Keysight i3070 In-Circuit Test Software

Notices

Manual Part Number

Edition

Warranty

Technology Licenses

U.S. Government Rights

Safety Notices

WARNING

A WARNING notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.

CAUTION

A CAUTION notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a CAUTION notice until the indicated conditions are fully understood and met.

i3070 Software Installation

This guide explains how to install the Keysight i3070 In-Circuit Test software release 11.10p. This software release can be used for:
- Upgrading i3070 systems with software release 10.xxp.
- Upgrading i3070 systems with software release 09.xxp.
- First-time installation on new testhead controllers or test development workstations.

In case of difficulty...

To contact Keysight technical support, go to www.keysight.com/find/contactus.

If you find a Keysight product or solution is impacted by a cyber security issue, please report it using this link: Report a Product Cybersecurity Issue | Keysight.

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Preparation

1 Ensure that the PC meets the System requirements on page 5.

2 Make a complete system backup before installing the software.

3 If you are upgrading the i3070 software from a previous release:

    a At least back up the critical files listed in Table 2, if you are unable to do a full backup.

    b Remove the previous releases of the i3070 software using the **Remove All** option.

4 Obtain the host ID of the PC for license redemption.

    a Insert the Keysight software installation disk into the drive.

    b In the installation window, click **Install Keysight PathWave License Manager**.

    c Launch PathWave License Manager using its desktop icon .

    d On the **Add License** tab, note the MAC address listed under **This machine's host ID**. If there is more than one host ID, you can choose to use any one.
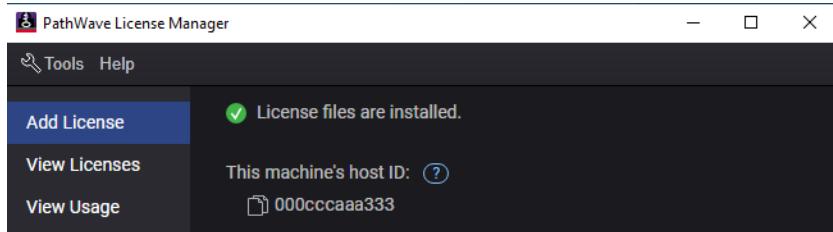
5 Redeem your software licenses following the instructions in your Software Entitlement Certificate.

Then proceed to Installing the i3070 Software on page 7.

NOTE

Starting from Pathwave License Manager version 7, frequently disconnected Ethernet devices (such as docking stations or USB Ethernet dongles) can no longer be used to host Keysight software licenses. If you have current licenses tied to such a device, contact a Keysight representative to rehost the licenses.

NOTE

i3070 system with ControlXTPA module control cards:

- Uninstalling the i3070 software using Remove All removes the BOOTP Turbo program, which is required for network configuration of ControlXTPA cards.

- After completing the i3070 software installation, reinstall BOOTP Turbo and reconfigure the system. Refer to the *BOOTP Turbo Installation and Network Configuration* guide.

This is not needed if the i3070 system uses ControlXTPB cards.

System requirements

Before installing the software, ensure that the workstation has a DVD–ROM drive and meets the following specifications.

Table 1   System requirements

	Specifications
Processor	Recommended: Intel Core i5 and above
Operating System	Windows 10 Pro (64-bit) Windows 10 Enterprise (64-bit) version 22H2 or later Windows 11 Pro Ensure that all Windows updates are installed.
Memory	Recommended: 8 GB of RAM (minimum 4 GB)
Available Disk Space	Recommended: 10 GB (minimum 5 GB), must be on drive C
Display Properties	▪ Screen resolution: at least 1280 x 1024 pixels ▪ Color quality: at least 16-bit
Language Setting	Must be English (United States).

NOTE   If you are upgrading a controller to Windows 10, ensure that it meets the Windows system requirements and there are no compatibility issues.

Critical folders and files

If you are upgrading a system, you can use the following shell command to capture most of the computer's networking information:

```
ipconfig /all > mynetwork.txt
```

This saves the networking data to *mynetwork.txt*, which you can refer to when restoring the network settings.

Back up the critical files if you are unable to make a complete system backup.

Table 2   Critical folders and files

Folders/files [1]	Description
\windows\system32\drivers\etc\hosts	Local hostname resolution and networking information
\windows\system32\drivers\etc\bootptab	Hardware addresses for the testhead[2] [3]
\<installation folder>\autofile	Fixtures ID auto numbers
\<installation folder>\boards	Board test programs. If your board files are in a different folder, back up that folder.
\<installation folder>\diagnostics\th1\ASRU_Reference	System Calibration file (system dependent)
\<installation folder>\diagnostics\th1\config	Testhead hardware configuration[2]
\<installation folder>\home	User's home folder
\<installation folder>\standard\config	Testhead resources configuration[2]
\<installation folder>\dev	Back up any ps (DUT power supply) files that were customized.
Any other custom folders and files containing important data.	Any other user data

1.   The default installation folder may be *I3070_ICT* or *Agilent_ICT*.
2.   These files are not on a test development workstation.
3.   This file is updated by BOOTP Turbo, which is required for network configuration only if the i3070 system has ControlXTPA module control cards.

Installing the i3070 Software

CAUTION

- All software must be installed to drive C, which must also be the drive where the operating system is installed.

- Disable anti-virus software before starting the installation. Otherwise, some of the components might not install properly. Remember to reactivate the anti-virus software after the i3070 software is installed.

- Unless directed otherwise, always accept the default selections. Otherwise, errors could occur when using the software.

Before installation

Task

Turn on .NET Framework:

a   Use Search on the taskbar to find **Control Panel** and click **Programs and Features** › **Turn Windows features on or off**.

b   In the Windows Features dialog box, select **.NET Framework 3.5 (includes .NET 2.0 and 3.0)** and click **OK**.
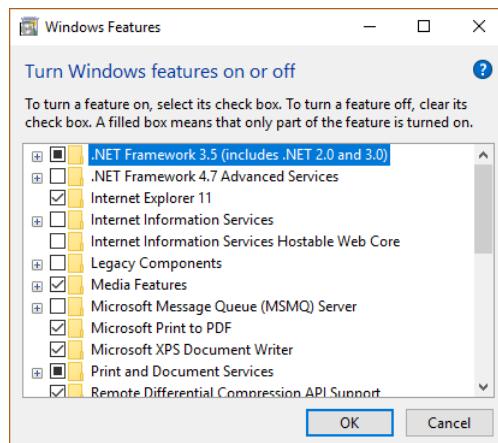
You do not need to select any of the items under .NET Framework 3.5, unless you are a developer who requires WCF script and handler mapping functionality.

c   Reboot the computer if prompted.

Installing the software

Task	Steps
1 Insert the Keysight installation disk into the drive. It should auto-start.	**a** If the User Account Control dialog box appears, click **Yes** to allow the installation to continue. **b** In the installation window, click **Install Keysight i3070 Software**.
	If the installation does not auto-start after several seconds: **a** Open Windows Explorer and browse to the disc. **b** Double-click *setup.exe* in the *W10\Software* folder. **c** If the User Account Control dialog box appears, click **Yes** to allow the installation to continue.

2 Install required components, if missing:	The installer checks that system requirements are met and that required components are installed.
	    • If system requirements are not met, the installer may exit. See Table 1 for the requirements.
	    • If any component is missing, a dialog box will be displayed.
	 a Click **Install** if you see any of these dialog boxes.
	    NOTE: This can happen at any time during the installation process.
	 b When installation is complete, click **Next** to continue.

3 Accept license agreement:	**a** Accept the license agreement and click **Next** to proceed.
4 In the **Destination Folder** window:	**a** Accept the default folder for installing the software, unless you have a specific need to change it. **NOTE:** Spaces are not allowed in the path of the destination folder, which must be on drive C. **b** Click **Next**.

Installing the software (continued)

Task	Steps
5 Check license files for **Testhead Controller (node-locked)**: (Licenses will be installed on the controller together with the i3070 software. If you are installing on a test development workstation, go to step 7.)	a In the License Folder dialog box, click **Change**. b Select the temporary folder where you saved your license files and click **OK**. c The installer lists the licenses found in the selected folder. Click **Next**. d Click **Yes** to confirm you are installing on a testhead controller.
6 Create user accounts (testhead controller)	▪ User accounts will be created for first-time installation on testhead controllers. ▪ Where i3070 user accounts already exist, no new users will be created. Click **Next** to continue (skip to step 8).
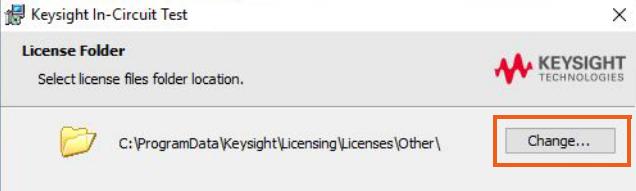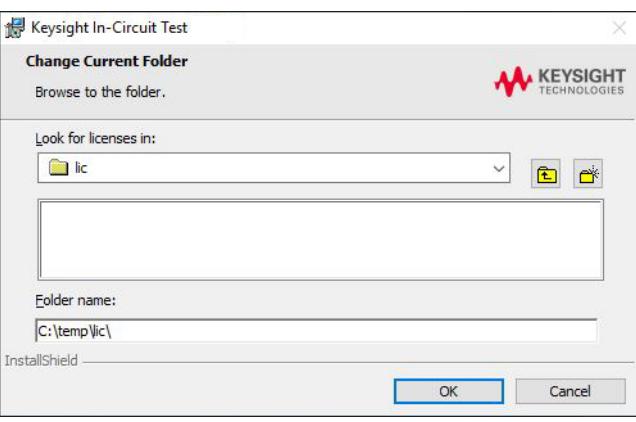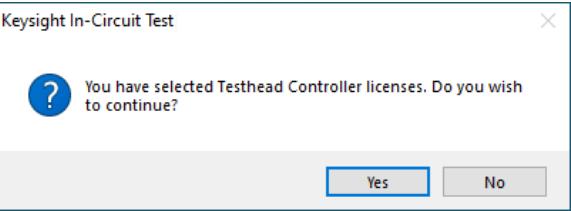
Installing the software (continued)

Task	Steps
7 Check license files for **Test Development Workstation (node-locked)** (Licenses will be installed on the workstation together with the i3070 software.)	a In the License Folder dialog box, click **Change**. b Select the temporary folder where you saved your license files and click **OK**. c The installer lists the licenses found in the selected folder. Click **Next**. d Click **Yes** to confirm you are installing on a test development workstation.
8 Confirm installation:	The installer displays the third party applications to be installed. a Click **Install** to begin installation. b If prompted, click **Install** or **Next** to continue installation.
9 Finish installation:	a When installation is completed, click **Finish**. b Then click **OK** to reboot the computer.
10 If errors or other messages appear:	▪ If Quick Log Converter prompts for a missing template, ignore it. ▪ If prompted to install a new version of Keysight IO Libraries, do not do so. Select **Skip this version** and **Quit**.
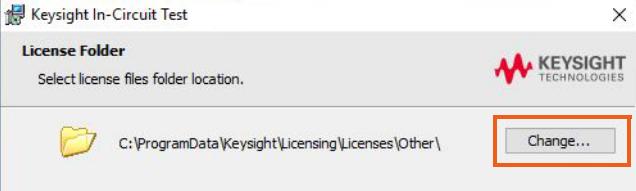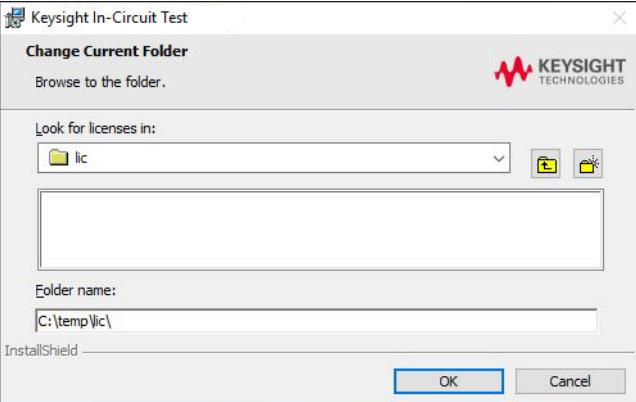
Completing the software installation

Task	Steps
The installation wizard procedure is now completed. Continue with the following tasks.	
1 If installing on a testhead controller, set the recommended Speed & Duplex on Testhead LAN to prevent lost heartbeat failure:	a Right-click on the Testhead LAN icon in the Taskbar and select **Status**. b In the Testhead LAN Status dialog box, click **Properties**. c In the Testhead LAN Properties dialog box, click **Configure**. d In the network adapter's Properties dialog box, click the **Advanced** tab. e Select **Speed & Duplex** and change its value according to the Module Control Card in use. ControlXTPB – Auto Negotiation ControlXTPA – 100 Mb, half duplex

Intel(R) I211 Gigabit Network Connection Properties ×

General | Advanced | Driver | Details | Events | Power Management

The following properties are available for this network adapter. Click the property you want to change on the left, and then select its value on the right.

Property:
- Large Send Offload V2 (IPv4)
- Large Send Offload V2 (IPv6)
- Locally Administered Address
- Log Link State Event
- Maximum Number of RSS Queues
- NS Offload
- Packet Priority & VLAN
- Receive Buffers
- Receive Side Scaling
- Speed & Duplex
- TCP Checksum Offload (IPv4)
- TCP Checksum Offload (IPv6)
- Transmit Buffers
- UDP Checksum Offload (IPv4)

Value:
Auto Negotiation
- 1.0 Gbps Full Duplex
- 10 Mbps Full Duplex
- 10 Mbps Half Duplex
- 100 Mbps Full Duplex
- 100 Mbps Half Duplex
- Auto Negotiation

OK   Cancel

Task	Steps
2 Set power options to never turn off the hard disks and monitor:	a Open **Control Panel** and click **Power Options**. b Click **Change plan settings** for the power plan in use. c Set all options to **Never** and click **Save changes**.
3 Check for software patches:	Go to www.keysight.com/find/i3070patches to check for any software patches and install them.
4 Copy needed files:	a Open a KornShell window. b Execute `setupEnv.ksh`. (This will copy four files to the *$HOME* folder. This step creates the user account and home env.) c Close the KornShell window.

Completing the software installation (continued)

Task	Steps
5 Complete the license installation.	Refer to Installing Software Licenses.
6 To run the i3070 software when Windows Firewall is enabled (optional):	To allow the i3070 software to run when Windows Firewall is enabled, go to the *C:\I3070_ICT\util* folder, right-click *CreateFirewallRule.bat* and select **Run as administrator**. The script creates inbound rules for the required ports and TCP/IP addresses. • Default ports enabled: 1337, 3071, 9090, 5672, 31883, 40100, 40102, 50100, 50102, 7030. • Default IP addresses enabled: 10.3.112.1 to 10.3.112.255, 0.0.0.0, 192.168.1.1, 255.255.255.255.

Installing Software Licenses

Installing Node-Locked Licences

1   Launch PathWave License Manager (**Start** > **Keysight PathWave License Manager** > **Keysight PathWave License Manager**).

2   Click **+ Add a License File**.

3   Click **Browse** to locate and select the license(s) that you redeemed.

4   Click **Add Now**.

5   Click **Done** to close the Add a License File window.

   You should see the following status:
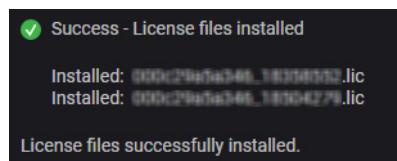
6   Open Task Manager (right-click on the taskbar and click **Task Manager**).

7   On the **Services** tab, right-click **i3070 License Communication Service** and select **Restart**.

You can now run the i3070 In-Circuit Test Software.
View licenses and their status from the License Status module (see Viewing Licenses).

Setting Up Client Machines to Use Floating Licenses

Follow these steps to enable client machines to make use of floating licenses, which are shared from one or more remote license servers. You will need the hostname(s) of the license server(s).

1   Launch PathWave License Manager (**Start** > **Keysight PathWave License Manager** > **Keysight PathWave License Manager**).

2   Click **Specify a Remote License Server**.

3   Enter the hostname of the license server, for example, `27009@server1`

    If your system relies on a triple redundant server setup, enter the hostnames of the three license servers, separated by commas. The three servers should be listed in the same order as specified in the license files. For example: `27009@server1,27009@server2,27009@server`

4   Click **Verify Connection and Save**.

5   Click **Done** when the process is completed.

6   In a Command Prompt window, go to `C:\I3070_ICT\util` and run `LicenseSearchPathReg.bat` as an administrator.

    Enter `All` if prompted to overwrite.

7   Open Task Manager (right-click on the taskbar and click **Task Manager**).

8   On the **Services** tab, right-click **i3070 License Communication Service** and select **Restart**.

You can now run the i3070 In-Circuit Test Software.
View licenses and their status from the License Status module (see Viewing Licenses).

Viewing Licenses

Once licenses are successfully installed, you can view them from the **License Status** module. Floating licenses can be found on the **Remote Licenses** tab.

Other Tasks

Copying user data

If you are upgrading a test development station, you can copy your user data from the old workstation. Do not copy the license files.

- From release 10.00p, the default installation folder for the i3070 In-Circuit Test Software is *C:\I3070_ICT*.

- Copy your data from the old workstation (*C:\I3070_ICT or C:\Agilent_ICT*) to corresponding subfolders in *C:\I3070_ICT* on the new workstation.

If your board data is not in the default `boards` folder (*C:\I3070_ICT\boards*), follow the procedure below to change ownership of the board directory.

Changing ownership of the boards directory

If you change the location of the default `boards` directory, follow the instructions below to change the ownership of your custom directory. Otherwise, error messages may appear.

To change the ownership of the *boards* directory:

1 In Windows Explorer, right-click the *boards* directory and select **Properties**.

2 In the boards Properties dialog box, click the **Security** tab.

3 In the Security tab, click **Edit**.

4 In the Permissions dialog box, click **Add**.

5 Under **Enter the object names to select**, type `Everyone` and click **OK**.

   The group **Everyone** is added to the **Group or user names** list in the Permissions dialog box.

6 Under **Group or user names**, select **Everyone**.

7 In the **Allow** column, select the **Full Control** check box.

8 Click **OK** to save the changes.

Installing the online help

1 Insert the Keysight installation disk into the drive. It should auto-start. Click **Install Keysight i3070 Help** to install the online help.

If the installation does not auto-start after several seconds:

   a Open Windows Explorer and browse to the disc.

   b Double-click *setup.exe* in the *W10\Help* folder.

2 Close any open windows and log out.

System backup and recovery

Use a disk imaging application to create a custom recovery image of your test development workstation that includes changes and updates to the system since it was first installed.

It is the responsibility of the customer to create a full backup of the files on their i3070 ICT systems so that the system and data can be recovered in case of a disaster such as a disk crash. It is recommended that you set up a backup schedule and procedure to create regular backups.

IN NO EVENT WILL KEYSIGHT OR ITS SUPPLIERS BE LIABLE FOR LOSS OF DATA OR FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFIT OR DATA), OR OTHER DAMAGE WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE.

Troubleshooting

Troubleshooting software installation

If you encounter problems after software installation and find that you are unable to uninstall or reinstall the i3070 In-Circuit Test Software, follow the instructions below. These steps will not remove all i3070 files from your system, but will clean up the system sufficiently to enable you to reinstall the software.

1   If there are any i3070 programs running, you must stop them.

   a   Press **Ctrl**+**Alt**+**Delete** and select **Start Task Manager**.

   b   On the **Processes** tab, check whether any of the following programs are running:
   - *rmiregistry.exe*
   - *RmiServer.exe*
   - *translogd.exe*
   - *xinitcolorcells.exe*

   c   Select each program that is running and click **End Process**.

2   Rename your existing i3070 installation folder.

3   Remove the i3070 uninstall key from the registry.

   a   Select **Start** > **Run**, type `regedit` and click **OK**.

   b   Navigate to the following:

     64-bit OS: `HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Microsoft\Windows\CurrentVersion\Uninstall`.

   c   Look for the key whose Product Name in the right panel shows **i3070**.

   d   Delete that key.

4   Remove the i3070 configuration information from the registry. Look for **HKEY_LOCAL_MACHINE\SOFTWARE\Keysight**. If you find this key, delete it.

At this point there will still be some i3070 icons and programs on your system. However, you should now be able to successfully reinstall the i3070 In-Circuit Test Software.

Obtaining an installer error log

If you encounter an error during installation, you can obtain an installer log for more information on the error:

1 Close the installer wizard.

2 In a Command Prompt window, run the installer using the following command:
```
<path for installer> /v"/L*v <path for output log file>.log
```
For example,
```
E:\W10\Software\KeysightIOlibraries\IOLibSuite_18_1_25310.exe
/v"/L*v C:\temp\install_log.log
```

3 Let the installation run until the error stage.

4 Navigate to the output log file to review the error information.

Troubleshooting i3070 software on Windows 11

If any of the i3070 software applications cannot be launched or do not work correctly in Windows 11, try setting Windows Console Host as the default terminal app:

1 Select **Start** > **Settings** > **Privacy & security** > **For developers**.

2 In **Terminal**, select **Windows Console Host**.

Now try launching the i3070 software applications again.

Reinstall XServer

Follow these instructions to reinstall XServer when needed.

1 On the Keysight software installation disk, browse to the
\W10\Software\xserver folder. Right-click *setup64x.exe* and click **Run as administrator**. Continue the installation.

2 Browse to the *\W10\Software\xserver\hf-xserver* folder. Right-click
XS10.4p0-SPR15428615.exe and click **Run as administrator**. Continue the
installation.

3 Open a Command Prompt window as administrator. Go to the xserver folder:
```
cd C:\11.10p\W10\Software\xserver\keysight
```

4 Run `xserver.bat`.

5 Restart the PC.

Uninstalling the i3070 In-Circuit Test Software

1 Uninstall the i3070 software from either Settings or Control Panel.

- Click **Start** > **Settings** > **Apps & Features**.
  Click **Keysight In-circuit Test <xx.xx>p** and click **Modify**.

  or

- From **Control Panel**, click **Programs and Features**.
  Click **Keysight In-circuit Test <xx.xx>p** and click **Change**.

| **NOTE**	- **xx.xx** indicates the release that is currently installed.
	- You can click **Uninstall** if you want to remove the i3070 software only. Third party software will not be removed.

2 Select one of the options:

- **Remove All** to remove the i3070 In-Circuit Test Software together with associated third party software.

  Choose this option if you no longer want the i3070 In-Circuit Test Software on this PC, or when you are upgrading the i3070 In-Circuit Test Software from one release to another.

- Select **Remove** to remove the i3070 In-Circuit Test Software only.

  You can choose this option if you want to reinstall the same release.

3 Follow the instructions to complete the uninstallation.

4 If the Keysight LXI Mdns Responder dialog box appears, click **Ignore**.

5 If the following dialog box appears, click **OK** to continue.
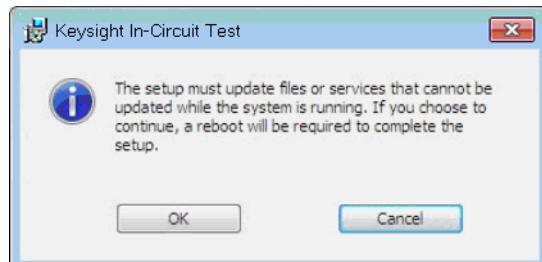
6 (Optional) Remove the i3070 online help.

7 Reboot the PC.

NOTE	The uninstall process does not remove the i3070 user accounts.

i3070 Users on Testhead Controller

If you upgraded the i3070 software from a previous release

You can continue to use the same User accounts and passwords to run this release of the i3070 software. No new Users are created during installation.

However, if you want to set up User accounts with new default passwords, first remove the existing Users, then create the new ones. You must be signed on to Windows using an account with adminstrator rights. Then run the batch files described below.

Remove Users

    a Locate the batch file: *C:\I3070_ICT\util\3070removeaccounts.bat*

    b Right-click the file and click **Run as administrator**.

Create Users

    a Locate the batch file: *C:\I3070_ICT\home\system\3070accounts.bat*

    b Right-click the file and click **Run as administrator**.

    New i3070 Users will be created with default passwords as shown in Table 3.

First-time installation of the i3070 software

The following Users are created during software installation.

Table 3   Default User names and passwords

User Name	Default Password (i3070 software release 10.30p)
operator	Resetme@3070
tcm	Resetme@3070
user	Alterme@3070
engineer	Alterme@3070
calibrate	Changeme@3070

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