Manufacturer: National Instruments

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

Part Number and Revision	Description
149880A-01L or later	**SLSC-12202, 32CH, 5V-60V, DIO Module**

Volatile Memory

Target Data	*Type*	*Size*	*Battery Backup*	*User[1] Accessible*	*System Accessible*	*Sanitization Procedure*
None						

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

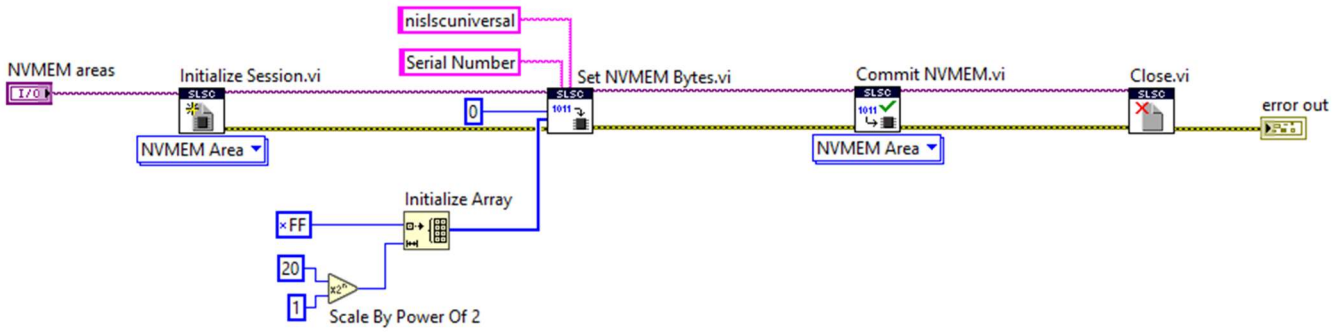
Target Data	*Type*	*Size*	*Battery Backup*	*User Accessible*	*System Accessible*	*Sanitization Procedure*
Device configuration	Flash	1 MB	No	Yes	Yes	Procedure 2

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

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 "149880a-01L" where "a" is the letter revision of the assembly (e.g. A, B, C…).

Procedure 2 – Erasing the Device Configuration Flash:
LabVIEW 2015, or newer versions supporting SLSC, must be used to execute the following procedures. The SLSC driver version 18.5 or newer is also required. The necessary library is located at <LabVIEW_DIR>\vi.lib\SLSC. Following this procedure will render the device inoperable. Contact NI Support for help backing up the contents prior to erasing if it is necessary to recover operations.



1. Open a new LabVIEW VI
2. Add "Initialize Session.vi" to open a NVMEM session
    a. From the dropdown menu below the VI icon, select "NVMEM Area".
    b. Create a control at the "NVMEM areas" port. On the front panel, select from the control's drop-down menu the device's raw area. Selection will be formatted as follows:
    <SLSC Chassis name in NI MAX>-Mod<Slot Number>/raw
3. Add "Set NVMEM Bytes.vi"
    a. Connect the "session out" port from "Initialize Session.vi" to the "session in" port.
    b. Connect the "error out" port from "Initialize Session.vi" to the "error in" port.
    c. Create a constant at the "data address" port and set the value to 0.
    d. Create a constant at the "password" port and set the value to "nislscuniversal".
    e. Create a constant at the "serial number" port and set the value to the serial number of the module selected.
4. Add "Scale By Power Of 2"
    a. Create a constant at the "n" port and set the value to 20.
    b. Create a constant at the "x" port and set the value to 1.
5. Add "Initialize Array"
    a. Connect "x*2^n" port from "Scale By Power Of 2" to the "dimension size" port.
    b. Create a constant at the "element" port.
    c. Right click on the constant and select "U8" from the "Representation" section of the drop-down menu that appears.

   d. Right click on the constant and select “Radix” from the “Visible Items” section of the drop-down menu that appears.
   e. Click the ‘d’ that appears to the left of the constant’s value and select ‘x’ from the drop-down menu that appears.
   f. Enter “FF” into the constant, or another hex pattern to write to each byte of flash.
   g. Connect the “initialized array” port to the “data” port of “Set NVMEM Bytes.vi”
6. Add “Commit NVMEM.vi”
   a. Connect the “session out” port from “Set NVMEM Bytes.vi” to the “session in” port.
   b. Connect the “error out” port from “Set NVMEM Bytes.vi” to the “error in” port.
7. Add “Close.vi”
   a. Connect the “session out” port from “Commit NVMEM.vi” to the “session in” port.
   b. Connect the “error out” port from “Commit NVMEM.vi” to the “error in” port.
   c. Create an indicator at the “error out” port.
8. Run the VI. Ensure there are no errors reported on the “error out” indicator.

Caution: This erase procedure renders the module inoperable. If you want to use a module again after erasing the Configuration Flash without having stored a copy of the original flash contents, contact National Instruments for information about costs and procedures to return the module to the factory for repair.

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.

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