atcom

AXE800PN User Manual

ATCOM® GSM Card AXE800PN

User Manual

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Release note

Version	Changed note	Editor	Date
1.0	First Release	Robert	
2.0	Release the User manual	Deniel	2013-12-31

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:

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Tel	+(86)755-23487618
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Website address: http://www.atcom.cn/

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

Chapter 1 the Introduction of AXE800PN

Overview of the AXE800PN

AXE800PN Asterisk card is an analog card, which support 8 FXO/FXS ports. Using AXE800PN, open source Asterisk PBX and stand alone PC, users can create their SOHO telephony solution which includes all the sophisticated features of traditional PBX, and extended features in IP PBX, such as voicemail, call transfer, call park, call pick up, call forward, bulk SMS sending, SMS receiving and so on.

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
Support Elastix 2.4.0, Trixbox 2.8.0.4

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

Chapter 2 Hardware Introduction

Motherboard: AXE800PN

Dual ports FXS module: AX-210S

Dual ports FXO module: AX-210X

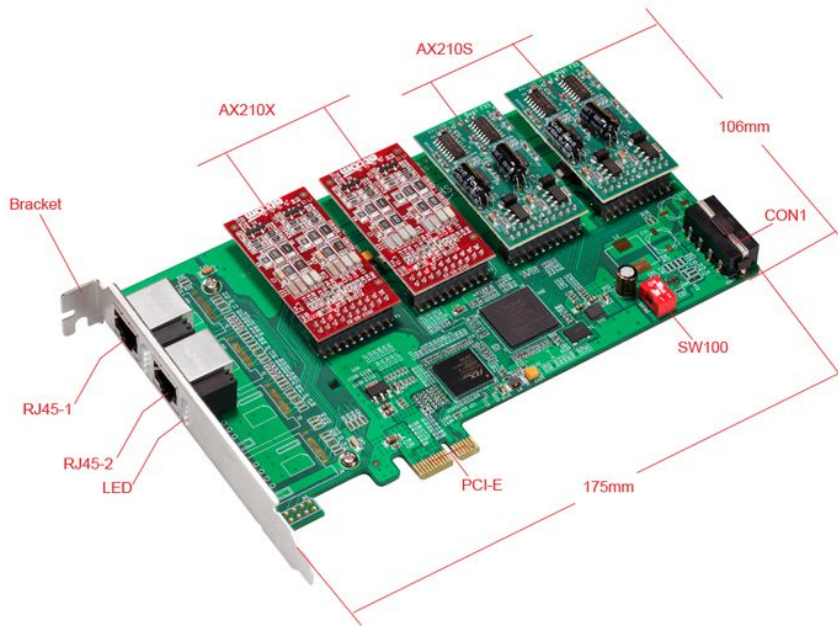One FXS port and one FXO port module: AX-210XS

Splitter: SP400

Figure 1: AXE800P

AX210S: FXS module, it supports two FXS ports.

AX210X: FXO module, it supports two FXO ports.

CON1: 4 pin power connector.

SW100: the switch set in the "1-off, 2-on" state. It should plug the power supply extra.

RJ45-1: Used for connecting a splitter to the card, the splitter supports four RJ11 ports and one RJ45 port. It's used for module 1 and module 2.

RJ45-2: Used for connecting a splitter to the card, the splitter supports four RJ11 ports and one RJ45 port. It's used for module 3 and module 4.

LED: Used for checking if the FXS/FXO module is detected or not. When the FXS/FXO ports are detected correctly, the LED will be on.

Users can choose the AX-210S, AX-210X, AX-210XS modules according to the requirements. One AX-210S module supports two FXS ports, one AX-210X module supports two FXO ports, and one AX-210XS module supports one FXS port and one FXO port.

Attention:

If users want to use FXS or FXO port, please make sure the SW100 in the state: "1-off, 2-on". After doing that, please plug the power cable for the card.

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

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-1.8.7.0

Centos6.0   (kernel version: 2.6.18-348.3.1.el5)

AXE800PN + 2*AX210S + 2*AX210X

Chapter 4 Software Installation

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

02:00.0 Communication controller: Digium, Inc. Device b200 (rev 02)

If users can not get the above message, please power-off the server and try to another PCI-E slot. If it does not help still, please try to contact with support@atcomemail.com.

1. To install asterisk and dahdi, we have to use "yum" command to install the following prerequisite packages:
   yum install -y bison bison-devel zlib zlib-devel openssl openssl-devel gnutls-devel gcc gcc-c++ libxml2 libxml2-devel ncurses ncurses-devel

   If users install the asterisk-11 or over versions, please check the following packages.
   yum install -y update
   yum install -y bison openssl gcc libxml2 libxml2-dev ncurses-dev gawk
   yum install -y sqlite3 libsqlite3-dev

2. Download the dahdi package from the link: http://www.atcom.cn/dl_ax4g.html
   Attention: users need download dahdi package for AXE800PN card from ATCOM website only.

3. 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

4. Install asterisk
   1) [root@localhost src]# tar -xvzf asterisk-1.8.7.0.tar.gz
   2) [root@localhost asterisk-11.2.0]# ./configure
   3) [root@localhost asterisk-11.2.0]# make
   4) [root@localhost asterisk-11.2.0]# make install
   5) [root@localhost asterisk-11.2.0]# make samples

Chapter 5 Software Configuration

1. Please check if the AXE800PN driver has been loaded successfully, try to run the command: "cat /proc/interrupts". And users should get one line with "axe4gn":

    16:        42079   467412   IO-APIC-fasteoi   axe4gn

    If users can not get the "axe4gn", please try to power-off the server and re-plug the card into another PCI-E slot.

2. 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: AXFXSO/0/1 "ATCOM GSM/WCDMA 0"
    fxsks=1
    echocanceller=mg2,1
    fxsks=2
    echocanceller=mg2,2
    ... ...
    ... ...
    fxoks=7
    echocanceller=mg2,7
    fxoks=8
    echocanceller=mg2,8

    # Global data
    loadzone   = us
    defaultzone   = us

After running dahdi_genconf successfully, the "dahdi-channels.conf" file will get the following configuration:

```
; Span 1: AXFXSO/0/1 "ATCOM GSM/WCDMA 0"
;;;; line="1 AXGCOM/0/1/1 FXSKS    (EC: MG2 - INACTIVE)"
signalling=fxs_ks
callerid=asreceived
group=0
context=from-pstn
channel => 7
callerid=
group=
context=default

;;;; line="2 AXGCOM/0/1/2 FXSKS    (EC: MG2 - INACTIVE)"
signalling=fxs_ks
callerid=asreceived
group=0
context=from-pstn
channel => 8
callerid=
group=
context=default
... ...
... ...
;;;; line="7 AXGCOM/0/1/7 FXOKS    (EC: MG2 - INACTIVE)"
signalling=fxo_ks
callerid="Channel 7" <4007>
mailbox=4007
group=7
context=from-internal
channel => 7
callerid=
mailbox=
group=
context=default

;;;; line="8 AXGCOM/0/1/8 FXOKS    (EC: MG2 - INACTIVE)"
signalling=fxo_ks
callerid="Channel 8" <4008>
mailbox=4008
group=5
context=from-internal
channel => 8
callerid=
```

mailbox=
group=
context=default

3. Please run dahdi_cfg –vv command.
   [root@localhost asterisk]# **dahdi_cfg -vv**
   DAHDI Tools Version - 2.6.2

   DAHDI Version: 2.6.2
   Echo Canceller(s): HWEC, MG2
   Configuration
   ======================

   8 channels to configure.

   Setting echocan for channel 1 to mg2
   Setting echocan for channel 2 to none
    ... ...
    ... ...
   Setting echocan for channel 7 to mg2
   Setting echocan for channel 8 to mg2

4. Please check if the "**#include dahdi-channels.conf**" command line is at the bottom of the "/etc/asterisk/chan_dahdi.conf" file. If not, users can run the following command to add it.
   [root@localhost ~]# **echo #include dahdi-channels.conf   >>/etc/asterisk/chan_dahdi.conf**

5. If users want to load the asterisk, users can run the following command:
    [root@localhost ~]# **asterisk –vvgc**

6. Please run dahdi show channels command
   You should see 4 channels as the following:
   centos6*CLI> **dahdi show channels**

Chan Extension	Context	Language	MOH Interpret	Blocked	State
pseudo	default		default		In Service

   centos6*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-internal		default		In Service
8	from-internal		default		In Service

Chapter 6 Reference

http://www.asteriskguru.com/

http://www.asterisk.org/downloads

http://www.openippbx.org/index.php?title=Main_Page

http://www.atcom.cn/