VXC Cards User’s Manual

VXC-118U, VXC-148U
Linux Software Manual

Warranty

All products manufactured by ICP DAS are warranted against defective materials for a period of one year from the date of delivery to the original purchaser.

Warning

ICP DAS assume no liability for damages consequent to the use of this product. ICP DAS reserves the right to change this manual at any time without notice. The information furnished by ICP DAS is believed to be accurate and reliable. However, no responsibility is assumed by ICP DAS for its use, nor for any infringements of patents or other rights of third parties resulting from its use.

Copyright

Trademark

The names used for identification only may be registered trademarks of their respective companies.

Tables of Content

1. Linux Software Installation

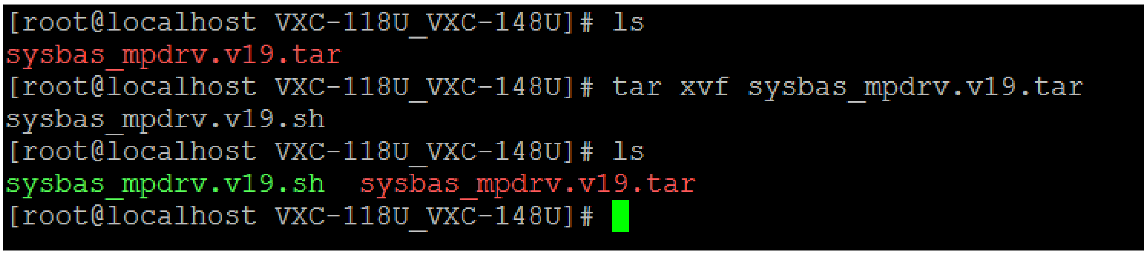
The VXC-118U & VXC-148U can be used in linux kernel 2.6.31 to 3.6.0. For Linux O.S, the recommended installation and uninstall steps are given in Sec 1.1 ~ 1.2

1.1 Linux Driver Installing Procedure

Step 1: Copy the linux driver “VXC-1x8U-Series.tar.gz” (or the later driver version) in the directory “NAPDOS\Linux” of the companion CD or download the latest driver from our website to the linux host.

Step 2: You must use the ‘**root**’ identity to compile and install VXC linux driver.

Step 3: Decompress the tarball “VXC-1x8U-Series.tar.gz”. Please refer Fig-1.1

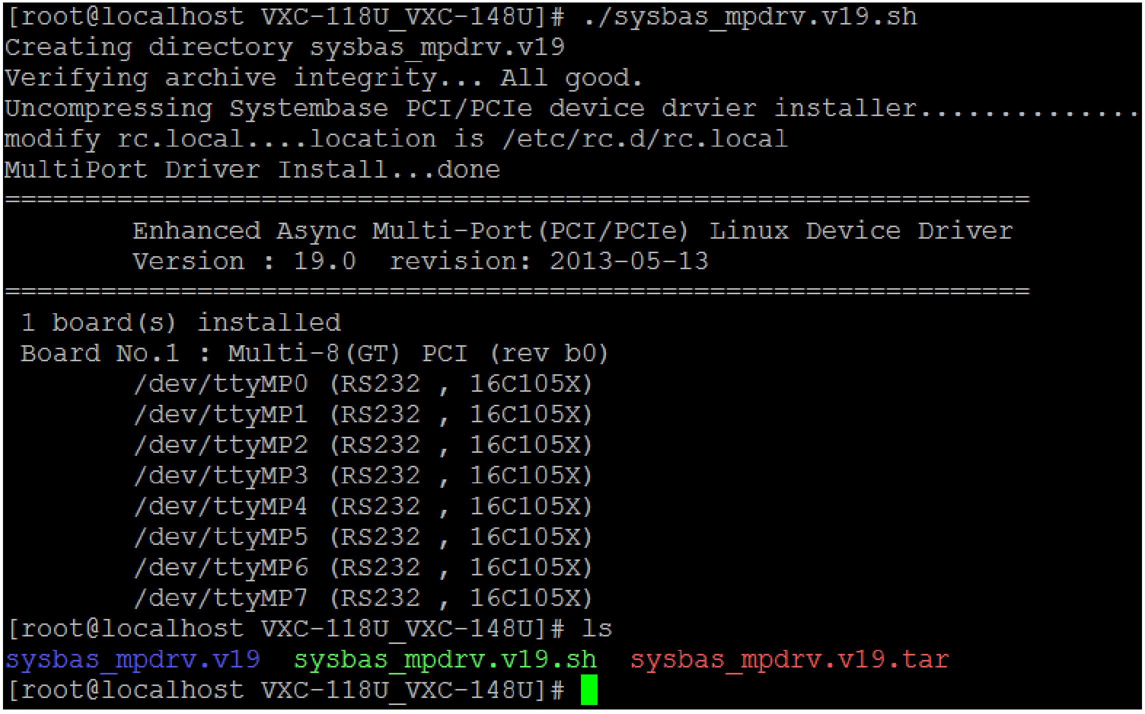


```
[root@localhost VXC-118U_VXC-148U]# ls
sysbas_mpdrv.v19.tar
[root@localhost VXC-118U_VXC-148U]# tar xvf sysbas_mpdrv.v19.tar
sysbas_mpdrv.v19.sh
[root@localhost VXC-118U_VXC-148U]# ls
sysbas_mpdrv.v19.sh  sysbas_mpdrv.v19.tar
[root@localhost VXC-118U_VXC-148U]#
```

Fig-1.1

Step 4: Execute the device file.

You can see sub directory named “sysbas_mpdrv.v19” with installing information. You can see kind of multiport, type of serial interface-RS232/RS422/RS485, port name and version. Please refer Fig-1.2



```
[root@localhost VXC-118U_VXC-148U]# ./sysbas_mpdrv.v19.sh
Creating directory sysbas_mpdrv.v19
Verifying archive integrity... All good.
Uncompressing Systembase PCI/PCIe device drvier installer.............
modify rc.local....location is /etc/rc.d/rc.local
MultiPort Driver Install...done
==============================================================
        Enhanced Async Multi-Port(PCI/PCIe) Linux Device Driver
        Version : 19.0  revision: 2013-05-13
==============================================================
 1 board(s) installed
 Board No.1 : Multi-8(GT) PCI (rev b0)
        /dev/ttyMP0 (RS232 , 16C105X)
        /dev/ttyMP1 (RS232 , 16C105X)
        /dev/ttyMP2 (RS232 , 16C105X)
        /dev/ttyMP3 (RS232 , 16C105X)
        /dev/ttyMP4 (RS232 , 16C105X)
        /dev/ttyMP5 (RS232 , 16C105X)
        /dev/ttyMP6 (RS232 , 16C105X)
        /dev/ttyMP7 (RS232 , 16C105X)
[root@localhost VXC-118U_VXC-148U]# ls
sysbas_mpdrv.v19  sysbas_mpdrv.v19.sh  sysbas_mpdrv.v19.tar
[root@localhost VXC-118U_VXC-148U]#
```

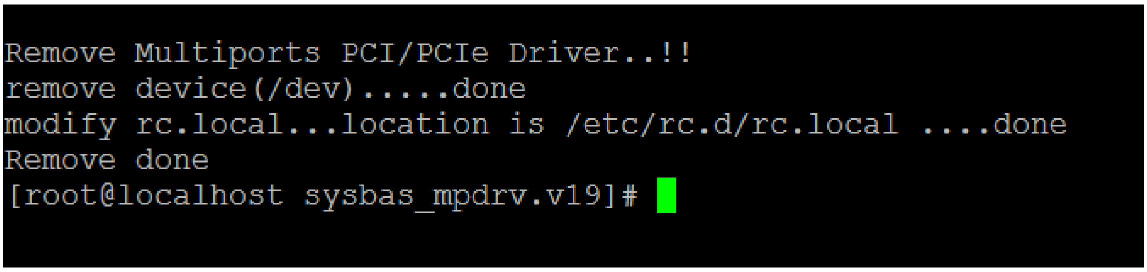
Fig-1.2

1.2 Linux Driver Uninstalling Procedure

Step 1: Type `cd' to the directory “sysbas_mpdrv.v19”.

Step 2: Type `../Remove' to remove the VXC driver module.

All installed files will be removed. Please refer Fig-1.3

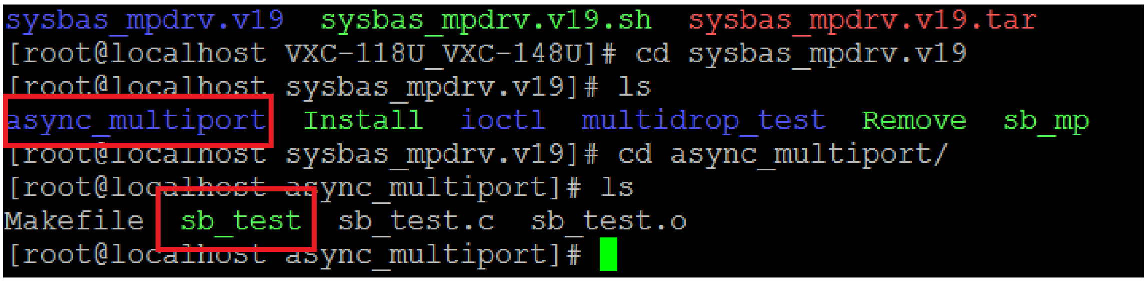


```
Remove Multiports PCI/PCIe Driver..!!
remove device(/dev).....done
modify rc.local...location is /etc/rc.d/rc.local ....done
Remove done
[root@localhost sysbas_mpdrv.v19]#
```

Fig-1.3

2. VXC-118U & VXC-148U Linux Demo

Users can use demo “sb_test” to test comport send & receive in sub directory “async_multiport”. Please refer to Fig-2.1

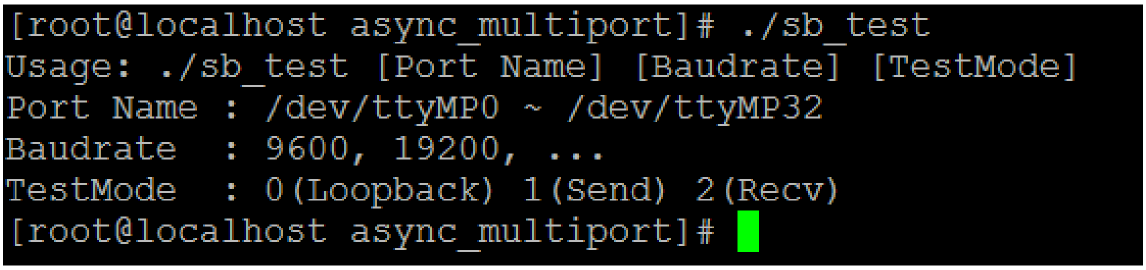


```
sysbas_mpdrv.v19  sysbas_mpdrv.v19.sh  sysbas_mpdrv.v19.tar
[root@localhost VXC-118U_VXC-148U]# cd sysbas_mpdrv.v19
[root@localhost sysbas_mpdrv.v19]# ls
async_multiport  Install  ioctl  multidrop_test  Remove  sb_mp
[root@localhost sysbas_mpdrv.v19]# cd async_multiport/
[root@localhost async_multiport]# ls
Makefile  sb_test  sb_test.c  sb_test.o
[root@localhost async_multiport]#
```

Fig-2.1

2.1 Demo sb_test

This demo program has three mode to test: Loopback、Send、Receive, if you want to know how to use the sb_test, you just type the name without any argument, and you can see the method of usage. Please refer Fig-2.2



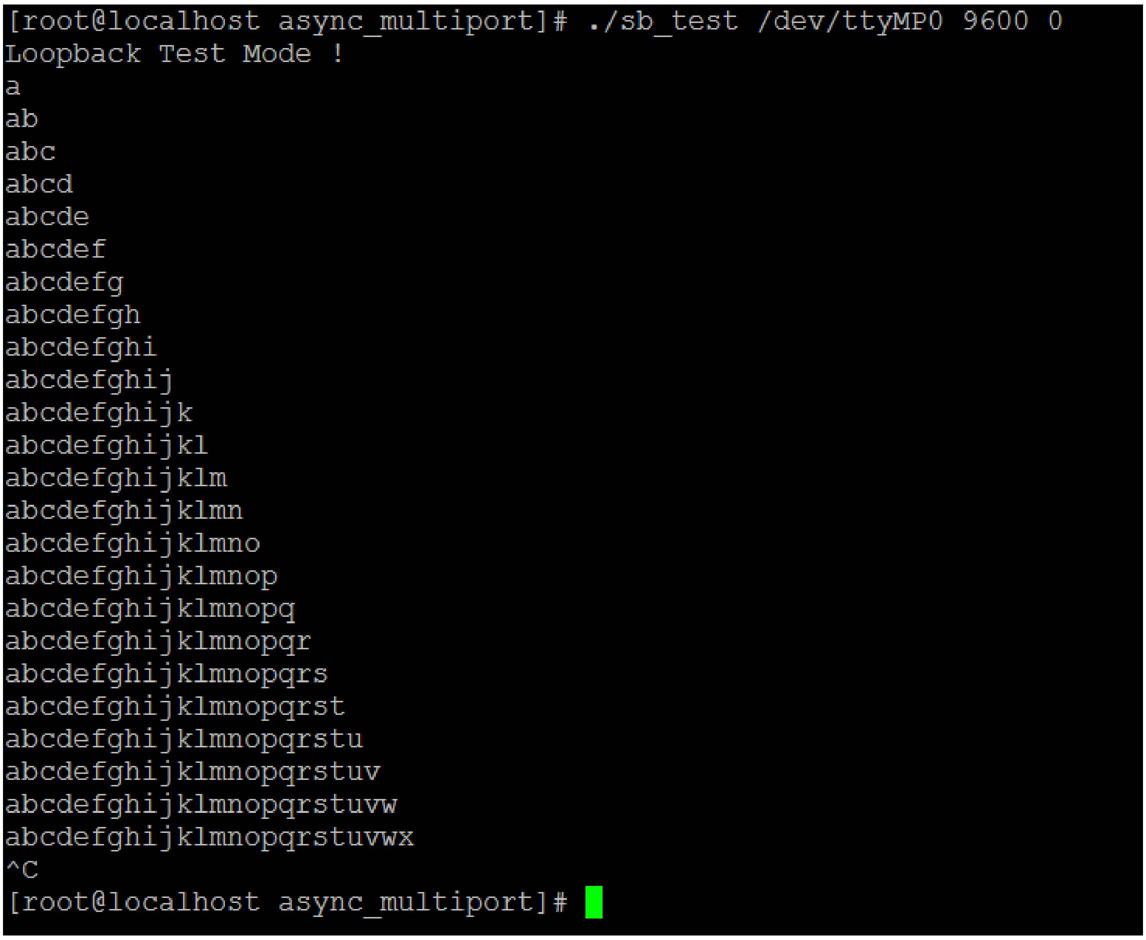
```
[root@localhost async_multiport]# ./sb_test
Usage: ./sb_test [Port Name] [Baudrate] [TestMode]
Port Name : /dev/ttyMP0 ~ /dev/ttyMP32
Baudrate  : 9600, 19200, ...
TestMode  : 0(Loopback) 1(Send) 2(Recv)
[root@localhost async_multiport]#
```

Fig-2.2

Example:

```
#./sb_test /dev/ttyMP0 9600 0
```

After you connected a loopback connecter to a port, you can test using loopback mode. The test pattern are “abcdefghijklmnopqrstuvwxyz” and the program generated increase one more character from ‘a’ to ‘z’ repeatedly. Please refer Fig-2.3



```
[root@localhost async_multiport]# ./sb_test /dev/ttyMP0 9600 0
Loopback Test Mode !
a
ab
abc
abcd
abcde
abcdef
abcdefg
abcdefgh
abcdefghi
abcdefghij
abcdefghijk
abcdefghijkl
abcdefghijklm
abcdefghijklmn
abcdefghijklmno
abcdefghijklmnop
abcdefghijklmnopq
abcdefghijklmnopqr
abcdefghijklmnopqrs
abcdefghijklmnopqrst
abcdefghijklmnopqrstu
abcdefghijklmnopqrstuv
abcdefghijklmnopqrstuvw
abcdefghijklmnopqrstuvwx
^C
[root@localhost async_multiport]#
```

Fig-2.3