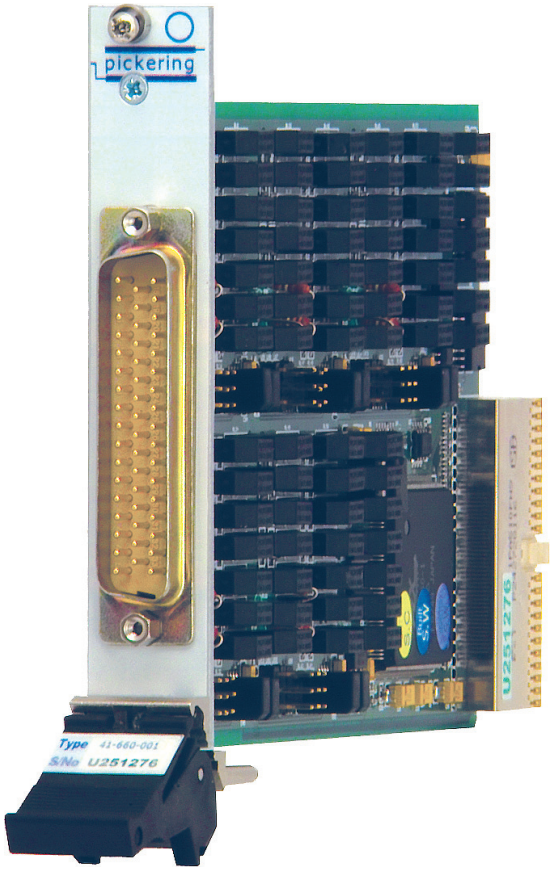
41-660/661
Programmable High Voltage Attenuator

- High Input Impedance
- 600 Volt Input Rating
- Available With Single or Differential Input Configurations
- Buffered Single Ended Output Signal Provides Low Output Impedance
- Wide Output Bandwidth
- High Channel Density
- VISA Drivers Supplied for Windows XP/Vista/7
- 2 Year Warranty

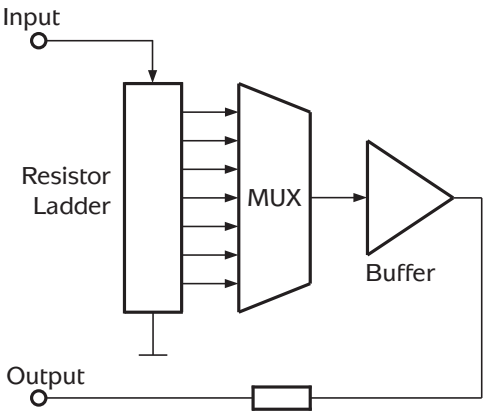


The 41-660 and 41-661 are high voltage attenuators designed to reduce the high output voltages commonly generated by some types of sensors. This is in order to produce manageable signal levels that can be acquired by typical data acquisition devices in a PXI system.

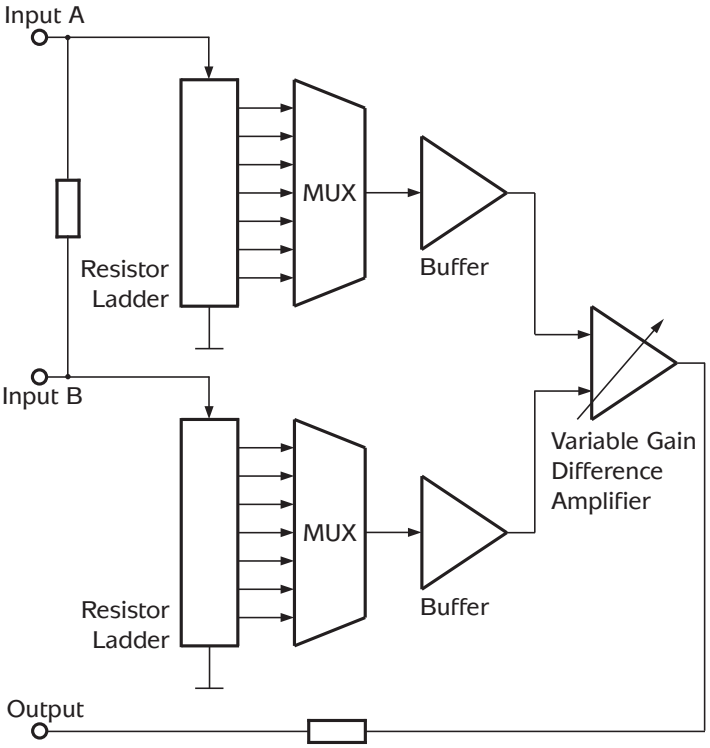
The 41-660 provides 10 single ended attenuator channels while the 41-661 provides 5 differential attenuator channels. The attenuated signals are provided on 50Ω outputs to ensure they can drive simple data acquisition systems with no significant loss of signal level. Each model provides attenuation factors of 10 to 160, permitting a 600V peak signal to be attenuated to less than 4 Volts.

The 41-661 attenuates both the common mode and differential signal equally to ensure the signal cannot overload the data acquisition system and provides a single ended output from a difference amplifier.

Attenuation values are controlled by high quality instrument grade relays to ensure long service life. All active devices are fully protected against the application of over-voltages or short circuit loads.



Block Diagram for the 41-660 Programmable High Voltage Attenuator (1 of 10 channels shown)



Block Diagram for the 41-661 Programmable Differential High Voltage Attenuator (1 of 5 channels shown)

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Specification

Number of Input Channels	
41-660:	10 off (Single Ended)
41-661:	5 off (Differential)
Maximum Input Voltage:	±600V
Input Impedance	
41-660:	1MΩ
41-661 (Differential):	0.666MΩ
41-661 (Common Mode):	0.5MΩ
Attenuation Values:	10, 20, 40, 80 or 160
Attenuation Accuracy:	1% excluding DC offset
Output Offset Voltage	
41-660:	<10mV
41-661:	<40mV
Output Impedance:	50Ω nominal, single ended
Output Voltage (Max):	±10V into open circuit
Output Current:	Up to 10mA per channel
Output Bandwidth:	20kHz
Output Slew Rate:	13V/µs typical
PCI Interface:	33MHz 32-bit address

Programming

All PXI modules are supplied with complete Windows XP/Vista/7 drivers, these perform the following functions:-

- Write word/s to module (to set relay pattern)
- Write bit to module (to operate an individual relay)
- Full relay status reporting
- Module identification and location information
- Set and read module calibration information

Up to date driver software is available from our web site at www.pickeringtest.com

Power Requirements

+3.3V	+5V	+12V	-12V
0	0.5A max	0.15A max	0.15A max

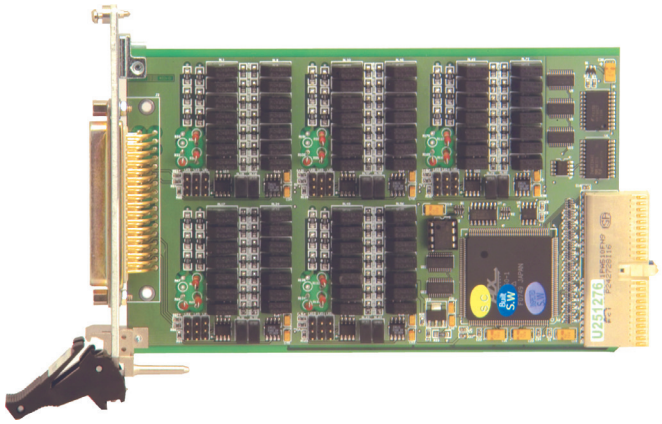
Width and Dimensions

Size: Single width 3U PXI/CompactPCI instrument module

Connectors

PXI bus: 32-bit P1/J1 backplane connector

Front panel connector: 50-way male D-type



PCB Layout for the 41-660 High Voltage Attenuator

PXI & CompactPCI Compliance

All Pickering Interfaces PXI modules comply with the PXI Specification 2.2. Local Bus, Interrupts, Trigger Bus and Star Trigger are not implemented.

Supplied soft front panels and driver software are fully Windows XP/Vista/7 compatible.

Safety & CE Compliance

All modules are fully CE compliant and meet applicable EU directives: Low-voltage safety EN61010-1:2001, EMC Immunity EN61000-6-1:2001, Emissions EN55011:1998.

Operating/Storage Conditions

Operating Conditions

Operating Temperature:	0°C to +55°C
Humidity:	Up to 90% non-condensing
Altitude:	5000m

Storage and Transport Conditions

Storage Temperature:	-20°C to +75°C
Humidity:	Up to 90% non-condensing
Altitude:	15000m

Product Order Codes

10-Channel High Voltage Attenuator	**41-660-001**
5-Channel Differential High Voltage Attenuator	**41-661-001**

Other versions can be supplied with lower channel count or different input impedance. Please contact your Pickering Interface sale office with your requirements.

Latest Details

Please refer to our Web Site for Latest Product Details.

www.pickeringtest.com

Mating Connectors & Cabling

For connection accessories for the 41-660/661 module please refer to the **90-005D** 50-way D-Type Connector Accessories data sheet where a complete list and documentation can be found for accessories.

Alternatively, refer to the Pickering Interfaces "**Connection Solutions**" catalog for the full list of connector/cabling options, including drawings, photos and specifications. This is available in either print or as a download. Alternatively our web site has dynamically linked connector/cabling options, including pricing, for all Pickering PXI modules.

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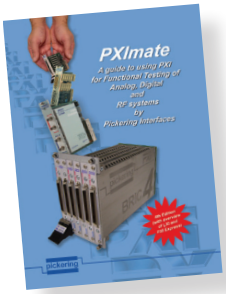
Refer to the "**PXI Product Guide**" for descriptions of Pickering Interfaces' comprehensive range of PXI switching and instrumentation modules, including specifications and product selection guides.

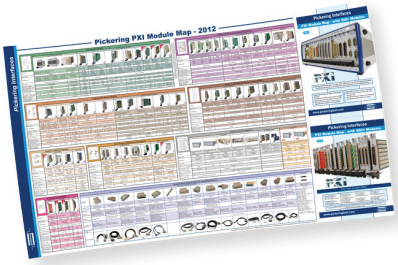
The Product Guide is available on request or can be downloaded from the Pickering website.



Ever wondered what PXI is all about?

Pickering Interfaces' "**PXImate**" Explains the basics of PXI and provides useful data for engineers working on switch based test systems.

The PXImate is available free on request from the Pickering website.



The "**PXI Module Map**" - a simple fold-out selection guide to all Pickering's 500+ PXI Modules.

"**The Big PXI Catalog**" gives full details of Pickering's entire range of PXI switch modules, instrument modules and support products.
At over 500 pages, the Big PXI Catalog is available on request or can be downloaded from the Pickering website.