

Board Assembly Part Number(s)

Part Number	Description
781496-01	cDAQ-9181
782069-01	cDAQ-9184
781424-01	cDAQ-9188
782824-01	cDAQ-9188XT

Manufacturer: National Instruments

Volatile Memory

Type ¹	Size	User Accessible/ System Accessible ²	Battery Backup?	Purpose	Method of Clearing ³
Microcontroller SDRAM	32M x 16-bit	No/Yes	No	System Memory	Power Cycle
Analog Input FIFO	2k x 32-bit	No/No	No	Input buffer	Power Cycle
Analog Output FIFO	8k x 16-bit	Yes/No	No	Output buffer	Power Cycle
Digital Output FIFO	2k x 32-bit	Yes/No	No	Output buffer	Power Cycle
Counter FIFO	1024 x 32-bit	Yes/No	No	Buffer	Power Cycle
CPU FIFO	8k x 8-bit	Yes/No	No	Memory	Power Cycle
DMA FIFO	4k x 8-bit	Yes/No	No	Buffer	Power Cycle
DMA Adapter	256 x 32-bit	Yes/No	No	Memory	Power Cycle
Cartridge Controller Instruction	4k x 18-bit	No/No	No	Memory	Power Cycle
Cartridge Controller Data	2k x 32-bit	Yes/No	No	Memory	Power Cycle

¹ Calibration constants that are stored in device EEPROMs include information for the device's full operating range. Calibration constants do not maintain any unique data for specific configurations at 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 customers 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 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.

Non-Volatile Memory

Type	Size	User Accessible/ System Accessible	Battery Backup?	Purpose	Method of Clearing
<i>Microcontroller Flash</i>	<i>16M x 16-bit</i>	<i>Yes/Yes</i>	<i>No</i>	<i>Boot Code & User Configurations</i>	<i>None Available to User Perform Factory Reset</i>
<i>CPU Flash</i>	<i>8Mbit</i>	<i>No/Yes</i>	<i>No</i>	<i>Boot Code</i>	<i>None Available to User</i>

Media Storage

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

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.