

IX100+ OpenVox mini BRI/Analog cards+Voyage-linux

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This instruction is for users who want to use OpenVox (IX100) mini cards (B100M/B200M/B400M/A400M) working with PC Engines TM Alix 2C2. There are few steps you have to go through:

1. Preparing the hardware:.

- A. Make sure that you have an at least 8GB CF cards.
- B. Make sure the power supply is set correctly. Please check that, if the ports of cards work under NT of mini BRI cards or FXS of A400M, you must provide such devices.

2. Copying voyage-linux into your system

please go to [voyage-linux official website \(http://www.voyage.hk/download/voyage/voyage-0.5.1.tar.bz2\)](http://www.voyage.hk/download/voyage/voyage-0.5.1.tar.bz2) to get the image files. And copy it into CF cards. For more details about installing the image into CF cards, please refer the wiki from voyage-linux(<http://wiki.voyage.hk/dokuwiki/doku.php?id=installation>).

3. Compiling mISDN, zaptel, asterisk

Once the images are copied into CF card, please insert the CF card into the CF slot and switch on the power supply. Note: please use super terminal to access the system. Please check the IP for ssh access. Through accessing SSH, we are able to see the console like this:

```
login as: root
root@192.168.2.109's password:
Last login: Fri Jul 11 06:15:12 2008 from zlz
Linux voyage 2.6.23-486-voyage #1 PREEMPT Wed May 21 15:31:49 GMT 2008 i586

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.

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      // _ //
      ( V o y a g e ) - L i n u x
        < http://linux.voyage.hk >

Useful Commands:
remountrw - mount disk as read-write
remountro - mount disk as read-only
remove.docs - remove all docs and manpages

Version: 0.5 (Build Date 20080622)

voyage:~# █
```

Please run the command: **remountrw** to get write permission.

Actually, in the system, asterisk and zaptel have built in, but I still can not run it. If so, please recompile asterisk, zaptel and mISDN. Go to asterisk.org to get those packages. Some packages I use for this system:

```
voyage:/usr/src# ls -l
total 59312
drwxr-xr-x 24 root root    4096 Jul 11 03:56 asterisk-1.4.21.1
-rw-r--r--  1 root src   11528154 Jul 10 10:23 asterisk-1.4.21.1.tar.gz
drwxr-xr-x  3 root root    4096 Nov  9  2007 chan_misdn
-rw-r--r--  1 root src    90838 Nov  9  2007 chan_misdn.tar.gz
-rw-r--r--  1 root src   58429 May 21 15:28 config-2.6.23-486-voyage_5.0-2
drwxr-xr-x 21 root root    4096 Jul 10 08:53 linux-source-2.6.23-voyage
-rw-r--r--  1 root root 46419776 Jun 22 17:52 linux-source-2.6.23-voyage.tar.bz2
drwxr-xr-x  5 root root    4096 Jun 18 08:41 mISDN-1_1_8
-rw-r--r--  1 root src   498226 Jun 18 08:23 mISDN-1_1_8.tar.gz
drwxr-xr-x 12 root root    4096 Jun 18 08:42 mISDNUser-1_1_8
-rw-r--r--  1 root src   330147 Jun 18 08:23 mISDNUser-1_1_8.tar.gz
drwxr-sr-x  8 root root    4096 Jul 11 05:42 zaptel-1.4.11
-rw-r--r--  1 root src  1681384 Jul 11 02:14 zaptel-1.4.11.tar.gz
voyage:/usr/src#
```

Before compiling those packages, please install some support packages

apt-get install:

```
bison openssl libssl-dev libeditline0 libeditline-dev libedit-dev,
```

```
gcc make g++ php5-cli mysql-common libmysqlclient15-dev libnet-dev flex
```

you also need a linux source, please go to voyage-linux to get right version of linux source.

Make a link with kernel source:

```
voyage:/usr/src# ln -s linux-source-2.6.23-voyage /lib/modules/2.6.23-486-voyage/build
```

Then you can compile: zaptel, mISDNUser, mISDN and asterisk.

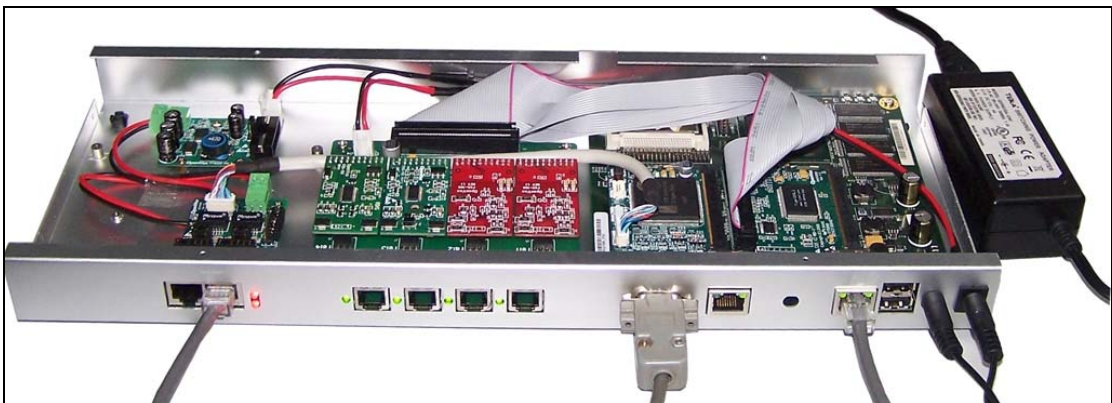
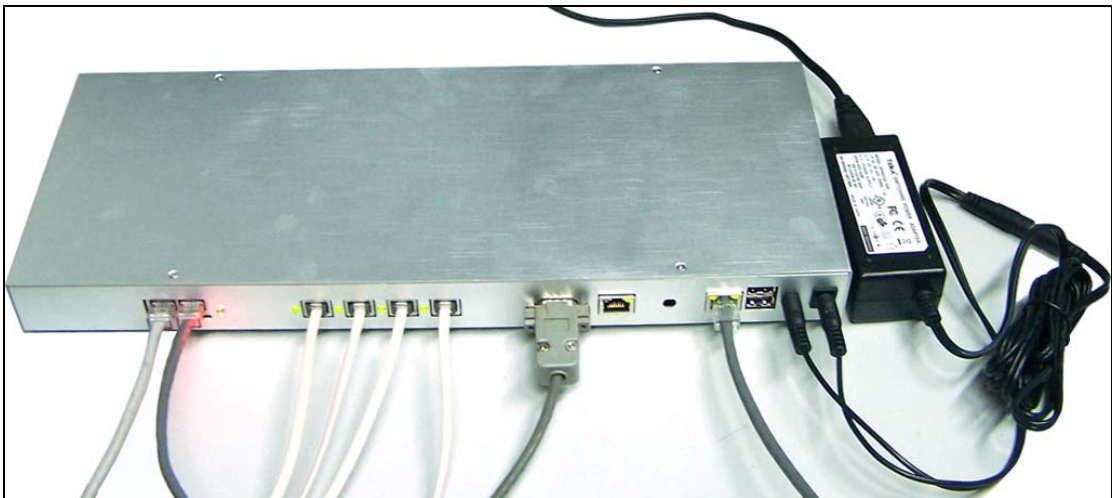
If all are done properly, the system should be able to start up successfully. Before making calls, please check the status of misdn channels and zap channels from asterisk console, make sure those channels can be shown.

```
voyage*CLI> misdn show stacks
BEGIN STACK LIST:
 * Port 1 Type TE Prot. PMP L2Link DOWN L1Link:UP Blocked:0 Debug:0
 * Port 2 Type TE Prot. PMP L2Link DOWN L1Link:DOWN Blocked:0 Debug:0
voyage*CLI> zap show channels
  Chan Extension Context Language MOH Interpret
pseudo          default          default
 1              demo           default
 2              demo           default
 3              from-internal  default
 4              from-internal  default
voyage*CLI>
```

```

voyage*CLI>
voyage*CLI> P[ 1] channel with stdid:0 for one second still in use!
  == Starting mISDN/2-u7 at demo,,1 failed so falling back to exten 's'
  -- Executing [s@demo:1] Answer("mISDN/2-u7", "") in new stack
  -- Executing [s@demo:2] Dial("mISDN/2-u7", "ZAP/4") in new stack
  -- Called 4
P[ 1] channel with stdid:0 for one second still in use!
  == Starting mISDN/2-u7 at demo,,1 failed so falling back to exten 's'
  -- Executing [s@demo:1] Answer("mISDN/2-u7", "") in new stack
  -- Executing [s@demo:2] Dial("mISDN/2-u7", "ZAP/4") in new stack
  -- Called 4
  -- Zap/4-1 is ringing
  -- Zap/4-1 is ringing
voyage*CLI>    -- Zap/4-1 is ringing
  -- Zap/4-1 is ringing
voyage*CLI>    -- Zap/4-1 answered mISDN/2-u7
  -- Zap/4-1 answered mISDN/2-u7

```



Test environments:

OS-Voyage-linux Version: 0.5 (Build Date 20080622)

OpenVox cards: B200M, A400M

OpenVox IX100 with Alix 2c2

CF card: Kingston compact flash 8 GB

Drivers: asterisk-1.4.21.1, zaptel-1.4.11 and mISDN-1_1_8

If you only install A400M, you do not need to install mISDN.

Bristuff should be ok under Voyage-linux.

References:

<http://linux.voyage.hk/>

www.asterisk.org

www.openvox.com.cn

<http://www.debian.org/>

www.misdn.org

<http://www.pcengines.ch/alix2c2.htm>