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# PXI-7342

**Board Assembly Part Number(s)**

| Part Number          | Description |
|----------------------|-------------|
| 190976D-02L or later | PCI-7342    |
| 190976D-04L or later | PCI-7344    |
| 190977J-02L or later | PXI-7342    |
| 190977J-04L or later | PXI-7344    |

**Manufacturer:** National Instruments

**Volatile Memory**

| Type | Size         | User Accessible/<br>System Accessible <sup>1</sup> | Battery<br>Backup? | Purpose   | Method of Clearing <sup>2</sup> |
|------|--------------|--|--------------------|---|---------------------------------|
| FPGA | 24,000 Gates | No/Yes   | No                 | Encoder Decoder   | Cycle power                     |
| FPGA | 16,000 Gates | No/Yes   | No                 | Step/Dir Signals  | Cycle Power                     |
| FPGA | 16,000 Gates | No/Yes   | No                 | Microprocessor to<br>Host Interface   | Cycle Power                     |
| SRAM | 512 KB       | Yes/Yes  | No                 | Used by the microprocessor.<br>Also stores onboard variables<br>which are user accessible | Cycle Power                     |
| SRAM | 80 KB        | No/Yes   | No                 | Integrated RAM for DSP  | Cycle Power                     |

**Non-Volatile Memory**

| Type   | Size | User Accessible/<br>System Accessible | Battery<br>Backup? | Purpose   | Method of Clearing  |
|--------|------|---------------------------------------|--------------------|---|---|
| EEPROM | 8 KB | No/Yes                                | No                 | PCI Configuration   | None available to user  |
| Flash  | 1 MB | Yes/Yes                               | No                 | Stores onboard programs,<br>FPGA bitstreams, DSP<br>initialization, microprocessor<br>boot image, buffers, and user<br>defaults. The user can modify<br>the onboard programs, buffers,<br>and user default values | Flash memory pointers can<br>be cleared by using the<br>memory management<br>function or by using MAX.<br>The flash is not actually<br>cleared, but it is not<br>accessible from any API. |

**Media Storage**

| Type | Size | User Accessible/<br>System Accessible | Battery<br>Backup? | Purpose | Method of Clearing |
|------|------|---------------------------------------|--------------------|---------|--------------------|
|------|------|---------------------------------------|--------------------|---------|--------------------|

*NONE*

<sup>1</sup> Items are designated **No** for the following reason(s):

- a) Hardware changes or a unique software tool from National Instruments are required to modify contents of the memory listed.
- b) Hardware-modifying software tools are not distributed to customers for any personal access or customization, also known as non-normal use.

<sup>2</sup> The designation *None Available to User* indicates that the ability to clear this memory is not available to the user under normal operation. The utilities required to clear the memory are not distributed by National Instruments to customers for normal use.

**Terms and Definitions**

**User Accessible** Allows the user to directly write or modify the contents of the memory during normal instrument operation.

**System Accessible** Does not allow the user to access or modify the memory during normal instrument operation. However, system accessible memory may be accessed or modified by background processes. This can be something that is not deliberate by the user and can be a background driver implementation, such as storing application information in RAM to increase speed of use.

**Cycle Power** The process of completely removing power from the device and its components. 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.

**Non-Volatile** Retains its contents when power is removed. This type of memory typically contains calibration or chip configuration information, such as power up states.