

Release Notice
CONVEX I/O Diagnostics V1.0 (C200/C3200/C3400 Series)
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Release Notice

1. Introduction

This document is intended to enhance and clarify the existing permanent documentation for this product with information that is up-to-the-minute, or was developed too late for inclusion in the permanent documentation. Always refer to this release notice before reporting questions or problems with CONVEX I/O Diagnostics. Your questions may be answered here. Fixes and workarounds are listed here that may save you time in rediscovering known problems.

The remaining sections in this document describe the contents of this release:

- Section 2 describes the contents of this distribution.
- Section 3 contains notes and warnings about the use of the software.
- Section 4 contains enhancements to the previous functionality.
- Section 5 describes fixes for previously reported problems.
- Section 6 describes known software problems.
- Section 7 contains known documentation problems.
- Section 8 contains description of new documentation.
- Appendix A contains instructions for installing this release on a CONVEX C200/C3200/C3400 Series Service Processor Unit.
- Appendix B contains a list of the files contained on the release tape.

CONVEX I/O Diagnostics consists of various functional-level test programs and diagnostic utilities that execute under the CONVEX UNIX Version 7 operating system of the CONVEX Service Processor Unit (SPU). All programs MUST execute in the offline diagnostic environment of CONVEX SPU OS and are mutually exclusive with the operation of ConvexOS on the main processors. These programs are the property of CONVEX Computer Corporation and are intended for use only by CONVEX Field Service.

2. Contents of This Distribution

The distribution package for this release of CONVEX I/O Diagnostics consists of this document, distribution media for the software, and documentation. The specific contents of the software and documentation distribution are described in the following tables:

CONVEX I/O Diagnostics Media

ITEM	QTY	TYPE	PART NUMBER	DESCRIPTION	FORMAT
1.	1	QIC	760-004215-000	I/O Diagnostics, V1.0	Installsw

If you do not already have CONVEX I/O Diagnostics Documentation, you will receive the Release Package.

CONVEX I/O Diagnostics Documentation

Release Package

ITEM	QTY	ORDER NUMBER	DESCRIPTION
1.	1	DHW-082	C2 Diagnostics Utilities Manual
2.	1	DHW-082a	C2 Diagnostics Utilities Manual Addendum
3.	0/1	DHW-230	Mbus I/O Subsystem Diagnostics Manual
4.	0/1	DHW-231	Mbus SMD Disk Diagnostics Manual
5.	0/1	DHW-232	Mbus SMD Disk Formatter Diagnostics Manual
6.	0/1	DHW-233	Mbus STC Tape Unit Controller Diagnostics Manual
7.	0/1	DHW-234	Mbus Terminal Controller Diagnostics Manual
8.	0/1	DHW-235	Mbus Line Printer Diagnostics Manual
9.	0/1	DHW-236	Mbus Plotter Diagnostics Manual
10.	0/1	DHW-237	Mbus Ethernet Controller Diagnostics Manual
11.	0/1	DHW-238	Mbus HYPERchannel Controller Diagnostics Manual
12.	0/1	DHW-239	Mbus X.25 Controller Diagnostics Manual
13.	0/1	DHW-240	Mbus Emulator Controller Diagnostics Manual
14.	0/1	DHW-241	VME I/O Processor Diagnostics Manual
15.	0/1	DHW-242	VME SMD/ESDI Disk & Formatter Diagnostics Manual
16.	0/1	DHW-243	VME STC Tape Controller Diagnostics Manual
17.	0/1	DHW-244	VME Async Controller Diagnostics Manual
18.	0/1	DHW-245	VME Ethernet Controller Diagnostics Manual
19.	0/1	DHW-246	VME UltraNet Controller Diagnostics Manual
20.	0/1	DHW-247	VME DAT/3480 Tape Subsystem Diagnostics Manual
21.	0/1	DHW-248	VME HSP/HIA Subsystem Diagnostics Manual
22.	0/1	DHW-249	TLI Subsystem Diagnostics Manual
23.	0/1	DHW-280	High Performance Parallel Interface Diagnostic Manual

- C200 and C3200 series Release Packages will include items 1 and 2. Items 3 thru 23 are included, as pertinent, with respect to I/O configuration. C3400 series Release Packages will include items 1 and 2. Items 14 thru 23 are included, as pertinent, with respect to I/O configuration.

Series Update Package

- Consists of items 3 thru 23, as pertinent, with respect to I/O configuration updates, and or, additions.

3. Notes and Warnings

This section contains generally useful information or words of caution about the product.

- This release supersedes all previous versions of Diagnostics.
- For C200 and C3200 systems, this release of CONVEX I/O Diagnostics requires the V5.0 (or later) release of CONVEX C3200 Series Processor Diagnostics (760-001015-220) and the V5.2 (or later) release of CONVEX SPU OS (760-001215-204). For C3400 systems, this release of CONVEX I/O Diagnostics requires the V1.1 (or later) release of CONVEX C3400 Series Processor Diagnostics (760-004115-000) and the V6.0 (or later) release of CONVEX SPU OS (760-001215-206).

- Multibus is not supported on C3400 series systems.
- The following table lists the hardware configurators recommended to support this release of CONVEX I/O Diagnostics:

Logic Configurator Specification

Logic Configurator	PART NUMBER
CX Configurator	400-000100-979
C2XX Shipping Configurator	400-000100-981

- CONVEX SCSI I/O requires Revision J (or later) of the VIOP Channel Controller Unit (CCU).
- The Diagnostic Database files are now included as part of the CONVEX I/O Diagnostics release and are no longer a separately released product.
- This release should only be installed by a qualified CONVEX Field Service representative. Please see Appendix A for installation details.

4. Enhancements

Utilities

The following enhancements have been made to utility programs in this release:

- The system I/O configuration description file, **ioconfig**, can now be commented (CONVEX OS V10.0 is the first OS revision to support this).

```
#
# Example of a commented ioconfig file.
#
idc 0
#
# Root Disk
#
ipi 0
  drvr DKC-IP2
    unit 0 type DKD-502
viop 1
vme 0
#
# VME 9-TRACK TAPE
#
ctrl MTC-201 csr 0x1000 int 7
  unit 0 type MTD-204
#
# VME ETHERNET
#
ctrl LAN-007 csr 0xfe00 int 5
  unit 0 type ex
```

- **idcfmt** will now perform format verification on a write protected drive.

- `io_sysreset`, `io_margin`, and `io_hardlogger` are internal enhancements and should not be directly invoked.

Test Programs

The following enhancements have been made to test programs in this release:

- The `dev5130` diagnostic will now support up to 4 ESDI drives when used with an interphase 4201 controller.
- The `dev5130` "Forced Bad Data" option will now loop until it reads bad data before it displays the result when a Soft ECC error occurs.
- To format a pre-formatted drive using the `dev5130` diagnostic, answer `n[o_defaults]` to "Default type" after the diagnostic displays the Test Parameter Menu. Then, answer `y[es]` to "allow write to other than the diagnostics cylinder" and "allow write to the diagnostics cylinder", and answer `n[o]` to "start pattern testing after last completed pattern".
- The `dev_vscsit` diagnostic now supports the 3480 tape drive with automatic cartridge loader.
- The `hpi4000` ccu diagnostic is released for the first time.

5. Fixes

Utilities

- None

Test Programs

- The `:p` command in the SUBTEST MENU (`-s`) did not work correctly. It now correctly goes to the previous screen of subtests, if not already at the first screen.
- When the `dev5130` diagnostic finds a problem with the pattern file, it now prompts the user to either edit the pattern file using `vi` or to quit the diagnostic.
- When using the `tli4480` diagnostic "set" command, the user is now able to change the tape drive number to the upper limit of 15.

6. Known Software Problems

At the time this release notice was prepared, this section contains the known problems with this release of CONVEX I/O Diagnostics software. Please refer to this list prior to reporting a problem in order to ensure that it has not been previously reported. Serious problems

include workarounds if they are known.

Utilities

- None

Test Programs

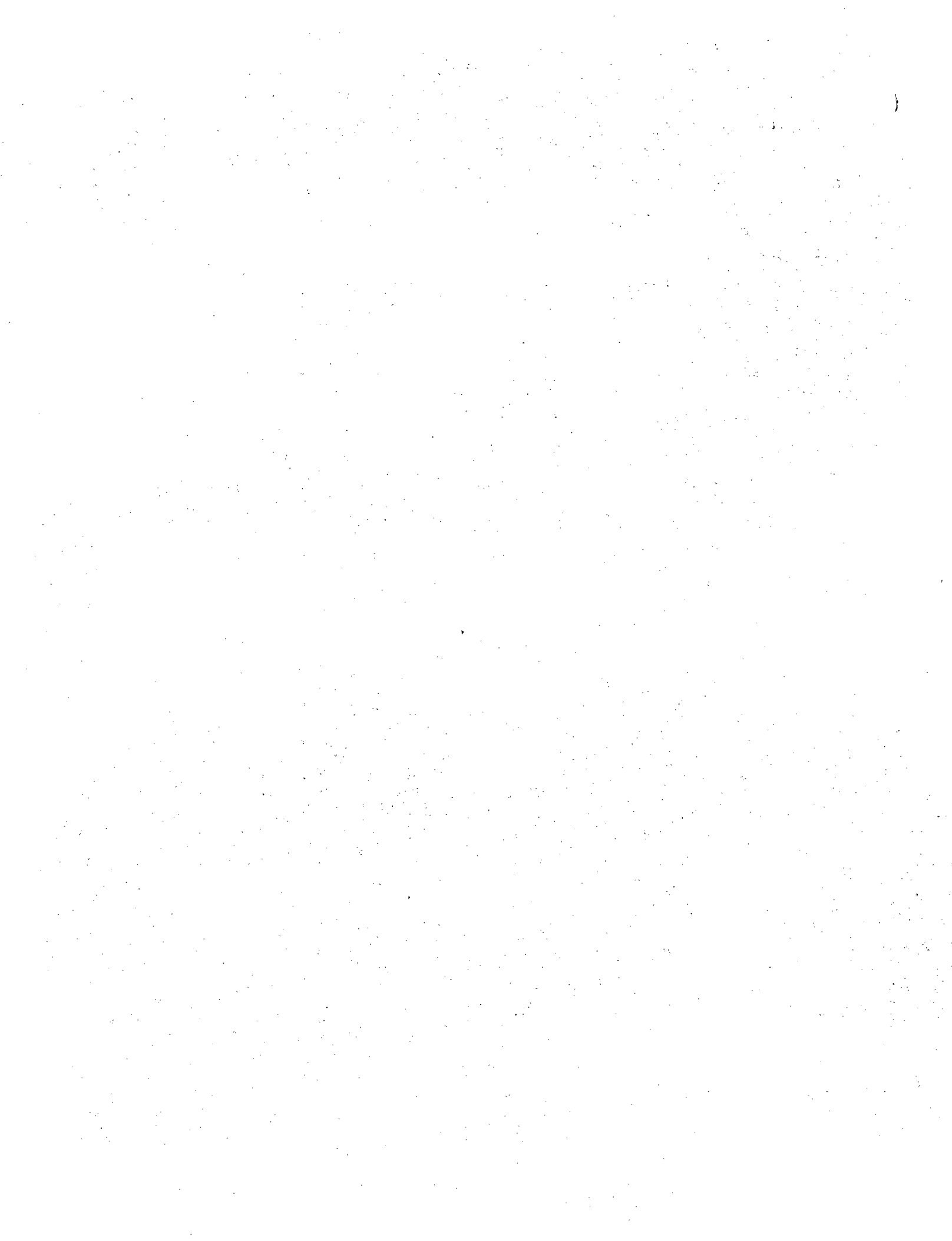
- None

7. Known Documentation Problems

There are no known documentation problems for this release.

8. New Documentation

There is no new documentation for this release.



Installing CONVEX C200/C3200/C3400 Series I/O Diagnostics V1.0

Warnings

This section contains generally useful information or words of caution about the product.

- This release supersedes all previous versions of Diagnostics.
- For C200 and C3200 systems, this release of CONVEX I/O Diagnostics requires the V5.0 (or later) release of CONVEX C3200 Series Processor Diagnostics (760-001015-220) and the V5.2 (or later) release of CONVEX SPU OS (760-001215-204). For C3400 systems, this release of CONVEX I/O Diagnostics requires the V1.1 (or later) release of CONVEX C3400 Series Processor Diagnostics (760-004115-000) and the V6.0 (or later) release of CONVEX SPU OS (760-001215-206).
- Multibus is not supported on C3400 series systems.
- The following table lists the hardware configurators recommended to support this release of CONVEX I/O Diagnostics:

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- CONVEX SCSI I/O requires Revision J (or later) of the VIOP Channel Controller Unit (CCU).
- The Diagnostic Database files are now included as part of the CONVEX I/O Diagnostics release and are no longer a separately released product.
- This release should only be installed by a qualified CONVEX Field Service representative.

Installation Procedure

1. If CONVEX SPU OS is already booted, go to step 5.
2. Place the front panel key switch in the *local* position and depress the system reset button to boot CONVEX SPU OS.

3. The soft front panel menu will be displayed. Change the mode to diagnostics and continue the boot process by entering the following commands at the **(fp)>** prompt:

```
(fp)> set mode=diagnostic (or sm=d).  
(fp)> boot (or b)
```

4. The CONVEX SPU OS bootstrap routine will prompt with:

```
SPU OS boot  
:
```

You should enter a carriage return <CR> in response to the prompt. CONVEX SPU OS will now boot and prompt with **(spu)>** when boot is complete.

NOTE: A file system check is performed during the boot procedure. If errors are detected in the file system, they will be corrected if possible. If it is not possible to automatically correct the errors, then you will be requested to execute */etc/fsck* manually to correct these errors before proceeding.

5. Verify that the required version of CONVEX SPU OS is installed :

```
(spu)> more /UNIX_REV
```

If the file */UNIX_REV* is not present, then install CONVEX SPU OS V5.2 (or later) for CONVEX C200/C3200 Series systems. For CONVEX C3400 Series systems, install CONVEX SPU OS V6.0 (or later).

6. Verify that the required version of CONVEX Processor Diagnostics is installed :

```
(spu)> more /mnt/PROCDIAG_REV
```

For CONVEX C200/C3200 Series systems, if the file */mnt/PROCDIAG_REV* indicates that version V5.0 (or later) of the CONVEX Processor Diagnostics is installed, proceed to the next step. If the file is not present or the version number displayed for CONVEX Processor Diagnostics is not V5.0 or later, then install CONVEX C3200 Series Processor Diagnostics/Database V5.0 (760-001015-220) in accordance with the CONVEX C3200 Series Processor Diagnostics/Database Release Notice (760-001130-007). For CONVEX C3400 Series systems, if the file */mnt/PROCDIAG_REV* indicates that version V1.1 (or later) of the CONVEX Processor Diagnostics is installed, proceed to the next step. If the file is not present or the version number displayed for CONVEX Processor Diagnostics is not V1.1 or later, then install CONVEX C3400 Series Processor Diagnostics V1.1 (760-004115-000) in accordance with the CONVEX C3400 Series Processor Diagnostics Release Notice (760-006630-000).

7. Place the CONVEX C200/C3200/C3400 Series I/O Diagnostics V1.0 tape (760-004215-000) in the cartridge tape unit and enter the following command:

```
(spu)> /etc/installsw -i
```

The installation of this release requires about 8 minutes.

8. A log of all tar operations is saved in */tmp/installsw.tar* and should be removed as follows:

```
(spu)> rm /tmp/installsw.tar
```

9. After installation is complete, remove the tape from the cartridge tape unit.

10. If the desired mode of operation is diagnostic mode, then this step may be skipped. Otherwise, return to the soft front panel via the */etc/reboot* command:

```
(spu)> /etc/reboot
```

Change the mode of operation setting to the *desired-mode*. Use the soft front panel *help* command if you need assistance.

```
(fp)> set mode=desired-mode
```

Place the front panel key switch in the *local* position and enter the *boot* command to reboot the system:

```
(fp)> boot (or b)
```

11. This completes the installation of CONVEX C200/C3200/C3400 Series I/O Diagnostics.

B

Files list

The following is the *installsw* output from making the V1.0 I/O Diagnostics tape.

```
=====
** Installsw Header File Copy **
Product:      CONVEX C200/C3200/C3400 I/O Diagnostics V1.0
Release date: Feb 06, 1992
Directories:  /mnt/bin, /mnt/bin/lib, /mnt/test, /mnt/test/script,
              /mnt/usr, /mnt/usr/lib, /mnt/usr/scn, /mnt/man
=====
```

```
SPU tape device is /dev/rmt1
a /tmp/install1 1 blocks
a /tmp/install2 3 blocks
a bin/get_defects 320 blocks
a bin/ioputil 46 blocks
a bin/lib/get_defects.x00 115 blocks
a bin/lib/ioputil.x00 42 blocks
a bin/lib/dev4100.causes 6 blocks
a bin/lib/dev4100.help 8 blocks
a bin/lib/dev4110.help 7 blocks
a bin/lib/dev4200.help 5 blocks
a bin/lib/dev4300.help 4 blocks
a bin/lib/dev4400.help 3 blocks
a bin/lib/dev4410.help 10 blocks
a bin/lib/dev4500.help 3 blocks
a bin/lib/dev4510.causes 4 blocks
a bin/lib/dev4510.help 5 blocks
a bin/lib/dev4540.help 14 blocks
a bin/lib/dev4600.help 5 blocks
a test/dev4100.t 605 blocks
a test/dev4110.t link to test/dev4100.t
a test/dev4200.t 365 blocks
a test/dev4300.t 520 blocks
a test/dev4400.t 360 blocks
a test/dev4410.t 334 blocks
a test/dev4500.t 385 blocks
a test/dev4510.t 366 blocks
a test/dev4540.t 295 blocks
a test/dev4540x.t link to test/dev4540.t
a test/dev4600.t 298 blocks
a test/io4000.t 443 blocks
a test/dev4100.x00 126 blocks
a test/dev4200.x00 84 blocks
a test/dev4300.x00 78 blocks
a test/dev4400.x00 67 blocks
a test/dev4410.x00 73 blocks
a test/dev4500.x00 69 blocks
```

a test/dev4510.x00 90 blocks
a test/dev4540.x00 69 blocks
a test/dev4540.xx0 19 blocks
a test/dev4600.x00 74 blocks
a test/io4000.x00 31 blocks
a usr/scn/iop_rev1 18 blocks
a man/cat1/get_defects.1d 5 blocks
a man/cat1/ioputil.1d 14 blocks
a man/cat1/security_clear.1d 11 blocks
a bin/boot_hsp 264 blocks
a bin/boot_iop 277 blocks
a bin/hsputil 188 blocks
a bin/idcfmt 464 blocks
a bin/io_hard_logger 233 blocks
a bin/io_margin 239 blocks
a bin/io_sysreset 238 blocks
a bin/vioputil 35 blocks
a bin/lib/hsputil.x00 74 blocks
a bin/lib/vioputil.x00 45 blocks
a bin/lib/controllers 4 blocks
a bin/lib/DB_diskfmt 6 blocks
a bin/lib/DBtapefmt 11 blocks
a bin/lib/names.idc4000 2 blocks
a bin/lib/dev5130.causes 3 blocks
a bin/lib/dev5130.help 9 blocks
a bin/lib/dev5210.dhelp 20 blocks
a bin/lib/dev5210.help 41 blocks
a bin/lib/dev5300.dhelp 24 blocks
a bin/lib/dev5300.help 14 blocks
a bin/lib/dev5510.dhelp 18 blocks
a bin/lib/dev5510.help 16 blocks
a bin/lib/dev_ultra.help 11 blocks
a bin/lib/dev_vscsit.dhelp 30 blocks
a bin/lib/dev_vscsit.help 12 blocks
a bin/lib/idcfmt.help 35 blocks
a bin/lib/hpi4000.help 14 blocks
a test/dev5130.t 564 blocks
a test/dev5210.t 555 blocks
a test/dev5300.t 315 blocks
a test/dev5500.t 265 blocks
a test/dev5510.t 314 blocks
a test/dev_ultra.t 292 blocks
a test/dev_vscsit.t 467 blocks
a test/idc4000.t 366 blocks
a test/io4120.t 551 blocks
a test/io5000.t 538 blocks
a test/tli4480.t 802 blocks
a test/dev5130.x00 121 blocks
a test/dev5210.x00 117 blocks
a test/dev5300.x00 119 blocks
a test/dev5300.xx0 29 blocks
a test/dev5500.x00 72 blocks
a test/dev5510.x00 88 blocks
a test/dev_ultra.x00 374 blocks
a test/io4120.x00 156 blocks
a test/io5000.x00 68 blocks
a test/tli.help 144 blocks
a test/tli4480.edb 38 blocks
a test/dev5210x.t link to test/dev5210.t

a test/dev5300x.t link to test/dev5300.t
a test/dev5510x.t link to test/dev5510.t
a test/dev_ultrax.t link to test/dev_ultra.t
a test/dev_vscsitx.t link to test/dev_vscsit.t
a test/tli4480x.t link to test/tli4480.t
a test/hpi4000.piga 2 blocks
a test/hpi4000.t 593 blocks
a test/hpi4000.x00 424 blocks
a test/hpi4000x.t link to test/hpi4000.t
a test/script/tli_test.pat 1 blocks
a test/script/tli4480.scr 7 blocks
a test/script/tli4480b.scr 2 blocks
a test/script/tli4480d.scr 2 blocks
a test/script/tli4480f.scr 2 blocks
a test/script/tli4480i.scr 1 blocks
a test/script/tli_config.scr 1 blocks
a test/script/tli_scr5 2 blocks
a usr/lib/DB_idc 7 blocks
a usr/lib/RLL_1_7 1 blocks
a usr/lib/RLL_1_7.2hp 1 blocks
a usr/lib/RLL_2_7 1 blocks
a usr/lib/RLL_2_7.2hp 1 blocks
a usr/lib/DB_cop_io 1 blocks
a usr/scn/fse_rev1 14 blocks
a usr/scn/hsp_rev1 8 blocks
a usr/scn/idc_rev1 296 blocks
a usr/scn/tli_rev1 164 blocks
a usr/scn/viop_rev1 18 blocks
a usr/scn/hpi_rev1 60 blocks
a man/cat1/boot_iop.1d 2 blocks
a man/cat1/hsputil.1d 16 blocks
a man/cat1/idcfmt.1d 98 blocks
a man/cat1/vioputil.1d 14 blocks