

NAME

outb, outw, outl, outsb, outsw, outsl, inb, inw, inl, insb, insw, insl, outb_p, outw_p, outl_p, inb_p, inw_p, inl_p – port I/O

DESCRIPTION

This family of functions is used to do low-level port input and output. The out* functions do port output, the in* functions do port input; the b-suffix functions are byte-width and the w-suffix functions word-width; the _p-suffix functions pause until the I/O completes.

They are primarily designed for internal kernel use, but can be used from user space.

You compile with **-O** or **-O2** or similar. The functions are defined as inline macros, and will not be substituted in without optimization enabled, causing unresolved references at link time.

You use **ioperm(2)** or alternatively **iopl(2)** to tell the kernel to allow the user space application to access the I/O ports in question. Failure to do this will cause the application to receive a segmentation fault.

CONFORMING TO

outb() and friends are hardware-specific. The *value* argument is passed first and the *port* argument is passed second, which is the opposite order from most DOS implementations.

SEE ALSO

ioperm(2), **iopl(2)**

COLOPHON

This page is part of release 3.22 of the Linux *man-pages* project. A description of the project, and information about reporting bugs, can be found at <http://www.kernel.org/doc/man-pages/>.