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USB-6221

Manufacturer: National Instruments

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

Part Number and Revision	Description
194021B-01(L) or later	USB-6259
194021B-03(L) or later	USB-6251
194929A-01(L) or later	USB-6259 (OEM)
194929A-02(L) or later	USB-6259 MASS TERMINATION
194929A-03(L) or later	USB-6251 (OEM)
194929A-04(L) or later	USB-6251 MASS TERMINATION
195840A-01(L) or later	USB-6229
195840A-02(L) or later	USB-6221
195959B-01L or later	USB-6229 (OEM)
195959B-02L or later	USB-6221 (OEM)
197111A-01L or later	USB-6255
197201A-01L or later	USB-6255 (OEM)
197201A-02L or later	USB-6255 MASS TERMINATION
197291A-01L or later	USB-6225
197294A-01L or later	USB-6225 (OEM)
197294A-02L or later	USB-6225 MASS TERMINATION
197593A-01L or later	USB-6289
197593A-03L or later	USB-6281
197596A-01L or later	USB-6289 (OEM)
197596A-02L or later	USB-6289 MASS TERMINATION
197596A-03L or later	USB-6281 (OEM)
197596A-04L or later	USB-6281 MASS TERMINATION
197979A-01L or later	USB-6259 (BNC)
197980A-01L or later	USB-6251 (BNC)
197981A-01L or later	USB-6229 (BNC)
197982A-01L or later	USB-6221 (BNC)

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>
Glue logic	FPGA	Xilinx XC3S1000	No	No	Yes	Cycle Power

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

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>
Device configuration	Flash	1 MB	No			
<ul style="list-style-type: none"> • Device information • FPGA bitstream • Calibration metadata • Calibration data² 				No	Yes	None
				No	Yes	None
				Yes	Yes	Procedure 2
				No	Yes	None

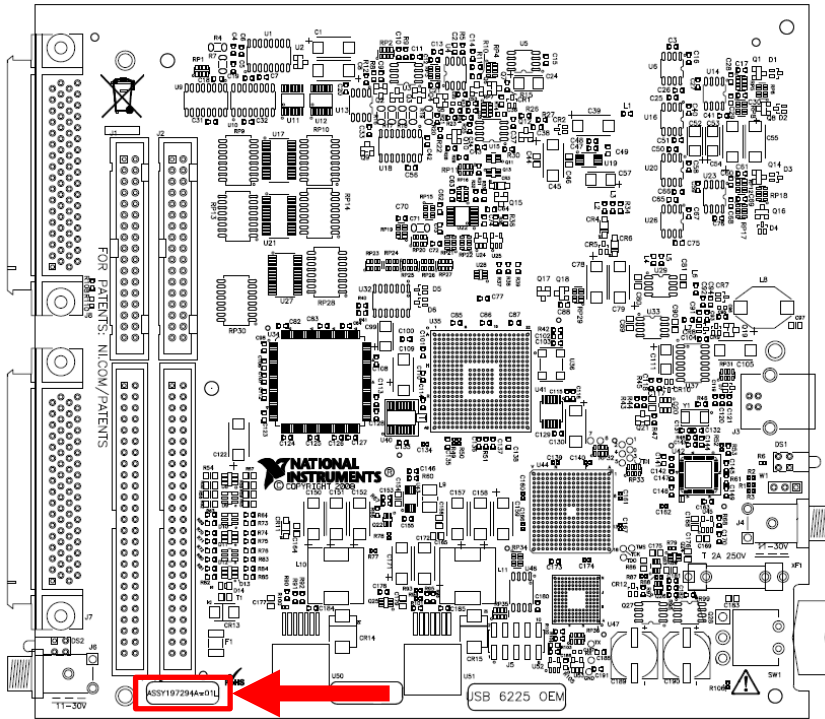
² Calibration constants that are stored on the device include information for the device's full operating range. Any implications resulting from partial self-calibration can be eliminated by running the full self-calibration procedure.

Procedures

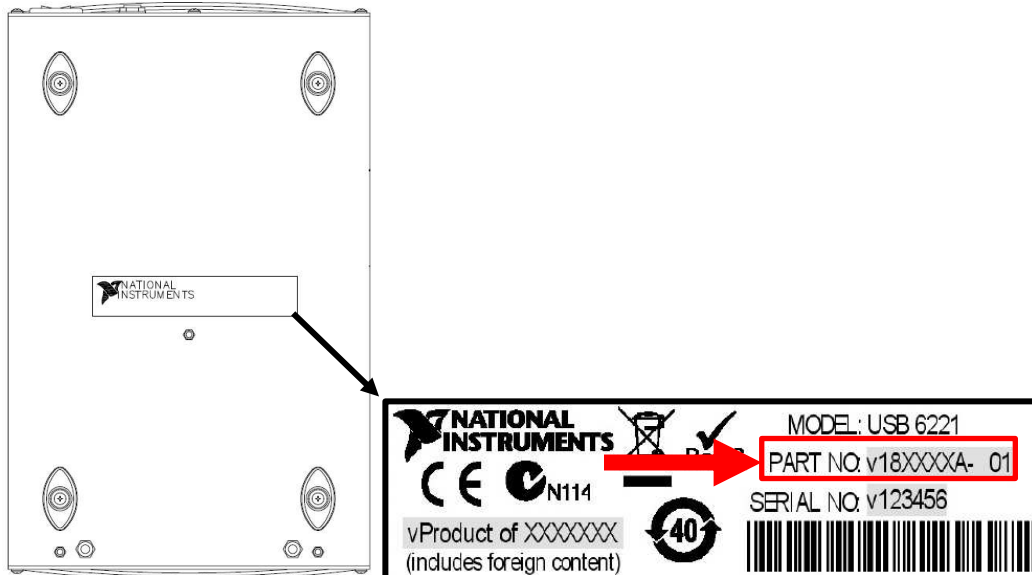
Procedure 1 – Board Assembly Part Number identification:

To determine the Board Assembly Part Number and Revision, refer to the “P/N” label applied to the surface of your product as shown below. The Assembly Part Number should be formatted as “P/N: #####a-vvL” where “a” is the letter revision of the Board Assembly (eg. A, B, C...) and the “vv” is the type identifier. If the product is RoHS compliant, “L” can be found at the end of the part number.

Products without enclosure (OEM):



Products with enclosure (bottom view):



Procedure 2 - Device Configuration Flash (Calibration Metadata):

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

1. The user-accessible areas of the Device Configuration EEPROM can be cleared using the NI DAQmx API. For instructions on how to clear these areas, go to www.ni.com/info and enter info code *DAQmxLOV*

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.