
```

```
34 #include <linux/moduleparam.h>
```

```
35
```

```
36 #include <dahdi/kernel.h>
```

```
29 #include <linux/kernel.h>
```

```
30 #include <linux/slab.h>
```

```
31 #include <linux/errno.h>
```

```
32 #include <linux/module.h>
```

```
33 #include <linux/init.h>
```

```
34 #include <linux/ctype.h>
```

```
35 #include <linux/moduleparam.h>
```

```
36
```

```
37 #include <dahdi/kernel.h>
```

D. Compiling libpri, dahdi and asterisk

```
cd /usr/src/libpri-
```

```
1.4.11.4 make
```

```
make install
```

```
cd /usr/src/dahdi-linux-complete-
```

```
2.3.0.1+2.3.0 make
```

```
make
```

```
install
```

```
make
```

```
config
```

```
cd /usr/src/asterisk-1.6.2.10
./config
ure
make
make
install
make
samples
make
config
```

The *make config* creates init script to start/stop/restart asterisk. If the make failed and configure wrote that run it *-disable-xmldoc* then run and repeat it.

```
./configure -disable-xmldoc
```

4) Load

drivers

```
service dahdi
stop modprobe
dahdi
modprobe
vzaphfc
```

(If user use NT mode, please load it like this:

```
modprobe vzaphfc modes=1 force_11_up=0)
```

5) Control the dahdi

```
dahdi_genconf
dahdi_cfg -vvvvvvvvvvv
DAHDI Tools Version - 2.3.0
DAHDI Version: 2.3.0.1
```

Echo Cancellor(s): MG2

Configuration

SPAN 1: CCS/ AMI Build-out: 0 db (CSU)/0-133 feet (DSX-1)

Channel map:

Channel 01: Clear channel (Default) (Echo Canceler: mg2) (Slaves: 01)

Channel 02: Clear channel (Default) (Echo Canceler: mg2) (Slaves: 02)

Channel 03: Hardware assisted D-channel (Default) (Echo Canceler: none) (Slaves: 03)

3 channels to configure.

Setting echocan for channel 1 to mg2

Setting echocan for channel 2 to mg2

Setting echocan for channel 3 to none

6) Modify configure files

/etc/dahdi/system.conf

```
# Autogenerated by /usr/sbin/dahdi_genconf on Wed Jun 30 18:52:54 2010
```

```
# If you edit this file and execute /usr/sbin/dahdi_genconf again,
```

```
# your manual changes will be LOST.
```

```
# Dahdi Configuration File
```

```
#
```

```
# This file is parsed by the Dahdi Configurator, dahdi_cfg
```

```
#
```

```
# Span 1: ZTHFC1 "HFC-S PCI A ISDN card 0 [TE] " (MASTER)
```

```
span=1,1,0,ccs,ami
# termtype: te
bchan=1-2 hardhdlc=3
echocanceller=mg2,1-2
# Global data
loadzone = us
defaultzone = us

/etc/asterisk/dahdi-channels.conf
; Autogenerated by /usr/sbin/dahdi_genconf on Wed Jun 30 18:52:54 2010
; If you edit this file and execute /usr/sbin/dahdi_genconf again,
; your manual changes will be LOST.
; Dahdi Channels Configurations (chan_dahdi.conf)
;
; This is not intended to be a complete chan_dahdi.conf. Rather, it is intended
; to be #include-d by /etc/chan_dahdi.conf that will include the global settings
;
; Span 1: ZTHFC1 "HFC-S PCI A ISDN card 0 [TE] " (MASTER)
group=0,11
context=from-pstn)
overlapdial=yes
switchtype = euroisdn
signalling = bri_cpe_ptmp
channel => 1-2
context = default
group = 63
```

Add these lines (copy) "include dahdi-channels.conf" in the file chan_dahdi.conf

User must make sure that the context "from-pstn" is in extensions.conf. Here an example is given:

extensions.conf

```
TRUNK=DAHDI/1
```

```
[default]
```

```
;outgoing
```

```
exten =>
```

```
_9.,1,Dial(${GLOBAL(TRUNK)}/${EXTEN:${GLOBAL(TRUNKMSD)}})
```

```
[from-pstn]
```

```
exten => s,1,Answer()
```

```
exten => s,n,Goto(ringroups-custom-1,s,1)
```

```
exten => s,n,Hangup()
```

```
[DLPN_DialPlan1]
```

```
include = default
```

```
include = parkedcalls
```

```
include = conferences
```

```
include = ringroups
```

```
include = voicemenus
```

```
include = queues
```

```
include = voicemailgroups
```

```
include = directory
```

```
[ringroups-custom-1]
```



```
exten = s,1,NoOp(6400)
exten = s,n,Dial(SIP/6001&SIP/6002,20,i)
exten = s,n,Hangup
```

I created two extensions, 6001 and 6002 and a custom ring group, 6400 that I can to try the config. I don't write it because it is very simple.

7) Starting asterisk and test it

run: asterisk -vvvvvvvgc to start up asterisk server

under asterisk console, run:dahdi show channels and pri show spans

```
*CLI> dahdi show channels
```

Chan	Extension	Context	Language	MOH Interpret	Blocked	State
pseudo		default	default			In Service
1		from-pstnn	default			In Service
2		from-pstn	default			In Service

```
*CLI>
```

```
*CLI> pri show spans
```

```
PRI span 1/0: Provisioned, Up, Active
```

```
*CLI>
```

If you can see the ports with active and up status, you will able to make calls.

Otherwise, please check the setting files and physical connections.

If all of them works you finished your job well.

8) Notes

There are two issues for B100P/NT mode:

(1)After reboot the system,the driver can't be loaded as NT mode. User need to reload it. After reboot, please run the command:

```
modprobe -r vzaphfc
```

```
modprobe vzaphfc modes=1 force_11_up=0
```

(2)And sometimes the first call can't work,in this situation user need to restart asterisk.

We are follow-up the issues,it's in progress.

Test environment

OS: openSUSE 11.3 x86_64

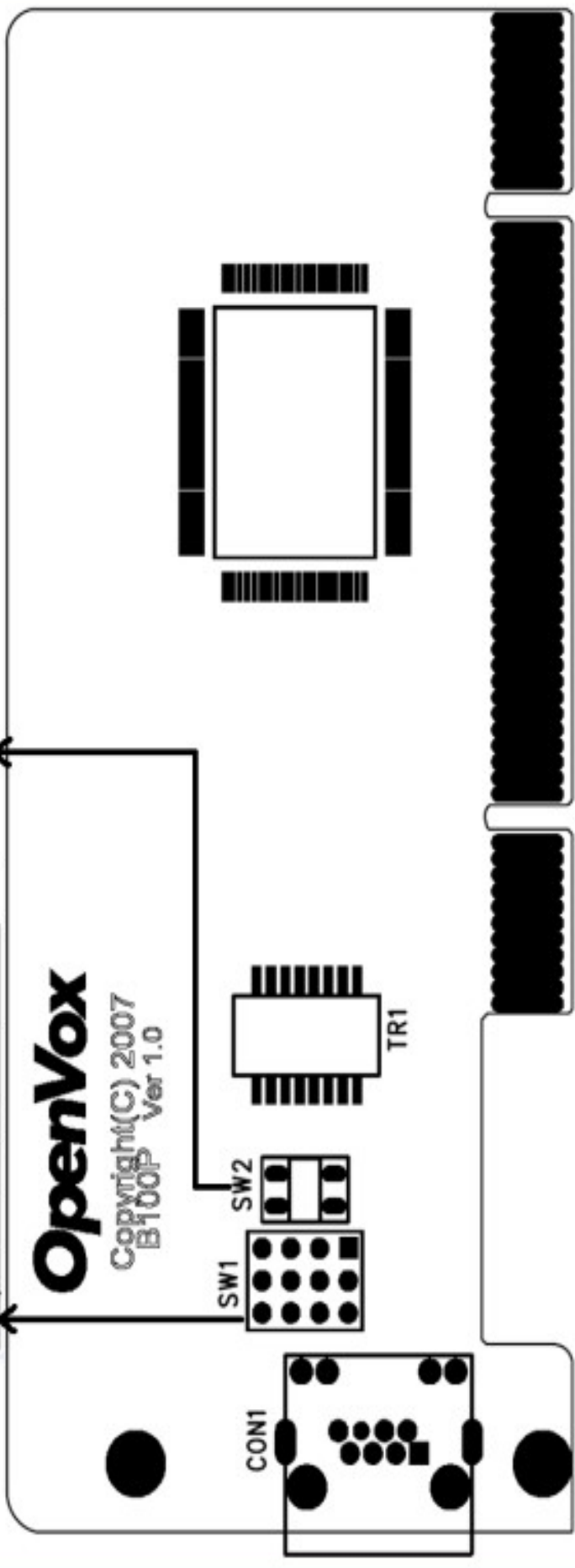
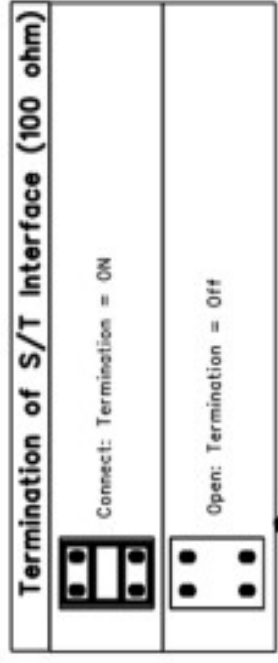
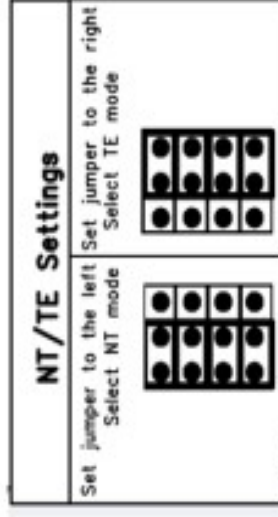
Kernel version: 2.6.34.8-0.2-xen

Asterisk version: Asterisk-1.6.2.10

Dahdi version: dahdi-linux-complete-2.3.0.1+2.3.0

Libpri version: libpri-1.4.11.4

Hardware : OpenVox B100P



B100P Hardware Setting