NI PXI-7953R

NI FlexRIO FPGA Module for PXI

- Virtex-5 LX85 FPGA programmable with the LabVIEW FPGA Module
- 128 MB onboard DDR2 DRAM
- Access to 132 single-ended I/O lines configurable as 66 differential pairs
- Customizable I/O with the NI FlexRIO Adapter Module Development Kit (MDK)
- 100 MHz digital I/O with the NI 6581 adapter module
- 3 DMA channels for high-speed data streaming

Overview

NI FlexRIO hardware provides flexible, customizable I/O for NI LabVIEW FPGA. It features two parts: NI FlexRIO field-programmable gate array (FPGA) modules for PXI and NI FlexRIO adapter modules. Together, they form a high-performance, reconfigurable instrument programmable with LabVIEW FPGA software.

The PXI-7953R NI FlexRIO FPGA module features a Virtex-5 LX85 FPGA and 128 MB of onboard DDR2 DRAM. The new Virtex-5 FPGA architecture is optimized to execute faster and more efficiently using single-cycle timed loops in LabVIEW FPGA. This means that you can optimize more LabVIEW FPGA code to fit within Virtex-5 FPGAs and can execute more operations per clock cycle.

Build Your Own I/O for LabVIEW FPGA

Use the NI FlexRIO Adapter Module Development Kit (MDK) to build custom I/O to meet your exact application needs. The NI FlexRIO card edge connector offers direct access to the raw digital I/O pins of the FPGA. Each pin is capable of low-voltage differential signaling (LVDS) rates up to 1 Gb/s and single-ended rates up to 400 Mb/s.

100 MHz Digital I/O Adapter Module

All NI FlexRIO FPGA modules are compatible with the **NI 6581** high-speed digital adapter module. This adapter module offers 54 single-ended digital I/O lines with selectable voltage levels of 1.8, 2.5, and 3.3 V (5 V TTL-compatible) and the option to provide any external voltage reference from 1.8 to 5.5 V.

Specifications

Specifications Documents

- Specifications (2)
- Data Sheet

Specifications Summary

General

Product Family	NI FlexRIO Custom Instruments

Form Factor	PXI Platform
PXI Bus Type	PXI Hybrid Compatible
Part Number	780562-01
Operating System/Target	Real-Time , FPGA , Windows
LabVIEW RT Support	Yes
Synchronization Bus (RTSI)	Yes
Length	18.8 cm
Width	2 cm
Height	12.9 cm
I/O Connector	Terminal Block
Power Requirement for +3.3V Rail	2 A
Power Requirement for +5V Rail	2 A
Power Requirement for +12V Rail	0.5 A
Power Requirement for -12V Rail	0 A
Slot Two Module	No
Module Width	1
MXI Compatible	No
Product Name	NI PXI-7953R NI FlexRIO FPGA Module
Analog Input	
Channels	0
Analog Output	
Channels	0
Digital I/O	
Channels	132
Max Clock Rate	500 MHz
Maximum Data Rate / Channel	1 Gbits/s
Logic Levels	1.2 V , 3.3 V , 1.8 V , LVDS , 1.5 V , LVTTL , TTL , 2.5 V
On-Board Memory	128 MB
Reconfigurable FPGA	
FPGA	Virtex-5 LX85

Pricing

Part Number	Description	Est Ship	US Dollars*	Qty
NI PXI-7953R				
780562-01	NI PXI-7953R NI FlexRIO FPGA Module (Virtex-5 LX85, 128MB RAM)	9 - 14	$ 6,270.00	0
Related Products				
780711-01	NI FlexRIO Adapter Module Development Kit	16 - 24	$ 5,500.00	0
780565-01	NI 6581 100MHz DIO (54 Channel) NI FlexRIO Adapter Module	16 - 24	$ 1,100.00	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 07/25/2012. Please visit *ni.com* to see current pricing.

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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.

Resources

Additional Product Information

- Manuals (4)
- Dimensional Drawings
- Product Certifications

Related Information

- NI FlexRIO Frequently Asked Questions (FAQ)
- View the 4-Minute Video Demonstration
- NI FlexRIO Introductory Webcast
- NI FlexRIO Product Family
- NI LabVIEW FPGA