

# **The Userspace I/O HOWTO**

**Hans-Jürgen Koch**

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## Abstract

This HOWTO describes concept and usage of Linux kernel's Userspace I/O system.

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- `size`: The number of ports in this region.
- `porttype`: A string describing the type of port.











other value for `count` causes `read()` to fail. The signed 32 bit integer read is the interrupt count of your device. If the value is one more than the value you read the last time, everything is OK. If the difference is greater than one, you missed interrupts.

You can also use `select()` on `/dev/uioX`.





```
    fprintf(stderr, "Started uio test driver.\n");
else
    fprintf(stderr, "Interrupts: %d\n", icount);

/*****
/* Here we got an interrupt from the
   device. Do something to it. */
*****/

/* Re-enable interrupts. */
err = pwrite(configfd, &command_high, 1, 5);
if (err != 1) {
    perror("config write:");
    break;
}

/* Wait for next interrupt. */
err = read(uiofd, &icount, 4);
if (err != 4) {
    perror("uio read:");
    break;
}
}
return errno;
}
```

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# Appendix A. Further information

- OSADL homepage. [<http://www.osadl.org>]
- Linutronix homepage. [<http://www.linutronix.de>]