

S E R V I C E N O T E

Supersedes:
NONE

Agilent Medalist i3070 In-Circuit Test System

System Serial Numbers:

- E9901D - ALL
- E9902D - ALL
- E9903D - ALL
- E9905D - ALL
- E9901E - ALL
- E9902E - ALL
- E9903E - ALL
- E9905E - ALL

Changes to Control XTP card Firmware due to change in old NEC 4Mx4bit SRAM to new NEC 2Mx8bit SRAM

Parts Required:

P/N	Description	Qty.
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NONE

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
MODIFICATION RECOMMENDED			
ACTION CATEGORY:	<input type="checkbox"/> ON SPECIFIED FAILURE <input checked="" type="checkbox"/> AGREEABLE TIME	STANDARDS	LABOR: 0.0 Hours
LOCATION CATEGORY:	<input checked="" type="checkbox"/> CUSTOMER INSTALLABLE <input type="checkbox"/> ON-SITE <input type="checkbox"/> SERVICE CENTER <input type="checkbox"/> CHANNEL PARTNER	SERVICE INVENTORY: <input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input checked="" type="checkbox"/> SEE TEXT	USED PARTS: <input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input checked="" type="checkbox"/> SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	NO CHARGE AVAILABLE UNTIL: END OF PRODUCT'S SUPPORT LIFE	
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ADDITIONAL INFORMATION:			

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Situation:

The NEC 4Mx4bit SRAM (part number: 1818-8683) on the Control XTP card has become obsolete. Agilent needs to replace it with an NEC 2Mx8bit SRAM (part number: 1819-0563).

In order that the layout of the Control XTP board is not affected, the firmware that is programmed into the microcontroller that reads from the SRAM is changed. This will allow for easier changes of the SRAM, in event of repair.

Cut in date:

The new NEC 2Mx8bit SRAM will be assembled on **new Control XTP cards** that will start shipping in **end July 2010**.

The new firmware for the new NEC 2Mx8bit SRAM is “10071517_1.xsvf”.

The new firmware, after installing with the system will allow the microcontroller to be able to read both the old NEC 4Mx4bit SRAM and the NEC 2Mx8bit SRAM. This means that the new firmware is **backward compatible** with the old NEC 4Mx4bit SRAM. However the old firmware will not allow the microcontroller to read the new NEC 2Mx8bit SRAM correctly.

Consequences:

If the wrong firmware is loaded, the Control XTP card will not function correctly. Users who have testheads that installed with Control XTP of one version and software release of another version may detect this differences at failing diagnostics “Test 6, Subtest 0” with the error “FPGA firmware error”. This is a symptom that the firmware versions are different. (See Figure 1)

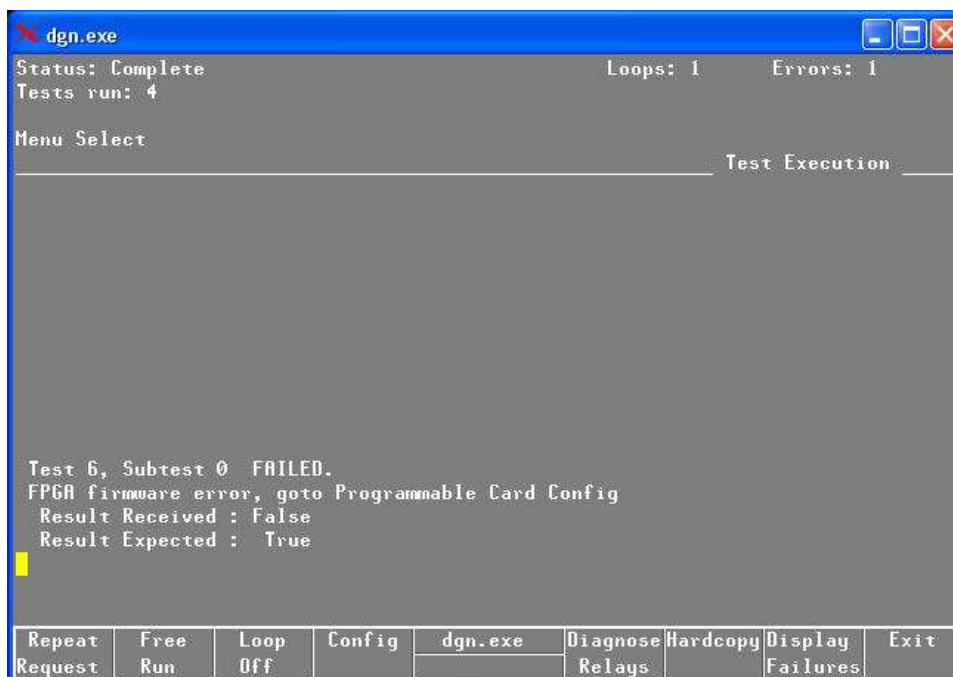


Figure 1: Diagnostics failure message when wrong firmware is loaded.

Solution/Action:**1) Identifying the new boards**

The boards installed with these new SRAM can be identified by a new code on the card label.

Control XTP cards	Label
Cards with NEC 4Mx4bit SRAM	E9900-66504- 4603 -23-xxxxx-xxxxx
Cards with NEC 2Mx8bit SRAM	E9900-66504- 5015 -23-xxxxx-xxxxx

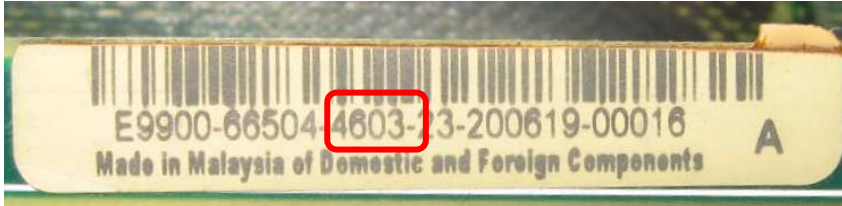


Figure 2: Control XTP card label (installed with old 1818-8683 NEC 4Mx4bit SRAM)

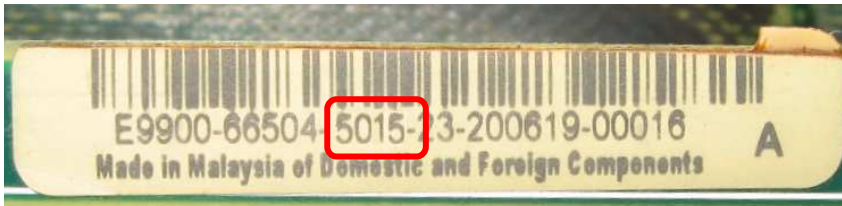


Figure 3: Control XTP card label (installed with new 1819-0563 NEC 2Mx8bit SRAM)

Another way to identify the different SRAMs is from the markings on the IC. The SRAMs can be found near the top right corner of the Control XTP card.

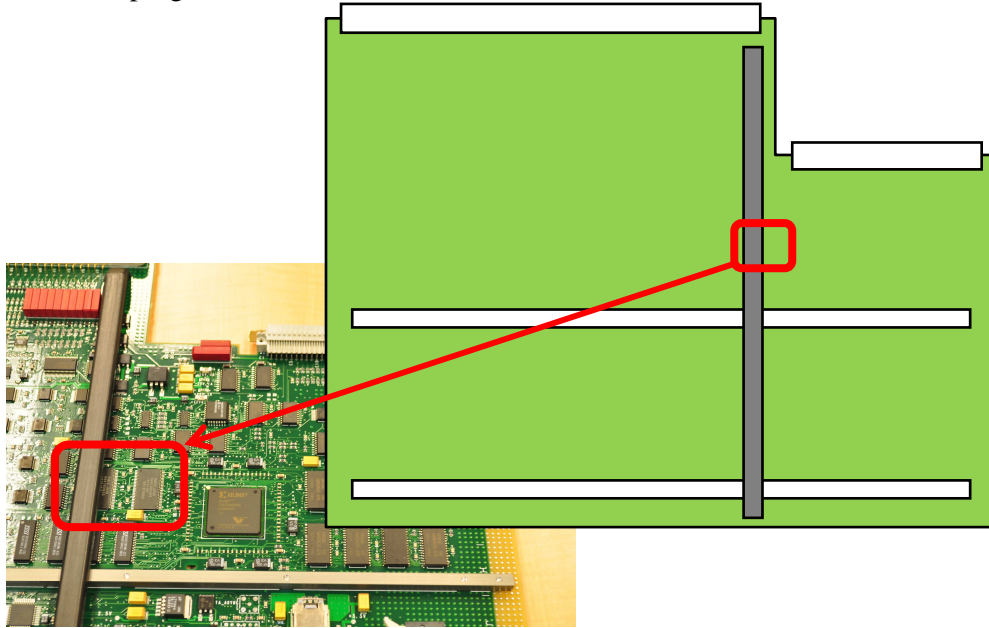


Figure 4: Location of NEC SRAM on the Control XTP Card

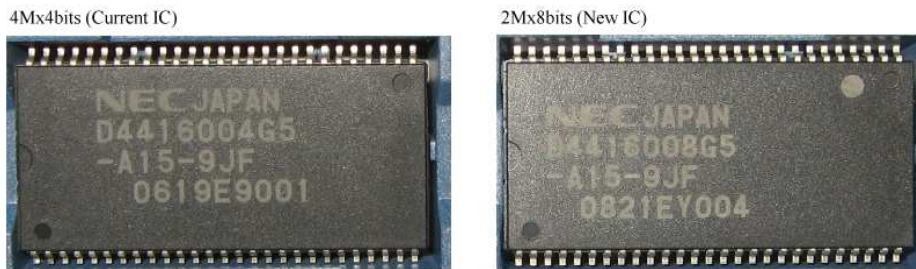


Figure 5: Markings on the NEC SRAMs

2) Identifying the software release version

To determine the version of the software that is currently running on the system, follow the steps below:

- I) Open a BT Basic window
 - a. Right click on the “Start Menu” on the Windows taskbar.
 - b. Select “Korn Shell Here ...”
- II) After a shell window has opened, key in “version” at the command prompt and hit “Enter” key.
- III) The software release version will be displayed. Take note of the version shown.

3) Solution/Action:

- A. Check the firmware version

Steps:

- 1) Execute the testhead diagnostics application by double clicking on the “DGN” icon on the desktop (alternatively, type “dgn” at the command prompt in a shell window)
- 2) To boot up the testhead,
 - a. Click on “Testhead Functns” (F4) and click on “Testhead Power On” (F1)
 - b. After the testhead is boot up, look at the statement starting with “Control Card:”

- c. Take note of the numbers after “XTP Rev:”
 - d. If the numbers are “**02020812_1**”, then the firmware revision installed is the old revision
 - e. If the numbers are “**10071517_1**”, then the correct updated firmware revision is installed on the Control XTP card.
- 3) To use the programmable card configurator
 - a. Boot up the testhead as described above
 - b. Launch the diagnostics application
 - c. Click on “Configuration” and click on “Programmable Card Config”
 - d. When you select the control card, you can view the firmware revision as shown below.

B. Get the correct firmware version

- a. First download the firmware from <http://www.agilent.com/see/i3070patches>
- b. Search for “XTP Firmware” at the above website
- c. Download the file “10071517_1.xsvf” from the website.
- d. Copy it into the “lib” directory “C:\Agilent_ICT\lib” on your controller
- e. Locate the file “C:\Agilent_ICT\lib\xtp.xsvf” and rename to “xtp.xsvf_02020812_1”
- f. Rename the file “10071517_1.xsvf” to “xtp.xsvf”
- g. **Proceed to step “C” to perform firmware update to Control XTP.**

Table 1 illustration of Control XTP card and the firmware file on the testhead controller.

Control XTP card	Control Card Firmware version	Firmware version in Software	Software Release	Symptoms	Actions
Assembled with old NEC 4Mx4bit SRAM	02020812_1	02020812_1	08.10p and earlier	No failure	No Action but recommend to update to 10071517_1
	10071517_1	02020812_1	08.10p and earlier	Fail diagnostics Test 6, Subtest 0	Download correct firmware file to update software.
	02020812_1	10071517_1	08.10p and earlier	Fail diagnostics Test 6, Subtest 0	Perform firmware update to Control XTP
	10071517_1	10071517_1	08.10p and earlier	No failure	No Action
Assembled with new NEC 2Mx8bit SRAM	10071517_1	02020812_1	08.10p and earlier	Fail diagnostics Test 6, Subtest 0	Download correct firmware file to update software.
	02020812_1	02020812_1	08.10p and earlier	No failure but Control XTP will not work	Download correct firmware file to update Control Card and software.
	02020812_1	10071517_1	08.10p and earlier	Fail diagnostics Test 6, Subtest 0	Perform firmware update to Control XTP
	10071517_1	10071517_1	08.10p and earlier	No failure	No Action

C. Program the new firmware into the Control XTP card (one time only process)

- a. Boot up the testhead as described above
- b. Launch the diagnostics application
- c. Click on “Configuration” and click on “Programmable Card Config”
- d. Click on “Update All” (F1) button to program all the Control XTP cards on the testhead.
(Note: Please ensure that the expected value should be **10071517_1** before updating)

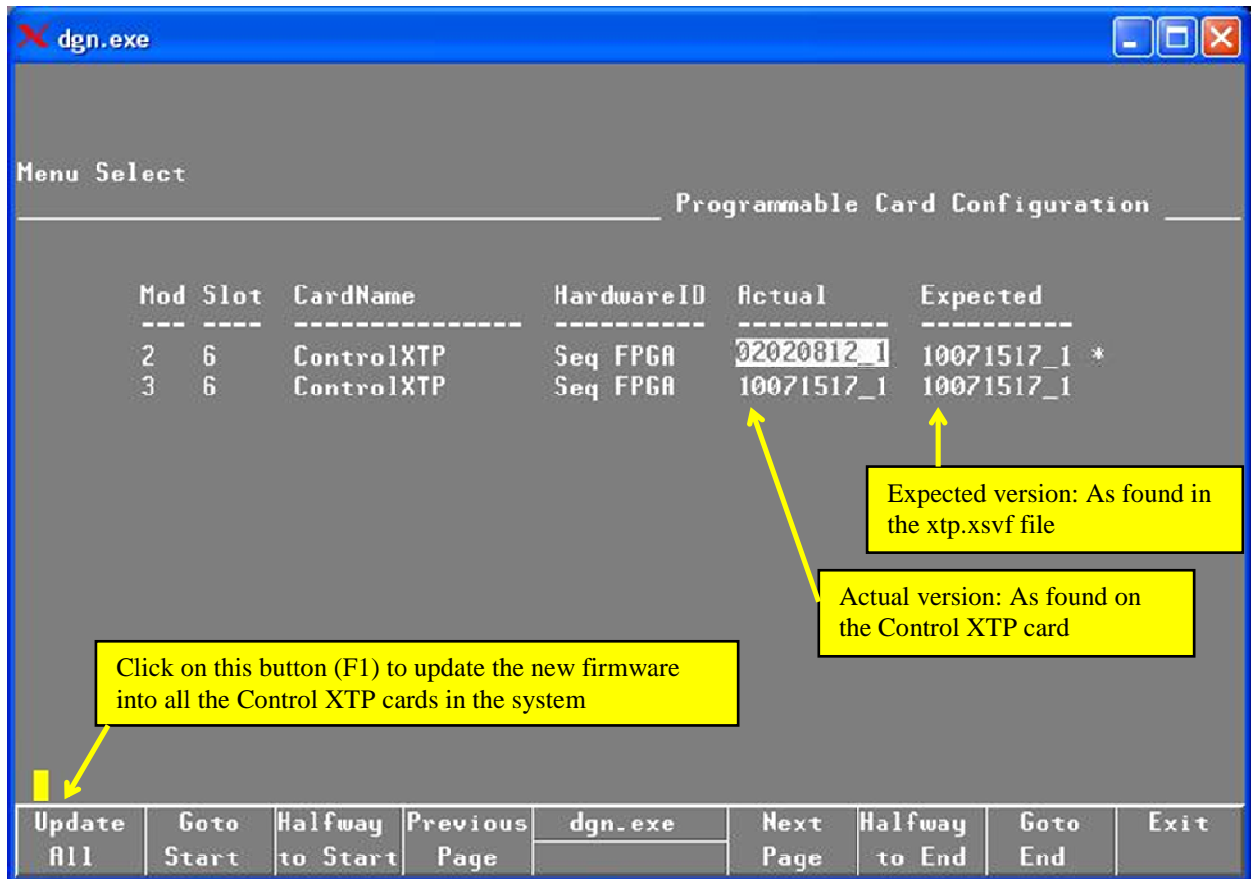


Figure 6: Diagnostics Configuration to update firmware

D. Confirmation test

- a. Reboot the testhead and check the Control XTP revision

Constraints of the upgrade:

- a. The firmware will only work on software release 05.21p and above. For example, for users who are on Unix version 05.00p, and are using the new Control XTP cards, they will have to upgrade to software release 05.21p before they can use the firmware and new Control XTP cards.
- b. The firmware will also work with Control XTP cards that are “downgraded” to XT when they are loaded on a system with Control XT cards.