



AX800P+2\*AX210S+2\*AX210X

## **ATCOM® Analog Card AX800P/AXE800P**

### **Product Guide**

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Version: 1.0

2011-06-15

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# 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, IP PBX, VoIP gateway and Asterisk Card.

## Contact Sales:

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Tel	+(86)755-23487618
Fax	+(86)755-23485319
E-mail	<a href="mailto:sales@atcomemail.com">sales@atcomemail.com</a>

## Contact Technical Support:

Tel	+(86)755-23481119
E-mail	<a href="mailto:Support@atcomemail.com">Support@atcomemail.com</a>

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

ATCOM Wiki Website: [http://www.openippbx.org/index.php?title=Main\\_Page](http://www.openippbx.org/index.php?title=Main_Page)

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

# Chapter 1 the Introduction of AX800P

## Overview of the AX800P/AXE800P

AX800P Asterisk card is the telephony PCI/PCI-E card that supports up to eight FXO and FXS ports. Using AX800P 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 Zaptel and Dahdi driver  
Support up to 8 FXO/FXS analog channels  
Suitable for SOHO PBX / VoiceMail / IVR.  
Caller ID and Call waiting  
Conference

## Applications

IP PBX  
IVR system  
Small Office Home Office  
Traditional Calls/VoIP Calls Conference

## Hardware Requirement

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

## PCI Card Dimension:

AX800P: 169mm (length) × 98mm (height)  
AXE800P: 169mm (length) × 110mm (height)

# Chapter 2 Hardware Introduction

## Hardware Configuration

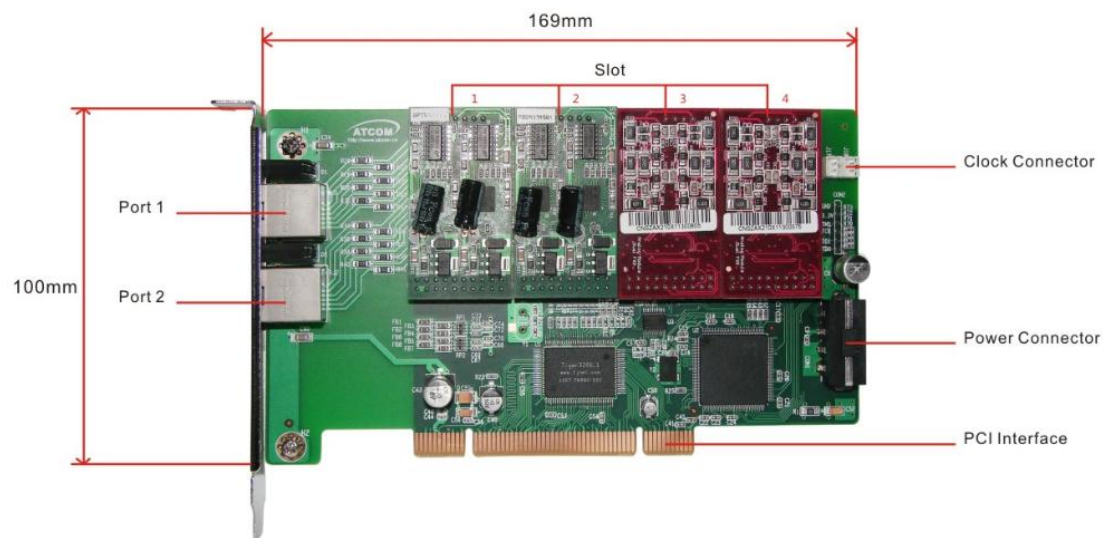
Motherboard: AX-800P

Dual ports FXS module: AX-210S

Dual ports FXO module: AX-210X

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.



AX800P+2\*AX210S+2\*AX210X

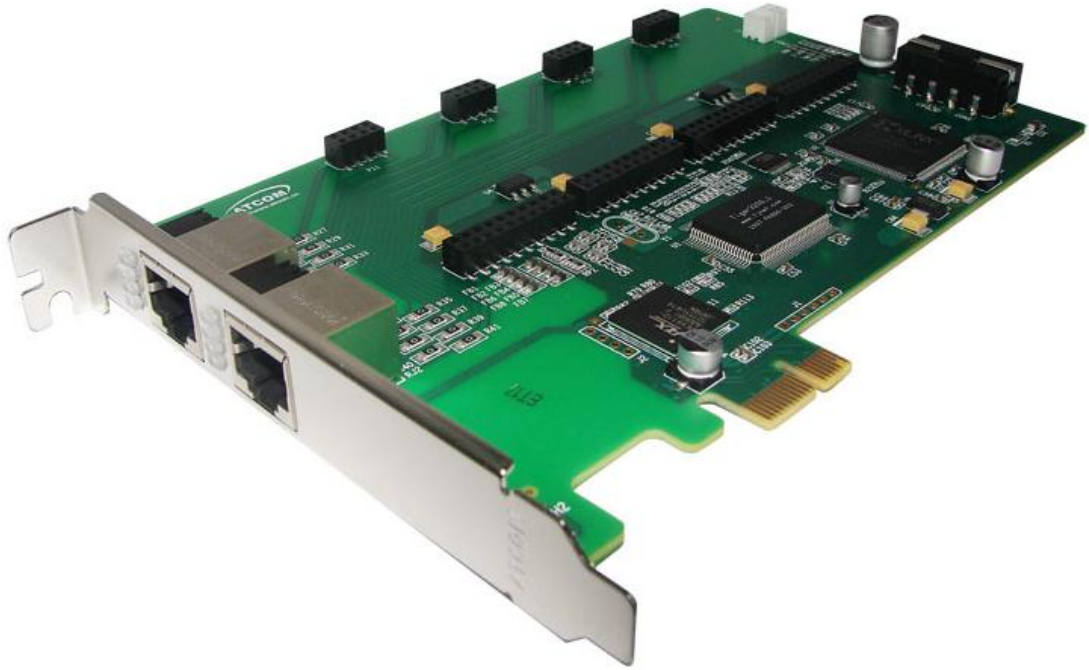
Port 1 and port 2 are RJ45 interfaces, the port is connected to a splitter, the splitter supports one RJ45 port and 4 RJ11 ports.

Near the port 1 and port 2, there are LEDs, when the driver of the card is loaded correctly, the LEDs will be green.

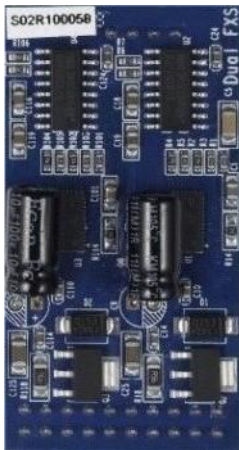
Clock connector is used to connect to ISDN PRI card, in this way the analog card can synchronize with Telecom through PRI line, it is good for receiving fax if you connect your fax to fxs port directly.

Attention: If you want to use FXS port, you have to provide the card with 12V power(4 Pin power cable).

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



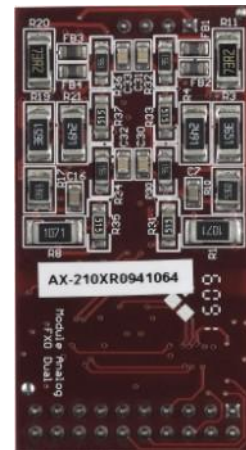
AXE800P



AX-210S



AX-210XS



AX-210X



SP400

## Chapter 3 Software Installation

### Test Environment:

asterisk-1.6.1.12  
dahdi-linux-2.2.0.2  
dahdi-tools-2.2.0  
Centos 5.4  
AX-800P+210S+210X

After inserting the card into your PCI slot and boot your server, please use the “lspci -vv” command to check the PCI bus compatibility. The correct output will like the following:

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

A Tiger Jet device will be found, if you can not see the Tiger Jet device, 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.

1. To install asterisk and dahdi, we have to install the following prerequisite packages:  
bison bison-devel zlib zlib-devel openssl openssl-devel gnutls-devel gcc gcc-c++  
Please use the yum install command to install the above packages.
2. Download asterisk,dahdi-linux and dahdi-tools  
[root@localhost src]#  
wget <http://downloads.asterisk.org/pub/telephony/asterisk/releases/asterisk-xx>  
[root@localhost src]#  
wget <http://downloads.asterisk.org/pub/telephony/dahdi-linux/releases/dahdi-linux-xx>  
[root@localhost src]#  
wget <http://downloads.asterisk.org/pub/telephony/dahdi-tools/releases/dahdi-tools-xx>
3. Install asterisk,dahdi-linux and dahdi-tools  
Install dahdi-linux and Rectify wctdm.c
  - 1) [root@localhost src]# tar -xvzf dahdi-linux-2.2.0.2.tar.gz
  - 2) [root@localhost src]# cd dahdi-linux-2.2.0.2/drivers/dahdi/
  - 3) rm -rf wctdm.c
  - 4) wget <http://www.atcom.cn/downloads/TelephonyCard/drivers/AX-1600P/wctdm.c.v1.6>
  - 5) mv wctdm.c.v1.6 wctdm.c
  - 6) [root@localhost src]# cd dahdi-linux-2.2.0.2  
[root@localhost dahdi-linux-2.2.0.2]# make
  - 7) [root@localhost dahdi-linux-2.2.0.2]# make install



#### Install dahdi-tools

- 1) [root@localhost src]# tar -xvzf dahdi-tools-2.2.0.tar.gz
- 2) [root@localhost src]# cd dahdi-tools-2.2.0
- 3) [root@localhost dahdi-tools-2.2.0]# ./configure
- 4) [root@localhost dahdi-tools-2.2.0]# make
- 5) [root@localhost dahdi-tools-2.2.0]# make install

#### Install asterisk

- 1) [root@localhost src]# tar -xvzf asterisk-1.6.1.12.tar.gz
- 2) [root@localhost src]# cd asterisk-1.6.1.12
- 3) [root@localhost asterisk-1.6.1.12]# ./configure
- 4) [root@localhost asterisk-1.6.1.12]# make
- 5) [root@localhost asterisk-1.6.1.12]# make install
- 6) [root@localhost asterisk-1.6.1.12]# make samples

---

## Chapter 4 Software Configuration

1. Please check if the AX-800P driver has been loaded successfully, run `cat /proc/interrupts` command and you should see one line with `wctdm`.  
If you can not see `wctdm`, you can try to poweroff your server and replugin AX-800P into another PCI slot.
2. Please use 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 does not show any output if `dahdi_genconf` runs successfully.

`system.conf`

-----  
`# Span 1: WCTDM/16 "Wildcard TDM400P REV E/F Board 17" (MASTER)`

`fxsks=1`

`echocanceller=mg2,1`

`fxsks=2`

`echocanceller=mg2,2`

`fxsks=3`

`echocanceller=mg2,3`

`fxsks=4`

`echocanceller=mg2,4`

`fxsks=5`

`echocanceller=mg2,5`

`fxsks=6`

`echocanceller=mg2,6`

`fxsks=7`

`echocanceller=mg2,7`

`fxsks=8`

`# Global data`

`loadzone = us (According to your country)`

`defaultzone = us (According to your country)`  
-----

dahdi-channels.conf

-----  
; 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="3 WCTDM/16/2 FXSKS"

signalling=fxs\_ks

callerid=asreceived

group=0

context=from-pstn

channel => 3

callerid=

group=

context=default

;;; line="4 WCTDM/16/3 FXSKS"

signalling=fxs\_ks

callerid=asreceived

group=0

context=from-pstn

channel => 4

callerid=

group=

context=default

;;; line="5 WCTDM/16/4 FXSKS"

signalling=fxs\_ks

```
callerid=asreceived  
group=0  
context=from-pstn  
channel => 5  
callerid=  
group=  
context=default
```

```
::: line="6 WCTDM/16/5 FXSKS (SWEC: MG2)"  
signalling=fxs_ks  
callerid=asreceived  
group=0  
context=from-pstn  
channel => 6  
callerid=  
group=  
context=default
```

```
::: line="7 WCTDM/16/6 FXSKS"  
signalling=fxs_ks  
callerid=asreceived  
group=0  
context=from-pstn  
channel => 7  
callerid=  
group=  
context=default
```

```
::: line="8 WCTDM/16/7 FXSKS (SWEC: MG2)"  
signalling=fxs_ks  
callerid=asreceived  
group=0  
context=from-pstn  
channel => 8  
callerid=  
group=  
context=default
```

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

The right output of running dahdi\_cfg -vv will like the following:

```
DAHDI Tools Version - 2.2.0
```

```
DAHDI Version: 2.2.0.2
```

```
Echo Canceller(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: FXO Kewlstart (Default) (Echo Canceler: mg2) (Slaves: 03)
```

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

```
Channel 05: FXS Kewlstart (Default) (Echo Canceler: mg2) (Slaves: 05)
```

```
Channel 06: FXS Kewlstart (Default) (Echo Canceler: mg2) (Slaves: 06)
```

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

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

8 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
```

```
Setting echocan for channel 5 to mg2
```

```
Setting echocan for channel 6 to mg2
```

```
Setting echocan for channel 7 to mg2
```

```
Setting echocan for channel 8 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:

```
asterisk -vvgc
```

```
reload
```

5. Please run dahdi show channels command

The right output should like the following:

Chan Extension	Context	Language	MOH Interpret	Blocked	State
pseudo	default		default		In Service
1	from-internal		default		In Service
2	from-internal		default		In Service
3	from-internal		default		In Service
4	from-internal		default		In Service
5	from-pstn		default		In Service
6	from-pstn		default		In Service
7	from-pstn		default		In Service
8	from-pstn		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.openippbx.org/index.php?title=Main_Page)

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