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NI-9219

Manufacturer: National Instruments

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

Part Number and Revision	Description
198848B-01L or later	4 CH UNIVERSAL ANALOG INPUT
198848B-04L or later	4 CH CONFORMAL COATED UNIVERSAL ANALOG INPUT

Volatile Memory

<i>Target Data</i>	<i>Type</i>	<i>Size</i>	<i>Battery Backup</i>	<i>User¹ Accessible</i>	<i>System Accessible</i>	<i>Sanitization Procedure</i>
Last digitized value	ADC	24 bits (x4)	No	Yes	Yes	Cycle Power
Module operation	MCU RAM	1280 B (x4)	No	No	Yes	Cycle Power

Non-Volatile Memory (incl. Media Storage)

<i>Target Data</i>	<i>Type</i>	<i>Size</i>	<i>Battery Backup</i>	<i>User Accessible</i>	<i>System Accessible</i>	<i>Sanitization Procedure</i>
Module ID and Calibration data ²	EEPROM	2 KB	No	No	Yes	Procedure 2
Module operation	CPLD	640 LUTs	No	No	No	None
Module operation	MCU FLASH	8 KB (x4)	No	No	No	None

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

² Calibration constants that are stored in device EEPROMs include information for the device’s full operating range. Calibration constants do not maintain any unique data for specific configurations at which the device is used unless otherwise specified.

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” (where ‘#’ are numbers).

Procedure 2 - Calibration data:

The user-accessible areas of the Device Configuration EEPROM are exposed through a calibration Applications Programming Interface (API) in LabVIEW. Follow the instructions in KB [4GHLANQE](#) (Clearing the User-Accessible EEPROM on an NI-DAQmx Supported Device) for changing the calibration password and clearing the user-defined information.

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.