NI PXI-8431/8 (RS485/RS422)

High-Performance, 8-Port Serial Interface for PXI

- Minimal CPU usage with DMA transfers
- Memory mapped to prevent I/O resource conflicts
- Certified Windows quality driver for quick installation
- Includes converter cable (SCSI-68 to 8 DB-9 male connectors)
- LabVIEW Real-Time compatible
- Customizable baud rates up to 3 Mb/s and 128 B transmit and receive FIFOs)

Overview

The National Instruments PXI-8431/8 is a high-performance, 8-port serial interface for high-speed communication with RS485/RS422 devices at rates up to 3 Mb/s. High-performance RS485/RS422 interfaces are also available in 2 and 4-port versions from NI. The NI PXI-8431/8 offers flexible baud rates for data transmissions up to 3 Mb/s to within 1 percent accuracy for nonstandard baud rates and 0.01 percent accuracy for standard baud rates. With the high-performance DMA engine, you achieve high throughput with minimal CPU usage, which is especially useful for applications with simultaneous communication on multiple serial ports. With hyperthreading and multiprocessor compatibility, you can take advantage of the latest PC technology for higher speeds and better efficiency. National Instruments also offers easy-to-use, powerful software that significantly reduces your development time for systems that use serial communication with the PXI-8431/8.

Specifications

Specifications Documents

- Specifications (3)

Specifications Summary

General	
Product Name	PXI-8431/8
Product Family	Serial
Form Factor	PXI Platform
PXI Bus Type	PXI Hybrid Compatible
Part Number	779537-01
Operating System/Target	Real-Time , Windows
LabVIEW RT Support	Yes

Voltage	5 Vrms
Current	1 A
Source	Internally Powered
Power Requirement for +5V Rail	1 A
Slot Two Module	No
Module Width	1
MXI Compatible	Yes
Serial Standard Compatibility	RS-422
Port Information	
Number of Ports	8
Max Cable Length	1.2 km
I/O FIFO Buffer Size	128 B
Max Device Connections / Port	31
Handles RTS/CTS Handshake Lines	Yes
Interrupt Sharing Between Ports	Yes
Direct Memory Access (DMA)	Yes
Physical Specifications	
Length	16 cm
Width	10 cm
I/O Connector	68-pin SCSI type
Minimum Operating Temperature	0 °C
Maximum Operating Temperature	55 °C

Pricing

Select one of the following options for product configuration and pricing:

Select Module and Accessories Below »	OR	Configure and Price a Complete PXI System »

Module	Accessories	Chassis, Controllers, Modules	Software & Services

Step 1: Verify Device and Quantity Selection

Part Number	Description	Est Ship Days	US Dollars*	Qty
779537-01	NI PXI-8431/8	14 - 19	$ 960	1

Step 2: Select Optional Accessories

Part Number	Description	Est Ship Days	US Dollars*	Qty
Shielded Cables				
183283-01	RS485/RS422 Null Modem Cable (1m)	9 - 14	$ 30	0
183283-02	RS485/RS422 Null Modem Cable (2m)	9 - 14	$ 35	0
183283-04	RS485/RS422 Null Modem Cable (4m)	9 - 14	$ 40	0

* You have selected Egypt as the country where you will use the product(s). Pricing may have changed since you printed this document on 07/24/2012. Please visit *ni.com* to see current pricing.

Step 3: Place Order or Obtain Quote

Order Online or by Fax
1 . Navigate to *ni.com/products* and select "Order by Part Number" found under the "Business Center" section.
2 . Once you have added your items to your cart, see the "Your Cart Options" section to place your order, obtain a quote, or print a fax form.

Order by Phone
Call +20-10-400 1649 to place your order or obtain a quote.

Software

Graphical Programming

Option 1: Select a complete suite of software

Part Number	Description	Est Ship Days	US Dollars* (change)	Qty
Pre-configured NI Developer Suite Packages				
DS410836	NI Developer Suite Core (English) NI Recommended		$ 5,500	1 1

Option 2: Select any of the following software products

Part Number	Description	Est Ship Days	US Dollars*	Qty
LabVIEW Software				
776670-35	NI LabVIEW Full	9 - 14	$ 2,970	0

Development System for
Windows (English)

Text-Based Programming

Option 1: Select a complete suite of software

Part Number	Description	Est Ship Days	US Dollars* (change)	Qty
Pre-configured NI Developer Suite Packages				
DS410836	NI Developer Suite Core (English) NI Recommended		$ 5,500	1 1

Option 2: Select any of the following software products

Part Number	Description	Est Ship Days	US Dollars*	Qty
Application Software				
776800-35	LabWindows/CVI Full Development System for Windows	9 - 14	$ 2,970	0

* You have selected Egypt as the country where you will use the product(s). Pricing may have changed since you printed this document on 07/24/2012. Please visit *ni.com* to see current pricing.

Driver Software

- View Drivers and Updates
- Search All Drivers

Place Order or Obtain Quote

Order Online or by Fax
1 . Navigate to *ni.com/products* and select "Order by Part Number" found under the "Business Center" section.
2 . Once you have added your items to your cart, see the "Your Cart Options" section to place your order, obtain a quote, or print a fax form.

Order by Phone
Call +20-10-400 1649 to place your order or obtain a quote.

Services

System Assurance Programs

Reduce your setup time and total cost of ownership, and get a system you can use out of the box with National Instruments system assurance programs. System assurance programs include:

- Installation and integration test of all individual hardware
- Courtesy installation of system driver sets and application development environments
- Extended warranty and calibration coverage for up to five years
- Custom documentation plus a custom restore and startup utility

This service is only available for PXI, NI CompactRIO, and NI Compact FieldPoint systems.

- Learn More about System Configuration and Deployment Services [http://www.ni.com/services/configuration.htm]
- Customize Your CompactRIO System [http://ohm.ni.com/advisors/crio]

- Customize Your Compact FieldPoint System [http://ohm.ni.com/advisors/cfp]
- Customize Your PXI System [http://ohm.ni.com/advisors/pxi]
- Talk to an Expert about Custom System Configurations [javascript:openCallMeWindowCTA(document.referrer,%20'US')]

Extended Warranties

National Instruments designs and manufactures all products to minimize failures, however unexpected failures can still occur. Extended warranties provide a fixed economical price at the time of system purchase, covering any repair costs for up to three years. In addition, they offer the following benefits:

- Significant cost savings compared to individual repair incidents
- Fault location, diagnostics, and repair by NI any time the system product fails
- All parts and labor costs covered as well as any adjustments needed to restore the hardware to manufacturing specifications

For more information about your warranty options:

- Learn More about Warranty Services [http://www.ni.com/services/warranty.htm]
- Talk to an Expert about Extended Warranties [javascript:openCallMeWindowCTA(document.referrer,%20'US')]
- View Warranty Repair Policies [http://www.ni.com/services/warranty_repair_policies.htm]

Calibration

NI recognizes the need to maintain properly calibrated devices for high-accuracy measurements. NI provides manual calibration procedures, services to recalibrate your products, and automated calibration software to calibrate many NI measurement products.

- Learn More about Calibration Services [http://www.ni.com/services/calibration.htm]

Training

NI training is the fastest, most certain route to productivity with NI tools and successful application development.

- Learn More about NI Training and Certification [http://www.ni.com/training/]
- Find a Course Near You and View Schedules [http://sine.ni.com/apps/utf8/nisv.custed]

Repair Services

Return your registered product under warranty at no additional labor and parts cost. NI offers fault location, diagnostics, and repair any time the system fails as well as any adjustments needed to restore the hardware to manufacturing specifications.

- Learn More about Repair Services [http://www.ni.com/services/warranty.htm]
- Contact NI to Obtain a Return Material Authorization (RMA) Form and Shipping Instructions [http://sine.ni.com/apps/utf8/nicc.call_me]
- View Your RMA Support Request Status Online [http://www.ni.com/support/servicereq/]
- Register Your Product [http://www.ni.com/register]

Technical Support

ni.com/support [http://www.ni.com/support/]

Resources

Additional Product Information

- Manuals (7)
- Product Certifications