
M9021A, M9022A, M9023A, M9024A, M9025A, M9048A, M9048B, M9049A System and Cable Modules

Notices

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Contacting Keysight Sales and Service Offices

Assistance with test and measurement needs, and information on finding a local Keysight office, is available on the Internet at:

<http://www.keysight.com/find/assist>

If you do not have access to the Internet, please contact your field engineer.

NOTE

In any correspondence or telephone conversation, refer to the instrument by its model number and full serial number. With this information, the Keysight representative can determine whether your unit is still within its warranty period.

Products Covered by this Document

Product Family Name	Product Names	Model Numbers
PXI Chassis and Controllers	PXIe System and Cable Modules	M9021A, M9022A, M9023A, M9024A, M9025A
PXI Chassis and Controllers	PCIe Host Desktop Adapter	M9048A, M9048B, M9049A

This document describes instrument security features and the steps to declassify an instrument through memory clearing, sanitization or removal.

For additional information, go to:

<http://www.keysight.com/find/security>

NOTE

Be sure that all information stored by the user in the instrument that needs to be saved is properly backed up before attempting to clear any of the instrument memory. Keysight Technologies cannot be held responsible for any lost files or data resulting from the clearing of memory. Be sure to read this document entirely before proceeding with any file deletion or memory clearing.

M9021A Instrument Memory

There is no sanitization procedure for the M9021A because there is no memory available.

M9022A, M9023A Instrument Memory

This section contains information on the types of memory used in the **M9022A, M9023A PXIe System Modules**. It explains the size of memory, how it is used, its location, volatility, and the sanitization procedure.

Memory Type: EEPROM	Memory Size: 8192B
Memory Function: Store PLX PCIe settings through factory and firmware upgrades. Contains no user data.	
User Modifiable (Y/N): No	Volatile (Y/N): No
Memory Erase Processes: None	

Memory Type: Flash	Memory Size: 4096B
Memory Function: Store FPGA settings through factory and firmware upgrades. Contains no user data.	
User Modifiable (Y/N): No	Volatile (Y/N): No
Memory Erase Processes: None	

M9024A Instrument Memory

This section contains information on the types of memory used in the M9024A PXIe System Module. It explains the size of memory, how it is used, its location, volatility, and the sanitization procedure.

Memory Type: EEPROM	Memory Size: 8192B
Memory Function: Store PLX PCIe settings through factory and firmware upgrades. Contains no user data.	
User Modifiable (Y/N): No	Volatile (Y/N): No
Memory Erase Processes: None	

Memory Type: Flash	Memory Size: 4096B
Memory Function: Store FPGA settings through factory and firmware upgrades. Contains no user data.	
User Modifiable (Y/N): No	Volatile (Y/N): No
Memory Erase Processes: None	

Memory Type: Flash	Memory Size: 4096B
Memory Function: Store GPIB settings through factory and firmware upgrades. Contains no user data.	
User Modifiable (Y/N): No	Volatile (Y/N): No
Memory Erase Processes: None	

Memory Type: Flash	Memory Size: 4096B
Memory Function: Store LAN settings through factory and firmware upgrades. Contains no user data.	
User Modifiable (Y/N): No	Volatile (Y/N): No
Memory Erase Processes: None	

M9025A Instrument Memory

There is no sanitization procedure for the M9025A because there is no memory available.

M9048A Instrument Memory

This section contains information on the types of memory used in the **M9048A PCIe Host Desktop Adapter**. It explains the size of memory, how it is used, its location, volatility, and the sanitization procedure.

Memory Type: EEPROM	Memory Size: 128K bits
Memory Function: Store PCIe Switch configuration including port and transceiver characteristics. Contains no user data.	
User Modifiable (Y/N): No	Volatile (Y/N): No
Memory Erase Processes: None. Reprogramming the memory requires a special hardware utility from the PCIe switch manufacturer and is only performed at the factory.	

Memory Type: EEPROM	Memory Size: 128K bits
Memory Function: Store PCIe Switch configuration including NTB mode port and transceiver characteristics. Contains no user data.	
User Modifiable (Y/N): No	Volatile (Y/N): No
Memory Erase Processes: None. Reprogramming the memory requires a special hardware utility from the PCIe switch manufacturer and is only performed at the factory.	

M9048B, M9049A Instrument Memory

This section contains information on the types of memory used in the M9048B, M9049A PCIe Host Desktop Adapter. It explains the size of memory, how it is used, its location, volatility, and the sanitization procedure.

Memory Type: EEPROM	Memory Size: 8192B
Memory Function: Store PLX PCIe settings. Contains no user data.	
User Modifiable (Y/N): No	Volatile (Y/N): No
Memory Erase Processes: None. Reprogramming the memory requires a special hardware utility from the PCIe switch manufacturer and is only performed at the factory.	

Memory Type: Complex Programmable Logic Device (CPLD)	Memory Size: 32 Macro Cells
Memory Function: Logic array for switch settings. Contains no user data.	
User Modifiable (Y/N): No	Volatile (Y/N): No
Memory Erase Processes: None. Reprogramming the memory requires a special hardware utility from the PCIe switch manufacturer and is only performed at the factory.	

Memory Sanitization Procedures

Some test equipment users have a need to “declassify” or “sanitize” their instruments for security purposes. This involves following a procedure to clear all user data from the instrument’s memory. The result is a sanitized instrument that can be removed from a secure area without any chance of classified data being recovered from it.

This document details the internal memory locations of the Keysight M9021A, M9022A, M9023A, M9024A, and M9025A PXIe System and Cable Modules and the M9048A, M9048B, M9049A PCIe Host Desktop Adapter modules. It describes instrument security features and the steps necessary to declassify the products through memory sanitization or removal. For additional information on a particular product, the Keysight Instrument Security Database may be accessed here:

www.keysight.com/find/security.

For general information, the Keysight Aerospace and Defense web page may be found here:

www.keysight.com/find/ad.

The following table explains how to clear, sanitize, and remove memory from your instrument for all memory that can be written to during normal operation and for which the clearing and sanitization procedure is more than trivial such as rebooting your instrument.

Procedure	Process
Memory clearing	Remove operating power from the module for 30 seconds minimum.
Memory removal	This memory cannot be removed without destroying the module.