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cRIO-9805

SPECIFICATIONS

cRIO-9805

4-Port 802.1AS Ethernet Switch 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.

Network Interface

Network ports used	TCP:830 (configuration only)
	TCP:2537 (configuration only)
	UDP:5353 (configuration only)
	TCP:5353 (configuration only)
	UDP:7865 (configuration only)
	UDP:8463 (configuration only)

Network IP configuration	DHCP + Link-Local
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Ethernet

Number of ports	4 ports, internally switched ¹
Network interface	1000 Base-TX, full-duplex 1000 Base-TX, half-duplex 100 Base-TX, full-duplex 100 Base-TX, half-duplex 10 Base-T, full-duplex 10 Base-T, half-duplex
Communication rates	10/100/1000 Mbps, auto-negotiated
Maximum cabling distance	100 m/segment
Maximum hops per line	15

Timing and Synchronization

Protocol	IEEE 802.1AS for network synchronization over 1000 Base-TX, full-duplex
Network synchronization accuracy	<1 μs
Network synchronization accuracy with optimized configuration	<100 ns

Power Requirements

Maximum power consumption	5 W
Power supply voltage	9 V to 30 V
Power wire gauge ²	0.20 mm ² to 1.31 mm ² (24 AWG to 16 AWG)

Physical Characteristics



Tip For two-dimensional drawings and three-dimensional models of the cRIO-9805, visit ni.com/dimensions and search by module number.

Weight	406 g (14.3 oz)
Dimensions	30.0 mm × 88.1 mm × 106.9 mm (1.18 in. × 3.47 in. × 4.21 in.)

¹ This allows for line topologies or network redundancy.
² NI recommends using ferrules for stranded wires.

Environmental Characteristics

Temperature and Humidity

Temperature

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
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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 DEMKO 12 ATEX 1202658X IECEX UL 14.0089X

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