

**Manufacturer:** National Instruments

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

| Part Number and Revision | Description  |
|--------------------------|--|
| 156333A-01L or later     | USRP E310, Shipping Kit P/N 783773-01 or 785110-01 |
| 140605A-01L or later     | USRP E312, Shipping Kit P/N 784421-01              |
| 141634A-01L or later     | USRP E313, Shipping Kit P/N 784583-01              |

### Volatile Memory

| <i>Target Data</i>      | <i>Type</i>      | <i>Size</i>                               | <i>Battery Backup</i> | <i>User<sup>1</sup> Accessible</i> | <i>System Accessible</i> | <i>Sanitization Procedure</i> |
|-------------------------|------------------|---|-----------------------|------------------------------------|--------------------------|-------------------------------|
| Buffer Samples          | Synchronous DRAM | 1 GB                                      | No                    | Yes                                | Yes                      | Cycle Power                   |
| Microprocessor Storage  | Synchronous DRAM | 1 GB                                      | No                    | Yes                                | Yes                      | Cycle Power                   |
| Microprocessor Storage  | Synchronous RAM  | 256 KB                                    | No                    | Yes                                | Yes                      | Cycle Power                   |
| Microprocessor L1 Cache | Synchronous RAM  | 32 KB<br>(instruction)<br>32 KB<br>(data) | No                    | Yes                                | Yes                      | Cycle Power                   |
| Microprocessor L2 Cache | Synchronous RAM  | 512 KB                                    | No                    | Yes                                | Yes                      | Cycle Power                   |
| Microcontroller Storage | Synchronous RAM  | 512 bytes                                 | No                    | Yes                                | Yes                      | Cycle Power                   |
| User Storage            | FPGA LUT RAM     | 5,440 Kb                                  | No                    | Yes                                | Yes                      | Cycle Power                   |
| User Storage            | FPGA Block RAM   | 4900 Kb                                   | No                    | Yes                                | 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> |
|------------------------------------|----------------------|-------------|-----------------------|------------------------|--------------------------|-------------------------------|
| Device Configuration Data          | Motherboard EEPROM   | 2 kb        | No                    | No                     | Yes                      | None                          |
| Microcontroller Configuration Data | FLASH                | 8 kB        | No                    | No                     | Yes                      | None                          |
| Microcontroller Configuration Data | EEPROM               | 64 bytes    | No                    | No                     | Yes                      | None                          |
| Device Configuration Data          | Daughterboard EEPROM | 256 kb      | No                    | No                     | Yes                      | None                          |

<sup>1</sup> 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 “P/N: #####a-##L.

## 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.