Manufacturer: National Instruments

Board Assembly Part Numbers (Refer to Procedure 1 for identification procedure):

Part Number and Revision	Description
199119A-0xL or later	**PXI-795xR FlexRIO FPGA Module**
198733A-0xL or later	**PXIE-796xR FlexRIO FPGA Module**

Volatile Memory

Target Data	*Type*	*Size*	*Battery Backup*	*User[1] Accessible*	*System Accessible*	*Sanitization Procedure*
Data storage during VI Execution[2]	DRAM	128MB or 512MB	No	Yes	Yes	Cycle Power
Field Programmable Gate Array	Virtex-5 Block RAM	1,152Kb – 8,784Kb	No	Yes	Yes	Cycle Power

Non-Volatile Memory (*incl. Media Storage*)

Target Data	*Type*	*Size*	*Battery Backup*	*User Accessible*	*System Accessible*	*Sanitization Procedure*
Device Configuration	Flash	4MB	No			
• Device Identification				No	Yes	None
• User FPGA Bitfile				Yes	Yes	Procedure 2
Device Attributes	Flash	64Kb	No	Yes	Yes	Procedure 3

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[1] Refer to *Terms and Definitions* section for clarification of *User* and *System Accessible*
[2] The NI PXI-7951R and NI PXIe-7961R do not contain DRAM

Procedures

Procedure 1 – Board Assembly Part Number identification:
To determine the Board Assembly Part Number and Revision, refer to the label applied to the surface of your product. The Assembly Part Number should be formatted as "P/N: #####a-##L.

Procedure 2 – Device Configuration Flash (User FPGA Bitfile):
The User FPGA Bitfile can be cleared by using the RIO Device Setup Utility. To clear the User FPGA bitfile, complete the following steps:
1. Open NI MAX
2. Find and select your device
3. Click "Update Firmware" to load a blank, factory bitfile to the device or click "Erase Firmware" to clear whatever bitfile is currently on the device.

Procedure 3 – Device Attributes Flash:
The Device Attributes Flash can be cleared by using the FlexRIO Host Library. To clear the device attributes flash, complete the following steps:
1. Find and open the FlexRIO_HostInterface.llb LabVIEW library from "(LabVIEW Directory)\vi.lib\FlexRIO\FlexRIO_HostInterface.llb"
2. Open FlexRIO_Host_CustomAttributeWrite.vi select FlexRIO device from "RIO Device" dropdown
3. Run VI with "Value" set to 0 to clear that Attribute index
4. Repeat Step 3 for entire Attribute space to clear entire attribute flash

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Terms and Definitions

Cycle Power:
The process of completely removing power from the device and its components and allowing for adequate discharge. This process includes a complete shutdown of the PC and/or chassis containing the device; a reboot is not sufficient for the completion of this process.

Volatile Memory:
Requires power to maintain the stored information. When power is removed from this memory, its contents are lost. This type of memory typically contains application specific data such as capture waveforms.

Non-Volatile Memory:
Power is not required to maintain the stored information. Device retains its contents when power is removed. This type of memory typically contains information necessary to boot, configure, or calibrate the product or may include device power up states.

User Accessible:
The component is read and/or write addressable such that a user can store arbitrary information to the component from the host using a publicly distributed NI tool, such as a Driver API, the System Configuration API, or MAX.

System Accessible:
The component is read and/or write addressable from the host without the need to physically alter the product.

Clearing:
Per *NIST Special Publication 800-88 Revision 1*, "clearing" is a logical technique to sanitize data in all User Accessible storage locations for protection against simple non-invasive data recovery techniques using the same interface available to the user; typically applied through the standard read and write commands to the storage device.

Sanitization:
Per *NIST Special Publication 800-88 Revision 1*, "sanitization" is a process to render access to "Target Data" on the media infeasible for a given level of effort. In this document, clearing is the degree of sanitization described.