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Subject: 64bit DMA in i2o\_block  
Posted by [vaverin](#) on Fri, 22 Sep 2006 09:10:23 GMT  
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Markus,

I've found that your driver does not work correctly with following options:

```
CONFIG_I2O_EXT_ADAPTEC=y  
# CONFIG_I2O_EXT_ADAPTEC_DMA64 is not set
```

I've checked it on 2.6.18 kernel on x86\_64 node with 4Gb memory.

I would note that I've not noticed any bugs on x86 kernels, but x86\_64 does not work at all.

The behaviors of x86\_64 kernels can differ:  
sometimes driver can not find partition table:  
i2o/hda: unknown partition table

sometimes it find not all partition:  
i2o/hda: i2o/hda1 i2o/hda2 i2o/hda3 i2o/hda4 < >

in other cases it detects devices well but corrupt the memory and filesystem:

```
Sep 21 16:46:09 ts10 block-osm: registered device at major 80  
Sep 21 16:46:09 ts10 i2o/hda: i2o/hda1 i2o/hda2 i2o/hda3 i2o/hda4 < i2o/hda5 >  
Sep 21 16:46:09 ts10 block-osm: device added (TID: 207): i2o/hda  
Sep 21 16:46:09 ts10 kjournald starting. Commit interval 5 seconds  
Sep 21 16:46:09 ts10 EXT3-fs: mounted filesystem with ordered data mode.  
Sep 21 16:46:10 ts10 Freeing unused kernel memory: 236k freed  
Sep 21 16:46:10 ts10 hotplug[961]: segfault at 0000000000000008 rip  
00000032411088cf rsp 00007fff5b189050 error 4
```

When I enabled CONFIG\_I2O\_EXT\_ADAPTEC\_DMA64 -- all the troubles went away.

I've tried to investigate this issue, but I've not found and documentation described format of Adaptec's private messages.

I would like to ask you, is this behavior specific for my hardware (Adaptec ASR-2010S I2O Zero Channel)? If not, I believe it makes sense to enable CONFIG\_I2O\_EXT\_ADAPTEC\_DMA64 in Kconfig by default for 64-bit kernels.

Thank you,  
Vasily Averin

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