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Find the *National Instruments TB-2627* at our website: ***Click HERE***

32-Channel (2-Wire), 300 V Multiplexer Switches

NI PXI-2527, NI PXIe-2527 *NEW!*

- 64x1 1-wire, 32x1 2-wire, or 16x1 4-wire multiplexer
- Maximum switch capacity
  - Up to 300 VDC/300 VAC, CAT I
  - Up to 2 A switching/2 A carry
  - Up to 60 W or 62.5 VA
- 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

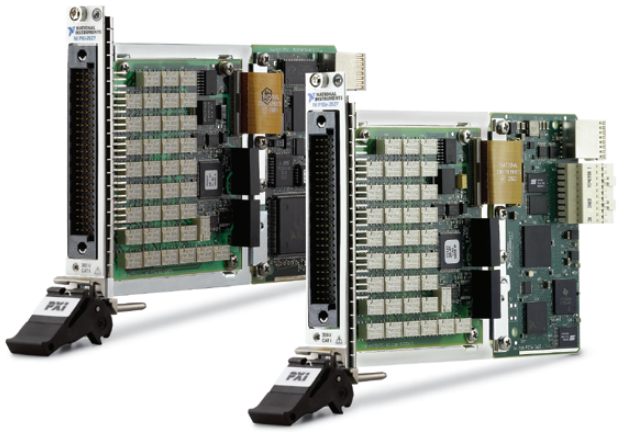
Operating Systems
- Windows XP/2000/NT

Recommended Software
- LabVIEW
- LabWindows™/CVI
- Measurement Studio for Visual C++
- NI Switch Executive

Other Compatible Software
- Visual Basic
- ANSI C/C++

Driver/Measurement Services Software (included)
- NI-SWITCH
- NI-DAQmx

Compliance
- UL
- CE



Overview and Applications

The NI PXI-2527 and PXIe-2527 are high-voltage multiplexer switch modules designed for medium- to high-density automated test systems. With a switching capacity of up to 300 VDC/300 VAC and up to 2 A, an NI 2527 acts as an effective front end for NI 4070 and NI 4072 digital multimeters (DMMs), offering simple channel expansion for voltage, current, resistance, capacitance, or inductance measurements. NI provides multiple-channel configurations including 64x1 one-wire, 32x1 two-wire, and 16x1 four-wire. Each channel, using robust electromechanical relays, is capable of scanning up to 140 channels/s. A cold-junction compensation (CJC) sensor is also included in the front-mounting terminal block to assist in thermocouple scanning applications.

Automatic Scanning

NI 2527 switches are able to maximize throughput in automated test applications with the use of scanning. Scanning improves throughput by downloading a list of up to 32,000 connections to the switches 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 2527 with an instrument such as an NI 407x FlexDMM, which issues a trigger after each measurement.

Relay Count Tracking

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

Simplified Signal Connectivity

Make signal connections for the NI 2527 modules in the TB-2627 front-mounting screw-terminal block. Additionally, to simplify connectivity with a DMM, use the HV6-BAN4 cable, which connects the banana jack inputs of a DMM to the COMs of each multiplexer bank.

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. Use the NI-SWITCH soft front panel for simple relay operations or debugging switch code/execution.

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Ordering Information

NI PXI-2527 778572-27

NI PXIe-2527 780587-27

Includes NI-SWITCH driver software.

Accessories

TB-2627 terminal block 779358-01

HV6-BAN4 DMM connectivity cable 192795-0R2

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**.

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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Specifications

Specifications subject to change without notice. Visit **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
DC systems	Refer to Figure 1

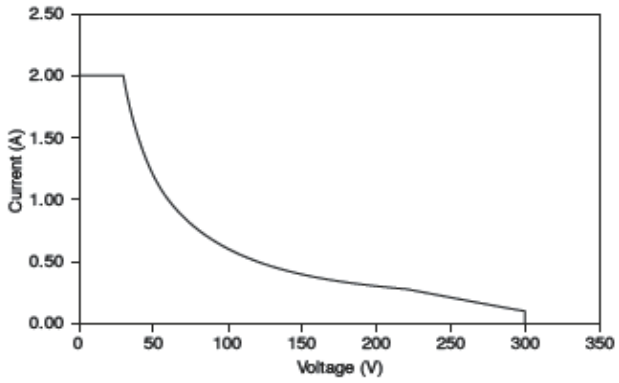


Figure 1. Maximum Switching Power for DC Loads (per channel).

Typical DC path resistance

Initial	<1½
End of life	>2½

Differential thermal EMF

Typical	2.5 µV
Maximum	<12 µV

Bandwidth (-3 dB)

1-wire	>30 MHz
2-wire	>25 MHz

Dynamic Characteristics

Maximum speed	140 cycles/s

Relay operate time

Typical	1 ms
Maximum	3.4 ms

Expected relay life

Mechanical	$1x10^8$ cycles

Electrical

<30 mV, <10 mA, resistive	$2.5x10^6$ cycles
30 VDC, 2 ADC, resistive	$1x10^5$ cycles
300 VDC, 60 mADC, resistive	$5x10^5$ cycles

Physical

Relay types	Electromechanical, latching
Contact material	Palladium-ruthenium, gold-covered
I/O connectors	100 POS HDI right-angle, male
Dimensions	2 by 10 by 17.4 cm (0.8 by 3.9 by 6.9 in.) single-slot, 3U

Environment

Operating temperature	0 to 55 °C

Note: If you are using an NI 2527 with an NI PXI-101x or the NI PXI-1000B chassis, operating temperature for the NI 2527 modules is 0 to 45 °C.

Storage temperature	-20 to 70 °C
Relative humidity	5 to 85% noncondensing
Pollution degree	2

Indoor use only.

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We also offer service programs that provide automatic upgrades to your application development environment and higher levels of technical support. Visit **ni.com/ssp**.

Hardware Services

System Assurance Programs

NI system assurance programs are designed to make it even easier for you to own an NI system. These programs include configuration and deployment services for your NI PXI, CompactRIO, or Compact FieldPoint system. The NI Basic System Assurance Program provides a simple integration test and ensures that your system is delivered completely assembled in one box. When you configure your system with the NI Standard System Assurance Program, you can select from available NI system driver sets and application development environments to create customized, reorderable software configurations. Your system arrives fully assembled and tested in one box with your software preinstalled. When you order your system with the standard program, you also receive system-specific documentation including a bill of materials, an integration test report, a recommended maintenance plan, and frequently asked question documents. Finally, the standard program reduces the total cost of owning an NI system by providing three years of warranty coverage and calibration service. Use the online product advisors at **ni.com/advisor** to find a system assurance program to meet your needs.

Calibration Services

NI recognizes the need to maintain properly calibrated devices for high-accuracy measurements. We provide manual calibration procedures, services to recalibrate your products, and automated calibration software specifically designed for use by metrology laboratories. Visit **ni.com/calibration**.

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