**Letter of Volatility Under Normal Use Conditions**

**NI PXIe-5605**

**Board Model Name**  
NI PXIe-5605  
**Board Part Number Range**  
199749X-01 including all letter revisions

**Manufacturer:** National Instruments

## Volatile Memory

<table>
<thead>
<tr>
<th>Type</th>
<th>Size</th>
<th>User Accessible/</th>
<th>Battery Backup?</th>
<th>Purpose</th>
<th>Method of Clearing</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASIC</td>
<td>208 b</td>
<td>No/Yes</td>
<td>No</td>
<td>PCI communication</td>
<td>Cycle power</td>
</tr>
<tr>
<td>FPGA BRAM</td>
<td>576 Kb</td>
<td>No/Yes</td>
<td>No</td>
<td>List mode instruction storage</td>
<td>Cycle power</td>
</tr>
</tbody>
</table>

## Non-Volatile Memory

<table>
<thead>
<tr>
<th>Type</th>
<th>Size</th>
<th>User Accessible/</th>
<th>Battery Backup?</th>
<th>Purpose</th>
<th>Method of Clearing</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLASH</td>
<td>4 Mb</td>
<td>No/Yes</td>
<td>No</td>
<td>Device enumeration</td>
<td>None available to user</td>
</tr>
<tr>
<td>FLASH</td>
<td>4 Mb</td>
<td>No/Yes</td>
<td>No</td>
<td>Calibration data storage</td>
<td>None available to user</td>
</tr>
<tr>
<td>FLASH</td>
<td>32 Mb</td>
<td>No/Yes</td>
<td>No</td>
<td>Calibration data storage</td>
<td>None available to user</td>
</tr>
</tbody>
</table>

## Media Storage

<table>
<thead>
<tr>
<th>Type</th>
<th>Size</th>
<th>User Accessible/</th>
<th>Battery Backup?</th>
<th>Purpose</th>
<th>Method of Clearing</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Clearing Notes:

**User Access:**

In order to clear the user accessible portion of the PXIe-5605 calibration memory, the user must write a known value to the user string field in the calibration memory. This can be accomplished using the following code excerpt:

```plaintext
niRFSA Set Cal User Defined Info.vi
niRFSA Get Cal User Defined Info.vi
```

---

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

2. 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 public users for any personal access or customization; also known as non-normal use.

3. The designation **None Available to User** indicates that the ability to clear the 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.
Calibration API:

The PXIe-5601 has a user accessible calibration API (Application Programming Interface) for LabVIEW. This API allows the user to perform following calibrations manually, which re-writes the stored calibration constants:

1. Downconverter Gain
2. LO Export Calibration
3. Baseline Calibration Store for Self Calibration

Documentation for the use of this API is listed in the NI RF Vector Signal Analyzers Help file.

If the user performs a manual calibration of this module in a classified location, they may be required to re-calibrate under “default” or “normal” use conditions before the device is cleared for removal from the classified location. These “default” or “normal” use conditions for re-calibration will be defined by the user and the approving declassification group.

Self Calibration:

The PXIe-5605 also has self calibration capability using the niRFSA Self Cal VI that allows the user to perform a calibration with the currently associated modules. The new calibration constants are stored in the self calibration area in the calibration memory.

If the user performs a self calibration of this module in a classified location, they may be required to re-run the self calibration under “default” or “normal” use conditions before the device is cleared for removal from the classified location. These “default” or “normal” use conditions for re-calibration will be defined by the user and the approving declassification group.

Terms and Definitions

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

**System Accessible** System accessible memory does not allow the user to access or modify the memory during normal instrument operation, however, 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. Under normal use conditions user data is not written to any non-volatile memory locations by the system.

**Cycle Power** The process of completely removing power from the device and its components. This 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** Volatile memory requires power to maintain the stored information. When power is removed from this memory, its contents are lost.

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