

# High-Density Electromechanical Relay Multiplexers

## NI PXI-2575, NI PXIe-2575 **NEW!**

- 196x1 1-wire, 98x1 2-wire multiplexer
- Maximum switch capacity
  - Up to 100 VDC, 100 VAC
  - Up to 1 A switching/1 A carry
- Onboard relay counting
- 140 cycles/s
- Fully software programmable
- Deterministic operation with hardware triggers
- 32,000-step scan list
- Available in both PXI and PXI Express versions for optimal slot placement

### Operating Systems

- Windows XP/2000/NT

### Recommended Software

- LabVIEW
- LabWindows™/CVI
- NI Switch Executive

### Other Compatible Software

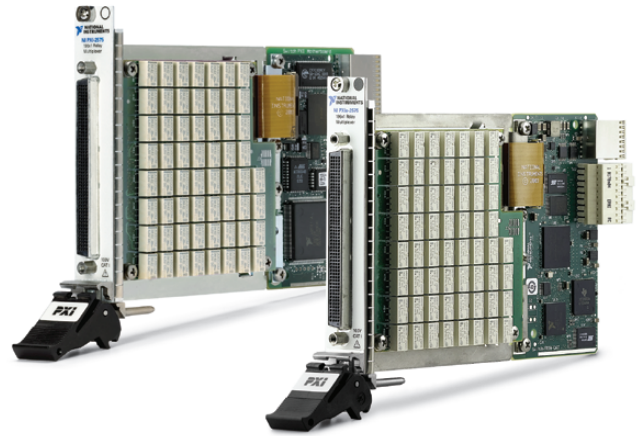
- Visual Basic
- ANSI C/C++

### Driver Software (included)

- NI-SWITCH

### Compliance

- UL
- CE



## Overview and Applications

The NI PXI-2575 and PXIe-2575 are high-density multiplexer switch modules. With 196 one-wire channels or 98 two-wire channels, NI 2575 modules are capable of routing hundreds of signals to measurement devices or from source units. Each channel uses robust electromechanical relays and is capable of switching up to 100 VDC/100 VAC or 1 A. With a scanning speed of up to 140 cycles/s, an NI 2575 acts as an effective front end for high-channel-count automated test applications.

### Automatic Scanning

NI 2575 modules are able to maximize throughput in automated test applications using scanning. Scanning improves throughput by downloading a list of up to 32,000 connections to the switch and cycling through the list using an event (trigger) without any interruption from the host processor. You can most efficiently implement scanning by mating an NI 2575 with an instrument such as the NI PXI-4070 6½-digit FlexDMM, which issues a trigger after each measurement.

### Relay Count Tracking

NI 2575 modules count relay closures on each of their relays. Relay counts are incremented each time a relay is actuated. You can programmatically retrieve the counts, which are stored on board the modules, and use them for predictive maintenance to reduce unexpected system downtime.

## Software

All National Instruments PXI switch modules are shipped with NI-SWITCH, an IVI-compliant driver that offers complete functionality for all switch modules. For additional assistance in configuring, programming, and managing higher-channel-count switching systems, NI Switch Executive software provides an easy-to-use, intelligent switch management and visual routing environment.

## Ordering Information

NI PXI-2575 .....	778572-75
NI PXIe-2575 .....	780587-75
Includes NI-SWITCH driver software.	

### Accessories

LFH200 connector to bare wire switch cable .....	779038-01
LFH200 connector to 50-pin D-Sub switch cable.....	779038-03

### NI Switch Executive

Development system.....	778546-01
Deployment engine .....	778548-00

## BUY NOW

For complete product specifications, pricing, and accessory information, call 800 813 3693 (U.S.) or go to [ni.com/switches](http://ni.com/switches).

# High-Density Electromechanical Relay Multiplexers

## Specifications

Specifications subject to change without notice. Visit [ni.com/manuals](http://ni.com/manuals) for the latest full specifications.

## Input Characteristics

Maximum switching voltage

Channel-to-ground.....	300 V, CAT I
Channel-to-channel .....	300 V
Maximum switching/carry current...	2 A

Maximum switching power

AC systems.....	60 W, 62.5 VA (per channel, resistive)
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Typical DC path resistance

Initial.....	<0.5 $\Omega$
End of life.....	$\geq 1 \Omega$
Thermal EMF.....	<12 $\mu$ V

Bandwidth (-3 dB)

1-wire.....	>9 MHz
2-wire.....	>8 MHz

## Dynamic Characteristics

Maximum speed..... 140 cycles/s

Relay operate time

Typical.....	1 ms
Maximum.....	3.4 ms

Expected relay life

Mechanical .....	$1 \times 10^8$ cycles
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Electrical

10 VDC, 100 mADC, resistive .....	$2.5 \times 10^6$ cycles
10 VDC, 1 ADC, resistive .....	$1 \times 10^6$ cycles
30 VDC, 1 ADC, resistive .....	$5 \times 10^5$ cycles
60 VDC, 1 ADC, resistive .....	$1 \times 10^5$ cycles

## Physical

Relay types.....	Electromechanical, latching
Contact material.....	Palladium-ruthenium, gold-covered
I/O connectors.....	200 POS LFH Matrix 50, receptacle
Dimensions.....	10 by 17.4 cm (3.9 by 6.9 in.) single-slot, 3U

## Environment

Operating temperature.....	0 to 55 °C
Storage temperature.....	-20 to 70 °C
Relative humidity .....	5 to 85% noncondensing
Pollution degree.....	2
Indoor use only.	

## Safety Compliance

- IEC 61010-1, EN 61010-1
- UL 61010-01, CSA 61010-1

## Electromagnetic Compatibility

This product meets the requirements of the following EMC standards for electrical equipment for measurement, control, and laboratory use:

- EN 61326 (IEC 61326): Class A emissions; Basic immunity
- EN 55011 (CISPR 11): Group 1, Class A emissions
- AS/NZS CISPR 11: Group 1, Class A emissions
- FCC 47 CFR Part 15B: Class A emissions
- ICES-001: Class A emissions

Note: For EMC compliance, operate this product according to the documentation.

## CE Compliance

This product meets the essential requirements of applicable European Directives as follows:

- 2006/95/EC; Low-Voltage Directive (safety)
- 2004/108/EC; Electromagnetic Compatibility Directive (EMC)

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