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cRIO-9803

SPECIFICATIONS

cRIO-9803

SSD Expansion Module for CompactRIO

Definitions

Warranted specifications describe the performance of a model under stated operating conditions and are covered by the model warranty.

Characteristics describe values that are relevant to the use of the model under stated operating conditions but are not covered by the model warranty.

- *Typical* specifications describe the performance met by a majority of models.
- *Nominal* specifications describe an attribute that is based on design, conformance testing, or supplemental testing.

Specifications are *Typical* unless otherwise noted.

Conditions

Specifications are valid for -40 °C to 70 °C unless otherwise noted.

Software

Supported operating system	NI Linux Real-Time (64-bit), Windows
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USB Ports

Type	USB type-C, upward-facing (device) port
USB interface	USB 3.1 Gen1, SuperSpeed
Maximum data rate	5 Gb/s
Maximum current from USB downward-facing (host) port	900 mA

Memory

Nonvolatile (SSD)

Varies



Note Visit ni.com/info and enter the Info Code `ssdbp` for information about the life span of the nonvolatile memory and about best practices for using nonvolatile memory.

Form factor

mSATA, full size

Maximum supported drive power

2.9 W (875 mA @ 3.3 V)

Drive interface

SATA II

Read/write performance (sequential)¹

150 MB/s

Table 1. Module Drive Specifications

Drive Specification		Kit Part Number	
		785920-01	786677-01
Drive capacity		64 GB	480 GB
Flash technology		Planar SLC NAND	Planar MLC NAND
Endurance	JESD218A Enterprise workload	733 TBW	259 TBW
	100% sequential workload	6,209 TBW	1,417 TBW



Note These specifications are typical at 40 °C operating and storage temperature according to JESD218A and JESD219. Visit ni.com/info and enter the Info Code `ssdtemp` for more information about the impact of temperature on flash endurance.

Power Requirements

Maximum power consumption

4.5 W (900 mA @ 5 V)

Power source

USB bus-powered

¹ Drive performance is dependent on operating system, file system, and application.

Physical Characteristics



Tip For two-dimensional drawings and three-dimensional models of the cRIO-9803, visit ni.com/dimensions and search by module number.

Weight	370 g (13 oz)
Dimensions	30.0 mm × 88.1 mm × 106.9 mm (1.18 in. × 3.47 in. × 4.21 in.)

Environmental Characteristics

Temperature and Humidity

Temperature²

Operating	-40 °C to 70 °C
Storage	-40 °C to 85 °C

Humidity

Operating	10% RH to 90% RH, noncondensing
Storage	5% RH to 95% RH, noncondensing

Ingress protection IP40

Pollution Degree 2

Maximum altitude 5,000 m

Shock and Vibration

Operating vibration

Random	5 g _{rms} , 10 Hz to 500 Hz
Sinusoidal	5 g, 10 Hz to 500 Hz

Operating shock 30 g, 11 ms half sine; 50 g, 3 ms half sine;
18 shocks at 6 orientations

² Drive utilization at extreme temperatures may limit storage duration over time. NI recommends the use of SLC based drives for operating and storage environments above 40 °C. Visit ni.com/info and enter the Info Code `ssdttemp` for more information about the impact of temperature on drive endurance.

Hazardous Locations

U.S. (UL)	Class I, Division 2, Groups A, B, C, D, T4; Class I, Zone 2, AEx nA IIC T4 Gc
Canada (C-UL)	Class I, Division 2, Groups A, B, C, D, T4; Ex nA IIC T4 Gc
Europe (ATEX) and International (IECEX)	Ex nA IIC T4 Gc

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