

40-567 1-Pole 2A BRIC™ 3U PXI Multi Slot Matrix Module

- **Very High Density 2A Matrix With Up To 704 Crosspoints Per 2-Slot BRIC, 1408 Crosspoints Per 4-Slot BRIC & 2816 Crosspoints Per 8-Slot BRIC (352 Crosspoints Per PXI Slot)**
- **Integrated PXI Module With Built In High Performance Screened Analog Bus**
- **2-Slot Configurations to 88x8 (1-Pole), 4-Slot Configurations to 176x8 (1-Pole) & 8-Slot Configurations to 352x8 (1-Pole)**
- **Switch up to 100VDC/70VAC, 2A, 60W**
- **Automatic Analog Bus Isolation Switching Maximizes Bandwidth and Matrix Reliability**
- **VISA, IVI & Kernel Drivers Supplied for Windows XP/Vista/7/8**
- **Supported by PXI or LXI Chassis**
- **3 Year Warranty**



The 2 Amp Matrix BRIC is a higher power/voltage version of Pickering's established range of PXI Matrix BRIC modules. It features higher voltage, current and power handling capability than the existing ultra high density reed relay based BRICs. But it is not as suited to switching low level signals, where Ruthenium Reed Relays are a better choice and have a very long lifetime of up to 1000 million operations. For superior low level switching please refer to our 40-560/561/562 range.

BRIC™ 2nd Generation PXI 2Amp Switch Matrix

The 40-567 PXI Matrix BRIC provides a range of high density matrix modules able to switch up to 2 Amps or 100VDC/70VAC. The 40-567 BRIC modules are available in 2, 4 or 8-slot PXI sizes to suit most high performance PXI Matrix requirements, constructed using high quality electro-mechanical relays for high switching confidence.

Typical applications include signal routing for Functional ATE systems. With this high level of switching density, 40-567 PXI matrix modules allow a complete Functional ATE system to be housed in a single 3U PXI chassis, BRIC Modules allow the use of a much lower cost 8-slot PXI chassis.

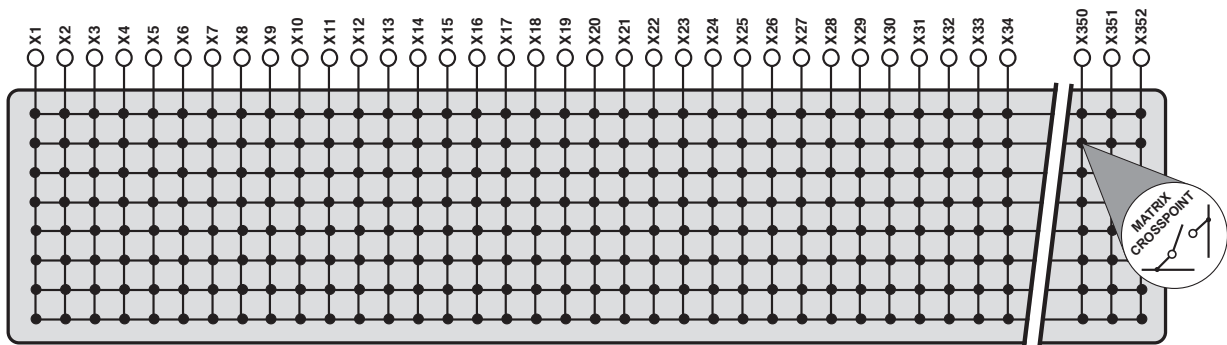
- **BRIC2** is a 2-slot PXI Module, this can hold up to 2 matrix daughtercards, 704 crosspoints.
- **BRIC4** is a 4-slot PXI Module, this can hold up to 4 matrix daughtercards, 1408 crosspoints.
- **BRIC8** is an 8-slot PXI Module, which can hold up to 8 matrix daughtercards, 2816 crosspoints.

Pickering's Range of 2A BRIC Matrix Modules

Model No.	Poles	Y-Bus Size	Min. Matrix Size	Max. Matrix Size
40-568	1	4	75x4	600x4
40-596	1	6	58x6	464x6
40-567	1	8	44x8	352x8
40-597	1	12	32x12	256x12
40-598	1	16	24x16	192x16
40-566A	2	4	55x4	385x4
40-565A	2	8	24x8	192x8

High Reliability and Easy of Use

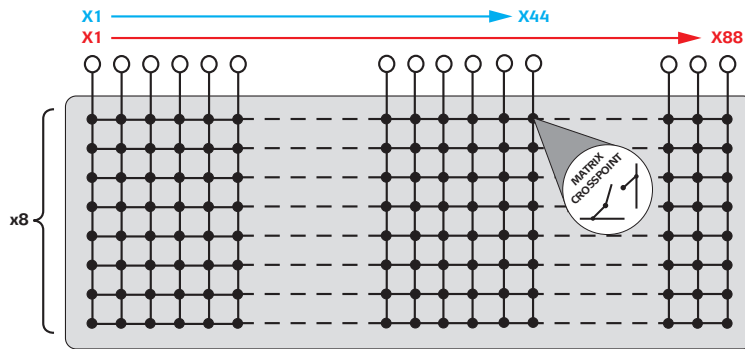
The 40-567 PXI BRIC is designed to minimise the cost and complexity of cable assemblies to the device under test and instrumentation. Analog busing is housed within the module using a high performance screened analog bus backplane. Pickering can construct custom cable assemblies for all of our PXI modules, please contact sales office for further assistance.



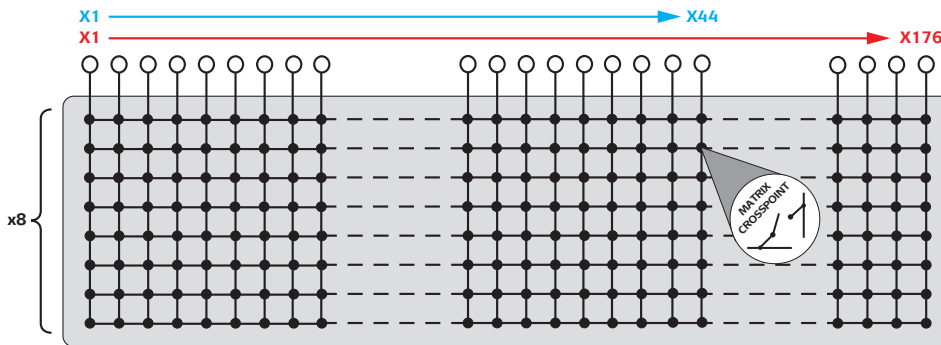
40-567-108 352x8 Matrix Switching Diagram (Fully Populated BRIC8)

The 40-567 supports 8 concurrent switch paths for X to X (see application diagram overleaf)

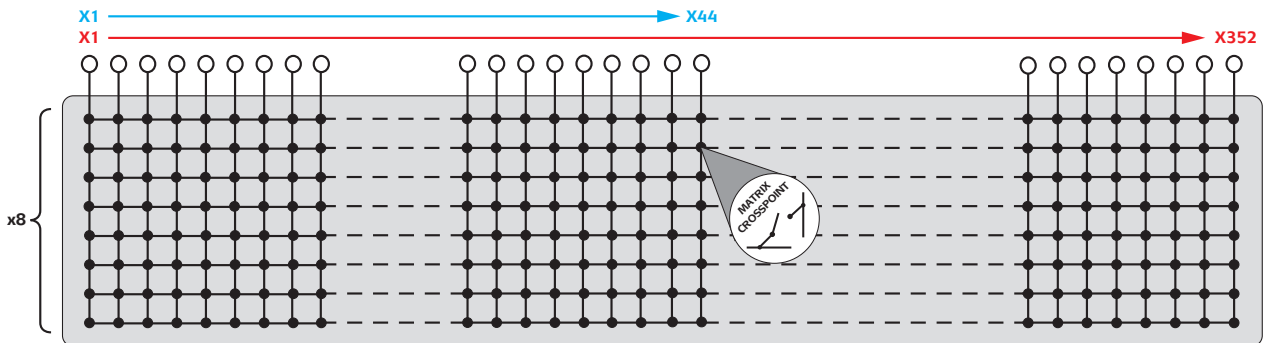




The 40-567 in BRIC2 Format is Available With Matrix Configurations of 44x8 and 88x8

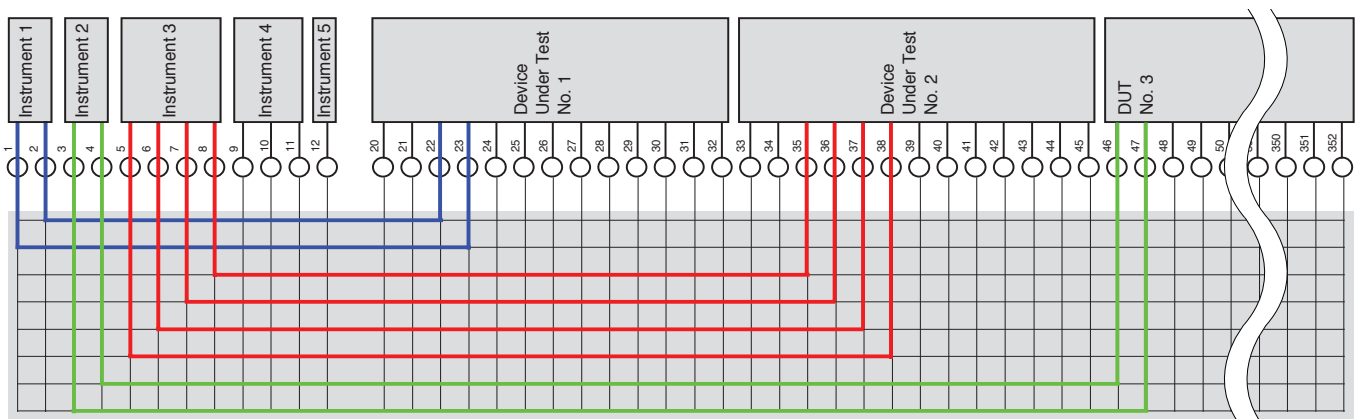


The 40-567 in BRIC4 Format is Available With Matrix Configurations Between 44x8 and 176x8



The 40-567 in BRIC8 Format is Available With Matrix Configurations Between 44x8 and 352x8

Example Application of the 40-567 1-Pole 2A BRIC Matrix



Schematic diagram showing a 352x8 BRIC Matrix being used to parallel test multiple DUTs. The BRIC Matrix allows tremendous test system flexibility.

Switching Specification

Relay Type:	2 Amp Electro-mechanical Relay
Contact Type:	Palladium-Ruthenium, Gold Covered Bifurcated
Max Switch Voltage:	100VDC/70VAC
Max Power:	62.5VA, 60W
Max Switch Current:	2A
Max Continuous Carry Current:	2A
Max Pulsed Carry Current Example (for a single switch path):	6A for 100ms (up to 10% duty cycle)
Initial On Path Resistance:	<1Ω
Off Path Resistance:	>10 ⁹ Ω
Thermal Offset:	10μV (X to X connection)
Max Number of Simultaneously Closed Crosspoints:	BRIC-2 & -4 = 65 BRIC-8 = 130
Switch Operate Time:	6.5ms
Expected Life (operations)	
Very low power signal load:	>1x10 ⁸
Low power load (2W):	>1.5x10 ⁷ (0.1A 20VDC)
Medium power load (30W):	>5x10 ⁶ (1A 30VDC)
Full power load (60W):	>1x10 ⁵ (2A 30VDC)

Typical Bandwidth and Crosstalk

Bandwidth (-3dB):	>5MHz
Crosstalk (typical):	10kHz: -65dB 100kHz: -45dB 1MHz: -30dB 10MHz: -15dB
Isolation (typical):	10kHz: 65dB 100kHz: 50dB 1MHz: 30dB 10MHz: 10dB

Matrix Functionality

Permits any X to X with multiple connections and 8 concurrent Y paths. Direct Y connections are not provided at the user connector but can be accessed by reassignment of 8 off X connections to provide Y connections. The driver prevents the connection of Y axis connections together (e.g. Y1 to Y4).

Power Requirements - BRIC2 & BRIC4

+3.3V	+5V	+12V	-12V
50mA	1.5A	35mA	0

Power Requirements - BRIC8

+3.3V	+5V	+12V	-12V
115mA	2.2A	35mA	0

Weight

BRIC2 empty module	0.6kg
BRIC2 fully loaded	1.3kg
BRIC4 empty module	0.9kg
BRIC4 fully loaded	2.2kg
BRIC8 empty module	1.6kg
BRIC8 fully loaded	4.2kg
BRIC daughter card	325g

Mechanical Characteristics

Two, four or eight slot 3U PXI (CompactPCI module). 3D models for all versions in a variety of popular file formats are available on request.

Connectors

PXI bus via 32-bit P1/J1 backplane connector.

Signals are carried via multiple front panel 50-Way male D- Type connectors (Up to 2 per 2-slot module, up to 4 per 4-slot module or up to 8 per 8-slot module).

Special Versions

BRIC modules can be built in special versions, for example where an exact matrix size is required then partly populated daughtercards may be ordered.

40-567 BRIC Matrix Product Order Codes

BRIC2 - 2-Slot High Density Matrix	
2 Amp 1-Pole 44x8 Matrix	40-567-201
2 Amp 1-Pole 88x8 Matrix	40-567-202
BRIC4 - 4-Slot High Density Matrix	
2 Amp 1-Pole 44x8 Matrix	40-567-001
2 Amp 1-Pole 88x8 Matrix	40-567-002
2 Amp 1-Pole 132x8 Matrix	40-567-003
2 Amp 1-Pole 176x8 Matrix	40-567-004
BRIC8 - 8-Slot High Density Matrix	
2 Amp 1-Pole 44x8 Matrix	40-567-101
2 Amp 1-Pole 88x8 Matrix	40-567-102
2 Amp 1-Pole 132x8 Matrix	40-567-103
2 Amp 1-Pole 176x8 Matrix	40-567-104
2 Amp 1-Pole 220x8 Matrix	40-567-105
2 Amp 1-Pole 264x8 Matrix	40-567-106
2 Amp 1-Pole 308x8 Matrix	40-567-107
2 Amp 1-Pole 352x8 Matrix	40-567-108

Upgrading With Daughtercards

BRIC modules can be upgraded to a larger matrix size using daughtercards, please consult your local sales office for further information.

Support Products

Spare Relay Kits

Kits of replacement relays are available for the majority of Pickering's PXI switching modules, simplifying servicing and reducing down-time. The relay kit for the 40-567 range is as follows:

91-100-001 Relay Kit 1 for 40-567-xxx

For further assistance, please contact your local Pickering sales office.

Mating Connectors & Cabling

For connection accessories for the 40-567 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, or refer to the Connection Solutions catalog.



All Pickering's 1-Pole 2A BRICs are Available in 2, 4 or 8-Slot Formats

Programming

Pickering provide kernel, IVI and VISA (NI and Agilent) drivers which are compatible with 32/64-bit versions of Windows including XP, Vista, 7 and 8 operating systems. The VISA driver is also compatible with Real-Time Operating Systems such as LabVIEW RT. For other RTOS support contact Pickering.

These drivers may be used with a variety of programming environments and applications including:

- **National Instruments** products (LabVIEW, LabWindows/CVI, Switch Executive, MAX, TestStand, etc.)
- **Microsoft Visual Studio** products (Visual Basic, Visual C+)
- **Agilent VEE**
- **Mathworks Matlab**
- **Geotest ATE Easy**
- **MTQ Testsolutions Tecap**

Drivers for popular Linux distributions are available, other environments are also supported, please contact Pickering with specific enquiries.

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

PXI & CompactPCI Compliance

The module is compliant with the PXI Specification 2.2. Local Bus, Trigger Bus and Star Trigger are not implemented. Uses 33MHz 32-bit backplane interface.

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.

PXI & LXI Chassis Compatibility

Compatible with all chassis conforming to the 3U PXI and 3U cPCI specification. Compatible with Legacy and Hybrid peripheral slots in a 3U PXI Express chassis.

Compatible with Pickering Interfaces LXI Modular Chassis. For information on driving your switching solution in an LXI environment refer to the LXI Product Catalog.



Latest Details

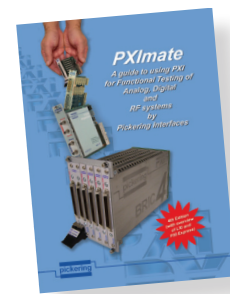
Please refer to our Web Site for Latest Product Details.
www.pickeringtest.com



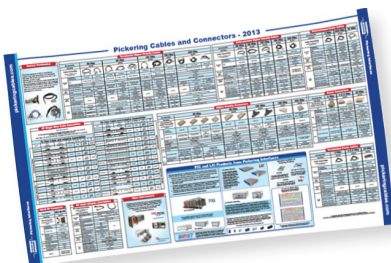
Please refer to the Pickering Interfaces "**Connection Solutions**" catalog for the full list of connector/cabling options, including drawings, photos and specifications. This is available in either print or as a download. Alternatively our web site has dynamically linked connector/cabling options, including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



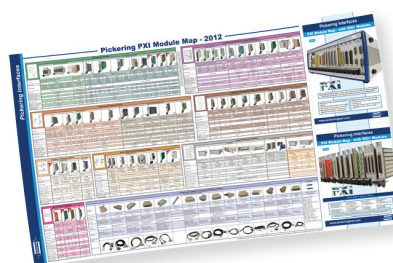
"**The Big PXI Catalog**" gives full details of Pickering's entire range of PXI switch modules, instrument modules and support products. At over 500 pages, the Big PXI Catalog is available on request or can be downloaded from the Pickering website.



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 "**Cables & Connectors Map**" - outlines the cable and connector options available for all PXI Modules.



The "**PXI Module Map**" - a simple fold-out selection guide to all Pickering's 600+ PXI Modules.