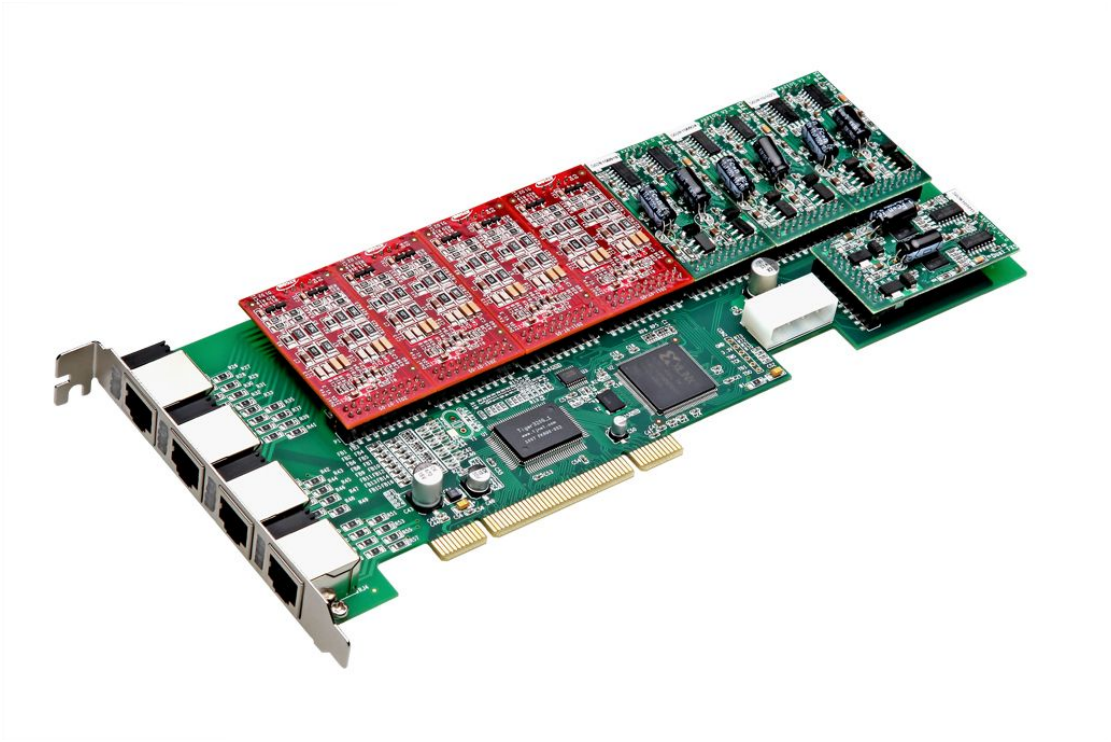

AX1600P User Manual

ATCOM® Analog card AX1600P

User Manual

Version: 2.0

2013-06-03

Release note

Version	Changed note	Editor	Date
1.0	First Release	Robert	
2.0	Release the User manual	Deniel	2013-06-10

Content

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.

Contact sales:

Address	District C, east of 2nd floor, #3, Crown industry buildings, Chegongmiao Industry area, Futian district, Shenzhen, China
Tel	+(86)755-23487618
Fax	+(86)755-23485319
E-mail	sales@atcomemail.com

Contact Technical Support:

Tel	+(86)755-23481119
E-mail	Support@atcomemail.com

Website address: http://www.atcom.cn/

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

Chapter 1 the Introduction of AX-1600P

Overview of the AX-1600P

The Asterisk card is the telephony PCI card that supports up to sixteen FXO and 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 16 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:

264mm (length) × 121mm (height)

Chapter 2 Hardware Introduction

Hardware Configuration

Motherboard: AX-1600P
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 users 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.

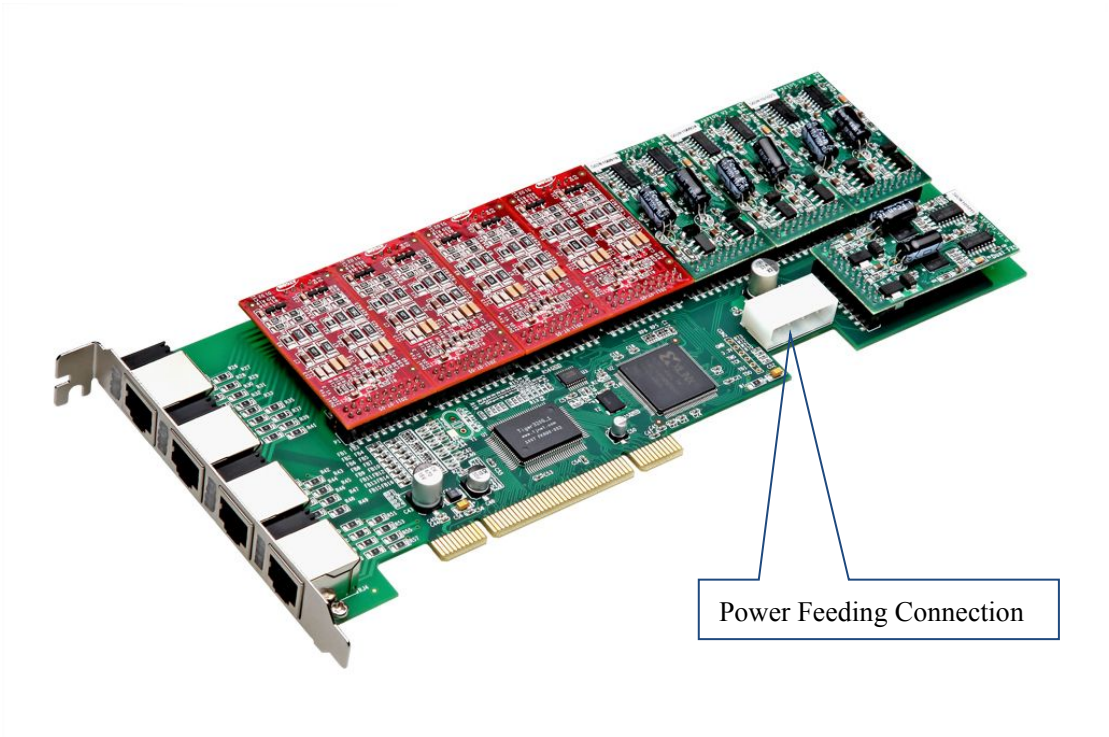

Figure 1: AX-1600P

Figure 2: AX-210S

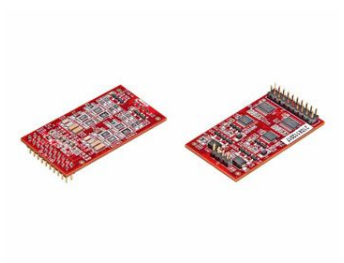

Figure 3: AX-210X

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)
AX1600P	

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 axe1d 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 "Wildcard TDM400P REV E/F Board 17" (MASTER)
fxsks=1
echocanceller=mg2,1
fxsks=2
... ...
... ...
fxsks=15
echocanceller=mg2,15
fxsks=16
echocanceller=mg2,16

# 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/16/14 FXSKS (SWEC: MG2)"
signalling=fxs_ks
callerid=asreceived
group=0
context=from-pstn
channel => 15
callerid=
group=
context=default

;;; line="16 WCTDM/16/15 FXSKS (SWEC: MG2)"
signalling=fxs_ks
callerid=asreceived
group=0
context=from-pstn
channel => 16
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 Canceller(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 15: FXS Kewlstart (Default) (Echo Canceler: mg2) (Slaves: 15)

Channel 16: FXS Kewlstart (Default) (Echo Canceler: mg2) (Slaves: 16)

16 channels to configure.

Setting echocan for channel 1 to mg2

Setting echocan for channel 2 to mg2

... ...

... ...

Setting echocan for channel 15 to mg2

Setting echocan for channel 16 to mg2

3. Please add the following command 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
3		from-pstn		default		In Service
...	...					
...	...					
14		from-pstn		default		In Service
15		from-pstn		default		In Service
16		from-pstn		default		In Service

Chapter 6 Reference

http://www.asteriskguru.com/
http://www.asterisk.org/downloads
http://www.atcom.cn/