NI 9853

2-Port, High-Speed CAN Module for NI CompactRIO

- 2-port, high-speed CAN module; Port 1 internally powered, Port 2 externally powered
- Standard DE9M (DB9) male connector for each port
- Philips SJA1000 CAN controller and Philips TJA1041 CAN transceiver
- Hardware synchronization with any NI CompactRIO I/O module
- ISO 11898 compliance for standard (11-bit) and extended (29-bit) arbitration IDs
- Ability to transmit/receive 100 percent bus load at 1 Mbit/s

Overview

With high-speed NI 9853 controller area network (CAN) modules for NI CompactRIO, you can achieve communication with devices at transfer rates up to 1 Mbit/s at 100 percent bus load. You can take advantage of the flexibility and performance of the CompactRIO platform to synchronize NI 9853 modules with any CompactRIO I/O modules to achieve CAN and data acquisition hardware synchronization with up to 25 ns resolution. With 11-bit and 29-bit arbitration ID support, NI 9853 modules can communicate on J1939 networks. Using NI-CAN 2.3 or later driver software, you can incorporate vector database files into your application.

Specifications

Specifications Documents

- Specifications (2)

Specifications Summary

General	
Product Name	NI 9853
Product Family	CAN
Form Factor	CompactRIO
Part Number	779429-01
Operating System/Target	Windows , Real-Time
LabVIEW RT Support	No
Voltage	5 VDC
Current	125 mA

Source	Internally Powered
Isolation Type	Port-Port Isolation
OEM Available	No
API Support	NI-CAN Channel API (Limited) , NI-CAN Frame API (Full)
Port Information	
Number of Ports	2
Physical Layer	High-Speed
Max Baud Rate	1 Mbits/s
Min Baud Rate	40 kbits/s
Termination	External
Transceiver	Philips TJA1041, Built-in
Special Features	
Hardware Synchronization	Yes
Synchronization Frequency	20 MHz
Hardware Timestamping	Yes
Timestamp Resolution	1 us
Remote Frame Support	No
Advanced Mode Support	Sleep/Wakeup Mode
Physical Specifications	
Length	7.9 cm
Width	8.9 cm
Height	2.2 cm
I/O Connector	9-pin D-Sub (DB-9)
Minimum Operating Temperature	-40 °C
Maximum Operating Temperature	70 °C

Pricing

NI 9853 Packages

To use the NI 9853 , you need all items in the diagram below. Select Option 1 if you already own a CompactRIO System, or Option 2 if you do not already own a chassis, controller, or software.

Roll over the icons below to learn why you need each item in the system

CompactRIO System

2 Cable	**NI 9853**	Chassis	Controller	Software

NI 9853 and Accessories Only

- Option 1: **NI 9853 and Accessories Only**
- Option 2: **CompactRIO System**

NI 9853

Module Only 779429-01	Qty			$ 1,185 each $ 1,066.50 each
Module with Conformal Coating 780178-01	Qty	0		$ 1,339 each $ 1,205.10 each

Required Accessories

Cable - NI CAN Single Termination High-Speed Cable (2m) - 192017-02	Qty			$ 50 each $ 45 each

Optional Accessories Show

Estimated Shipping Days: 10 - 15
Package Price: $ 1,285
$ 1,156.50

Add to Cart >>

Guarantee your price for 30 days (learn more) Instant Quote

Save for Later

Get Started with CompactRIO

Choose from over one hundred specialized instruments to create a CompactRIO System that suits your measurement needs and can scale for future applications. Then, we'll help you choose the right hardware and software to complete your configuration.

Add More Measurements and I/O Modules
Use the CompactRIO Advisor to choose from a variety of modules including analog I/O, digital I/O, serial and more. Then, complete and price the CompactRIO System.

Add Modules

Preview a Complete System
View and price a complete CompactRIO configuration including the NI 9853, chassis, and controller. Starting from the default configuration, you can add modules, accessories, and software and customize your system.

You need a cable to transmit communication signals between devices.
The chassis provides rugged, modular housing for the controller and modules and contains the high-performance CompactRIO backplane, which includes the system's data, timing, triggering buses, and field-programmable gate array (FPGA) chips.
The embedded controller runs your application and interfaces with your CompactRIO modules.
This device requires the LabVIEW FPGA Module (sold separately), the LabVIEW Real-Time Module (sold separately) and NI-RIO driver software (included with the hardware). LabVIEW and the LabVIEW FPGA Module deliver graphical development for field-programmable gate array (FPGA) chips on NI reconfigurable I/O (RIO) hardware targets.
You have selected **United States** as the country where you will use the product(s) (change).

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 (6)
- Dimensional Drawings
- Product Certifications

Related Information

- Learn Which NI CompactRIO CAN Module Is Right for Your Application
- Learn About CompactRIO
- Build Your CompactRIO System
- Configure Your Complete CompactRIO System