

Install X-400p:

To following this guide, you need a PC with linux and asterisk installed,X-400p mother card and FXO module or FXS module

Configure Card:

The X-400p is an FXO/FXS interchangeable card. You can configure it as FXO or FXS or hybrid one with the modules.

There are four module slot in the X-400p mother board. In this demo, we put the FXO (the red one) modules to the TEL1 and TEL2 ports. And the FXS modules(the blue one) to the TEL3 and TEL4 ports. Then the tel1 and tel2 were configured as FXO ports. And tel3, tel4 configured as FXS ports. Remember to put the power cable to the X-400p card when using FXS ports. Otherwise it will claim power error

Install Linux: I am using Redhat9.0 and AS4 update4 in the testing. Other Liunx version may suitable, please refer asterisk official website for more info about the linux support.

Install asterisk: to use X-400P, you need to install zaptel driver. Libpri. And asterisk. Download these three file from <http://www.asterisk.org/downloads> download the latest version of asterisk 1.4.2, zaptel.1.4.1, libpri1.4.0 to local directory **/usr/src** .

When finish the downloading; move to /usr/src and unpack the source and run the installation orderly(firdst zaptel, then libpri,then asterisk

```
cd /usr/src
tar -zxvf zaptel-1.4.1.tar.gz
cd zaptel-1.4.1
make clean;make install          ; finish the install of zaptel

cd ..
tar -zxvf libpri-1.4.0.tar.gz    ; unpack the libpri source file
cd libpri-1.4.0
make clean;make install          ; finish the install of libpri

cd ..
tar -zxvf asterisk-1.4.2.tar.gz ;unpack the asterisk source file
cd asterisk-1.4.2
make clean;make install          ;finish the install of asterisk
```

Configure asterisk:

After success install zaptel , libpri and asterisk. You also need to run **make samples** ;to generate the default configure file for asterisk.

To configure X-400P , you need to configure the following files:

/etc/zaptel.conf ; configure file for zaptel driver. Set the hardware description of X-400P in this file

/etc/asterisk/zapata.conf ;configure file for asterisk. Interface the X-400P to asterisk.

/etc/asterisk/extensions.conf: ;dial plan of asterisk.

/etc/asterisk/sip.conf ;sip account description.

The most important part of **zaptel.conf** is:

fxsks=1,2 ;FXO using FXS signaling

fxoks=3,4 ;FXS using FXO signaling

In the **/etc/asterisk/zapata.conf** file:

```
signalling = fxs_ks
context = pstn_incoming ; incoming call from port1,2 will route to this extensions.
channel => 1,2

signalling = fxo_ks
context => edwintest
channel => 3,4 ; when port3,port4 make calls, it will go to context edwintest
in extensions.conf file
```

in the **sip.conf** file:

```
[8806] ; sip account 8806
type=friend
username=8806
host=dynamic
secret=8806
context=edwintest ; when 8806 make calls, it will go to context edwintest in
extensions.conf file

callerid="edwin"
mailbox=8806
```

in the **extensions.conf** file:

```
[pstn-incoming]
exten => _x.,1,Answer()
exten => _x.,2,Dial(zip/3,20,tr)
```

Run asterisk:

Connect the TDM-400p's port1 to your pstn line and port2 to a normal phone.

Run

```
modprobe zaptel to load zaptel
modprobe wctdm to load the X-400p driver
asterisk to run asterisk
ztcfg -vvvv to configure X-400p channel
then run
asterisk again to run asterisk
```

After asterisk is successful running , you can dial to the line connect to port1 via pstn, then the calls will be routed to port2. the normal phone which connect to port2 will ring and you can answer the calls..

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