

# Driver Compilation

In order to compile the open source driver, the following package is not required but it will make solving dependencies much easier.

## Xorg

**Package:** xorg- x11- SDK

Fedora Core 3:

Download appropriate package from  
<http://download.fedora.redhat.com/pub/fedora/linux/core/updates/3/i386/>

This same package exists for different distributions. See distribution specific documentation.

## Xfree86

**Package:** XFree86- SDK

Any current gcc compiler and GNU linker should work.

## Symbol Definitions

- Dlinux
- D\_\_i386\_\_
- D\_POSIX\_C\_SOURCE=199309L
- D\_POSIX\_SOURCE
- D\_XOPEN\_SOURCE
- D\_BSD\_SOURCE
- D\_SVID\_SOURCE
- D\_GNU\_SOURCE
- DSHAPE
- DXINPUT
- DXKB
- DLBX
- DXAPPGROUP
- DXCSECURITY
- DTOGCUP
- DXF86BIGFONT
- DDPMSExtension
- DPIXPRIV
- DPANORAMIX
- DGCCUSESAS

- DAVOID\_GLYPHBLT
- DPIXPRIV
- DSINGLEDEPTH
- DXFreeXDGA
- DXvExtension
- DXFree86LOADER
- DXFree86Server
- DXF86VIDMODE
- DSMART\_SCHEDULE
- DX\_BYTE\_ORDER=X\_LITTLE\_ENDIAN
- DNDEBUG
- DFUNCPROTO=15
- DNARROWPROTO
- DIN\_MODULE
- DXFree86Module

## gcc Options

- *c*
- *ansi*

If you are using a later version of gcc ( $\geq$  ~2.96) you may or may not need to add the "*-fno-merge-constants*" flag to the compile line. I have successfully used the driver compiled without the flag on both XFree86 and X.org without any problems.

The driver will still build if you need this option and you do not use it, but X may crash when it tries to load the driver. You will see errors that look something like this:

```
(II) Loading /usr/X11R6/lib/modules/input/gtcc_drv.o
Not loading .rodata.str1.1
Not loading .rodata.str1.32
Not loading .rodata.cst8
(II) Symbol .LC12 from module /usr/X11R6/lib/modules/input/gtcc_drv.o is
unresolved!
Symbol .LC12 from module /usr/X11R6/lib/modules/input/gtcc_drv.o is
unresolved!
Symbol .LC12 from module /usr/X11R6/lib/modules/input/gtcc_drv.o is
unresolved!
Symbol .LC19 from module /usr/X11R6/lib/modules/input/gtcc_drv.o is
unresolved!
Symbol .LC18 from module /usr/X11R6/lib/modules/input/gtcc_drv.o is
unresolved!
```

**My command line looks something like:**

```
“gcc - Dlinux - D__i386__ - D_POSIX_C_SOURCE=199309L - D_POSIX_SOURCE  
- D_XOPEN_SOURCE - D_BSD_SOURCE - D_SVID_SOURCE - D_GNU_SOURCE  
- D_SHAPE - DXINPUT - DXKB - DLBX - DXAPPGROUP - DXCSECURITY - DTOGCUP  
- DXF86BIGFONT - DDPMSExtension - DPIXPRIV - DPANORAMIX - DGCCUSESGAS  
- DAVOID_GLYPHBLT - DPIXPRIV - DSINGLEDEPTH - DXFreeXDGA - DXvExtension  
- DXFree86LOADER - DXFree86Server - DXF86VIDMODE - DSMART_SCHEDULE  
- DX_BYTE_ORDER=X_LITTLE_ENDIAN - DNDEBUG - DFUNCPROTO=15  
- DNARROWPROTO - DIN_MODULE - DXFree86Module - I  
/usr/X11R6/lib/Server/include - O2 - fno-merge-constants - g3 - w - c  
- fmessage- length=0 -oIWLinux.o xIWLinux.c”
```

**Then use the following command to link:** “ld -r xIWLinux.o -oiwld\_drv.o”