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Manufacturer: National Instruments

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

Part Number and Revision	Description
158031C-120L or later	**PXIe-5413**
158031C-140L or later	**PXIe-5423**
158031C-181L or later	**PXIe-5433**
158031C-220L or later	**PXIe-5413**
158031C-240L or later	**PXIe-5423**
158031C-281L or later	**PXIe-5433**

Volatile Memory

Target Data	*Type*	*Size*	*Battery Backup*	*User[1] Accessible*	*System Accessible*	*Sanitization Procedure*
Waveform storage	DRAM	512 MB (5413/5423) 1 GB (5433)	No	Yes	Yes	Cycle Power

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

Target Data	*Type*	*Size*	*Battery Backup*	*User Accessible*	*System Accessible*	*Sanitization Procedure*
Calibration Storage	Flash	16 MB	No			
• Calibration metadata				Yes	Yes	Procedure 2
• Calibration data				No	Yes	None
MAX 10 FPGA Bitstream	Built-in Flash	4224 Kb	No	No	Yes	None
Spread Spectrum Clock (config)	On-chip	48 Bytes	No	No	No	None
ASIC Configuration Code	EEPROM	32 KB	No	No	Yes	None
ASIC Firmware	Flash	4 Mbit	No	No	Yes	None

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[1] Refer to *Terms and Definitions* section for clarification of *User* and *System Accessible*

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Procedures

Procedure 1 – Board Assembly Part Number identification:
To determine the Board Assembly Part Number and Revision, look at the sticker on the back shield of the board. The part number is in the format "P/N: 158031n-xxxL" where 'n' is the revision and 'xxx' is the variant.

Procedure 2 – Calibration Flash:
The user-accessible areas of the Calibration Flash are exposed through a calibration Applications Programming Interface (API) in LabVIEW. To clear the calibration user-data area, complete the following steps:

1. The calibration password cannot be changed without knowing what the calibration password is already. The default as-shipped from factory is "NI". To change the password, use the NI-FGEN/Calibration/Utility/niFgen Change Ext Cal Password VI, passing it the old password and the new password.
2. To clear the user-defined information: (All of the VIs noted here are located in the NI-FGEN/Calibration/PXIe-5433 Ext Cal palette) Open an external cal session using the Open Ext Cal Session VI. In that session, call the Set User Info VI, passing it an arbitrary 255 character string to use in overwriting the data. Close the session using the Close Ext Cal Session, using the cancel action.

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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.