TLA7Bxx Series Logic Analyzer Modules Declassification and Security

Instructions

www.tektronix.com
077-0146-00

Tektronix

Contacting Tektronix

Tektronix, Inc.
14200 SW Karl Braun Drive
P.O. Box 500
Beaverton, OR 97077
USA

For product information, sales, service, and technical support:

- In North America, call 1-800-833-9200.
- Worldwide, visit www.tektronix.com to find contacts in your area.

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Preface

This document helps customers with data security concerns to sanitize or remove memory devices from TLA7Bxx Series Logic Analyzer Modules.

These products have data storage (memory) devices and data output devices. These instructions tell how to do the following:

- Clear or sanitize the memory devices
- Clear or sanitize an instrument that is not functioning

Products

The following Tektronix products are covered by this document:

TLA7BB2, TLA7BB3, TLA7BB4

TLA7BC4

Related Documents

The *TLA7Bxx Technical Reference Manual (service manual)* available on the Tektronix Web site at www.tektronix.com/manuals or on the TLA Documentation CD that is available with your product.

Terms

The following terms may be used in this document:

Clear. This removes data on media/memory before reusing it in a secured area. All reusable memory is cleared to deny access to previously stored information by standard means of access.

Erase. This is equivalent to clear.

Media storage/data export. Various devices that are used to store or export data from the instrument, such as a USB port.

Nonvolatile memory. Data is retained when the instrument is powered off.

Remove. This is a physical means to clear the data by removing the memory device from the instrument. Instructions are available in the product service manual.

Sanitize. This eradicates the data from media/memory so that the data cannot be recovered by other means or technology. This is typically used when the device will be moved (temporarily or permanently) from a secured area to a non-secured area.

Scrub. This is equivalent to sanitize.

User-modifiable. The memory device can be written to by the user during normal instrument operation, using the instrument's user interface or remote control.

Volatile memory. Data is lost when the instrument is powered off.

Clear and Sanitize Procedures

Memory Devices

The following tables list the volatile and nonvolatile memory devices.

You only need to perform the *Nonvolatile Memory Security Procedure* to clear the instrument.

Table 1: Volatile memory devices

Type and minimum size	Function	User modifiable	Input method	Location	Process to clear	Process to sanitize
DDR2, 1G, 64M X 16 (TLA7Bxx) 2G, 128M X 16 (TLA7BC4)	Acquisition memory for storing acquired data	No	Written by controller ASICs	Acquisition board	Remove power source from the instrument for at least 20 seconds.	Remove acquisition board and either securely store it or destroy it.
DRAM, 4 M X 8	Firmware execution code	No	Written by the processor system	LPU board	Remove power source from the instrument for at least 20 seconds.	Remove LPU board and either securely store it or destroy it.
ASIC 32 K X 32	ARC processor execution memory	No	Written by ASICs	Acquisition board	Remove power source from the instrument for at least 20 seconds.	Remove acquisition board and either securely store it or destroy it.
ASIC 128 K X 144	Magniview memory	No	Written by ASICs	Acquisition board	Remove power source from the instrument for at least 20 seconds.	Remove acquisition board and either securely store it or destroy it.

Table 2: Nonvolatile memory devices

Type and minimum size	Function	User modifiable	Input method	Location	Process to clear	Process to sanitize
FLASH, 4 M X 16	Stores instrument firmware and FPGA image	No	Programmed at the factory, no user data	LPU board	Load new firmware image. See manual.	Remove LPU board and either securely store it or destroy it.
NVRAM, 128 K X 8	Stores instrument serial number and calibration constants	No	Written by processor	LPU board	N/A. No user data stored in this device.	Remove LPU board and either securely store it or destroy it.

Nonvolatile Memory Security Procedure

User data is not stored in nonvolatile memory. To secure nonvolatile memory, proceed as follows:

1. Remove the LPU board from the module. Refer to the *TLABxx Logic Analyzer Module Technical Reference Manual* on the Tektronix Web site at www.tektronix.com/manuals or on the TLA Documentation CD.
2. Since there is no way for you to sanitize nonvolatile memory, either store these circuit boards in a secure area or destroy them.

Data Export Devices

The following table lists the data export devices.

Table 3: Data export devices

Type	Function	User modifiable	Input method	Location	Process to disable
Analog outputs	Provides an analog copy of signals from the device under test	No	From the device under test	Front panel of module	N/A. Outputs cannot be disabled.
Backplane	Interfaces with TLA mainframe	No	Instrument function and application software	Backplane connectors	Power off the TLA mainframe power and remove the module. (See below.)

Backplane

To locate and remove the module from the TLA mainframe, refer to the *TLABxx Logic Analyzer Module Technical Reference Manual* on the Tektronix Web site at www.tektronix.com/manuals or on the TLA Documentation CD.

Troubleshooting

How to Clear or Sanitize a Nonfunctional Instrument

If your instrument is not functioning and you need to clear it, remove the power source from the instrument for at least 20 seconds.

To sanitize the instrument, remove the circuit boards and either securely store them in a safe location or destroy them. You can also return the circuit boards to Tektronix; Tektronix will repair and replace the circuit boards as necessary.