

Application Note for Linux system

1. From Linux kernel version 2.4.x it is very important for system configuration setting. The OBJ file generated in different system configuration may have error message and can not be used. So we can not offer OBJ type driver from kernel 2.4.x version. Now we always offer source file type driver for user to install and compile in their system.
2. Because we only offer source file type driver for user to install, so user must have kernel source file in their system.
3. When you get new version source file driver from us, you can use following procedure to duplicate one diskette.
 - a) You may get "alnxsrc.Z" from us.
 - b) You can use following command to copy from DOS formatted diskette to your Linux system

```
#mcopy a:alnxsrc.Z alnxsrc.Z
```
 - c) Now we need to uncompress such file to get original diskette image file.

```
#uncompress alnxsrc
```
 - d) Then we can use "dd" command to duplicate one diskette.

```
#dd if=alnxsrc of=/dev/fd0
```
4. When you have source file type driver diskette in hand, you can use following procedure to install our driver.
 - a) Please goto root directory.

```
#cd /
```
 - b) Please "tar" driver diskette to your system.

```
#tar xvf /dev/fd0
```
 - c) Now we can goto directory /etc/rayon to install our driver

```
#cd /etc/rayon  
#./Install
```
 - d) Because we put all our card's driver in one diskette, so you will be asked your card type to install. Then you need to specify your Linux system's type.
 - e) In the final stage the system will start to compile our driver. We may have some warning message. But we can not have error message. Then we may have OBJ file of module driver.
 - f) In next boot procedure we can have two times display message about our cards. You can use "dmesg" command to check it. And you can have extra TTY device to be used now.
5. In above procedure we suggest that you may have kernel source file in directory /usr/src/linux. If you had another name, please use "ln" command to link with name /usr/src/linux.

6. Because the run time image file may have different system configuration with your kernel source file. So you may have some error message in your boot procedure after driver installation.
 - a) Because the run time image is generated in your media supplier (ex, REDHAT) for one dedicated system configuration (generally you can see information in /boot directory). Even though this system configuration is not same as your hardware platform. There are no problem for you to run your system. Because they will be skipped in incompatible hardware device.
 - b) When we install our driver and compile with your kernel source file. We will use the system configuration file in your kernel source file. If your system configuration did not set correct condition to support multi-serial port, we may have some error message and no OBJ generated. Then you may need to modify your system configuration file (.config file with make config). If there are no error message and had OBJ file generated, you can have module driver usable in next boot procedure.
 - c) If we had different system configuration file for your run time image file and kernel source file, we may have error in our module driver installation. Then you need to use your kernel source file to generate one run time image.

7. Following procedure is example to generate one new run time image file. This procedure is same as user to upgrade kernel version.
 - a) Please confirm that you have kernel source file in directory /usr/src/linux.
 - b) Please goto directory /usr/src/linux.
 - c) We can use "make config" or "make oldconfig" to set your system configuration file (You must set to meet your real hardware environment).
 - d) We will run "make dep" to fix our system dependence.
 - e) Now, we can use "make zImage" to generate one new run time image.
 - f) If there are no error condition, you may have image file in /usr/src/linux/arch/i386/boot/zImage.
 - g) You can use this image to replace your current run time image. Generally you may have "/boot/vmlinuz" as your run time image file.

8. So user must keep in mind that the image file from media supplier may not have same system configuration in their kernel source file. When you generate one run time image from kernel source file. Then it is no problem for our source file type driver to be installed.

9. Because user may always upgrade their kernel version, so they may know the procedure to generate image file from kernel source file. Then it is no problem for user to install our source file type driver.