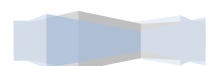




## OpenVox FD140 User Manual





## **OpenVox-Best Cost Effective Asterisk Cards**

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*Thank You for Choosing OpenVox Products!*



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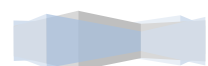
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## FD140 Description

In most of the time, users need to reconnect the BRI/PRI line to a redundant server maintained by UPS when main PBX Server is power off. It may cause a little extra work for people who use simple and small PBX servers. But for those who run complex PBXs in server rooms, it becomes real problems.

How to eliminate this problem? The release of OpenVox FD140 failover box for BRI/PRI answers it. The FD140 can automatically switch the BRI/PRI line to the redundant server when the power of the main PBX server has been cut off and will automatically switch back to normal when the power is on again. In this way, no more worries about getting the BRI/PRI line connected to the redundant server when the main server is down.

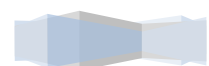
FD140 is controlled through an Asterisk loadable module `res_failover.so`. This module keeps sending “running” signal to redundant server when Asterisk is running. Once Asterisk is down or system power is cut off, the module will not be able to send out the “running” signal to FB40/FD40 and thus FD140 will automatically switch to the redundant server.



FD140 provides a reliable and flexible solution to Asterisk PBX.

## FD140 Features

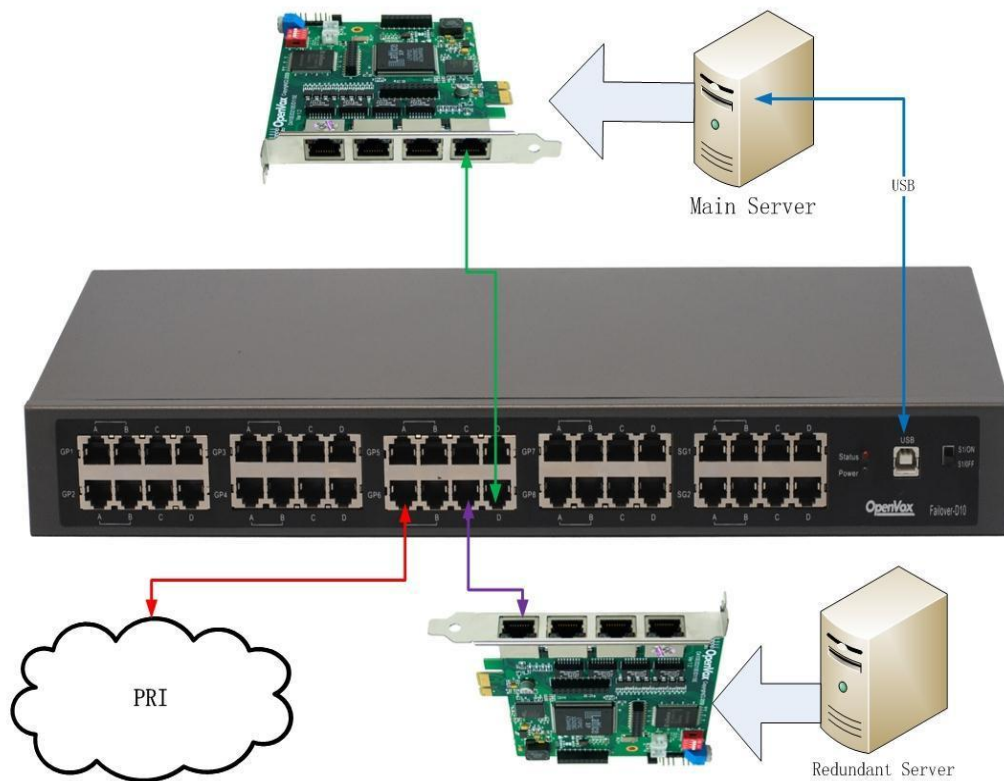
- FD140 contains 4 E1 / T1 / BRI ports.
- Easy installation; uses USB to connect computer or server. In order to provide more stable power supply, a USB interface for two connected hosts.
- Industry standard USB type B connector.
- USB 2.0 and 1.1 compliant.
- FD140 supports all OpenVox D series and B series cards, Digium and other compatible digital cards.
- Two indicator lights, red and green. Two lights, said an Asterisk work normal, FD140 work. Only when green light said Asterisk hangs, FD140 switch to the backup phone.
- Supports multiple FD140 devices in one system. Support the BRI or PRI circuit connection.
- Each network interface is divided into four mouth end, A, B, C, D, respectively, the interface of A and B are connected. Digital card.net client any end of the connection of A and B, redundant one interface can according to your needs, our TAP the card, to record, so as to meet your requirement for functional diversification. C and D connected to digital card of CPE, D is one end of the primary server, C



is the standby server. For cable connection, LAN received any end of the A or B, D connected to the main network, C connect backup network.

## FD140 Installation Guide

### Hardware Connection



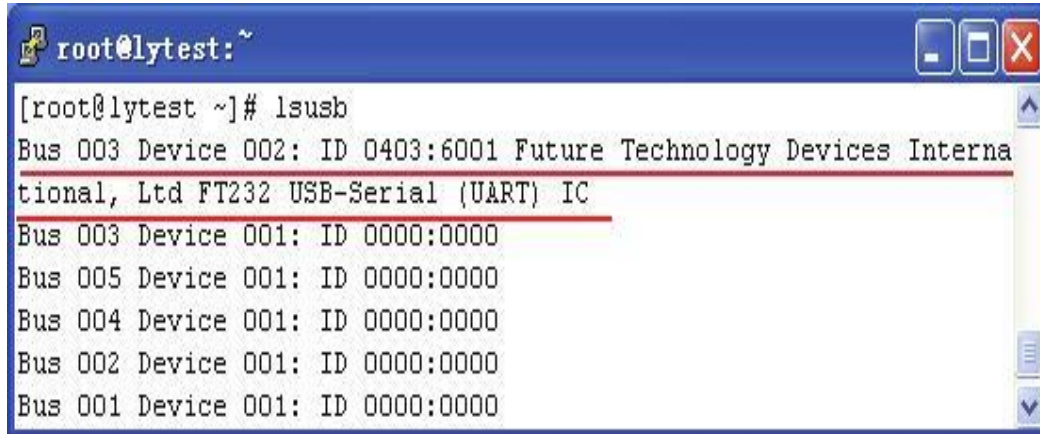
### Device Driver Detection

The device driver of FD140 has been integrated with many Linux distributions. Users can run the following command to see if the FD140



has been recognized or detected by the system.

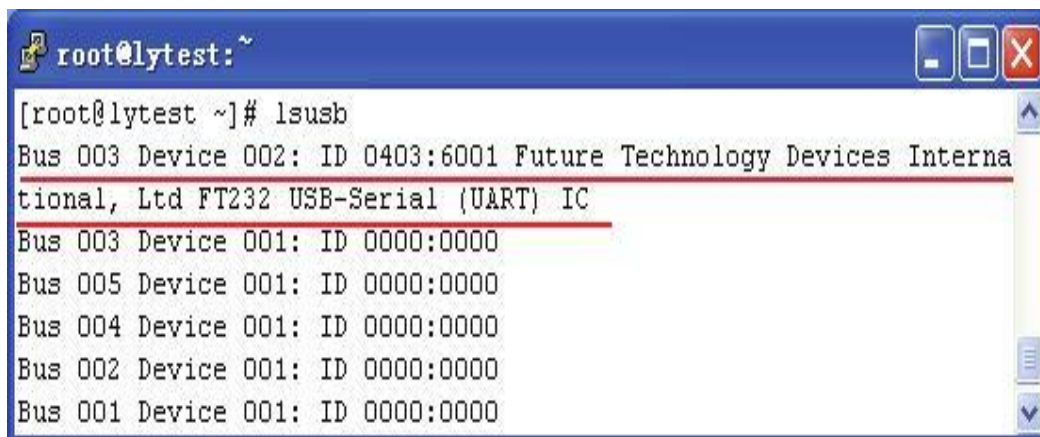
```
# dmesg | grep FTDI
```



```
root@lytest:~  
[root@lytest ~]# lsusb  
Bus 003 Device 002: ID 0403:6001 Future Technology Devices Interna  
tional, Ltd FT232 USB-Serial (UART) IC  
Bus 003 Device 001: ID 0000:0000  
Bus 005 Device 001: ID 0000:0000  
Bus 004 Device 001: ID 0000:0000  
Bus 002 Device 001: ID 0000:0000  
Bus 001 Device 001: ID 0000:0000
```

User can also run the lsusb command to check if the FD140 device is connected.

```
# lsusb
```



```
root@lytest:~  
[root@lytest ~]# lsusb  
Bus 003 Device 002: ID 0403:6001 Future Technology Devices Interna  
tional, Ltd FT232 USB-Serial (UART) IC  
Bus 003 Device 001: ID 0000:0000  
Bus 005 Device 001: ID 0000:0000  
Bus 004 Device 001: ID 0000:0000  
Bus 002 Device 001: ID 0000:0000  
Bus 001 Device 001: ID 0000:0000
```



## FD140 Working Instruction

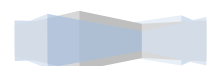
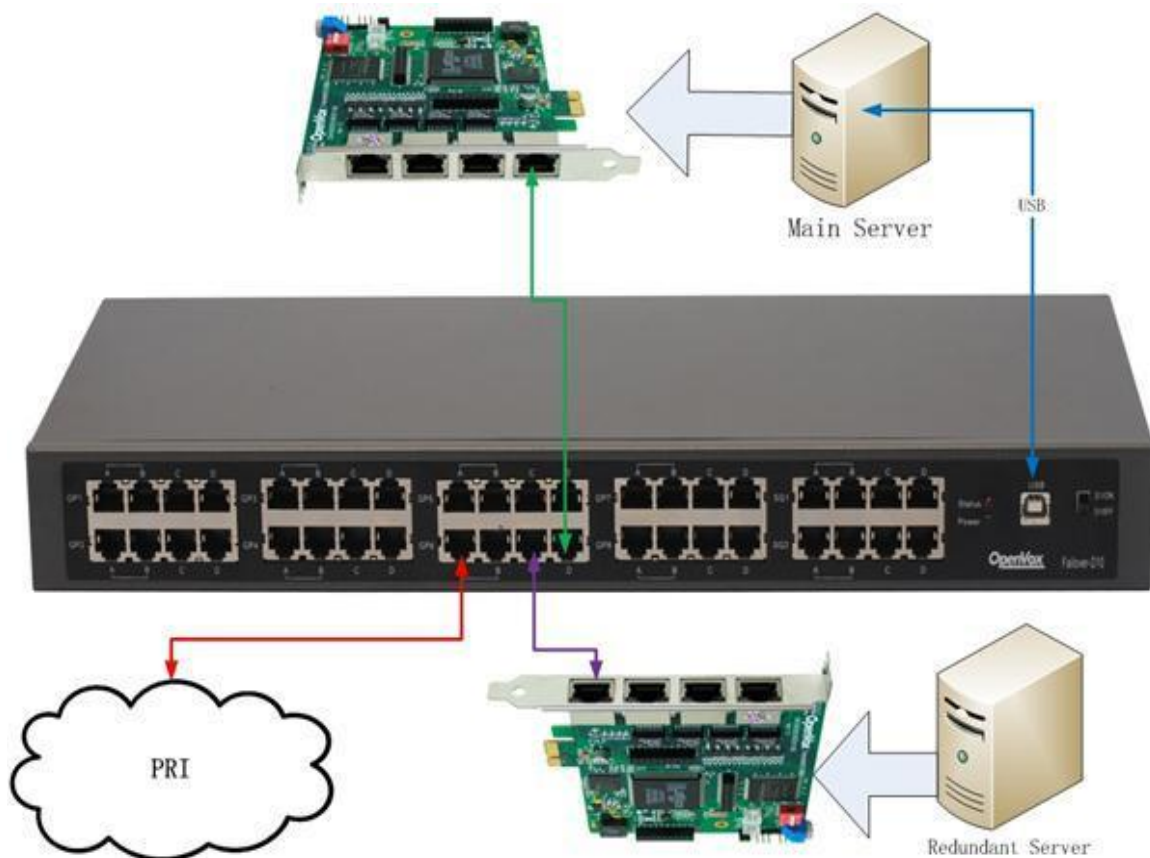
As shown:

When the PBX Server is ON and Asterisk works, the signal goes from:

1->LAN(red) 2->Main Network(green)

When the power of PBX cut off or Asterisk abnormal work, the signal goes form:

1->LAN(red) 2->Redundant Network(purple)





# FD140 Software Installation

Before installation, make sure the host system (LINUX) is running good, whether the DAHDI and Asterisk installation well, whether boards (Analog cards) drivers have loaded into the system. If you buy our cards, has not yet installed, you can go to our official website to download the user manual, then install. After everything installed, and then into the following steps.

## Software Download

```
#wget
```

```
www.openvox.cn/download/drivers/failover/failover-1.0.1.tar.gz
```

## Software Installation

1)Unzip the file

```
#tar -xvzf failover-1.0.1.tar.gz
```

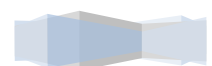
```
#cd failover
```

2)Copy the file to res directory under asterisk

```
#cp res_failover.c /usr/src/asterisk-*/res/
```

3)Copy the configuration file to /etc/asterisk directory

```
#cp failover.conf /etc/asterisk/
```



#### 4) Compile and install

```
#cd /usr/src/asterisk-*/
```

```
#make
```

```
#make install
```

#### 5) Reboot asterisk

```
#reboot
```

## Explanation of Configuration Files

```
[openvox_failover_1]
device=/dev/ttyUSB0
; Kick the soft watchdog every 4000ms
; default value: 4000
; Between 100ms and 9000ms
;kick_time_interval=4000
;event_cmd=no
;event_cmd=logger
; default value: yes
autorun=yes
```

```
:[openvox_failover_2]
;device=/dev/ttyUSB1
;kick_time_interval=500
;event_cmd=logger
;autorun=yes
```

- [openvox\_failover\_1]: Name of FD140 Device, to distinguish from different devices, a must to configuration;
- device=/dev/ttyUSB0: Name of USB device that FD140 uses, a must to configuration;
- kick\_time\_interval: the time interval of software watch dog; the



default time is 4000ms, user can customize the time with 100ms for Minimum and 9000ms for Maximum;

- `event_cmd`: event command, the default is `logger`, it will record the FD140 status in system log;
- `autorun`: this decides if FD140 will start when asterisk boots; the default is `yes` which means the FD140 starts when asterisk boots; if no, the FD140 will not start when asterisk boots and user may need manually boot the device by running `failover start` command.

## Steps to Use

1)Start asterisk

```
# asterisk -vvvgc
```

2)Start FD140 device

```
*CLI> failover start
```

3)Stop FD140 device

```
*CLI> failover stop
```

4)Show FD140 device information

```
*CLI> failover show
```

5)Reload FD140 device configuration file

```
*CLI> failover stop    Before reload the configuration file, must  
                        stop all FD140 device
```

```
*CLI> failover reload Reload the configuration file
```

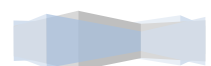


6) Check the connection

*\*CLI>pri show spans*

7)Reboot DAHDI

*\*CLI>dahdi restart*



## Technical Support

If you meet any technical problems when using OpenVox products, you can check our Forum for help or contact us directly by the following ways:

i. BBS feedback problems

You can put your issued to our BBS encountered technical problems, we will in the shortest possible time solve the problem of you mentioned.

<http://bbs.openvox.cn/>

ii. Email Support

You can email your technical problems to the following emails:

[support@openvox.com.cn](mailto:support@openvox.com.cn)

Unless it is an emergency, this is always the most efficient way to get support.

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