

**Board Assembly Part Number(s)**

Part Number	Description
151496D-01L or later	NI PXI-6683
151496D-04L or later	NI PXI-6683H

**Manufacturer:** National Instruments

**Volatile Memory**

Type	Size	User Accessible/ System Accessible <sup>1</sup>	Battery Backup?	Purpose	Method of Clearing <sup>2</sup>
FPGA Block	1548 KB	No/Yes	No	Data Buffering	Cycle Power
PCI DMA	1536 bits	No/Yes	No	Data Buffering	Cycle Power

**Non-Volatile Memory**

Type	Size	User Accessible/ System Accessible	Battery Backup?	Purpose	Method of Clearing
EEPROM	2 KB	Yes/Yes	No	Stores TCXO calibration data <sup>3</sup>	See "Clearing Notes"
Flash EEPROM	4 MB	No/Yes	No	Stores device configuration data	None available to user
CPLD	256 Macrocells	No/Yes	No	Trigger routing	None available to user

**Media Storage**

Type	Size	User Accessible/ System Accessible	Battery Backup?	Purpose	Method of Clearing
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NONE

**Clearing Notes:**

**EEPROM:** The calibration data for the onboard temperature-controlled oscillator (TCXO) is exposed through an Applications Programming Interface (API) in LabVIEW. Please refer to the *NI PXI-6683 Series Calibration Procedure* to learn how to overwrite the stored calibration constant.

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

- Hardware changes or a unique software tool from National Instruments are required to modify contents of the memory listed.
- 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.

<sup>3</sup> Calibration data includes the following: time and date of calibration, board temperature at time of calibration, calibrated TCXO voltage, calibration password (up to 8 bytes) and CRC.

## 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.