Release Notice
CONVEX I/O Diagnostics V2.0 (C200/C3200/C3400 Series)

Document No. 760-006730-002

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HEWLETT® PACKARD
CONVEX Computer Corporation
RICHARDSON, TX USA

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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 ioconfig entry examples.
- Section 8 contains known documentation problems.
- Section 9 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	760-004215-004	I/O Diagnostics, V2.0	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	Tape Library Interface(TLI) Subsystem Diagnostics Manual
23.	0/1	DHW-276	Fiber Distributed Data Interface Diagnostic Manual
24.	0/1	DHW-280	High Performance Parallel Interface Diagnostic Manual
25.	0/1	DHW-285	Integrated Tape Channel Subsystem Diagnostic Manual
26.	0/1	DHW-286	Integrated Disk Channel Subsystem Diagnostic Manual

- C200 and C3200 series Release Packages will include items 1 and 2. Items 3 thru 26 are included, as pertinent, with respect to I/O configuration. For C3400 series Release Packages, items 14 thru 26 are included, as pertinent, with respect to I/O configuration.

Series Update Package

- Consists of items 3 thru 26, 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 (760-003515-007) 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 scsiutil utility provides the ability to access and control SCSI devices. Special commands have been provided for disk related tasks such as reading/writing topology data, formatting, defect management, etc. Additionally, any SCSI device may be accessed with user created SCSI commands if desired. Refer to the SPU and ConvexOS man pages for more information.
- The qsc_ldplsi utility provides the ability to reprogram the pLSI components of the QSC. Refer to the QSC Field Service Guide (DHW-287) or the SPU qsc_ldplsi man page for further information.

Test Programs

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

- The **qsc4000** (Quad SCSI Channel) diagnostic is released for the first time. Please refer to the QSC Field Service Guide (DHW-287) for further information on this diagnostic.

5. Fixes

Utilities

- None

Test Programs

- None

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. Ioconfig example

- Ioconfig entries for dev5130, dev_vfddi, dev_vscsit

```
viop 1
 vme 0
#
#   1.5GB esdi disk drive
#
  ctlr DKC-203 csr 0x800 int 1
    unit 0 type DKD-287

#
#       fddi
#
  ctlr LAN-208 csr 0x6000 int 2
    unit 0 type fd
  ctlr LAN-208 csr 0x6200 int 3
    unit 0 type fd

#
#       dev_vscsit
```

```
#

# 3480 (207), 3480 with data compression (227)
  ctlr MTC-202 csr 0xee00 int 4
    unit 0 subunit 0 type MTD-207
    unit 0 subunit 1 type MTD 227

# 3480 stacker (217), 3480 with data compression and stacker (237)
  cltr MTC-202 csr 0xec00 int 5
    unit 0 subunit 0 type MTD-217
    unit 0 subunit 1 type MTD 237

# DAT (208), DAT with data compression and stacker (238)
  ctlr MTC-202 csr 0xea00 int 6
    unit 0 subunit 0 type MTD-208
    unit 1 subunit 0 type MTD-238
```

8. Known Documentation Problems

There are no known documentation problems for this release.

9. New Documentation

There is no new documentation for this release.

A

Installing CONVEX C200/C3200/C3400 Series I/O Diagnostics V2.0

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 (760-003515-007) 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

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- CONVEX SCSI I/O requires Revision J (or later) of the VIOP Channel Controller Unit (CCU).
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- 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 V5.2 (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 V5.2 or later, then install CONVEX C3200 Series Processor Diagnostics/Database V5.2 (760-001015-220) in accordance with the CONVEX C3200 Series Processor Diagnostics/Database Release Notice (760-001130-012). For CONVEX C3400 Series systems, if the file*/mnt/PROCDIAG_REV* indicates that version V2.0 (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 V2.0 or later, then install CONVEX C3400 Series Processor Diagnostics V2.1 (760-003515-013) in accordance with the CONVEX C3400 Series Processor Diagnostics Release Notice (760-005030-013).

7. Place the CONVEX C200/C3200/C3400 Series I/O Diagnostics V2.0 tape (760-004215-003) 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 V2.0 I/O Diagnostics tape.

```
==========================================

** Installsw Header File Copy **
Product:      CONVEX C200/C3200/C3400 I/O Diagnostics  V2.0
Release date:  March 17th 1995
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
 --- C200/C3200/C3400 I/O Diagnostics  V2.0
 --- C32C34V2_0 I/O Diagnostics build begun Tue Mar 21 13:42:31 CST 1995
a bin/get_defects 321 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 605 blocks
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 295 blocks
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 4 blocks
a man/cat1/ioputil.1d 10 blocks
a bin/boot_hsp 264 blocks
a bin/boot_iop 276 blocks
a bin/hsputil 188 blocks
a bin/idcfmt 505 blocks
a bin/io_hard_logger 233 blocks
a bin/io_margin 241 blocks
a bin/io_sysreset 239 blocks
a bin/vioputil 35 blocks
a bin/qsc_ldplsi 285 blocks
a bin/scsiutil 389 blocks
a bin/scsiutil_scr/generic/cap 1 blocks
a bin/scsiutil_scr/generic/format 1 blocks
a bin/scsiutil_scr/generic/format_2k 2 blocks
a bin/scsiutil_scr/generic/inq 2 blocks
a bin/scsiutil_scr/generic/tur 1 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/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 38 blocks
a bin/lib/dev_vscsit.help 12 blocks
a bin/lib/dev_vfddi.dhelp 26 blocks
a bin/lib/dev_vfddi.help 12 blocks
a bin/lib/tli.help 145 blocks
a bin/lib/tli4480.edb 38 blocks
a bin/lib/idcfmt.help 35 blocks
a bin/lib/hpi4000.help 14 blocks
a bin/lib/idc4010.edb 38 blocks
a bin/lib/idc4010.help 68 blocks
a bin/lib/itc.help 75 blocks
a bin/lib/itc4000.edb 38 blocks
a test/dev5130.t 570 blocks
a test/dev5130.x00 144 blocks
a test/dev5210.t 556 blocks
a test/dev5210x.t link to test/dev5210.t
a test/dev5210.x00 138 blocks
a test/dev5300.t 317 blocks

a test/dev5300x.t link to test/dev5300.t
a test/dev5300.x00 141 blocks
a test/dev5300.xx0 30 blocks
a test/dev5300.000 65 blocks
a test/dev5500.t 273 blocks
a test/dev5500.x00 94 blocks
a test/dev5510.t 315 blocks
a test/dev5510x.t link to test/dev5510.t
a test/dev5510.x00 110 blocks
a test/dev_ultra.t 293 blocks
a test/dev_ultrax.t link to test/dev_ultra.t
a test/dev_ultra.x00 374 blocks
a test/dev_vscsit.t 501 blocks
a test/dev_vscsitx.t link to test/dev_vscsit.t
a test/vscsit.x00 371 blocks
a test/dev_vfddi.t 434 blocks
a test/dev_vfddix.t link to test/dev_vfddi.t
a test/fddi.viop 450 blocks
a test/fddi.x00 513 blocks
a test/io4120.t 555 blocks
a test/io4120.x00 157 blocks
a test/io5000.t 554 blocks
a test/io5000.x00 74 blocks
a test/tli4480.t 799 blocks
a test/tli4480x.t link to test/tli4480.t
a test/tli4480.000 3 blocks
a test/tli4480.x00 256 blocks
a test/itc4000.t 836 blocks
a test/itc4000.x00 247 blocks
a test/idc4010.t 751 blocks
a test/idc4010.x00 247 blocks
a test/hpi4000.t 592 blocks
a test/hpi4000x.t link to test/hpi4000.t
a test/hpi4000.x00 424 blocks
a test/hpi4000.piga 2 blocks
a test/qsc4000.x00 159 blocks
a test/qsc4000.t 697 blocks
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_scsi 6 blocks
a usr/lib/DB_idc 15 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 usr/scn/qsc_rev1 4 blocks
a man/cat1/qsc_ldplsi.1d 3 blocks
a man/cat1/boot_iop.1d 2 blocks
a man/cat1/hsputil.1d 11 blocks
a man/cat1/idcfmt.1d 89 blocks
a man/cat1/vioputil.1d 10 blocks
a man/cat1/security_clear.1d 10 blocks
+ mt rew
--- C32C34V2_0 I/O Diagnostics build completed Tue Mar 21 13:46:48 CST 1995

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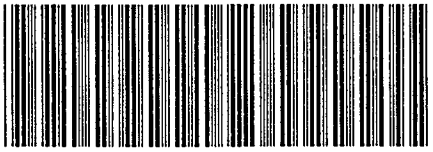

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