

AX800P User Manual

ATCOM® Analog card AX800P 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 field; 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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Website address: <http://www.atcom.cn/>

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

Chapter 1 the Introduction of AX800P

Overview of the AX800P

The Asterisk card is the telephony PCI card that supports up to eight 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 8 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/VoIP Calls Conference

Hardware requirement

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

PCI card dimension:

169mm (length) × 100mm (height)

Chapter 2 Hardware Introduction

Hardware Configuration

Motherboard: AX800P

Dual ports FXS module: AX-210S

Dual ports FXO module: AX-210X

One FXS port and one FXO port module: AX-210XS

Splitter: SP400

Customers can use the combination of AX-210S, AX-210X, AX-210XS modules according to their requirements. One AX-210S module supports two FXS ports, one AX-210X module supports two FXO ports, One AX-210XS module supports one FXS port and one FXO port.

Attention: If user want to use FXS port, please provide the power cable for the card.

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

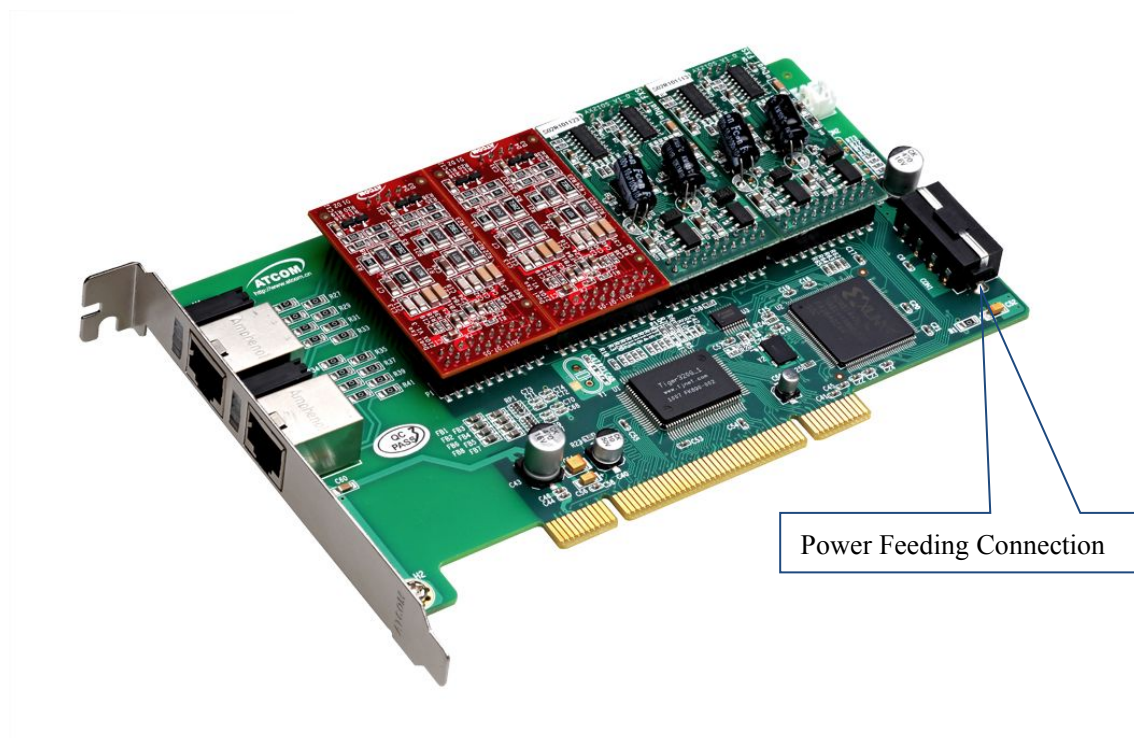


Figure 1: AX800P



Figure 2: AX-210S

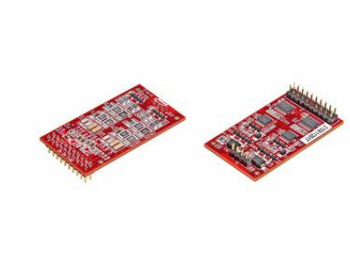


Figure 3: AX-210X



Figure 4: AX-210XS



Figure 5: SP400

Chapter 3 Test Environment

Test Environment:

dahdi-linux-complete-2.6.2+2.6.2

(download from ATCOM website)

asterisk-1.8

(download from Digium website)

Centos6.0

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

AX800P

Chapter 4 Software Installation

1. Check the hardware information

After inserting the card into the PCI 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:

```
-----  
05:04.0 Communication controller: Tiger Jet Network Inc. Tiger3XX Modem/ISDN interface  
-----
```

The asterisk card will be found. If users can not get the information as the above, please power off the server and try to use another PCI slot.

2. Installation the dependence packages

To install asterisk and dahdi, users need to install and update the following prerequisite packages firstly.

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

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

3. Download the dahdi and asterisk packages

User could download dahdi-linux-complete, and asterisk packages into the system.

```
[root@localhost src]#
```

```
wget http://downloads.asterisk.org/pub/telephony/asterisk/asterisk-1.8-current.tar.gz
```

Attention:

Users need download **dahdi package** for ax1d card from ATCOM website. Users can get the latest driver from the download center: <http://www.atcom.cn/download.html>.

For example:

Users can download the dahdi as the following link:

```
[root@localhost src]# wget
```

```
http://www.atcom.cn/cn/download/cards/ax1d/dahdi-linux-complete-2.6.1+2.6.1-1.2.tar.gz
```

4. Installation the dahdi and asterisk packages

Install dahdi-linux-complete

- 1) [root@localhost src]# tar -xvzf dahdi-linux-complete-xxx.tar.gz
- 2) [root@localhost dahdi-linux-complete-xxx+xxx]# make
- 3) [root@localhost dahdi-linux-complete-xxx+xxx]# make install
- 4) [root@localhost dahdi-linux-complete-xxx+xxx]# make config

Install asterisk

- 1) [root@localhost src]# tar -xvzf asterisk-xxx.tar.gz
- 2) [root@localhost asterisk-xxx]# ./configure
- 3) [root@localhost asterisk-xxx]# make
- 4) [root@localhost asterisk-xxx]# make install
- 5) [root@localhost asterisk-xxx]# make samples

Chapter 5 Software Configuration

1. Create the configuration messages

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

It will not show any messages if the “dahdi_genconf” command run successfully.

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

After that, users will get the following configuration in the “/etc/asterisk/system.conf” file.

```
-----
# Span 1: WCTDM/16 "ATCOM AX1600P REV E/F Board 17" (MASTER)
fxsks=1
echocanceller=mg2,1
fxsks=2
... ..
... ..
fxsks=7
echocanceller=mg2,7
fxsks=8
echocanceller=mg2,8

# Global data
loadzone          = us (According to your country)
defaultzone       = us (According to your country)
```

Users will get the configuration messages in the “/etc/asterisk/dahdi-channels.conf” file also.

```
-----
; Span 1: WCTDM/16 "Wildcard TDM400P REV E/F Board 17" (MASTER)
;;; line="1 WCTDM/16/0 FXSKS"
signalling=fxs_ks
callerid=asreceived
group=0
context=from-pstn
channel => 1
callerid=
group=
context=default

;;; line="2 WCTDM/16/1 FXSKS"
signalling=fxs_ks
callerid=asreceived
group=0
```

```
context=from-pstn
channel => 2
callerid=
group=
context=default
```

```
... ..
... ..
```

```
;;; line="15 WCTDM/16/7 FXSKS (SWEC: MG2)"
signalling=fxs_ks
callerid=asreceived
group=0
context=from-pstn
channel =>7
callerid=
group=
context=default
```

```
;;; line="16 WCTDM/16/8 FXSKS (SWEC: MG2)"
signalling=fxs_ks
callerid=asreceived
group=0
context=from-pstn
channel => 8
callerid=
group=
context=default
```

2. Load the dahdi

Users can run the command “dahdi_cfg -vv” to load the dahdi in the CLI.

```
[root@localhost ~]# dahdi_cfg -vv
```

The right output of running dahdi_cfg -vv will like the following:

DAHDI Tools Version - 2.6.2

DAHDI Version: 2.6.2

Echo Cancellor(s): MG2

Configuration

=====

Channel map:

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

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

... ..

... ..

Channel 07: FXS Kewlstart (Default) (Echo Canceler: mg2) (Slaves: 07)

Channel 08: FXS Kewlstart (Default) (Echo Canceler: mg2) (Slaves: 08)

16 channels to configure.

Setting echocan for channel 1 to mg2

Setting echocan for channel 2 to mg2

... ..

... ..

Setting echocan for channel 07 to mg2

Setting echocan for channel 08 to mg2

3. Please add the following line in the end of chan_dahdi.conf file
`#include dahdi-channels.conf`

4. Please run asterisk with the following command:
`[root@localhost ~]# asterisk -vvgc`
`localhost *CLI> reload`

5. Please run “dahdi show channels” command

The right output should like the following:

`localhost *CLI> dahdi show channels`

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

Chapter 6 Reference

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

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

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