

# Keysight Technologies M9187A PXI Digital I/O Control Module

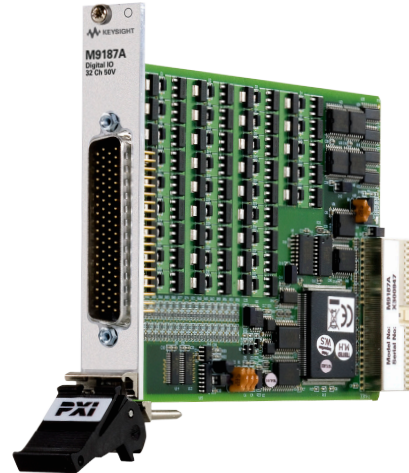
## Product Fact Sheet

### Industries and Applications

- Aerospace and defense
- Automotive
- Electronics test
- Medical
- Semiconductor

### Product Description

The M9187A digital I/O control module has 32 input/output channels. The input channels can be used for comparing inputs to user-defined thresholds between 0.3 V and 50 V, with 12.5 mV setting resolution. Each input is protected up to 100 V. The 32 output channels can drive high or low outputs, and are capable of sourcing 0.4 A from the high-side or sink 0.5 A from the low-side of each channel. These outputs are protected against over-voltage or over-current conditions.



M9187A	Digital I/O 32 input/32 output channels
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### Main Features and Benefits

Product features	Your benefit
32 input/output channels	Provides the flexibility to meet your testing needs
100 V input protection and fully protected outputs	Reliable performance
Software drivers support the most common programming environments	Work in your environment of choice and reduce development time
Optional connector block, soft front panels, and Keysight Connection Expert	Fast and easy installation and configuration

Chassis slot compatibility: cPCI (J1), PXI-1, PXIe Hybrid
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### Specifications and Characteristics

Hardware	
<b>Input specifications</b>	
Input impedance	1 M $\Omega$
Max input voltage (typ)	+50 Vpk, with 100 Vpk over voltage protection
Thresholds	Dual programmable 0.3 to 50 V, 12.5mV resolution
<b>Output specifications</b>	
Max voltage (typ)	+50 Vpk
Max current	0.5 A for low-side drivers 0.4 A for high-side drivers 10 A module total
Output states	Driven high, driven low, or off
Low-side driver output voltage	0.3 V @ Isink = 0.5 A
High-side driver output voltage	Vext - 1.5 V @ Isource = 0.4 A

## Software Information

Operating systems	Microsoft Windows XP Microsoft Windows Vista (32/64-bit) Microsoft Windows 7 (32/64-bit)
Standard compliant drivers	IVI-COM, IVI-C, LabVIEW, MATLAB
Supported application development environments (ADE)	VisualStudio (C/C++, C#, VB.NET), LabVIEW, LabWindows/CVI, MATLAB, VEE
Keysight IO Libraries	Includes: VISA Libraries, Keysight Connection Expert, IO Monitor

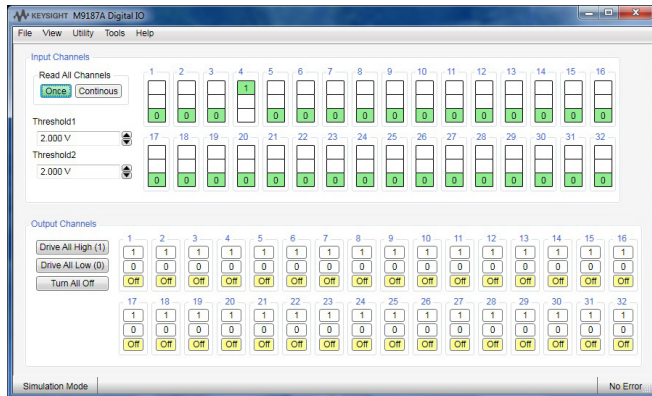


Figure 1. Soft front panel.

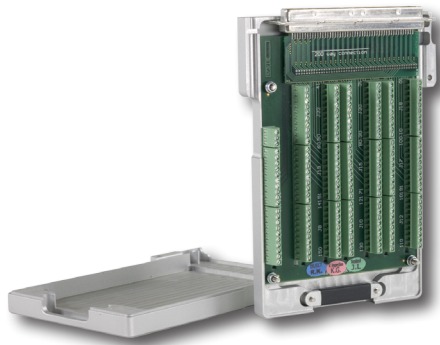


Figure 2. PXI connector block.

## Ordering Information

Model	Description
M9187A	PXI digital I/O: 32 input/32 output channels
<b>Related products</b>	
M9018A	18-slot PXIe chassis
M9021A	PCIe® cable interface
M9120A	4 x 32, 2-wire matrix switch
M9103A	99-ch, 1-wire multiplexer switch
M9135A	20-ch SPST general purpose switch
<b>Accessories</b>	
Y1181A	PXI connector block: 78-pin, shielded, female DSub (recommended)
Y1187A	PXI connector cable: 78-pin, male-to-female, 1 Meter
Y1188A	PXI connector cable: 78-pin, male-to-female, 2 Meter
<b>Advantage Services: Warranty</b>	
Keysight Advantage Services is committed to your success throughout your equipment's lifetime.	
Included	Return to Keysight warranty - 3 years
R-51B-001-5C	3-year, return-to-Keysight warranty extended to 5 years

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