
NI-9467/9469 Explosive Atmospheres User Guide

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Product Descriptions

NI-9467: GPS C Series Synchronization Module

NI-9469: Chassis C Series Synchronization Module

Physical Characteristics

Weight	
NI-9467 with GPS Antenna Connector	141 g (4.5 oz)
NI-9469 with RJ45	148 g (5.2 oz)
Dimensions	Visit ni.com/dimensions and search by module number.

Environmental

Temperature	
Operating	-40 °C to 70 °C
Storage	-40 °C to 85 °C
Ingress protection	IP40
Humidity	

Operating	10% RH to 90% RH, noncondensing	
Storage	5% RH to 95% RH, noncondensing	
Pollution Degree		2
Maximum altitude		
NI-9467	5,000 m	
NI-9469	2,000 m	

Indoor use only.

Hazardous Locations

Explosive atmospheres rating	Ex ec IIC T4 Gc
CCC certificate number	2021312310000312

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

These products have been evaluated as Ex ec IIC T4 Gc equipment and are CCC certified. Each product is suitable for use within ambient temperatures of $-40\text{ }^{\circ}\text{C} \leq T_a \leq 70\text{ }^{\circ}\text{C}$ in either nonhazardous locations or Zone 2 hazardous locations. If you are using the products in Gas Group IIC hazardous locations, you must use the device in an NI chassis that has been evaluated as Ex ec IIC T4 Gc equipment.

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 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 Transient protection shall be provided that is set at a level not exceeding 140% of the peak rated voltage value of 85 V at the supply terminals to the equipment.



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 GB/T3836.1.



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

Safety Voltages

NI-9467

DC voltage output for active antenna	+5 V $\pm$ 10%
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NI-9469

Isolation	
Channel-to-channel	None
Channel-to-earth ground	None

Installing C Series Modules

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

Connecting to the NI-9467

The NI-9467 has one SMA female connector on its front panel for a GPS active antenna. The connector provides a DC voltage to power the antenna and also serves as input for the GPS RF signal.

Connecting to the NI-9469

The NI-9469 has three RJ45 connectors on the front panel labeled Port 0, 1, and 2. These connectors use standard straight through CAT 5e Ethernet cabling to provide connection to other NI-9469 modules only . Each port is software configurable to drive

or receive four differential signals through the cable, which are referred to as Line 0 to 3. Each port can carry either four triggers, or three triggers and one clock, in which Line 3 is dedicated to carry the clock.

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, IEC 60079-7
- GB/T3836.1, GB/T3836.3



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.

Worldwide Support and Services

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