ATCOM® Analog Card AX-400P

Product Guide

Version: 1.0

The Installation of AX-400P
with Ubuntu 8.10

Content

Contact ATCOM

The Introduction of ATCOM

Founded in 1998, ATCOM technology has been always endeavoring in the R&D and manufacturing of the internet communication terminals. The product line of ATCOM includes IP Phone, USB Phone, IP PBX, VoIP gateway and Asterisk Card.

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

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

Chapter 1 the Introduction of AX-400P

Overview of the AX-400P

AX-400P Asterisk card is the TDM400P compatible PCI card that supports up to four FXO and FXS ports. Using AX-400P analog card, open source Asterisk PBX and stand alone PC, users can create their SOHO telephony solution includes all the sophisticated features of traditional PBX, and extend features such as voicemail in IP PBX. User can use AX-400P analog card with standard zaptel driver and Asterisk source code without modify any code. The FXO and FXS modules are interchangeable to suit various requirements.

Features

Analog card for Asterisk PBX
Support Asterisk PBX and zaptel driver
Support up to four fxo/fxs analog port
Suitable for SOHO PBX / VoiceMail / IVR.
Caller ID and Call waiting Caller ID
Conference

Configuration

Motherboard: AX-400P
Single port FXS module: AX-110S
Single port FXO module: AX-110X

Hardware requirement

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

PCI card dimension:

102mm (height) × 134mm (Length)

Chapter 2 Hardware Introduction

Hardware Configuration

Motherboard: AX-400P

Modules:AX-110X,AX-110S

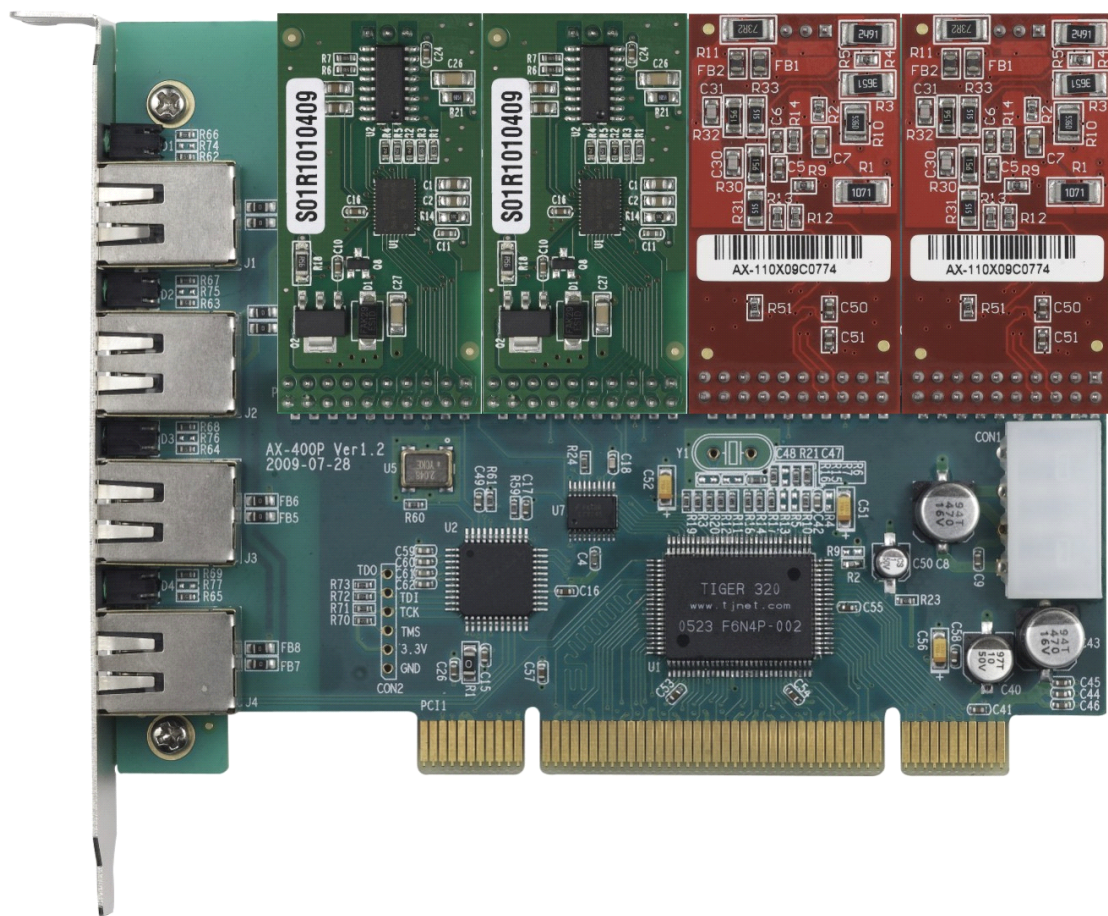Warning: Please do not plug and unplug the card when the PC power is on.

Figure 1:AX-400P with 2 AX-110S and 2 AX-110X
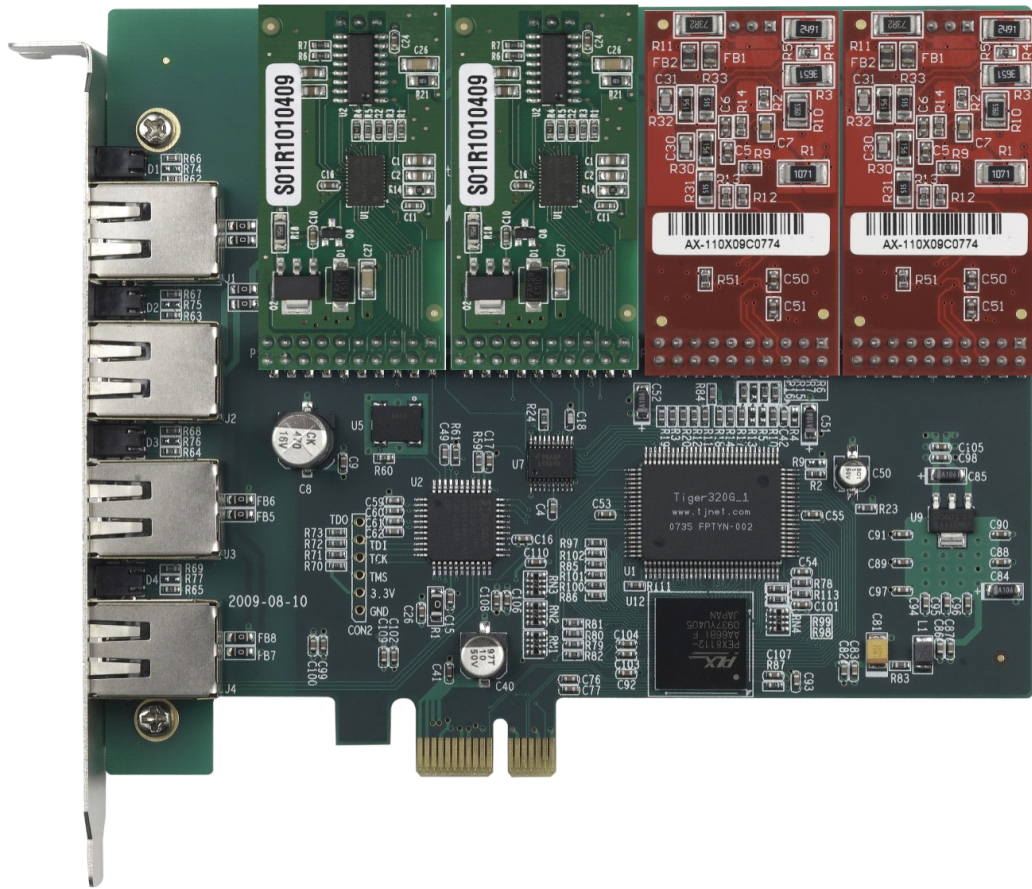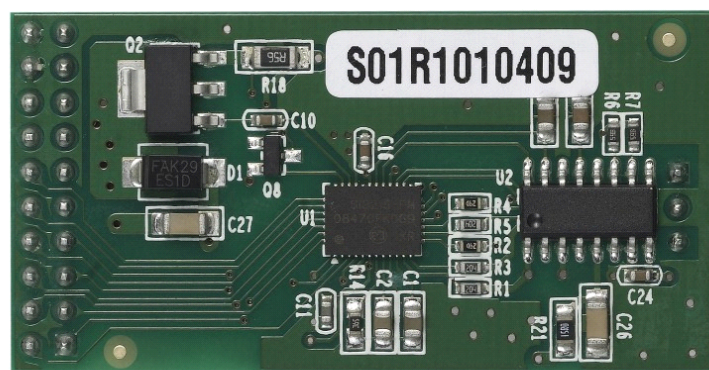
Figure 2:AXE-400P with 2 AX-110S and 2 AX-110X

Figure 3: AX-110X Single FXS Module
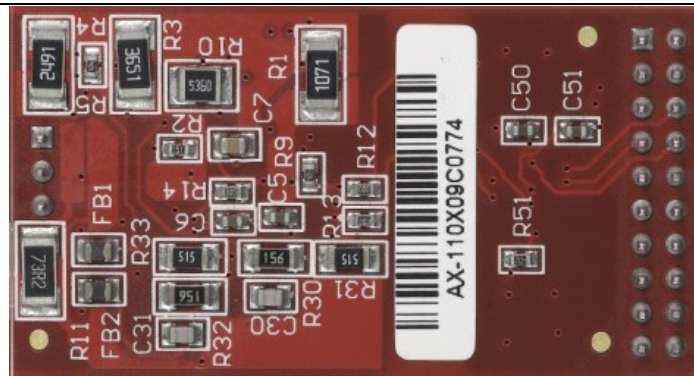
Figure 4: AX-110S Single FXO Module

Chapter 3 Software Installation

Test Environment:

Ubuntu 8.10
AX-400P
4 AX-110X

1. Please install necessary packages as following:
    root@atcom-desktop:~# apt-get install g++
    root@atcom-desktop:~# apt-get install libxml2-dev
    root@atcom-desktop:~# apt-get install ncurses-dev

2. Before you insert the AX-400P, please make sure that you have installed
    dahdi-linux,dahdi-tools and asterisk on your Ubuntu 8.10, if not ,please download them as
    following:
    root@atcom-desktop:~# cd /usr/src
    root@atcom-desktop:/usr/src# wget
    http://downloads.asterisk.org/pub/telephony/dahdi-linux/releases/dahdi-linux-2.3.0.tar.gz
    root@atcom-desktop:/usr/src# wget
    http://downloads.asterisk.org/pub/telephony/dahdi-tools/releases/dahdi-tools-2.3.0.tar.gz
    root@atcom-desktop:/usr/src# wget
    http://downloads.asterisk.org/pub/telephony/asterisk/releases/asterisk-1.6.0.27.tar.gz
    root@atcom-desktop:/usr/src# tar -xzvf dahdi-linux-2.3.0.tar.gz
    root@atcom-desktop:/usr/src# tar -xzvf dahdi-tools-2.3.0.tar.gz
    root@atcom-desktop:/usr/src# tar -xzvf asterisk-1.6.0.27.tar.gz

3. Install dahdi
    root@atcom-desktop:/usr/src# cd dahdi-linux-2.3.0
    root@atcom-desktop:/usr/src/dahdi-linux-2.3.0# make clean
    root@atcom-desktop:/usr/src/dahdi-linux-2.3.0# make
    root@atcom-desktop:/usr/src/dahdi-linux-2.3.0# make install
    You will see:
    ###
    ###
    ### DAHDI installed successfully.
    ### If you have not done so before, install the package
    ### dahdi-tools.
    ###
    ###

```
root@atcom-desktop:/usr/src/dahdi-linux-2.3.0# cd ..
root@atcom-desktop:/usr/src# cd dahdi-tools-2.3.0
root@atcom-desktop:/usr/src/dahdi-tools-2.3.0# ./configure
root@atcom-desktop:/usr/src/dahdi-tools-2.3.0# make
root@atcom-desktop:/usr/src/dahdi-tools-2.3.0# make install
```

You will see:
```
######################################################
###
### DAHDI tools installed successfully.
### If you have not done so before, install init scripts with:
###
###      make config
###
######################################################
root@atcom-desktop:/usr/src/dahdi-tools-2.3.0# make config
```

4. Install asterisk:
```
root@atcom-desktop:/usr/src/dahdi-tools-2.3.0# cd ..
root@atcom-desktop:/usr/src# cd asterisk-1.6.0.27
root@atcom-desktop:/usr/src/asterisk-1.6.0.27# ./configure
```
You will see:
```
               .$$$$$$$$$$$$$$$=..
             .$7$7..          .7$$7:.
           .$$:.                 ,$7.7
         .$7.     7$$$$           .$$77
      ..$$.       $$$$$            .$$$7
     ..7$   .?.   $$$$$   .?.       7$$$.
    $.$.   .$$$7. $$$$7 .7$$$.      .$$$.
  .777.   .$$$$$$77$$$77$$$$$7.      $$$,
  $$$~      .7$$$$$$$$$$$$$7.       .$$$.
.$$7          .7$$$$$$$7:          ?$$$.
$$$             ?7$$$$$$$$$$I        .$$$7
$$$            .7$$$$$$$$$$$$$$$$      :$$$.
$$$          $$$$$$7$$$$$$$$$$$$$$     .$$$.
$$$           $$$   7$$$7  .$$$      .$$$.
$$$$            $$$$7                .$$$.
7$$$7           7$$$$               7$$$
 $$$$$                            $$$
  $$$$7.                        $$   (TM)
   $$$$$$$.              .7$$$$$$  $$
     $$$$$$$$$$$$7$$$$$$$$$.$$$$$$
       $$$$$$$$$$$$$$$$.
root@atcom-desktop:/usr/src/asterisk-1.6.0.27# make install
```

root@atcom-desktop:/usr/src/asterisk-1.6.0.27# make samples

5. Shut down your server and insert AX-400P into your PCI slot then boot your server, please use the "lspci" command to check the PCI bus compatibility. The correct output will like the following:

    ===

    05:02.0 Communication controller: Tiger Jet Network Inc. Tiger3XX Modem/ISDN interface

    ===

    An "Tiger3XX Modem/ISDN interface" will be found, if you can not see it, please poweroff your server and try another PCI slot, if it still does not help, you have to check the compatibility issue between the card and your PCI bus.

Chapter 4 Software Configuration

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

   root@atcom-desktop:~# dahdi_genconf

   It does not show any output if dahdi_genconf run successfully.

2. To check whether it has finished the configuration, please open the system.conf file:

   root@atcom-desktop:~# vi /etc/dahdi/system.conf

   You will see:

   ==

   \# Autogenerated by /usr/sbin/dahdi_genconf on Wed May 19 03:53:49 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 "Wildcard TDM400P REV I Board 5" (MASTER)

   fxsks=1

   echocanceller=mg2,1

   fxsks=2

   echocanceller=mg2,2

   fxsks=3

   echocanceller=mg2,3

   fxsks=4

   echocanceller=mg2,4

   \# Global data

   loadzone   = us

   defaultzone   = us

   ==

3. Please configure the chan_dahdi.conf file:

   root@atcom-desktop:~# cd /etc/asterisk

   root@atcom-desktop:/usr/src/asterisk-1.6.0.27# vim /etc/asterisk/chan_dahdi.conf

   Please add following word at the end of it:

   ==

#include dahdi-channels.conf
==

4. root@atcom-desktop:~# dahdi_cfg -vvvvvvvvvvvvvvvvv
   You will see:
   ==

   DAHDI Tools Version - 2.3.0

   DAHDI Version: 2.3.0
   Echo Canceller(s):
   Configuration
   ======================

   Channel map:

   Channel 01: FXS Kewlstart (Default) (Echo Canceler: mg2) (Slaves: 01)
   Channel 02: FXS Kewlstart (Default) (Echo Canceler: mg2) (Slaves: 02)
   Channel 03: FXS Kewlstart (Default) (Echo Canceler: mg2) (Slaves: 03)
   Channel 04: FXS Kewlstart (Default) (Echo Canceler: mg2) (Slaves: 04)

   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
   ==

5. root@atcom-desktop:/usr/src/asterisk-1.6.0.27# asterisk
   root@atcom-desktop:/usr/src/asterisk-1.6.0.27# asterisk -r
   atcom-desktop*CLI> reload
   atcom-desktop*CLI> dahdi show channels
   You will see:
   ==

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

   ==

Chapter 5 Reference

http://www.asteriskguru.com/

http://www.asterisk.org/downloads

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

http://www.atcom.cn/