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NI PXIe-2541

300 MHz, 8x12, 50 Ω Expandable RF Matrix

- 8x12 RF matrix for routing signals up to 300 MHz
- Expandable to 8x24, 8x36, and larger with multiple modules
- RF performance at 350 MHz: insertion loss <2.1 dB, isolation >75 dB (typical)
- Up to 60 V or 0.5 A
- Triggering via the PXI backplane



Overview

The NI PXIe-2541 is an 8x12 switching matrix capable of routing RF signals up to 300 MHz. With its nonblocking design, you can simultaneously connect any row or column within the switching matrix and maximize the flexibility of your test system. Isolation relays on the module disconnect unused parts of the switching matrix to maintain RF performance and high isolation at 300 MHz. The density and bandwidth of the NI PXIe-2540 and PXIe-2541 are ideal for routing signals between NI function generators and high-speed digitizers.

Connectivity

The NI PXIe-2540 and PXIe-2541 modules use high-density push-on MCX connectors for discrete yet manageable cabling. NI offers direct MCX-to-MCX cables along with options for BNC, SMB, and SMA connectivity that provide easy accessibility to digitizers, function generators, and other RF generators and analyzers.

Matrix Expansion

For higher channel count applications, connect multiple NI PXIe-2541 modules together to create switching matrices of 8x24, 8x36, and larger. Matrix expansion with the NI PXIe-2541 requires eight MCX-to-MCX cables, and NI offers a 0.15 m version to minimize cabling between adjacent modules.

Specifications

Specifications Summary

General

Product Family	Switches
Form Factor	PXI Platform
PXI Bus Type	PXI Express
Part Number	780587-41

Product Name	PXle-2541
Switches	
Switch Type	Matrix , RF
Max Switching Voltage DC (Pollution Deg. 2)	60 VDC
Max Switching Current	0.5 A
Maximum Carry Current	0.5 A
Maximum Switching Power	10 W
Bandwidth	300 MHz
Relay Type	Reed
Relay Count Tracking	Yes
Path Resistance (Typical)	2 Ohm
VSWR Ratio	1.6
Isolation (Typical)	75 dB
Insertion Loss (Typical)	2.1 dB
Terminated	No
Characteristic Impedance	50 Ohm
Matrix Config Wire Mode	1-wire

Pricing

Part Number	Description	Est Ship	US Dollars*	Qty
NI PXle-2541				
780587-41	NI PXle-2541 Expandable 8x12 RF Matrix	16 - 24	\$ 3,630.00	0
MCX Connectivity Options				
188374-0R15	MCX Plug to MCX Plug, 0.15M	Call	\$ 65.00	0
188374-0R3	MCX Plug to MCX Plug, 0.3 m	16 - 24	\$ 65.00	0
188374-01	MCX Plug to MCX Plug, 1 m	16 - 24	\$ 65.00	0
188375-0R3	MCX Plug to BNC Plug, 0.3 m	14 - 19	\$ 65.00	0
188375-01	MCX Plug to BNC Plug, 1 m	14 - 19	\$ 65.00	0
188376-0R3	MCX Plug to SMB Plug, 0.3 m	Call	\$ 65.00	0
188376-01	MCX Plug to SMB Plug, 1 m	14 - 19	\$ 65.00	0
188377-0R3	MCX Plug to SMA Plug, 0.3 m	16 - 24	\$ 65.00	0

188377-01	MCX Plug to SMA Plug, 1 m	14 - 19	\$ 65.00	0
778831-01	MCX 50 Ohm Termination Plug	16 - 24	\$ 35.00	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 01/10/2013. Please visit ni.com to see current pricing.

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/tacs/app/fp/p/ap/ov/pg/1/>]

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) [<http://www.ni.com/support/>]

Resources

Additional Product Information

- Manuals (5)
- Dimensional Drawings

Related Information

- Tutorials, Webcasts, and Other Content on RF Switching