NAME

lp – driver for parallel port

SYNOPSIS

include <sys/bpp_io.h>

fd = open("/dev/lp*n***",** *flags***);**

name=lp
class=sysbus
ioaddr=0x378 interrupts=3,7;

name=lp
class=sysbus
ioaddr=0x278 interrupts=3,5;

AVAILABILITY

x86

DESCRIPTION

The **lp** driver provides the interface to the parallel ports used by printers for x86 systems. The **lp** driver is implemented as a STREAMS device. Up to three parallel ports can be accessed by the driver. The **lp** driver accesses the **/kernel/drv/lp.conf** file for specifications about these parallel ports. The specifications include:

name

class

ioaddr The I/O port base address for this port.

interrupts The IRQ level of the port. **interrupts** is analogous to **intr**.

For more information about **lp.conf**, refer to **sysbus**(4).

IOCTLS

BPPIOC_TESTIO Test transfer readiness. This command checks to see if a read or write transfer would succeed based on pin status. If a transfer would succeed, **0** is returned. If a transfer would fail, **–1** is returned, and **errno** is set to **EIO**. The error status can be retrieved using the **BPPIOC_GETERR ioctl( )** call.

BPPIOC_GETERR Get last error status. The argument is a pointer to a **struct bpp_error_status**. See below for a description of the elements of this structure. This structure indicates the status of all the appropriate status bits at the time of the most recent error condition during a **read**(2) or **write**(2) call, or the status of the bits at the most recent **BPPIOC_TESTIO ioctl**(2) call. The application can check transfer readiness without attempting another transfer using the **BPPIOC_TESTIO ioctl( )**.

Error Pins Structure

This structure and symbols are defined in the include file **<sys/bpp_io.h>**:

```
struct bpp_error_status {
        char      timeout_occurred;        /* Not use */
        char      bus_error;               /* Not use */
        u_char    pin_status;              /* Status of pins which could
                                            * cause an error */
};

/* Values for pin_status field */
#define     BPP_ERR_ERR       0x01     /* Error pin active */
#define     BPP_SLCT_ERR      0x02     /* Select pin active */
#define     BPP_PE_ERR        0x04     /* Paper empty pin active */
```

Note: Other pin statuses are defined in **<sys/bpp_io.h>**, but **BPP_ERR_ERR**, **BPP_SLCT_ERR** and **BPP_PE_ERR** are the only ones valid for the x86 **lp** driver.

ERRORS

EIO A **BPPIOC_TESTIO ioctl( )** call is attempted while a condition exists that would prevent a transfer (such as a peripheral error).

EINVAL An **ioctl( )** is attempted with an invalid value in the command argument.

FILES

/kernel/drv/lp.conf
configuration file for **lp** driver. For a description of each field, refer to **sysbus**(4).

SEE ALSO

sysbus(4), **streamio**(7I)

DIAGNOSTICS

"lp_attach: cannot add intr."
An invalid **intr=** or **interrupts=** property has been specified in the **/kernel/drv/lp.conf** file.

NOTES

A read operation on a bi-directional parallel port is not supported.