

Release Notice
CONVEX C3400/P5500 Series
Processor Diagnostics and Database V2.1.1
Document No. 760-005030-015

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CONVEX Computer Corporation
Richardson, Texas, U.S.A.

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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 C3400/P5500 Series Processor Diagnostics and Database. 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 describes known hardware problems.
- Section 8 contains known documentation problems.
- Section 9 contains description of new documentation.
- Appendix A contains instructions for installing this release on a CONVEX C3400/P5500 Series Service Processor Unit.
- Appendix B contains a list of the files contained on the release tape.

Processor Diagnostics consists of various functional-level test programs and diagnostic utilities that execute under the CONVEX SPU OS operating system of the Service Processor Unit. 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. The Database portion of the release tape contains the microcode, scan ring definitions, and configuration files. 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 Processor 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 C3400/P5500 Series Processor Diagnostics and Database Media

ITEM	QTY	TYPE	PART NUMBER	DESCRIPTION	FORMAT
1.	1	QIC.	760-003515-015	Processor Diagnostics and Database, V2.1.1	Installsw

3. Notes and Warnings

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

- This release is a patch to V2.1 CONVEX C3400/P5500 Series Processor Diagnostics and Database (760-003515-013) and should be installed after installing the V2.1 release.
- The installation of the release results in overwriting the following directories when loading the V2.1.1 files from the release tape:
 - /mnt/usr/ucode
- Note, this release requires the CONVEX C200/C3200/C3400 Series I/O Diagnostics tape V1.0 or greater be co-installed on the system.
- This release of CONVEX C3400/P5500 Series Processor Diagnostics and Database contains CONVEX C3400/P5500 microcode version 5.61 for the 410-002236-200, 410-003236-200, 410-004236-200, and 410-005236-200 JCPU boards; and 410-001350-200 JCP2 boards.
- This release also requires the V6.1 (or later) release of CONVEX SPU OS. To support the installation of IDC (Integrated Disk Channel) ccu, the V6.1 (or later) release of CONVEX SPU OS is required.

The V6.2 (or later) release of CONVEX SPU OS is required when the system contains a mixed set of JCPU and JCP2 processor boards.

- This release should only be installed by a qualified CONVEX Field Service representative. Please see Appendix A for installation details.

4. Enhancements

Utilities

None.

Test Programs

None.

Microcode

- Fixed a bug that occurred in the vector load byte instruction with certain stride values.
- Changed all memory semaphoring instructions (TAS, TAC, SWAP, GETR, PUTR, etc.) so that they will delay on a failure to acquire the lock.
- Changed the LCK instruction to guarantee that it will eventually succeed in all cases.
- Changed the MSYNC operation to work around a problem on machines with 8 CPU's.

5. Fixes

Utilities

None.

Test Programs

None.

6. Known Software Problems

Utilities

- Control stores must be reloaded after running `cop` or `load_clk` on a JCPU or JCP2 board.

Test Programs

Test Suite	Subtest Errors
cpu4241	Note: These tests take a very long time to run with the <code>vl</code> set to any value greater than 8.
spu4000	Control stores must be reloaded after running <code>spu4000</code> on a JCPU or JCP2 board.

7. Known Hardware Problems

None.

8. Known Documentation Problems

- There are no known documentation problems for this release.

9. New Documentation

There is no new documentation for this release.

Installing CONVEX C3400/P5500 Series Processor Diagnostics and Database V2.1.1

Warnings

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

- This release is a patch to V2.1 CONVEX C3400/P5500 Series Processor Diagnostics and Database (760-003515-013) and should be installed after installing the V2.1 release.
- The installation of the release results in overwriting the following directories when loading the V2.1.1 files from the release tape:
 - /mnt/usr/ucode
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- This release of CONVEX C3400/P5500 Series Processor Diagnostics and Database contains CONVEX C3400/P5500 microcode version 5.61 for the 410-002236-200, 410-003236-200, 410-004236-200, and 410-005236-200 JCPU boards; and 410-001350-200 JCP2 boards.
- This release also requires the V6.1 (or later) release of CONVEX SPU OS. To support the installation of IDC (Integrated Disk Channel) ccu, the V6.1 (or later) release of CONVEX SPU OS is required.

The V6.2 (or later) release of CONVEX SPU OS is required when the system contains a mixed set of JCPU and JCP2 processor boards.

- 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:

CONVEX 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. Place the CONVEX C3400/P5500 Series Processor Diagnostics and Database V2.1.1 tape (760-003515-015) in the cartridge tape unit and enter the following command:

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

The installation of this release requires about 30 minutes.

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

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

7. After installation is complete, remove the tape from the cartridge tape unit.
8. Place the CONVEX C200/C3200/C3400 Series I/O Diagnostics tape (760-004215-00x) in the cartridge tape unit and install the tape per the instructions in the CONVEX C200/C3200/C3400 I/O Diagnostics Release Notes (760-006730-00x).
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 *secure* position and enter the *boot* command to reboot the system:

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

11. This completes the installation of CONVEX C3400/P5500 Series Processor Diagnostics and Database. Note that the machine is automatically set up to the maximum configuration. All installed CPU's will be enabled and initialized.

B

Files list

The following is the *installsw* output from making the V2.1.1 Processor Diagnostics and Database tape.

=====
** Installsw Header File Copy **

Product: C3400/5500 System Diagnostics and Database, Version: V2.1.1

Release date: February 1994

Directories: /mnt/usr/ucode

=====
SPU tape device is /dev/rmt1

a /tmp/install1 1 blocks

a /tmp/install2 5 blocks

a mnt/usr/ucode.1350/ip.wcs 89 blocks

a mnt/usr/ucode.1350/sr.wcs 46 blocks

a mnt/usr/ucode.1350/us_N.wcs 515 blocks

a mnt/usr/ucode.2236/ip.wcs 89 blocks

a mnt/usr/ucode.2236/sr.wcs 46 blocks

a mnt/usr/ucode.2236/us_0.wcs 177 blocks

a mnt/usr/ucode.2236/us_1.wcs 177 blocks

a mnt/usr/ucode.2236/us_2.wcs 177 blocks

a doc/v2.1.1diag.rel 30 blocks

