

WorkBiT NinjaSCSI-3/32Bi driver for Linux

1. Comment

This is Workbit corp.'s(<http://www.workbit.co.jp/>) NinjaSCSI-3 for Linux.

2. My Linux environment

Linux kernel:	2.4.7 / 2.2.19
pcmcia-cs:	3.1.27
gcc:	gcc-2.95.4
PC card:	I-O data PCSC-F (NinjaSCSI-3), I-O data CBSC-II in 16 bit mode (NinjaSCSI-32Bi)
SCSI device:	I-O data CDPS-PX24 (CD-ROM drive), Media Intelligent MMO-640GT (Optical disk drive)

3. Install

- a. Check your PC card is true "NinjaSCSI-3" card.

If you installed pcmcia-cs already, pcmcia reports your card as UNKNOWN card, and write ["WBT", "NinjaSCSI-3", "R1.0"] or some other string to your console or log file.

You can also use "cardctl" program (this program is in pcmcia-cs source code) to get more info.

```
# cat /var/log/messages
...
Jan  2 03:45:06 lindberg cardmgr[78]: unsupported card in socket 1
Jan  2 03:45:06 lindberg cardmgr[78]:  product info: "WBT", "NinjaSCSI-3", "R1.0"
...
# cardctl ident
Socket 0:
    no product info available
Socket 1:
    product info: "IO DATA", "CBSC16", "1"
```

- b. Get the Linux kernel source, and extract it to /usr/src. Because the NinjaSCSI driver requires some SCSI header files in Linux kernel source, I recommend rebuilding your kernel; this eliminates some versioning problems.

```
$ cd /usr/src
$ tar -zxvf linux-x.x.x.tar.gz
$ cd linux
$ make config
...
```

- c. If you use this driver with Kernel 2.2, unpack pcmcia-cs in some directory and make & install. This driver requires the pcmcia-cs header file.

```
$ cd /usr/src
$ tar zxvf cs-pcmcia-cs-3.x.x.tar.gz
...
```

- d. Extract this driver's archive somewhere, and edit Makefile, then do make:

```
$ tar -zxvf nsp_cs-x.x.tar.gz
$ cd nsp_cs-x.x
$ emacs Makefile
...
$ make
```

- e. Copy nsp_cs.ko to suitable place, like /lib/modules/<Kernel version>/pcmcia/ .

- f. Add these lines to /etc/pcmcia/config .

If you use pcmcia-cs-3.1.8 or later, we can use "nsp_cs.conf" file. So, you don't need to edit file. Just copy to /etc/pcmcia/ .

```
device "nsp_cs"
    class "scsi" module "nsp_cs"

card "WorkBit NinjaSCSI-3"
    version "WBT", "NinjaSCSI-3", "R1.0"
    bind "nsp_cs"

card "WorkBit NinjaSCSI-32Bi (16bit)"
    version "WORKBIT", "UltraNinja-16", "1"
    bind "nsp_cs"
```

```
# OEM
card "WorkBit NinjaSCSI-32Bi (16bit) / IO-DATA"
    version "IO DATA", "CBSC16", "1"
    bind "nsp_cs"

# OEM
card "WorkBit NinjaSCSI-32Bi (16bit) / KME-1"
    version "KME", "SCSI-CARD-001", "1"
    bind "nsp_cs"
card "WorkBit NinjaSCSI-32Bi (16bit) / KME-2"
    version "KME", "SCSI-CARD-002", "1"
    bind "nsp_cs"
card "WorkBit NinjaSCSI-32Bi (16bit) / KME-3"
    version "KME", "SCSI-CARD-003", "1"
    bind "nsp_cs"
card "WorkBit NinjaSCSI-32Bi (16bit) / KME-4"
    version "KME", "SCSI-CARD-004", "1"
    bind "nsp_cs"
```

f. Start (or restart) `pcmcia-cs`:

```
# /etc/rc.d/rc.pcmcia start (BSD style)
```

or:

```
# /etc/init.d/pcmcia start (SYSV style)
```

4. History

See `README.nin_cs`.

5. Caution

If you eject card when doing some operation for your SCSI device or suspend your computer, you encounter some *BAD* error like disk crash.

It works good when I using this driver right way. But I'm not guarantee your data. Please backup your data when you use this driver.

6. Known Bugs

In 2.4 kernel, you can't use 640MB Optical disk. This error comes from high level SCSI driver.

7. Testing

Please send me some reports(bug reports etc..) of this software. When you send report, please tell me these or more.

- card name
- kernel version
- your SCSI device name(hard drive, CD-ROM, etc...)

8. Copyright

See GPL.

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