cDAQ-9132/9133/9134/9135/9136/9137/9138/9139

cDAQ-9132: 1.33 GHz Dual-Core Atom, 4-Slot, CompactDAQ Controller

cDAQ-9133: 1.33 GHz Dual-Core Atom, 8-Slot, CompactDAQ Controller

cDAQ-9134: 1.33 GHz Dual-Core Atom, 4-Slot, Extended Temperature CompactDAQ Controller

cDAQ-9135: 1.33 GHz Dual-Core Atom, 8-Slot, Extended Temperature CompactDAQ Controller

cDAQ-9136: 1.91 GHz Quad-Core Atom, 4-Slot, CompactDAQ Controller

cDAQ-9137: 1.91 GHz Quad-Core Atom, 8-Slot, CompactDAQ Controller

cDAQ-9138: 1.06 GHz Celeron, 8-Slot CompactDAQ Controller

cDAQ-9139: 1.33 GHz Core i7, 8-Slot CompactDAQ Controller

Physical Characteristics

Weight	
cDAQ-9132	1.85 kg (4 lb 1.3 oz)
cDAQ-9133	2.5 kg (5 lb 8.2 oz)
cDAQ-9134	1.85 kg (4 lb 1.3 oz)
cDAQ-9135	2.5 kg (5 lb 8.2 oz)
cDAQ-9136	1.85 kg (4 lb 1.3 oz)
cDAQ-9137	2.5 kg (5 lb 8.2 oz)
cDAQ-9138	2.8 kg (6 lb 2.6 oz)
cDAQ-9139	2.8 kg (6 lb 2.6 oz)
Dimensions (unloaded)	
cDAQ-9132	219.5 mm × 88.1 mm × 118.6 mm (8.64 in. × 3.47 in. × 4.67 in.)
cDAQ-9133	328.8 mm × 88.1 mm × 118.6 mm (12.95 in. × 3.47 in. × 4.67 in.)

cDAQ-9134	219.5 mm × 88.1 mm × 118.6 mm (8.64 in. × 3.47 in. × 4.67 in.)
cDAQ-9135	328.8 mm × 88.1 mm × 118.6 mm (12.95 in. × 3.47 in. × 4.67 in.)
cDAQ-9136	219.5 mm × 88.1 mm × 118.6 mm (8.64 in. × 3.47 in. × 4.67 in.)
cDAQ-9137	328.8 mm × 88.1 mm × 118.6 mm (12.94 in. × 3.47 in. × 4.67 in.)
cDAQ-9138	403.7 mm × 88.1 mm × 121.3 mm (15.80 in. × 3.47 in. × 4.78 in.)
cDAQ-9139	403.7 mm × 88.1 mm × 121.3 mm (15.80 in. × 3.47 in. × 4.78 in.)

cDAQ-9132/9133/9134/9135/9136/9137 Power Connector

Screw-terminal wiring	
Gauge	0.5 mm^2 to 2.1 mm^2 (20 AWG to 14 AWG) copper conductor wire
Wire strip length	6 mm (0.24 in.) of insulation stripped from the end
Temperature rating	85 °C
Torque for screw terminals	0.20 N · m to 0.25 N · m (1.8 lb · in. to 2.2 lb · in.)
Wires per screw terminal	One wire per screw terminal
Connector securement	
Securement type	Screw flanges provided
Torque for screw flanges	0.20 N · m to 0.25 N · m (1.8 lb · in. to 2.2 lb · in.)

cDAQ-9138/9139 Power Connector

Screw-terminal wiring	
Gauge	3.0 mm^2 (12 AWG) copper conductor wire
Wire strip length	7 mm (0.276 in.) of insulation stripped from the end
Temperature rating	85 °C

Torque for screw terminals	0.5 N · m to 0.6 N · m (4.4 lb · in. to 5.3 lb · in.)
Wires per screw terminal	One wire per screw terminal
Connector securement	
Securement type	Screw flanges provided
Torque for screw flanges	0.5 N · m (4.4 lb · in.)

Environmental

Operating temperature	
cDAQ-9132	-20 °C to 55 °C
cDAQ-9133	-20 °C to 55 °C
cDAQ-9134	-40 °C to 70 °C
cDAQ-9135	-40 °C to 70 °C
cDAQ-9136	-20 °C to 55 °C
cDAQ-9137	-20 °C to 55 °C
cDAQ-9138	0 °C to 45 °C
cDAQ-9138 with NI panel mount kit (part number 781919-01)	0 °C to 55 °C
cDAQ-9139	0 °C to 45 °C
cDAQ-9139 with NI panel mount kit (part number 781919-01)	0 °C to 55 °C
Storage temperature	-40 °C to 85 °C

Caution Failure to follow the mounting instructions in the user manual can cause temperature derating.

Ingress protection	
cDAQ-9132	IP30
cDAQ-9133	IP30
cDAQ-9134	IP30
cDAQ-9135	IP30
cDAQ-9136	IP30
cDAQ-9137	IP30
cDAQ-9138	IP20
cDAQ-9139	IP20

Operating humidity	10% RH to 90% RH, noncondensing
Storage humidity	5% RH to 95% RH, noncondensing
Pollution Degree	2
Maximum altitude	
cDAQ-9132	5,000 m
cDAQ-9133	5,000 m
cDAQ-9134	5,000 m
cDAQ-9135	5,000 m
cDAQ-9136	5,000 m
cDAQ-9137	5,000 m
cDAQ-9138	2,000 m
cDAQ-9139	2,000 m

Indoor use only.

Hazardous Locations

Explosive atmospheres rating	Ex nA IIC T4 Gc
CCC certificate number	2021312310000337

Safety Guidelines

Operate the product only as described in this document.

Caution This icon denotes a caution, which advises you to consult documentation where this symbol is marked.

Caution Do not operate this product in a manner not specified in this document. Product misuse can result in a hazard. You can compromise the safety protection built into the product if the product is damaged in any way. If the product is damaged, return it to NI for repair.

Safety Guidelines for Hazardous Locations

The cDAQ-9132/9133/9136/9137 have been evaluated as Ex nA IIC T4 Gc equipment and are CCC certified. Each product is suitable for use within ambient temperatures of -20 °C ≤ Ta ≤ 55 °C in either nonhazardous locations or Zone 2 hazardous locations.

The cDAQ-9134/9135 have been evaluated as Ex nA IIC T4 Gc equipment and are CCC certified. Each product is suitable for use within ambient temperatures of -40 °C ≤ Ta ≤ 70 °C in either nonhazardous locations or Zone 2 hazardous locations.

The cDAQ-9138/9139 have been evaluated as Ex nA IIC T4 Gc equipment and are CCC certified. Each product is suitable for use within ambient temperatures of 0 °C ≤ Ta ≤ 55 °C in either nonhazardous locations or Zone 2 hazardous locations.

Follow these guidelines if you are installing the product in a potentially explosive environment. Not following these guidelines may result in serious injury or death.

Caution Do not disconnect the power supply wires and connectors from the controller unless power has been switched off.

Caution Do not disconnect I/O-side wires or connectors unless power has been switched off or the area is known to be nonhazardous.

Caution Do not remove modules unless power has been switched off or the area is known to be nonhazardous.

Caution Substitution of components may impair suitability for Zone 2.

Caution You must make sure that transient disturbances do not exceed 140% of the rated voltage.

Caution The system shall only be used in an area of not more than Pollution Degree 2, as defined in IEC/EN 60664-1.

Caution The system shall be mounted in a CCC-certified enclosure with a minimum ingress protection rating of at least IP54 as defined in GB3836.1.

Caution The enclosure must have a door or cover accessible only by the use of a tool.

Caution **(cDAQ-9132/9133/9134/9135/9136/9137)** The USB host ports, USB device port, mini DisplayPort, and SD card slot require the retention accessories listed in the following table for hazardous locations. All cables must be used in a conduit or cable gland to wire to a nonhazardous location. Do not disconnect a cable unless the product is powered off or the area is known to be nonhazardous.

Table 1. cDAQ-9132/9133/9134/9135/9136/9137 Hazardous Location Retention Accessories

Port	Required Accessory	Part Number
USB Host Port	NI Industrial USB Extender Cable	152166-xx
USB Device Port	NI Locking USB Cable	157788-01
Mini DisplayPort	Mini DisplayPort Cable Retention Bracket	156866-01
SD Card Slot	SD Door Kit	783660-01

Caution **(cDAQ-9132/9133/9134/9135/9136/9137)** Do not insert or remove SD cards unless power has been switched off or the area is known to be nonhazardous.

Caution **(cDAQ-9132/9133/9134/9135/9136/9137)** You must use the SD card slot cover to protect the SD card in hazardous locations.

Caution **(cDAQ-9138/9139)** The USB ports require the NI Industrial USB extender cable, NI part number 152166-xx. The cable must be used in conduit to wire to a nonhazardous location. Do not disconnect the cable unless the product is powered off or the area is known to be nonhazardous.

Safety Voltages

cDAQ-9132, cDAQ-9133, cDAQ-9134, cDAQ-9135, cDAQ-9136, cDAQ-9137

Connect only voltages that are below these limits.

V1 terminal to C terminal	30 V DC maximum, Measurement Category I
V2 terminal to C terminal	30 V DC maximum, Measurement Category I
Chassis ground to C terminal	30 V DC maximum, Measurement Category I

Caution Do not connect the product to signals or use for measurements within Measurement Categories II, III, or IV.

cDAQ-9138, cDAQ-9139

Connect only voltages that are below these limits.

V1 terminal to C terminal	30 V maximum, Measurement Category I
V2 terminal to C terminal	30 V maximum, Measurement Category I
Chassis ground to C terminal	30 V maximum, Measurement Category I
Isolation voltage, RS-485/422 (DTE) serial port to earth ground	
Continuous	60 V DC, Measurement Category I
Withstand	1,000 V RMS, verified by a 5 s dielectric withstand test

Caution Do not connect the product to signals or use for measurements within Measurement Categories II, III, or IV.

Power Requirements

Voltage input range (measured at the cDAQ controller power connector)	9 V to 30 V
Maximum power consumption[1]	
cDAQ-9132/9134/9136	40 W
cDAQ-9133/9135/9137	46 W
cDAQ-9138/9139	75 W
Recommended power supply	100 W, 24 V DC

Installing C Series Modules

Verify that power is not connected to the I/O connector(s) on the C Series module.

Removing C Series Modules

Verify that power is not connected to the I/O connector(s) on the C Series module before you remove a module from the chassis.

Safety Compliance and Hazardous Locations Standards

This product is designed to meet the requirements of the following electrical equipment safety standards for measurement, control, and laboratory use:

- IEC 61010-1
- IEC 60079-0: Ed 6, IEC 60079-15; Ed 4
- GB3836.1, GB3836.8

Note For safety certifications, refer to the product label or the *Product Certifications and Declarations* section.

Product Certifications and Declarations

To obtain product certifications and the DoC for NI products, visit *ni.com/product-certifications*, search by model number, and click the appropriate link.

[1] Includes maximum 1 W module load per slot across rated temperature and product variations.

Worldwide Support and Services

NI corporate headquarters is located at 11500 North Mopac Expressway, Austin, Texas, 78759-3504, USA.

378444A-01 April 20, 2021