Keysight Technologies Singapore
(Holdings) Pte Ltd
Measurement Systems Division
1 Yishun Avenue 7
Singapore 768923

+65 62157157 T
www.keysight.com/find/i3070

KEYSIGHT
TECHNOLOGIES

Dear Valued Customer,

i3070 In-Circuit Test Software release 09.00p
Release Notes

Keysight Technologies is pleased to introduce the latest software release 09.00p for existing i3070 in-circuit testers. This release can be installed on test systems and test development stations running Windows 7 32-bit or 64-bit operating systems.

Though we have separated from Agilent Technologies, we continue to be very focused on delivering best-in-class board test solutions to meet the most demanding requirements in the market. Behind our new company name, you still have the same great team to serve your needs.

Marking this new milestone, the 09.00p release will introduce Board Test Insight, a brand new testplan editor filled with features only found in powerful Integrated Development Environment (IDE) applications. We are confident that you will enjoy a better user experience with the new smart editor, and best of all, it comes with no additional charges. We have also taken action to improve test time – the enhanced Throughput Multiplier will now reduce both shorts and pins test execution time by half.

The following pages will introduce the various new features in more detail. For up-to-date information, please visit http://www.keysight.com/find/i3070patches.

I'd like to take this opportunity to thank you for your continuous support, and look forward to providing you more value-added features and services.

Yours faithfully,

Tian Chiok, LIAN
Product Marketing Manager
Keysight Technologies
tian-chiok_lian@keysight.com

What's New in i3070 09.00p Software Release

The i3070 In-Circuit Test Software release 09.00p provides the following features:

Board Test Insight

Board Test Insight provides a new graphical user interface in place of the BT-Basic window. It serves as a BT-Basic editor, allowing you to edit and debug the testplan and board files. It can also be used as the Operator Interface for production testing.

Features include:

- Testplan editor

  - Syntax highlighting and indenting of text in subroutines, functions, for-loops, etc.
    The indented sections can be hidden or expanded.

  - Syntax checking and auto-suggestions when entering commands.

  - Line numbers and testplan outline for fast navigation.

  - Use of standard Windows editing functions such as cut, copy, and paste.

- BT-Basic command line

- Testplan debug

- Customizable layout – Information is organized in panels, which can be hidden and moved, docked or left floating.

Launch Board Test Insight using its icon on the desktop. For information on using Board Test Insight, refer to the user guide (select it from the Help menu).

Throughput Multiplier enhancement

Throughput Multiplier has been enhanced for both shorts and pins tests, reducing the test time when homogeneous boards on a panel are tested simultaneously.

To apply this enhancement to existing test programs, recompile the pins and shorts tests.

Transfer pin assignment

This new feature for panelized boards forces the Probe Select (PBS) software to assign transfer pins to modules according to the board assignment in the board config file. This allows the user to easily locate the transfer pins if any of them needs to be replaced.

The new option is called **Confine Transfers To Assigned Modules**, and can be enabled in the board file, Board Consultant, or Test Consultant. See How to Restrict Transfer Pins to a Module.

Enhancement in version tracking using baselining

Baselining tracks and reports on changes in board directory contents. This enhancement provides the ability to list the baselines and revisions of selected files, together with their timestamps.
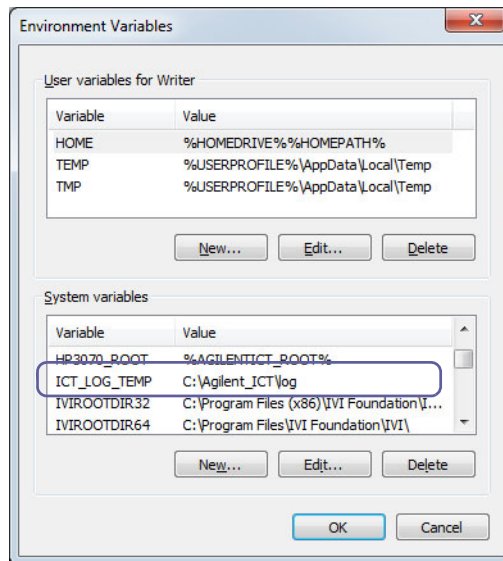
Example 1   Revision listing

```
File: testflow
   Baseline: 2 Revision: 2 Date: Dec 30 22:21:00 2014
   Baseline: 1 Revision: 1 Date: May 06 23:50:29 2013
File: testplan
   Baseline: 1 Revision: 1 Date: May 28 22:32:02 2014
```

System temperature log

This feature enables the logging of the i3070 module temperature. This is done by adding a system environment variable **ICT_LOG_TEMP** with the log file path as the value. For example:

The temperature of each module is logged at one minute intervals and saved to `<tempyyyymmdd>.csv` in the specified folder. The temperature is not logged during test execution.

System Requirements

The minimum hardware and software requirements for the installation of the i3070 09.00p software release are as follows:

Table 1   Minimum Requirements

Platform	Windows 7 Professional with Service Pack 1
Hardware	Processor – Intel Pentium® 4 or better (minimum 1.8 GHz) Memory – recommended 4 GB RAM (minimum 2 GB RAM) Disk space – minimum 10 GB
Other	Minimum screen resolution – 1280 x 1024, 16-bit Anti-virus and firewall software are recommended to be installed

> **NOTE**
>
> If you are upgrading a controller to Windows 7, ensure that it meets Windows 7 system requirements and there are no compatibility issues.

Software Licenses

The i3070 09.00p software release requires a 09.00p software update license. Users can still access the same features with their existing basic testhead and feature licenses.

The new software update license is automatically distributed to customers under subscription. It can be redeemed at www.keysight.com/find/softwaremanager.

Compatibility Statement

Existing board test programs that run on 3070 or i3070 systems with earlier software releases (08.xx, 07.xx, and 05.4x) will continue to run on systems that have been upgraded to the 09.00p software release running on Windows 7.

Board test programs developed on Windows-based software revisions prior to 05.40p should be converted to run on release 05.40p at the minimum, before running them on systems with i3070 software release 09.00p or later.

Notes for This Release

Firmware Update for Control XTPA Card

The firmware for the Control XTPA Card has been updated to enhance the accuracy of the Safeguard feature. Refer to Service Note 3070-91 for detailed instructions on how to update your Control Card.
(http://literature.cdn.keysight.com/litweb/pdf/3070-91.pdf)

If you are updating the firmware after installing the 09.00p software, note the following:

- The system can continue to function without the firmware update, but the error message **FPGA firmware error** will appear when Diagnostics (DGN) is run.

- The firmware file `xtpa_14091012_2.xsvf` described in Service Note 3070-91 is distributed with software release 09.00p as `C:\Agilent_ICT\lib\xtpA.xsvf`. You need not download it again.

- Program the Control XTPA Card with the new firmware (step D) and perform AutoAdjust after rebooting the testhead (step E) as described in pages 3 and 4 of the service note.

New Replacement Parts

Note the new part numbers for network switches.

Table 2   Part numbers for network switches

| Item | EXISTING | | NEW | |
	Part Number	Description	Part Number	Description
Unmanaged Switch	0960-3075	Ethernet Switch 10/100/1000-Mbps 8-Port 12VDC 1A	0960-3283	Ethernet Switch 10/100Mbps 8-Port 12VDC 0.5A
	0950-5573	Power Supply Adapter switching AC-DC 1-Output 12.6VDC 1.5A	No Change	
Managed Switch	0960-3091	Switch-Gigabit 8-Port 6W 158X105X27-mm	0960-3230	Switch-Ethernet web managed 8-Port 7.93X4.65X1.73-in
	0950-5573	Power Supply Adapter switching AC-DC 1-Output 12.6VDC 1.5A	0950-5757	Power Supply Adapter switching AC-DC 1-Output 12VDC 1.5A DC Plug 2.5

Change of Default Password

The default password for the user account "calibrate" is changed with this software release, although the user access rights remain unchanged.

Table 3   User account "calibrate"

Old Password	New Password	Definition and Permissions
Agilent1	Keysight1	No change. Used for system calibration and maintenance. This user has administrative rights.

Change of Start Menu Program Folder for i3070 Software

On the Windows Start menu, the program folder that contains the i3070 programs is now called **Keysight ICT**.

Table 4   Program folder on Start menu

Existing	New
Start > All Programs > Agilent ICT	Start > All Programs > Keysight ICT

(The default installation folder for the i3070 software remains as C:\Agilent_ICT.)

How to Restrict Transfer Pins to a Module

The **Confine Transfers To Assigned Modules** option can be enabled in the following ways.

- board File

    Add statement to board file.

    Example 2

    ```
    GLOBAL OPTIONS
        Fixture Type IN-LINE;
        Fixture Size BANK2;
        Top Probes Allowed ON;
        Confine Transfers To Assigned Modules ON;         ———— Add statement
        Heavy Probe Force 8;
    ```
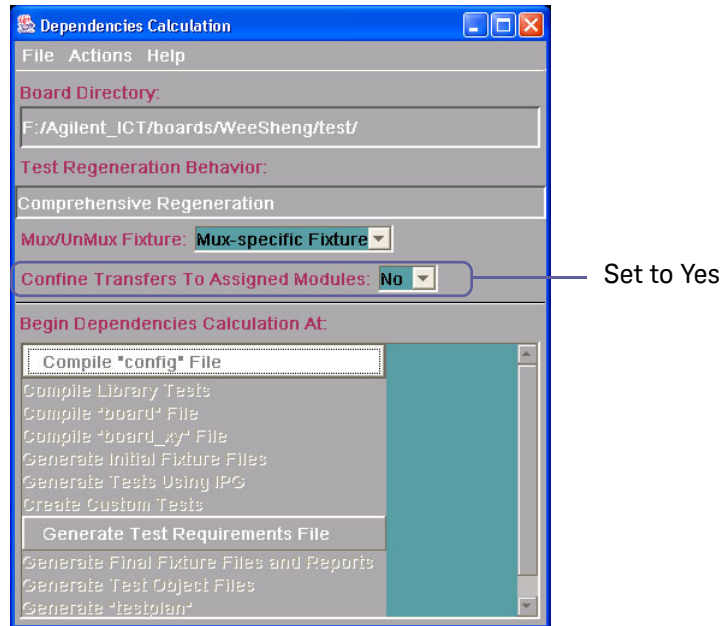
- Board Consultant

    Select option from View / Edit Test System Data > Fixture Options.
    The value will be saved to the board file.

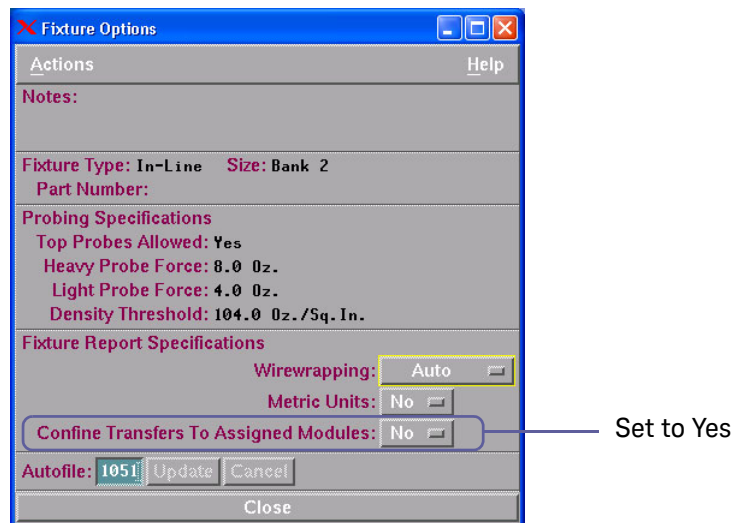- Test Consultant (Dependencies Calculation)

  The setting is only used for the current session; it is *not* saved to the board file.

- Fixture Consultant (Fixture Options)

  The setting is only used for the current session; it is *not* saved to the board file.

Appendix A: Improvements

Improvements and enhancements in the i3070 09.00p software based on customer requests are listed below.

Table 5   Change requests

Change Request ID	Description
195946	08.21p: Fixed Utility Card plug-in module wiring issue.
199774	08.40p: Ability to output system temperature to a file.
210063	08.40p: i3070 Inline – Faon/Faoff buttons removed.
214017	08.40p: Fixed DGN test T2340 marginal failure with analog boards.
218788	08.40p: Resolved illegal XML characters in the board file causing Coverage Analyst to abort with non-descriptive error message.
221346	08.40p: Display program name and version in i3070 interface.
223646	08.40p: Fixed crash in probe selection.
237576	08.30p: Fixed "Internal Error-11" and "In filter caught AV as expected" messages appearing if "enter…using…" statement is heavily used in large and complex testplan.
242922	08.30p: High Voltage zener tests on the same board using the same module resources fail when executed sequentially.
242923	08.30p: Subsequent High Voltage zener tests on different boards of the panel fail Source Over Voltage if using the same module resources.
278346	08.40p: Fixed DGN test T2340 not displaying results.
315320	08.40p: i3070 Inline – The default keepout area between the edge of the board and the front edge of the fixture is incorrect when placing panelized board in Fixture Consultant.
321090	08.40p: Updated how the ICT Browser displays transfer pins.
324517	08.40p: Fixed copying of board directories using the Administrator Interface.
328664	08.40p: Resolved i3070 diagnostic results for DGN test 13975.
352246	08.40p: i3070 Inline – Fixed incorrect board placement.
360449	08.40p: Fixed wrong calibration testplan report path.
366437	08.40p: Rectified how IPG generates nominal capacitor values for boards with multiple versions.
366443	08.40p: Resolved probe assignment for VTEP.
371264	08.40p: Corrected Dot6 wait time calculation for a single-device chain or if dot6 device is the last device in the chain.
372651	08.40p: Fixed signatures and code for generating tests with only negative legs of differential pairs.

Appendix B: Compatibility Matrix

Table 6   Compatibility matrix

	Keysight 3070 (UNIX®)	Keysight 3070 (Windows)	Keysight i5000	Keysight i3070 UnMux	Keysight i3070 Mux	Remarks
Software Revision	05.30 & below	05.42 & below	06.02 & below	09.00p & below	09.00p & below	09.00p runs on Windows 7 only. 08.40p is the last release that runs on Windows XP.
Operating System	UNIX	Windows 2000/ Windows XP	Windows XP	Windows 7/ Windows XP	Windows 7/ Windows XP	Only rp5700 or newer models can support Windows 7
Controller Hardware	HP B20000/ C36000 and below	HP X2100*/IPC (Advantech)/ HP xw4300	HP xw4200/ HP xw4300	HP xw4400/ HP xw4600/ HP rp5700/ HP rp5800	HP xw4400/ HP xw4600/ HP rp5700/ HP rp5800	* HP X2100 is not supported on 05.40p and above
Software Features						
Simplate Express Fixturing	√	√	√	√	√	
Analog In-circuit Test	√	√	√	√	√	
Analog Functional Test	√	√	√	√	√	
Timing Sets	√	√	×	×	√	
In-circuit Boundary-Scan	√	√	√	√	√	
InterconnectPlus Boundary-Scan	√	√	√	√	√	
PanelTest	√	√	√	√	√	
Throughput Multiplier	√	√	√	√	√	
TestJet	√	√	√	√	√	
VTEP v2.0 *Powered!* (VTEP, iVTEP, NPM and Cover-Extend)	×	√ (1)	√ (1)	√ (2)	√ (2)	(1) VTEP and iVTEP only (2) NPM works on 07.10p or later CET works on 07.20p or later
Cover-Extend Technology	×	×	×	√	√	CET works on 07.20p or later
Polarity Check	√	√	√	√	√	
Connect Check	√	√	×	×	√	
Powered Testing	√	√	√	√	√	

Table 6   Compatibility matrix

	Keysight 3070 (UNIX®)	Keysight 3070 (Windows)	Keysight i5000	Keysight i3070 UnMux	Keysight i3070 Mux	Remarks
Software Revision B	√	√	×	×	√	
All High Accuracy Resources	√	√	×	×	√	
Fault Detective	√	√	√	√	√	
DriveThru	√	√	√	√	√	
Flash70	√	√	√	√	√	
Awaretest xi	√	√	√	×	×	Not supported
MagicTest	√	√	×	×	√	
Control XT Override	√	√	×	×	√	
Advanced Fixturing	√	√	√	√	√	
Silicon Nails	√	√	√	√	√	
Flash ISP	√	√	√	√	√	Needs Control XTP
PLD ISP	√	√	√	√	√	Needs Control XTP
Diagnose Relays	√	√	√	√	√	
System Calibration	√	√	√	√	√	
Interactive Pin Locator	×	×	×	√	√	
Automatic Analog Debug (AutoDebug)	×	×	√	√	√	
AutoOptimizer	×	×	×	√	√	Needs Control XTP
Operator Interface	×	×	√	√	√	
Debug Interface	×	×	√	√	√	
ICT Browser	×	×	√	√	√	
Coverage Analyst	√	√	√	√	√	
Fixture Consultant	√	√	×*	×*	√	* i5000/i3070 UnMux uses ICT Browser
Board Consultant	√	√	×*	×*	√	* i5000/i3070 UnMux uses TTM Development Software
Test Consultant	√	√	×*	×*	√	* i5000/i3070 UnMux uses TTM Development Software

Table 6   Compatibility matrix

	Keysight 3070 (UNIX®)	Keysight 3070 (Windows)	Keysight i5000	Keysight i3070 UnMux	Keysight i3070 Mux	Remarks
TTM Development Software	×*	×*	√	√	×*	* 3070/i3070 Mux uses Board Consultant, Fixture Consultant and Test Consultant
Pushbutton Debug	√	√	√	√	√	
Access Consultant	√	√	√	√	√	
Part Description Editor	√	√	√	√	√	
Device Test Library	√	√	√	√	√	
BT-Basic Test Language	√	√	√	√	√	
Setup Test Editor	√	√	√	√	√	
Analog Test Language	√	√	√	√	√	
Vector Control Language	√	√	√	√	√	
Pattern Capture Format	√	√	√	√	√	
Digital In-circuit Test	√	√	√	√	√	
Integrated Digital In-circuit and Analog Functional Test Language	√	√	√	√	√	
IPG-II Program Generator	√	√	√	√	√	
Multiple Board Versions	√	√	√	√	√	
Dual-Well Shared Wiring	√	√	√	√	√	
Short-wire Fixture Technology	√	√	√	√	√	
Board Test Grader	√	√	√	√	√	
Datalogging	√	√	√	√	√	
DataLog Converter	×	×	×	√	√	Available on 08.40p and above
Board Test Insight	×	×	×	√	√	Available on 09.00p and above
Pushbutton Q-STATS	√	√	√	√	√	
CAMCAD						No longer supported.
Advanced Probe Spacing	×*	√	√	√	√	* Available only on 05.30 (UNIX)
Automatic 6 Wire Analog ICT Tests	√	√	√	√	√	
Automatic Digital Test Generation	√	√	√	√	√	

Table 6   Compatibility matrix

	Keysight 3070 (UNIX®)	Keysight 3070 (Windows)	Keysight i5000	Keysight i3070 UnMux	Keysight i3070 Mux	Remarks
Safeguard ICT Analysis	√	√	√	√	√	
Quick Report	√	√	√	√	√	
ScanWorks	×	√	√	√	√	Works on 05.21 to 08.30p (Windows XP only)
System Configuration and Hardware Diagnostics	√	√	√	√	√	
RS232 Control	√	√	√	√	√	
IEEE 488 Instrumentation	√	√	√ *	√ *	√ *	* Not tested
Hardware Features						
ASRU Rev A	√ *	×	×	×	×	* Supported only on 04.00 (UNIX) and below
ASRU Rev B	√ *	×	×	×	×	* Supported only on 05.30 (UNIX) and below
ASRU Rev C	√	√	√	√	√	
ASRU Rev D	×	×	√	√	√	
ASRU Rev N	×	×	×	√ *	√ *	* Works only with Control XTP and 08.00p or later
Serial Test Card	√ *	×	×	×	×	* Supported only on 05.21 (UNIX) and below
Serial Test Plus card	√ *	×	×	×	×	* Supported only on 05.21 (UNIX) and below
Serial Test Pay Per use	√ *	×	×	×	×	* Supported only on 05.21 (UNIX) and below
ChannelPlus	√	×	×	×	×	
ChannelPlus Pay Per Use	√	×	×	×	×	
Control Card	√ *	×	×	×	×	* Supported only on 05.21 (UNIX) and below
ControlPlus Card	√ *	×	×	×	×	* Supported only on 05.21 (UNIX) and below

Table 6   Compatibility matrix

	Keysight 3070 (UNIX®)	Keysight 3070 (Windows)	Keysight i5000	Keysight i3070 UnMux	Keysight i3070 Mux	Remarks
ControlXT	√	√	×	×	√ *	* ASRU Rev N not supported
ControlXTP	√	√	√	√	√	
ControlXTPA	×	×	×	√ *	√ *	* Supported on 08.30pb and above
HybridPlus SD/DD Pay Per Use	√	√	×	×	√ *	* Supported only on HybridPlus DD Pay Per Use
HybridPlus SD 6/12/20 MP/s	√ *	√	×	×	×	* Supported only on 05.30 (UNIX) and below
HybridPlus DD 6/12/20 MP/s	√	√	×	×	√	
HybridPlus 32 6/12/20MP/s	√	√	×	×	×	End of support
HybridPlus 32 Pay Per Use	√	√	×	×	×	End of support
HybridPlus 32 Value Series	×	√	×	×	×	End of support
HybridPlus 144 unmux	×	×	√	√	×	
AnalogPlus (SD)	√	√	×	×	√	
AnalogPlus (DD)	√	√	×	×	√	
AccessPlus (SD)	√	√	×	×	√	
Utility Card	×	×	×	√ *	√ *	Works with 08.00p or later
Guided Probe and Footswitch	√	√	√	√	√	
Bar Code Scanner (E3786A)	√	√	√	√	√	
Strip Printer	√	√	√	√	√	
Debug Ports (3)	√	√	√	√	√	
Functional Test Access Ports	√	√	√	√	√	
Performance Port	√	√	√	√	√	
DUT Power Supplies						
6621A, 6624A, 6634B, 6642A	√	√	√	√	√	
N5747A	×	×	×	√	√	08.20p and above
N6751A	×	×	×	√	√	Supports i3070 Inline tester, requires 08.40p and above

Table 6   Compatibility matrix

	Keysight 3070 (UNIX®)	Keysight 3070 (Windows)	Keysight i5000	Keysight i3070 UnMux	Keysight i3070 Mux	Remarks
Vacuum	√	√	√	√	√	
Compressed Air Quick Connect Tap	√	√	√	√	√	
Power Supply Support Bay	√	√	√	√	√	
Inline Board Handler	×	×	×	√	√	Requires 08.40p and above

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E9901-90034
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