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NI 9146

4-Slot Ethernet RIO Expansion Chassis

- This product is scheduled to release in August 2012.
- 4-slot Ethernet RIO expansion chassis for NI C Series modules
- Seamlessly add distributed monitoring and control to any Ethernet network
- Directly access C Series I/O from your Windows PC or LabVIEW Real-Time controller
- Integrated Spartan-6 LX45 FPGA for custom timing, onboard processing, and control
- -40 to 70 °C operating temperature

Overview

This product is scheduled to release in August 2012.

The NI 9146 is a rugged, 4-slot expansion chassis that you can use to easily add C Series I/O to any standard 10/100 Ethernet network. You can add this Ethernet reconfigurable I/O (RIO) chassis to an NI LabVIEW for Windows application or use it as remote expansion I/O on LabVIEW Real-Time systems such as NI CompactRIO or PXI. Just connect it over Ethernet and instantly obtain access to C Series I/O in your LabVIEW host program.

The NI 9146 does not require the LabVIEW Real-Time Module for access to C Series I/O in Windows-based systems.

For low-level access to I/O timing, triggering, and onboard processing, you can use the LabVIEW FPGA Module to program the Spartan-6 LX45 field-programmable gate array (FPGA) without having any prior experience in FPGA digital design. This FPGA provides reliable high-speed I/O, highly customizable timing, and advanced processing algorithms for your high-speed control applications. If you want to access your I/O only through the NI RIO Scan Interface, you do not need to use the LabVIEW FPGA Module.

The NI 9146 offers diagnostic and autoconfiguration features to simplify installation, use, and maintenance. For increased reliability, the chassis also has a network fail-safe that verifies network connectivity and communication with the remote host system and drives I/O to safe states should connectivity be interrupted. The NI 9146 features low-power consumption, quick startup times, a wide temperature range (-40 to 70 °C), and rugged industrial specs (50 g shock, 5 g vibration).

Specifications

Specifications Summary

General	
Product Name	NI 9146
Form Factor	CompactRIO

Product Type	Chassis
Part Number	782445-01
Operating System/Target	Real-Time , Windows
LabVIEW RT Support	Yes
Reconfigurable FPGA	
FPGA	Spartan-6 LX45
Specific FPGA	Spartan-6 LX45
Chassis	
Power Supply	DC
Number of Slots	4
Integrated Controller	No
Input Voltage Range	9 V , 30 V
Recommended Power Supply: Power	24 W
Recommended Power Supply: Voltage	24 V
Power Consumption	15 W
Shock and Vibration	
Operational Shock	50 g
Random Operating Frequency Range	10 Hz , 500 Hz
Random Vibration	5 g
Sinusoidal Operating Frequency Range	10 500
Sinusoidal Vibration	5
Physical Specifications	
Length	17.81 cm
Width	8.81 cm
Height	5.89 cm
Weight	929 gram
Minimum Operating Temperature	-40 °C
Maximum Operating Temperature	70 °C
Minimum Storage Temperature	-40 °C
Maximum Storage Temperature	85 °C
Maximum Altitude	2000 m

Resources

Additional Product Information

- Manuals (4)

Related Information

- Getting Started With the NI 9146 Ethernet RIO Expansion Chassis
- Learn more about Ethernet RIO
- Learn About LabVIEW FPGA
- Configure a CompactRIO System
- View a Demo of the Ethernet RIO System