Keysight E5867A Removable Hard Drive SSD for 16860-Series Logic Analyzers

Installation Guide

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Warranty

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Safety Notices

> **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.

> **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.

Safety Summary

The following general safety precautions must be observed during all phases of operation of this instrument. Failure to comply with these precautions or with specific warnings or operating instructions in the product manuals violates safety standards of design, manufacture, and intended use of the instrument. Keysight Technologies assumes no liability for the customer's failure to comply with these requirements. Product manuals are provided with your instrument on CD-ROM and/or in printed form. Printed manuals are an option for many products. Manuals may also be available on the Web. Go to www.keysight.com and type in your product number in the Search field at the top of the page.

General

Do not use this product in any manner not specified by the manufacturer. The protective features of this product may be impaired if it is used in a manner not specified in the operation instructions.

Before Applying Power

Verify that all safety precautions are taken. Make all connections to the unit before applying power. Note the instrument's external markings described in "Safety Symbols".

Ground the Instrument

If your product is provided with a grounding type power plug, the instrument chassis and cover must be connected to an electrical ground to minimize shock hazard. The ground pin must be firmly connected to an electrical ground (safety ground) terminal at the power outlet. Any interruption of the protective (grounding) conductor or disconnection of the protective earth terminal will cause a potential shock hazard that could result in personal injury.

Fuses

See the user's guide or operator's manual for information about line-fuse replacement. Some instruments contain an internal fuse, which is not user accessible.

Do Not Operate in an Explosive Atmosphere

Do not operate the instrument in the presence of flammable gases or fumes.

Do Not Remove the Instrument Cover

Only qualified, service-trained personnel who are aware of the hazards involved should remove instrument covers. Always disconnect the power cable and any external circuits before removing the instrument cover.

Cleaning

Clean the outside of the instrument with a soft, lint-free, slightly dampened cloth. Do not use detergent or chemical solvents.

Do Not Modify the Instrument

Do not install substitute parts or perform any unauthorized modification to the product. Return the product to an Keysight Sales and Service Office for service and repair to ensure that safety features are maintained.

In Case of Damage

Instruments that appear damaged or defective should be made inoperative and secured against unintended operation until they can be repaired by qualified service personnel.

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
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Safety Symbols

Table 1   Safety Symbol

Symbol	Description
	Direct current
	Alternating current
	Both direct and alternating current
	Three phase alternating current
	Three phase alternating current
	Earth ground terminal
	Protective earth ground terminal
	Frame or chassis ground terminal
	Terminal is at earth potential

Symbol	Description
	Equipotentiality
N	Neutral conductor on permanently installed equipment
L	Line conductor on permanently installed equipment
	On (mains supply)
	Off (mains supply)
	Standby (mains supply). The instrument is not completely disconnected from the mains supply when the power switch is in the standby position
	In position of a bi-stable push switch
	Out position of a bi-stable push switch
	Equipment protected throughout by DOUBLE INSULATION or REINFORCED INSULATION
	Caution, refer to accompanying documentation
	Caution, risk of electric shock
	Do not apply around or remove from HAZARDOUS LIVE conductors
	Application around and removal from HAZARDOUS LIVE conductors is permitted
	Caution, hot surface

Symbol	Description
	Ionizing radiation
CAT I	IEC Measurement Category I
CAT II	Measurement Category II
CAT III	Measurement Category III
CAT IV	Measurement Category IV

Compliance and Environmental Information

Table 2   **Compliance and Environmental Information**

Safety Symbol	Description
CSA	CSA is the Canadian certification mark to demonstrate compliance with the Safety requirements.
N10149	The C-tick mark is a registered trademark of the Spectrum Management Agency of Australia. This signifies compliance with the Australia EMC Framework regulations under the terms of the Radio Communication Act of 1992.
CE	CE compliance marking to the EU Safety and EMC Directives. ISM GRP-1A classification according to the international EMC standard. ICES/NMB-001 compliance marking to the Canadian EMC standard.

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1 Handling the Removable Hard Drive SSD

For the integrity of the data on your hard disk drive, Keysight recommends that you take the following precautions while handling and storing the hard disk drives:

- Store unused hard disk drives in the shipping container.
- Protect the hard disk drive from electrostatic discharge (ESD).
- Protect the hard disk drive's edge connectors from physical contamination.
- Protect the hard disk drive from physical shock.

Protecting Against Electrostatic Discharge (ESD)

CAUTION	Electrostatic discharge can damage electronic components. Use grounded wrist straps and mats when handling electronic components.

Protecting Against Contamination of the Edge Connector

CAUTION	The hard drive SSD edge connector is sensitive to ESD and mechanical or material contamination. Take precautions to protect the edge connector from contamination during handling and storage.

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Protecting Against Physical Shock

CAUTION   While operating, do not expose the hard disk drive to more than 5 to 500 Hz at 0.3 g rms.

2 Installing the Hard Drive

CAUTION	Electrostatic discharge can damage electronic components. Use grounded wrist straps and mats when handling electronic components.

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Step 1. Back up data for transfer to new hard drive SSD

1   Close the *Keysight Logic and Protocol Analyzer* application software.
2   Back up any data and server license files you want to retain using LAN, USB flash drive, writable CDs, etc.

Keysight recommends floating licenses for logic analyzers with removable disks (such as the 16860-series logic analyzers).

If the license server is on the logic analyzer, back up the server license files which are located in the "LicenseFiles" folder under the license server's installation directory. For example, the default location is: C:\ Program Files\Agilent Technologies\LicenseServer\LicenseFiles\

License files have the extension ".lic".

You can also use node-locked licenses. However, because the logic analyzer host ID changes with the hard disk drive, you must have separate licenses on each disk. Node-locked license files are located in the "License" folder under the *Keysight Logic and Protocol Analyzer* application's installation directory. For example, the default location is: C:\Program Files\Agilent Technologies\Logic Analyzer\License\

Step 2. Power OFF the 16860 logic analyzer

WARNING   Hazardous voltages exist on the power supply. To avoid electrical shock, disconnect the power from the instrument before performing the following procedures. After disconnecting the power, wait at least six minutes for the capacitors on the power supply board to discharge before servicing the instrument.

CAUTION   Damage can occur to electronic components if you remove or replace assemblies when the instrument is on or when the power cable is connected. Never attempt to remove or install any assembly with the instrument on or with the power cable connected.

1   Power off the system using one of the methods explained below.
2   Remove the power cord.

Using the Windows Shutdown

On the logic analysis system desktop, click **Start** > **Shut Down** or if you are running remote desktop, click **Start** > **Settings** > **Windows Security** > **Shut Down**. This software power off does the following:

· Closes all programs that are running.

· Writes all data to the disk.

· Turns off the power supply.

· If the system is unplugged while it is off and then plugged back in, the system will not power on until the power button is pressed.

Using a Short Press of the Power Button

Pressing the power button on a frame for a short time (less than 2 seconds):

· Closes all programs that are running.

· Writes all data to the disk.

· Turns off the power supply.

If the power button is depressed for a short time (less than 2 seconds or so) while another instrument has an open Remote Desktop connection to this instrument, a message on the logic analysis system screen (not on the remote desktop) will pop up asking if you really want to power down. Clicking the 'yes' button results in the above events. Clicking 'no' will prevent the shutdown and not answering the dialog box (neither clicking "Yes" or "No") will have no effect. Further short presses on the power button will have no effect.

Using a Long Press of the Power Button

Pressing the power button for more than 4 seconds will power the system down abruptly. Use this method only when other methods have not responded:

· Programs that are running will not be shut down. Any data that has not been written to the disk will be lost.

· Turns off the power supply.

· If the system is unplugged while it is off and then plugged back in, the system will not power on until the power button is pressed.

· If the system does not boot, the hard disk drive will need to be re-imaged.

Unplugging the Power Cord or Power Loss

Unplugging power while the instrument is turned on or a power loss is similar to the long press of the power button with one exception:

- When the system is plugged back in, it will power up and boot into Windows.

Step 3. Remove the current hard drive SSD

The 16860 logic analyzer has a removable hard disk drive SSD. It can be removed and replaced without disassembling the instrument.

1   Loosen both the thumb screws that hold the hard disk drive in place.

Removable Hard Disk Drive SSD

Thumb Screws
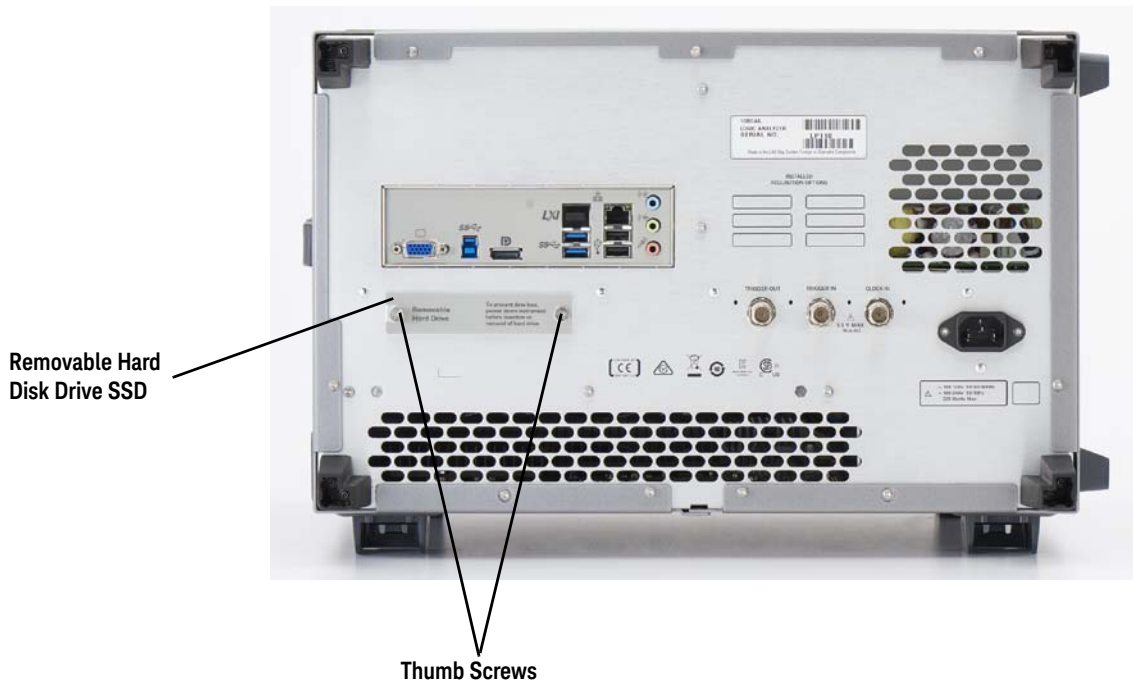
2   Pull the drive tray out to remove the disk drive.

**Removable Hard Disk
Drive SSD pulled out**

Step 4. Install the new hard drive

1   Slide the new removable hard drive SSD into the drive bay.

2   Gently press the tray all the way in to seat the disk drive connectors.
3   Tighten both the thumb screws that hold the hard disk drive in place.

Step 5. Power on the 16860 logic analyzer

Turn on the logic analyzer.

Step 6. Perform the first-time set up steps

If you are using the E5867A replacement hard disk as an additional bootable drive, the replacement disk is pre-configured with the operating system, frame drivers, and logic and protocol analysis application software (just like the original 16860 disk as shipped from the factory). The next step is to perform the first-time set up procedures described in the *16860 -Series Logic Analyzers Installation Guide* shipped with the 16860 logic analyzer.

Step 7. Perform the first-time set up procedures

The next step is to perform the first-time set up procedures described in the *16860-Series Logic Analyzer Installation Guide* shipped with the 16860 logic analyzer.

Step 8. Restore data

Restore the data and server license files you backed up in

Step 9. Install any additional application software

Install any additional application software.

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