

AXE400PL User Manual

ATCOM® Analog Card AXE400PL

User Manual

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Release note

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Contact ATCOM

The Introduction of ATCOM

ATCOM is the leading VoIP hardware manufacturer in global market. We have been keeping innovating with customer' s needs oriented , working with partners to establish a total solution for SMB VoIP with IP phone , IP PBX and Asterisk cards.

With over 10 years' experience of R&D, manufacturing and service in network and VoIP filed; mission of creating the biggest value for IP terminals, we commit ourselves in supplying the competitive IP phone and other terminals for IP PBX, softswitch, IMS, NGN providers and carriers; supplying the competitive total VoIP solution for SMB market. We keep improving the customer's experience and creating the bigger value with our reliable products. Until now , our VoIP products has been sold to over 60 countries and used by millions of end users.

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Download Center: <http://www.atcom.cn/download.html>

Chapter 1 the Introduction of AXE400PL

Overview of the AXE400PL

AXE400PL Asterisk card is the telephony PCI-E card that supports up to four FXO or FXS ports. Using the analog card, open source Asterisk PBX and stand alone PC, users can create their SOHO telephony solution which include all the sophisticated features of traditional PBX, and extend features such as voicemail in IP PBX. The FXO and FXS modules are interchangeable to suit various requirements.

Features

Analog card for Asterisk PBX
Support Asterisk PBX, zaptel and dahdi driver
Support up to 4 FXO/FXS analog port
Suitable for SOHO PBX / VoiceMail / IVR.
Caller ID and Call waiting Caller ID
Conference

Applications

IP PBX
IVR system
Traditional Calls or VOIP Calls Conference

Hardware requirement

500-Mhz Pentium III
64MB RAM
3.3V or 5V PCI 2.2 slot

PCI-E card dimension:

140mm (length) × 64mm (height)

Chapter 2 Hardware Introduction

Hardware Configuration

Motherboard: AXE400PL

Dual ports FXS module: AX-110S

Dual ports FXO module: AX-110X

One FXS port and one FXO port module: AX-110XS

Notice:

One AX-110S module supports single FXS ports;

one AX-110X module supports single FXO ports.

Warning: When the PC power is on, please do not plug or take down the card.

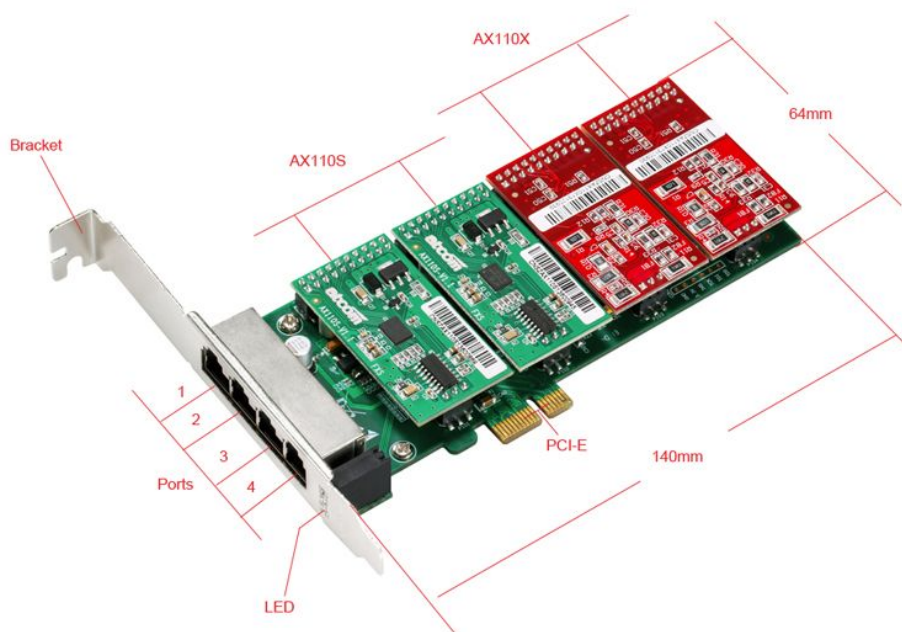


Figure2: AXE400PL with 2 AX-110S and 2 AX-110X

Chapter 3 Test Environment

Test Environment:

dahdi-linux-complete-2.6.2+2.6.2

(download from Digium website)

asterisk-1.8

(download from Digium website)

Centos6.0

(kernel version: 2.6.32-279.22.1.el6.i686)

Motherboard: AXE400PL

Chapter 4 Software Installation

After inserting the card into the PCI-E slot and boot the server, please use the “lspci” command to check the PCI bus compatibility. From the correct output, users can see the following line:

```
-----  
01:01.0 Communication controller: Tiger Jet Network Inc. Tiger3XX Modem/ISDN interface  
-----
```

The card will be found. If users can not see the **Tiger Jet** device, please power off the server and try another PCI slot.

1. To install asterisk and dahdi, users have to use “yum” command to install the prerequisite packages:

```
[root@localhost src]# yum install update
```

```
[root@localhost src]# yum -y bison bison-devel zlib zlib-devel openssl openssl-devel  
gnutls-devel gcc gcc-c++ libxml2 libxml2-devel ncurses ncurses-devel
```

2. Install dahdi-linux-complete package

```
1) [root@localhost src]# tar -xvzf dahdi-linux-complete-2.6.2+2.6.2.tar.gz
```

```
2) [root@localhost dahdi-linux-complete-2.6.2+2.6.2]# make
```

```
3) [root@localhost dahdi-linux-complete-2.6.2+2.6.2]# make install
```

```
4) [root@localhost dahdi-linux-complete-2.6.2+2.6.2]# make config
```

3. Install asterisk

```
1) [root@localhost src]# tar -xvzf asterisk-1.8.7.0.tar.gz
```

```
2) [root@localhost asterisk-1.8.7.0]# ./configure
```

```
3) [root@localhost asterisk-1.8.7.0]# make
```

```
4) [root@localhost asterisk-1.8.7.0]# make install
```

```
5) [root@localhost asterisk-1.8.7.0]# make samples
```


Chapter 5 Software Configuration

1. Create the configuration information

Please run the “dahdi_genconf” command to configure the “/etc/dahdi/system.conf” file and generate “/etc/asterisk/dahdi-channels.conf” file.

```
[root@localhost ~]# dahdi_genconf
```

It will not show anything if the command runs successfully. After doing that, the “/etc/dahdi/system.conf” file will be created as the following configuration.

```
# Autogenerated by /usr/sbin/dahdi_genconf on Thu Jul  1 11:33:13 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: WCTDM/4 "WCTDM board" (MASTER)
fxoks=1
echocanceller=mg2,1
fxoks=2
echocanceller=mg2,2
fxsks=3
echocanceller=mg2,3
fxsks=4
echocanceller=mg2,4

# Global data
loadzone      = us
defaultzone   = us
```

After running `dahdi_genconf` successfully, it will get the “dahdi-channels.conf” file as the following configuration:

```
; Span 1: WCTDM/4 "WCTDM board" (MASTER)
;;; line="1 WCTDM/6/0 FXSKS (In use) (SWEC: MG2)"
signalling=fxo_ks
callerid=asreceived
group=5
context=from-pstn
channel => 1
callerid=
group=
context=default

;;; line="2 WCTDM/4/1 FXSKS (In use) (SWEC: MG2)"
signalling=fxo_ks
callerid=asreceived
group=5
context=from-pstn
channel => 2
callerid=
group=
context=default

;;; line="3 WCTDM/4/2 FXSKS (In use) (SWEC: MG2)"
signalling=fxs_ks
callerid=asreceived
group=0
context=from-pstn
channel => 6
callerid=
group=
context=default

;;; line="5 WCTDM/4/3 FXSKS (In use) (SWEC: MG2)"
signalling=fxs_ks
callerid=asreceived
group=0
context=from-pstn
channel => 6
callerid=
group=
context=default
```

- Please run `dahdi_cfg -vv` command.

```
[root@localhost asterisk]# dahdi_cfg -vv
DAHDI Tools Version - 2.6.2
```

```
DAHDI Version: 2.6.2
```

```
Echo Cancellor(s): MG2
```

```
Configuration
```

```
=====
```

Channel map:

```
Channel 01: FXO Kewlstart (Default) (Echo Canceler: mg2) (Slaves: 01)
```

```
Channel 02: FXO Kewlstart (Default) (Echo Canceler: mg2) (Slaves: 02)
```

```
Channel 03: FXS Kewlstart (Default) (Echo Canceler: mg2) (Slaves: 01)
```

```
Channel 04: FXS Kewlstart (Default) (Echo Canceler: mg2) (Slaves: 02)
```

4 channels to configure.

```
Setting echocan for channel 1 to mg2
```

```
Setting echocan for channel 2 to mg2
```

```
Setting echocan for channel 3 to mg2
```

```
Setting echocan for channel 4 to mg2
```

- Please add the following line at the bottom of the “`/etc/asterisk/chan_dahdi.conf`” file. Users can run the following command in the CLI.

```
[root@localhost ~]# echo #include dahdi-channels.conf >>/etc/asterisk/chan_dahdi.conf
```

- If users want to load the asterisk, users can run the following command:

```
[root@localhost ~]# asterisk -vvgc
```

- Please run `dahdi show channels` command

You should see 4 channels as the following:

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

Chan	Extension	Context	Language	MOH Interpret	State
pseudo		default		default	In Service
	1	from-internal		default	In Service
	2	from-internal		default	In Service
	3	from-pstn		default	In Service
	4	from-pstn		default	In Service

Chapter 6 Reference

<http://www.asteriskguru.com/>

<http://www.asterisk.org/downloads>

<http://www.atcom.cn/>