

Keysight Technologies

M9170A PXI Attenuator/Switch Driver Module

Industries and Applications

- Automatic Test Equipment (ATE)
- RF communications
- Engineering verification
- RF parametric measurements

Product Description

M9170A attenuator/switch driver module provides drive control for programmable attenuators and electromechanical switches. It is a PXI-hybrid compliant module, that comes with a full-featured graphical interface soft front panel (SFP) for easy control and trigger.

Models	
M9170A	PXI Attenuator/Switch Driver Module



Main Features and Benefits

Product features	Your benefit
Drive up to 12 external SPDT switches, or 4 external SP4T/6T switches, or 12 transfer switches, or 2 external attenuators ¹	Maximize the PXI chassis slot utilization, which ultimately improves testing efficiency
Dual voltage supply of 5 V and 24 V, and dual driving mode of pulse and continuous	Ensure biasing compatibility with most switches on the market and hence increase system flexibility
Soft front panel provides a dynamic dashboard view and control of the connected attenuators or switches	Allows the selection of device models and the subsequent switch paths or attenuation levels
Point-to-point interface cable options available for connection between driver and switching device	Intuitive configuration for all Keysight switches and attenuators

1. The amount of switches and attenuators that can be driven is dependent on the type of switch configuration and attenuator section configuration.

Specifications and Characteristics

Hardware				
Size	1 slot wide module			
Voltage	+3.3 V	+5 V	-12 V	+12 V
Current	0.5 A	30 mA (min) 5.6 A (max)	0	30 mA (min) 0.8 A (max)
Attenuator types	Accepts most attenuators available today			
Switch types	Accepts most switches available today			
Connector compatibility: cPCI, PXI-H, PXI-1				
Software				
Software development platform	Microsoft Visual Studio with C/C++ Microsoft Visual Studio .NET with C# or Visual Basic, National Instruments LabVIEW National Instruments LabWindows CVI The MathWorks MATLAB, Keysight VEE			
Supported operating systems	Windows XP SP3, 32-bit Windows Vista 32-bit and 64-bit Windows 7 32-bit and 64-bit			
Drivers Provided	IVI-COM, IVI-C, LabVIEW, MATLAB			
Included GUI	Soft front panel			
Application code examples	C, C++, C#, Visual Basic, VEE, MATLAB			

Recommended Configuration

Model	Description
M9018A	18-slot PXIe chassis
M9170A	PXI-h Attenuator/Switch Driver Module
M9170A-501	Interface cable, 20 pin to 9 pin DSUB (x6) for N1810x SPDT switch
N1810TL	Coaxial Switch, DC up to 67 GHz, SPDT

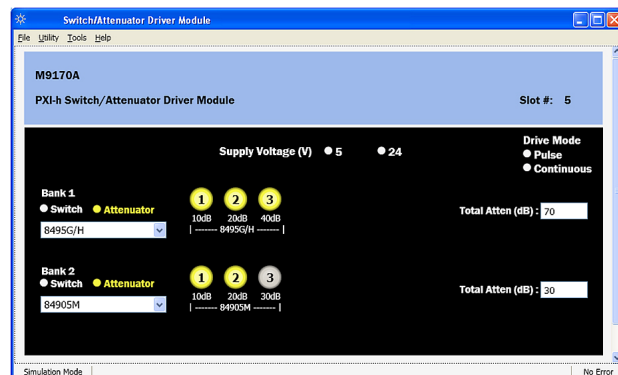
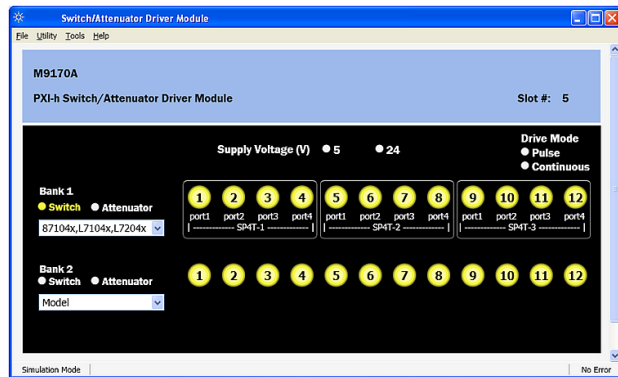
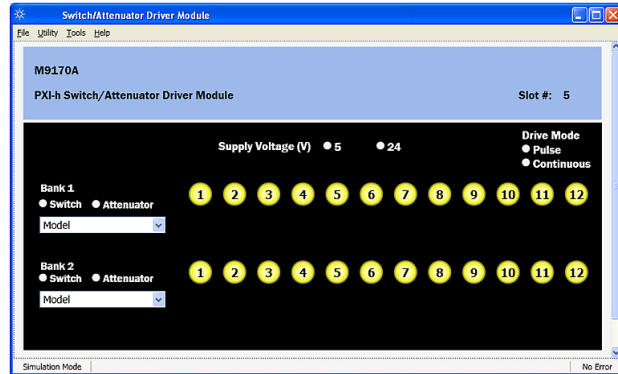


Figure 1. Soft front panel of M9170A provides an intuitive approach for program simulation and troubleshooting

Ordering Information

Typical Product Configuration	
Model	Description
M9170A	PXI-h Attenuator/Switch Driver Module
Options	
001	Interface cable, 20 pin to 10 pin DIP (x6) for transfer switch
002	Interface cable, 20 pin to 10 pin DIP for step attenuator
003	Interface cable, 20 pin to 12 pin Viking connector for step attenuator
201	Interface cable, 20 pin to 16 pin bare wire for solder lug switch
501	Interface cable, 20 pin to 9 pin DSUB (x6) for N1810x SPDT switch
601	Interface cable, 20 pin to 16 pin DIP (x2) for 8710x/L710x switch
Related products	
M9018A	18-slot PXIe chassis
87106C	Multiport Coaxial Switch, DC to 26.5 GHz, SP6T
8765C	Coaxial Switch, DC to 26.5 GHz, SPDT
8496G	Programmable Attenuator, 4 GHz, 110 dB, 10 dB steps

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