

PXI The **PXI/PXIe** icon denotes that modules are available in both **PXI** and **PXIe** formats. Pickering is committed to making many more of its **PXI** products available as **PXIe**.

Pickering - RF & Microwave Switching Map

CHASSIS & REMOTE CONTROLLERS

	PXI Chassis				PXI Controllers	PXI/PXIe Hybrid Chassis			PXIe Controllers		LXI Ethernet/USB Chassis					
Chassis Slots	8-Slot	19-Slot	8-Slot	14-Slot	-	8-Slot	18-Slot	21-Slot	-	-	2-Slot	4-Slot	6-Slot	7-Slot	18-Slot	
Features	<ul style="list-style-type: none"> High Performance Chassis Remote Management System 	<ul style="list-style-type: none"> High Performance Chassis Remote Management System 	<ul style="list-style-type: none"> 6 Mechanical Expansion Slots for Efficient Housing of Wide Modules e.g. BRIC 	<ul style="list-style-type: none"> High Performance Chassis Hot Swappable PSUs 	<ul style="list-style-type: none"> PCIe to PXI Control Interface Kit Provides a PCI Express Interface 	<ul style="list-style-type: none"> Gen3 High Performance Chassis Remote Management System 	<ul style="list-style-type: none"> Gen2 & Gen3 High Performance Chassis Remote Management System 	<ul style="list-style-type: none"> Gen2 High Performance Chassis 20 PXIe Hybrid Peripheral Slots Very High Power and Cooling Capacity 	<ul style="list-style-type: none"> PXIe Embedded Controller Max Throughput 14GB/s Compact for Versatility 	<ul style="list-style-type: none"> PCIe to PXIe Control Interface Kit Daisy Chain Option 	<ul style="list-style-type: none"> Compact chassis for hosting Pickering's 3U PXI modules in an LXI environment, allowing remote control over an Ethernet or USB connection 	LXI USB	LXI USB	LXI USB	LXI USB	LXI USB
Model Family	40-924	40-923A	40-908	40-914	41-924/51-924	42-924	42-925/42-926	42-927	43-920	43-921-001/002 and Kits	60-104	60-105	60-106	60-102D	60-103D	

Choosing a Chassis for Pickering PXI Modules

(Please note the chassis slot width for all required modules when selecting a chassis)

CHASSIS SELECTION GUIDE:

PXI and PXIe (with PXIe and/or Hybrid Slots)

- Mix our 1000+ PXI Switching & Simulation modules with any vendors' PXI/PXIe instrumentation
- Embedded or remote Windows PC control
- Real-time operating system support
- High data bandwidths, especially with PXI Express
- Integrated module timing and synchronization

Pickering LXI Ethernet/USB Modular Chassis (Only accept our PXI Switching & Simulation Modules):

- Choose from 1000+ Pickering PXI modules
- Ethernet or USB control enables remote operation
- Low-cost control from practically any controller
- LXI provides manual control via Web browsers

Drivertess software support

- Power sequencing immunity
- Ethernet provides chassis/controller voltage isolation
- Independence from Windows operating system

3U PXI modules are compatible with the following chassis types:

- All chassis conforming to the 3U PXI and 3U Compact PCI (c-PCI) specification
- Legacy and hybrid peripheral slots in a 3U PXI Express (PXIe) chassis
- Pickering Interfaces LXI or LXI/USB modular chassis

3U PXIe versions of the modules are compatible with the following chassis types:

- All chassis conforming to the 3U PXIe specification
- PXIe and hybrid peripheral slots in a 3U PXI Express (PXIe) chassis

PXI RF SWITCHES

	RF SPST Switch		RF SPDT Switch			
Features	<ul style="list-style-type: none"> Up to 1 GHz SPDT Options Optional Hardware Interlock 	<ul style="list-style-type: none"> 8GHz Bandwidth Terminated 	<ul style="list-style-type: none"> High Performance Low Cost 	<ul style="list-style-type: none"> Multiple Connector Options 	<ul style="list-style-type: none"> High Density High Performance Low Cost 	
Model Family	40-753	40-880B	40-870A	40-830A	40-710	40-754A
Impedance	75 Ω	50 Ω	75 Ω	50 Ω	50 Ω	75 Ω
Configurations	12 or 24 x SPST	Dual, Quad, Hex or Octal SPDT	Triple or Hex SPDT	Quad SPDT	9 or 17 x SPDT	
Max Frequency	1 GHz	8 GHz	3 GHz	2.7 GHz	1 GHz to 2.5 GHz	1 GHz
Insertion Loss	<3dB	<4dB	<0.5dB	<0.9dB	<3dB	<0.75dB
Max Power	25W	+36dBm			10W	
Typical Operate Time	1ms	50µs	3ms	10ms	3ms	
Relay Type	Electro-mechanical	Solid State			Electro-mechanical	
Connector Type	SMB, GMCT	SMA	SMB, MCX	BNC, SMB, SMA	BNC, SMZ, 1.0/2.3, SMB	SMB, MS-M, SMB, MS-M
Width (PXI-1, PXIe-hybrid)	1 or 2-Slot	1, 2 or 3-Slot	1-Slot	1 or 2-Slot	2-Slot	1-Slot

PXI MICROWAVE SWITCHES

	SPDT		Transfer Switch		SP4T/SP4T		SP8T/SP10T/SP12T	
Features	<ul style="list-style-type: none"> Choice of module bandwidths LED indication of closed switch paths Failsafe relays (Latching relays for 110GHz) 	<ul style="list-style-type: none"> Remote Mount versions available with a 1-slot controller (2-slots for 40-788) connected via 1.5m cables to up to 3 remote relays Use less PXI chassis space and allow relays to be placed closer to the UUT and RF instrumentation, minimizing RF cable lengths and improving system performance 						
Model Family	40-780B	40-781A	40-781A-92x	40-782B	40-784B	40-785C	40-788	
Impedance	50 Ω	75 Ω	50 Ω	50 Ω	50 Ω	75 Ω	50 Ω	
Configurations	Single, Dual, Triple or Quad SPDT	Single or Dual SPDT Terminated	Single or Dual Transfer Switch	Single or Dual SP4T	Single, Dual or Triple SP4T & SP6T with Terminated Options	Single, Dual or Triple SP4T & SP6T with Terminated Options	SP8T, SP10T, SP12T with Terminated Options	
Max Frequency	Up to 67GHz	2.5GHz	Up to 50GHz	110GHz	Up to 50GHz	Up to 40GHz	Up to 26.5GHz	
Insertion Loss	<1.1dB	<0.5dB	<2.5dB	<1.1dB	<1.1dB	<1.7dB	<0.3dB	
Max Power	Up to 700W	1W Terminated	Up to 240W	Up to 150W	Up to 150W	Up to 400W	Up to 400W	
Typical Operate Time	15ms	10ms	20ms	15ms	10ms	15ms	15ms	
Relay Type							Microwave Relay	
Connector Type	N-type, SMA, SMA-2.9, SMA-2.4, SMA-1.8, 1.6/5.6	SMA, SMA-2.9, SMA-2.4	SMA-1.0	SMA, SMA-2.9, SMA-2.4	SMA, SMA-2.9	N-type, SMA-2.9, SMA-2.4, SMA-1.8	N-type, SMA	
Width (PXI-1, PXIe-hybrid)	1, 2 or 3-Slot	1 or 2-Slot	2-Slot	1 or 2-Slot	1 or 2-Slot	1, 3, 4 or 6-Slot	2, 3, 4 or 6-Slot	

PXI RF MATRICES

	RF Matrix										
Features	<ul style="list-style-type: none"> 8GHz Bandwidth High Performance 	<ul style="list-style-type: none"> Expandable High Performance 	<ul style="list-style-type: none"> Expandable 	<ul style="list-style-type: none"> X and Y Isolation Switching 	<ul style="list-style-type: none"> Expandable Easy Y-Axis Loop-Thru 	<ul style="list-style-type: none"> Low Loss Expansion Options: 24x8, 32x8, 40x8, 48x8... X and Y Isolation Switching 	<ul style="list-style-type: none"> High Performance Loop-thru Option 				
Model Family	40-884B	40-877A	40-837A	40-750A	40-725	40-726A	40-727A	40-728A	40-729A	40-724	
Impedance	50 Ω	75 Ω	50 Ω	75 Ω	50 Ω	75 Ω	50 Ω	75 Ω	50 Ω	75 Ω	
Configurations	Single 4x4	Single or Dual 2x2	8x2	8x9	12x8	16x4	16x2	8x4		16x4, 16x8, 32x4 or with 32x8 Optional Loop-thru	
Max Frequency	8GHz	2.5GHz	1GHz	500MHz	250MHz	300MHz	300MHz	100MHz	300MHz	300MHz (150MHz Loop-thru)	
Insertion Loss	<8dB	<1.4dB	<2.0dB	<3dB	3dB					<3dB	
Max Power	+30dBm									10W	
Typical Operate Time	50µs	3ms	5ms	0.5ms						0.5ms	
Relay Type	Solid State	Electro-mechanical		Instrumentation Reed			Reed			Reed	
Connector Type	SMA	SMB, MCX	SMA, SMB, MS-M	SMB, MS-M	SMB		SMB or MS-M RF			SMB	
Width (PXI-1, PXIe-hybrid)	3-Slot	1-Slot								2-Slot	

PXI RF MULTIPLEXERS

	RF Multiplexer																		
Features	<ul style="list-style-type: none"> 8GHz Bandwidth Terminated Channels High Performance 	<ul style="list-style-type: none"> 4 GHz Fast Operation Long Life Low Insertion Loss 	<ul style="list-style-type: none"> 3GHz Bandwidth High Performance 	<ul style="list-style-type: none"> 3GHz Bandwidth Terminated 	<ul style="list-style-type: none"> 3GHz Bandwidth Terminated Com 	<ul style="list-style-type: none"> 3GHz Bandwidth High Performance Low Cost 	<ul style="list-style-type: none"> Up to 2GHz Bandwidth Choice of SMA or SMB Connectors 	<ul style="list-style-type: none"> Choice of SMA or SMB Connectors 	<ul style="list-style-type: none"> Very High Density High Performance Low Cost 	<ul style="list-style-type: none"> Low Cost Terminated Channels 									
Model Family	40-881B	40-882B	40-883B	40-878	40-872A	40-832A	40-873A	40-876A	40-874A	40-834A	40-875A	40-835A	40-740	40-745	40-746	40-747	40-748	40-749	
Impedance	50 Ω			50 Ω	75 Ω	50 Ω	75 Ω	50 Ω	75 Ω	50 Ω	75 Ω	50 Ω	75 Ω	50 Ω	75 Ω	50 Ω	75 Ω	50 Ω	75 Ω
Configurations	Single or Dual SP4T Terminated	Single, Dual, Triple or Quad SP4T Terminated	Single SP8T Terminated	Single SP16T Terminated	Single, Dual or Quad 4:1 RF-MUX	Single, Dual or Quad SP4T	Single or Dual SP4T Terminated	Single, Dual or Quad SP4T Terminated	Single or Dual SP8T	Single SP16T	SP4T Terminated	SP4T or SP8T	Dual SP4T	Single SP16T	Dual SP8T	Quad SP4T	4 or 10 off SP4T	5 or 10 off SP4T	4 or 10 off SP4T
Max Frequency	8GHz	4GHz	3GHz	3GHz	3GHz	1GHz to 2GHz	1GHz	2GHz	1GHz	1GHz	1GHz	1.8GHz	1.3GHz	1.3GHz	600MHz				
Insertion Loss	<6.8dB	<5dB	<8dB	<9dB	<1.4dB	<1dB	<1.6dB	<1.5dB	<1.3dB	<1.2dB	<2.1dB	<1.3dB	<1.9dB	<1.5dB	<1.25dB	<1.3dB	<2dB		<2dB
Max Power	+36dBm	+30dBm	25W	10W	1W Terminated	2W Terminated													1W
Typical Operate Time	50µs	50µs	3ms																3ms
Relay Type	Solid State																		
Connector Type	SMA																		
Width (PXI-1, PXIe-hybrid)	1 or 2-Slot	1, 2 or 3-Slot	2-Slot	3-Slot	1-Slot														

PXI ATTENUATORS

	Attenuators	
Features	<ul style="list-style-type: none"> Long Service Life & Fast Operation 	<ul style="list-style-type: none"> High Linearity & True DC Coupling
Model Family	41-182B	41-180
Configurations	Solid State Programmable RF Attenuator	Programmable RF Attenuator
Number of Channels	3 or 6	1 or 2
Frequency Range	10MHz to 6GHz	DC to 3GHz
Maximum Attenuation	31.75dB per channel	63dB per channel
Maximum Gain		
Connector Type		SMA
Width (PXI-1, PXIe-hybrid)	1 or 2-Slot	1-Slot

LXI ETHERNET RF & MICROWAVE MATRICES

	Video Matrix	High Frequency Matrix	Wideband Matrix	RF Matrix - 1 GHz			RF Matrix - 2.4 GHz			Microwave Matrix	
Features	<ul style="list-style-type: none"> Single or Dual 24x8 Matrix Suitable For Video Switching Applications Choice of RF Connectors 	<ul style="list-style-type: none"> Single or Dual 24x8 Matrix 50MHz Bandwidth, Useable to 100MHz SMB or BNC RF Connectors 	<ul style="list-style-type: none"> User Configurable For X and Y Dimensions Plug In As Many Cards As Required Built In Self-Test Checks all Relays 	<ul style="list-style-type: none"> High Bandwidth 750 Matrix Useable to 1.5GHz Automatic Termination of Unused Inputs 	<ul style="list-style-type: none"> High Bandwidth 500 Matrix Y Axis Loop-Thru Automatic Termination of Unused Inputs 	<ul style="list-style-type: none"> Versatile Microwave Matrix Switching Solution Loop-thru Option for Easy Expansion Internal Termination Option 					
Model Family	60-711	60-760	65-110A	60-730	60-731	60-732	60-770	60-771	60-772	60-750	60-751
Configurations	Single or Dual 24x8 (software configurable)	Single or Dual 24x8 (software configurable)	RF matrix with sizes between 24x8 and 104x8 or between 16x16 and 104x16	32x16 terminated, 24x16 terminated, 16x16 terminated	32x8 terminated, 24x8 terminated, 16x8 terminated, 8x8 terminated	32x4 terminated, 24x4 terminated, 16x4 terminated, 8x4 terminated	32x16 terminated, 24x16 terminated, 16x16 terminated	32x8 terminated, 24x8 terminated, 16x8 terminated, 8x8 terminated	32x4 terminated, 24x4 terminated, 16x4 terminated, 8x4 terminated	Single or Dual 3x3, Single or Dual 4x4, Single 8x4, Optional Loop-thru and/or Terminations	Single 3x3, Single or 4x4, Optional Loop-thru and/or Terminations
Impedance	75 Ω	50 Ω	50 Ω	75 Ω			50 Ω			50 Ω	75 Ω
Frequency Range	DC to 25MHz	DC to 50MHz (useable to 100MHz)	200MHz Useable to 500MHz	DC to 1GHz (useable to 1.5GHz)			DC to 2.4GHz			DC to 10GHz	DC to 18GHz
Insertion Loss	<0.75dB	<1dB	<1dB to 50MHz	<2.5dB			<2.5dB			<2.5dB	<3dB
VSWR	<2.0:1	<1.8:1	<1.6:1	<1.8:1			<1.6:1			<1.8:1	<1.6:1
Max Power	30W	10W	0.25W (limited by termination resistors)	0.125W (limited by termination resistors)			0.5W (limited by termination resistors)			100W (1W for termination resistors)	
Typical Operate Time	3ms	3ms		3ms			3ms			18ms	
Relay Type	Electro-mechanical	Electro-mechanical	Electro-mechanical	Electro-mechanical			Electro-mechanical			Microwave Relay	
Connector Type	SMB, MCX or BNC	SMB or BNC	SMB	F-type			SMA			SMA	
Enclosure Size	1U High, Full Rack Width, 340mm Deep or 2U High, Full Rack Width, 500mm Deep	1U High, Full Rack Width, 340mm Deep or 2U High, Full Rack Width, 500mm Deep	4U High, Full Rack Width, 500mm Deep	6U High, Full Rack Width, 500mm Deep	3U High, Full Rack Width, 500mm Deep	2U or 3U High, Full Rack Width, 500mm Deep	6U High, Full Rack Width, 500mm Deep	3U High, Full Rack Width, 500mm Deep	2U High, Full Rack Width, 500mm Deep	2U High, Full Rack Width, 500mm Deep	

LXI ETHERNET RF & MICROWAVE MULTIPLEXERS

	Video MUX	RF MUX	Microwave MUX						
Features	<ul style="list-style-type: none"> High Performance Multiplexer Suitable for Video Switching Applications Automatic Termination of Unused Inputs 	<ul style="list-style-type: none"> High Performance 12-Channel Multiplexer 1GHz Bandwidth Single or Dual Multiplexer Banks 	<ul style="list-style-type: none"> High Performance 6-Channel Multiplexer Terminated Versions Available 	<ul style="list-style-type: none"> High Performance 6-Channel Multiplexer 	<ul style="list-style-type: none"> High Performance 4-Channel Multiplexer 	<ul style="list-style-type: none"> High Performance 4-Channel Multiplexer 	<ul style="list-style-type: none"> High Performance 4-Channel Multiplexer 	<ul style="list-style-type: none"> High Performance 6-Channel Multiplexer Terminated Versions Available 	<ul style="list-style-type: none"> High Performance 4-Channel Multiplexer Low Loss High Isolation
Model Family	60-721A	60-722	60-800	60-801	60-802	60-803	60-820		
Configurations	24, 48, 72, 96, 120 or 144-Channel MUX with Terminations	Single or Dual 12-Channel MUX	6-Channel Terminated MUX with up to 16 Banks	6-Channel Terminated MUX with up to 14 Banks	6-Channel MUX with up to 16 Banks	4-Channel MUX with up to 16 Banks	4-Channel Terminated MUX with up to 14 Banks	6 Channel MUX with up to 16 Banks	
Impedance	75 Ω	75 Ω	50 Ω	50 Ω	50 Ω	50 Ω	75 Ω		
Frequency Range	1GHz	1GHz	18GHz, 26.5GHz, 40GHz, 50GHz or 67GHz	6GHz, 18GHz, 26.5GHz or 40GHz			18GHz, 26.5GHz, 40GHz, 50GHz or 67GHz	2.5GHz	
Insertion Loss	3.5dB	1.3dB	0.5dB (18GHz), 1.7dB (67GHz)	0.2dB (up to 3GHz)	0.5dB (18GHz), 1.7dB (67GHz)	0.3dB	1.5:1 (18GHz), 2.2:1 (67GHz)	0.3dB	
VSWR	1.5:1	1.5:1	1.5:1 (up to 3GHz)	1.2:1 (up to 3GHz)			1.5:1 (18GHz), 2.2:1 (67GHz)	1.3:1	
Max Power	0.5W (limited by termination resistors)	400W	100W/1W per termination (18GHz), 1W (67GHz)	250W (up to 3GHz)			100W/1W per termination (18GHz), 1W (67GHz)	400W (up to 2GHz)	
Typical Operate Time	5ms	20ms	18ms	13ms			18ms	18ms	
Relay Type	Electro-mechanical	Microwave Relay	Microwave Relay	Microwave Relay			Microwave Relay	Microwave Relay	
Connector Type	F-Type	F-Type	SMA, SMA-2.9, SMA-2.4 or SMA-1.85	SMA or SMA-2.9 (40GHz)			SMA, SMA-2.9, SMA-2.4 or SMA-1.85	DIN 1.6/5.6	
Enclosure Size	2U or 3U High, Full Rack Width, 500mm Deep	2U High, Full Rack Width, 500mm Deep	2U or 3U High, Full Rack Width, 500mm Deep	1U or 2U High, Full Rack Width, 500mm Deep			2U or 3U High, Full Rack Width, 500mm Deep	2U High, Full Rack Width, 500mm Deep	

Relay Counting - Many PXI(e) modules now feature relay operation counting to determine if a relay is approaching end of life (EOL). This information can be used to **reduce the load on heavily used relays**. Please refer to the specific module datasheet for more information.



Pickering - RF & Microwave Switching Map

SWITCHING & SIMULATION SOLUTIONS FROM PICKERING INTERFACES

About Us

At Pickering, we understand that to design, deploy and sustain your test system can be challenging, and we believe in offering you the products and services to help your engineering team get the job done on time and budget. Since 1988, our core focus has and continues to be high-density modular switching and simulation systems for PXI, PCI, LXI and USB applications.

We offer the industry's deepest portfolio (over 1000 products in PXI alone), but the value doesn't end there. Take a look at the benefits of working with Pickering:

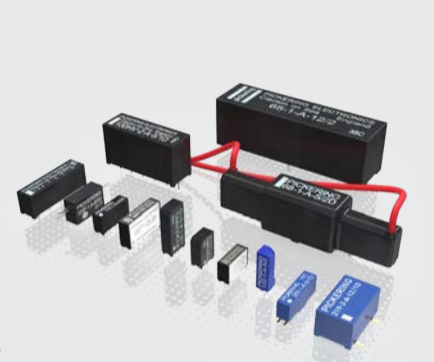
- When our product range doesn't fit your application, we have the agility and expertise needed to develop a system to your specifications, often with little to no engineering cost.
- We can also help accelerate software development and test time by offering tools to help with your programming efforts. These include our Switch Path Manager signal routing software that simplifies coding of switching systems, and simulation tools that allow development to begin before your hardware is received.



- We know that maximizing uptime of your test system is important—with our diagnostic test tools, you can identify faulty or damaged components in a matter of minutes. Many of our products include spare relays, so you can self-repair in the field without voiding our 3-year warranty.
- Our products have a history of longevity, typically 15–20 years, which is critical to many of our customers. All products manufactured by us come with a standard 3-year warranty* and include guaranteed long-term support.
- Our technical staff can address any hardware or software problems you may encounter with Pickering Products. We have multiple offices located around the world and provide access to support engineers that have many years' experience in functional test and are committed to responding in a timely fashion.
- All module and cabling manufacturing processes are done within our two factories on flexible manufacturing lines allowing us to offer simple customization to meet your needs. The chances are good that we can enhance your engineering team's effectiveness with our collaborative, creative and agile culture.

Reed Relays

Pickering is the only switch provider with in-house reed relay manufacturing capability. These instrument grade reed relays feature **SoftCenter™** technology, ensuring long service life and repeatable contact performance. In addition, most of our switch modules use through-hole technology relays (as opposed to surface mount) allowing easy replacement without the need for special tools. Learn more: pickeringrelay.com



Learn more: pickeringtest.com/whypickering
Note*: Currently the 110 GHz products come with a 1-year Warranty

TURNKEY LXI ETHERNET MICROWAVE SWITCH AND SIGNAL ROUTING SUBSYSTEMS

60-891 Integrated Solutions

Do you have limited engineering resources or demand performance that can only be delivered with a fully integrated solution?

We have the expertise and ability to turn your high-level requirements for a microwave switching system into the fully integrated solution that you need. You provide us with your unique configuration and specification, and our engineers will work closely with you to provide a well-defined, fully integrated and supportable end product that will satisfy your microwave testing needs.

- Designed and manufactured to your requirements by our switching experts
- Compact rack-mount designs** incorporating an industry-standard LXI/Ethernet interface
- Bandwidths from DC to 110 GHz @ 50 Ω**, with terminated or unterminated options, and bandwidths up to 2.5 GHz @ 75 Ω
- Fast turnaround**, cost-effective Multiplexer, Matrix and complex routing solutions
- Fully documented** to ensure performance repeatability in subsequent builds/orders
- Familiar programming environment** using Pickering's standard switch API accelerates software integration
- Pickering can turn your custom-design into an 'off-the-shelf' product with **15+ years** support

For complex subsystems, our **Switch Path Manager** signal routing software can be used to significantly reduce integration time. Another important tool we offer is the **LXI hardware simulator**, this tool allows you to develop and test the system software independently from your application hardware.

Visit pickeringtest.com/turnkey to learn more.

Example Turnkey Microwave Switching Systems



12x12 Microwave Matrix

SP36T Microwave Multiplexer

COMPREHENSIVE RANGE OF RF & MICROWAVE CONNECTORS & CABLES

Connector Types used on Pickering RF & Microwave Modules

SMB Connector

This is a push-fit connector with a small outline making it suitable for high density RF switching. It typically has a maximum frequency of 4 GHz and is used on many of our 3 GHz PXI switches and multiplexers. It is available in 50 Ω and 75 Ω versions.



SMA Connectors

This is a threaded connector which mates well with semi-rigid and larger cables than the MCX/SMB, ensuring a higher performance and lower loss. Ideally the connector should be secured with a torque spanner to ensure that it is sufficiently tightened while avoiding accidental mechanical damage.



MCX Connector

This is a push-fit connector with a similar size to the SMB connector. It has a higher maximum frequency of typically 6 GHz and is offered as an alternative to SMB on many of our switches and multiplexers. It is available in 50 Ω and 75 Ω versions.



It is used on many of our 50 Ω microwave switching modules in different variations depending on the maximum frequency of the switch as follows:

- 26.5 GHz - Standard SMA
- 40 GHz - SMA-2.9
- 50 GHz - SMA-2.4
- 67 GHz - SMA-1.85
- 110 GHz - SMA-1.0

MS-M Connector

This is a multi-way connector with an impedance of 50 Ω and maximum frequency of 500 MHz. Its small footprint makes it suitable for single slot high-density RF modules such as our 40-756A 17x SPDT switch and 40-755A 10 bank 4 to 1 multiplexer.



Other Connectors

Selected modules are available with alternative connector types such as BNC, N-type, F-type, SMZ, 1.0/2.3 and 1.6/5.6. If you have a particular connector requirement, please contact your local Pickering sales office.



RF & Microwave Cable Assemblies



We support all our RF and microwave switching products with a wide range of cabling options allowing easy integration into your test system.

The range of coaxial cables available includes:

- BNC to BNC 50 Ω
- SMA to SMB 50 Ω
- SMA to SMA 50 Ω
- MCX to MCX 50 Ω
- MMCX to MMCX 50 Ω
- SMB to BNC 50 Ω
- BNC to SMA 50 Ω
- SMB to SMA 50 Ω
- N type to SMA 50 Ω
- BNC to MCX 50 Ω
- MS-M multi-way to SMB 50 Ω
- MS-M multi-way to unterminated 50 Ω
- BNC to BNC 75 Ω
- SMZ/type43 to SMZ/type43 75 Ω
- 1.0/2.3 to 1.0/2.3 75 Ω
- Mini SMB to Mini SMB 75 Ω
- MCX to MCX 75 Ω
- F type to F type 75 Ω
- 1.6/5.6 to 1.6/5.6 75 Ω
- Mini SMB to BNC 75 Ω
- Mini SMB to SMZ/type43 75 Ω
- Mini SMB to 1.0/2.3 75 Ω
- BNC to MCX 75 Ω

FLEXIBLE PXI & LXI ETHERNET MICROWAVE SWITCH PLATFORMS

These flexible, configurable PXI & LXI microwave switch platforms may be specified with a mix of high-performance microwave relays up to 110 GHz bandwidth with 50 Ω impedance or up to 2.5 GHz with 75 Ω impedance and with a range of connector types.

- Available relays include **Transfer, SPDT, SP4T, SP6T, SP8T, SP10T and SP12T** in **unterminated and terminated** versions
- Flexibility in front-panel relay positioning helps minimize external interconnecting cable lengths
- LED indication** of energized switch paths
- PXI & PXIe** available in 1 to 6 slot wide modules
- LXI** up to 6U form factors
- Excellent RF and repeatability characteristics



Examples of PXI & LXI Flexible Microwave Switch Platforms

Visit pickeringtest.com/flexible

Microwave Switch Options

Switch Type	Termination	Bandwidth & Connector Type											
		2.5 GHz DIN 1.6/5.6 (75 Ω)	3 GHz SMA (50 Ω)	6 GHz SMA (50 Ω)	8 GHz N-Type (50 Ω)	12.4 GHz SMA (50 Ω)	18 GHz SMA (50 Ω)	22 GHz SMA (50 Ω)	26.5 GHz SMA 2.9 (50 Ω)	40 GHz SMA 2.4 (50 Ω)	50 GHz SMA 1.85 (50 Ω)	67 GHz SMA 1.0 (50 Ω)	110 GHz SMA 1.0 (50 Ω)
Transfer (DPDT)	Unterminated	SPDT	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		SP4T	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		SP6T	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		SP8T	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		SP10T	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		SP12T	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SPDT	Terminated	SPDT											
		SP4T											
		SP6T											
		SP8T											
		SP10T											
		SP12T											

Non-switching Components

To provide functionality in addition to switching, we also offer power dividers, attenuators, couplers and terminations. To maximize system flexibility other component types/specifications can be supplied upon request.

MICROWAVE SWITCH DESIGN TOOL

Configuring powerful and flexible PXI & LXI microwave switching products has never been easier than with our new Microwave Switch Design Tool. This free online tool greatly simplifies the configuration of your flexible microwave switching and relay systems for signal routing applications across 5G, wireless & telecommunications, semiconductor, medical, aerospace and defense.

Features of our Microwave Switch Design Tool include:

- Engineers can easily design a complete industry-standard, PXI or LXI Microwave switching system
- PXI/PXIe is available in 1 to 6 slot wide modules
- LXI is available in up to 6U form factors
- Specify and configure a mix of high-performance microwave relays
- Relays range up to 110 GHz bandwidth at 50 Ω impedance or up to 2.5 GHz at 75 Ω impedance and include transfer, SPDT, SP4T, SP6T, SP8T, SP10T and SP12T in terminated and unterminated versions
- Large range of connector types and complete flexibility on placement to help minimize external cable lengths
- Custom labeling and front-panel graphics
- Generate all the necessary documentation and quote your unique part number within the tool
- Excellent RF and repeatability characteristics
- Low VSWR (Voltage Standing Wave Ratio), very high isolation, low loss and high power handling
- Ideal for switching coaxial systems that require high performance from the HF band to microwave frequencies



To learn more or give the tool a try, go to: pickeringtest.com/msdt

- RF Switching to 8 GHz with Microwave to 110 GHz
- 8 GHz Solid State
- Matrices
- MUXs
- SPDT Switches
- Transfer Switches
- Attenuators
- Turnkey LXI Ethernet Microwave Subsystems**



Pickering's RF & Microwave Switching Map is a single-sheet reference to over 500 modules in PXI, PXIe, LXI Ethernet & USB formats, including their basic specifications and cabling options.

pickeringtest.com
2023

Pickering RF & Microwave Switching Map

What to expect when you engage with Pickering for your RF/Microwave switching

Defining your signal routing and distribution systems can be challenging. Work with an experienced global supplier who possesses the necessary skills to complete the task within the agreed timeline and budget. When you work with us, you get the following:

- Direct collaboration** with our engineers during the design phase
- Optimized solutions** tailored to your high-level requirements
- A fully documented** end product
- Platform and component flexibility** to meet your specific needs
- Whether you need one or 20 systems, **our process treats them all the same**

Exciting NEW Industry-first Technologies

PXI & PXIe microwave relay modules capable of switching 110 GHz signals.

PXI & PXIe MEMS-based RF MUXs deliver 300x operational life and 60x test system throughput compared to EMR-based equivalents.

Switching | Simulation | Programmable Resistors | Custom Design | Software | Reed Relays | Connectivity & Cables

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