

RF & Microwave Switching Solutions...



...for Signal Routing and Distribution

RF & Microwave Switching Solutions in PXI, LXI & USB

Pickering has a long history of providing **RF & Microwave** switch solutions for **Test & Measurement** applications. Our signal routing solutions range from simple switch control to fully integrated turnkey, tested and documented subsystems.

What sets us apart? Our **customer focus** and **agility**, along with the **performance** and **flexibility** of our solutions.



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 worldwide 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:

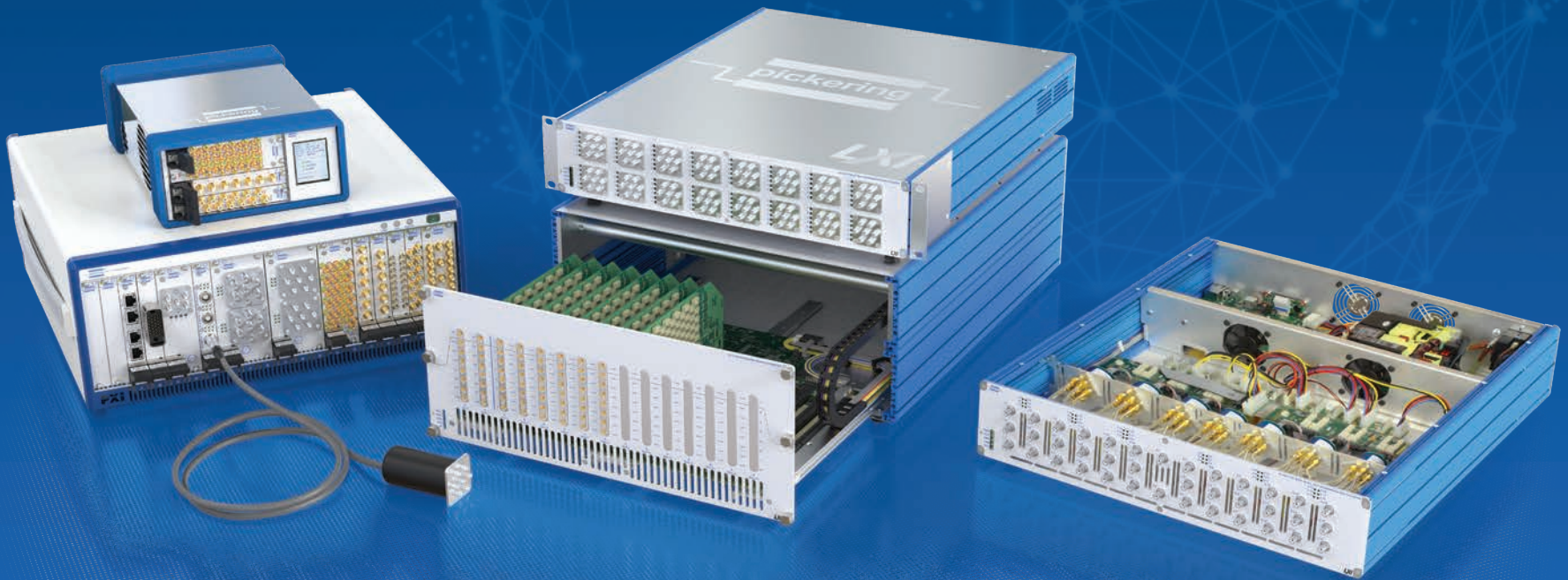
- **Direct collaboration** with our engineers during the design phase
- **Optimized solutions** tailored to your high-level requirements
- A **fully documented** end product
- **Platform and component flexibility** to meet your specific needs
- Whether you need one or 20 systems, **our process treats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

Get **commonality** across all of our **industry-standard test and measurement** platform solutions

The design and manufacturing practices used are the same for all our **extensive range of switching, covering thousands of products from DC to light**. Across all these platforms, you get commonality, including:

- **Common software driver control** for ease of integration
- **Driverless soft front panels** for manual control
- **Support** for all **common operating systems** and **application programming** interfaces
- We are also able to **supply mating RF cables** and **adaptors**
- All products come with our **standard 3-year warranty**

And, regardless of which of the above solutions you go with, you get predictable performance and speedy delivery.



Modular PXI, LXI & USB RF/Microwave Switching with bandwidths up to **110 GHz**

Our **PXI RF & Microwave switch modules** cover the frequency spectrum from DC to 110 GHz with SPDT, Transfer, MUX and Matrix configurations. They can be used in our own or any other vendor's compliant PXI or PXIe hybrid chassis and also our LXI/USB modular chassis, allowing remote control over USB or a gigabit Ethernet connection. Most modules are also available in PXIe format, allowing maximum application platform flexibility.



Flexible Microwave Switch Platforms

These **flexible, configurable LXI microwave switch platforms** may be specified with a mix of high-performance microwave relays up to **110 GHz bandwidth** with **50 Ω** or **75 Ω** impedance and 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
- Compact **1U to 4U form factors**, excellent RF and repeatability characteristics. An example is our LXI Microwave Multiplexers, offering the highest density configuration possible, packaging up to 16 multiplexers in a 2U high rack-mount enclosure



Turnkey Microwave Switch & Signal Routing Subsystems

With our **turnkey LXI microwave switch subsystems**, we have the expertise and ability to turn your high-level requirements for a microwave switching subsystem into the fully integrated solution you need.

- You provide us with your unique configuration and specification
- Our engineers will work closely with you to provide a **well-defined, fully integrated** and **supportable end product** to satisfy your microwave testing needs
- You'll get a **fully documented end product** to ensure performance repeatability in subsequent builds/orders – whether it be two months or five years from now



Large Turnkey Microwave Matrix

Turnkey Microwave MUX Switch for MRI Automated Test Equipment



"We are very happy with the result. This was a complex challenge, but now we have a better system that is 100% compatible with our established working practices, and Pickering delivered it on time and on budget."

Harrie van den Oever
Electrical Engineer at Philips

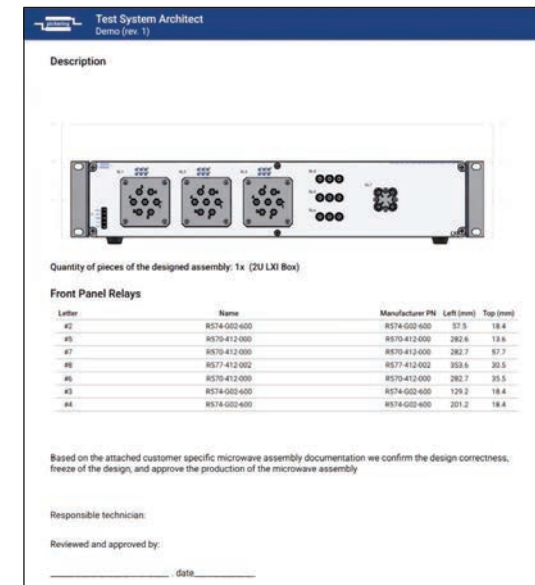


Microwave Switch Design Tool

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:

- Enables easy design of complete industry-standard, PXI or LXI Microwave switching systems
- 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 HG band to microwave frequencies



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

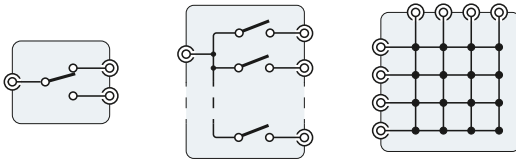


RF Switch Platforms

Our RF switching modules can provide economic switching for frequencies up to **8 GHz** with an impedance of **50 Ω** . The range includes SPDT switches, matrices and MUXs with a choice of signal connectors.

Versions are available with **75 Ω** impedance suitable for telecoms and high-quality video switching.

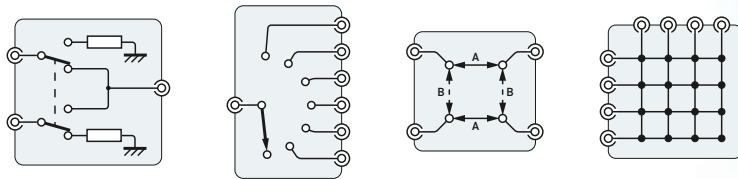
Please look at our microwave switching modules for higher frequency applications requiring high-performance levels.



- Available in **PXI, PXIe & LXI** formats
- SPDT, Matrix & Multiplexer configurations
- Modules use a variety of switches for optimal performance, including Pickering Reed relays, Electro-mechanical relays, Solid-State & MEMS (Micro-Electromechanical System) switches
- Available in **50 Ω** & **75 Ω** impedance versions
- Signal bandwidths up to **8 GHz**
- Wide range of signal connector options including **SMB, SMA & MCX**
- **PXI versions** supported by **PXI** or **LXI** chassis

Microwave Switch Platforms

Our microwave switch modules vary from simple multiplexer and switch configurations to large MUXs and matrices. Most products are characterized for **50 Ω** operation; however certain **75 Ω** versions are supplied as standard or custom products. Remote PXI or PXIe versions occupy a single slot with switches mounted separately from the host chassis and controlled via a cable.

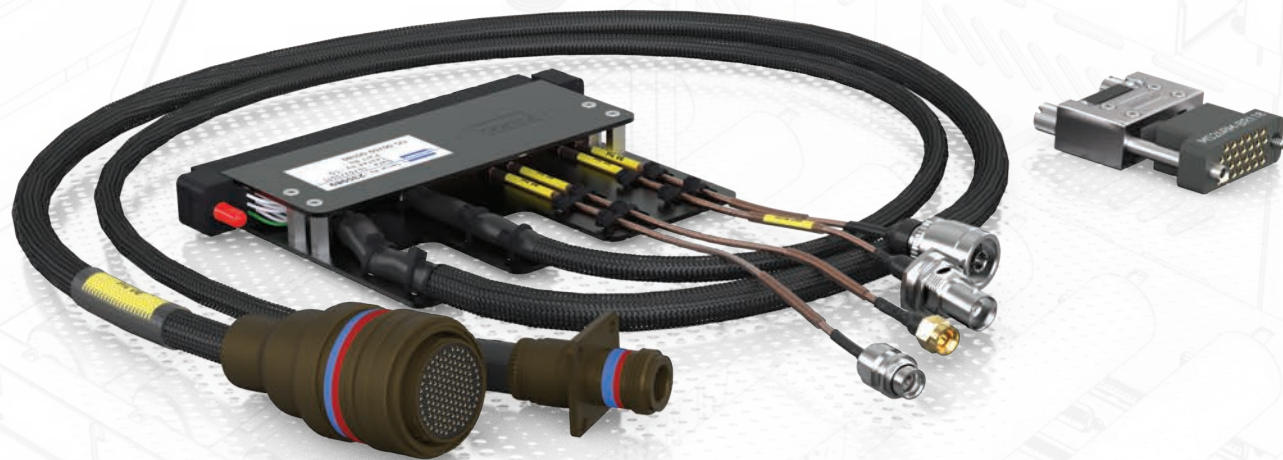


- High performance switching with low insertion loss & very high isolation
- Available in **PXI, PXIe & LXI** formats
- SPDT, multiplexer, transfer switch & matrix configurations
- Most modules include **LED indication** of active switch paths
- Latching & failsafe versions
- Available with **50 Ω** & **75 Ω** impedance
- Terminated & unterminated versions
- Signal bandwidths up to **110 GHz**
- Range of signal connectors including **SMA, N-type & 1.6/5.6**
- PXI/PXIe panel mounted & chassis space saving remote mounted versions
- **PXI versions** supported by **PXI** or **LXI** chassis

Cables and Connectors

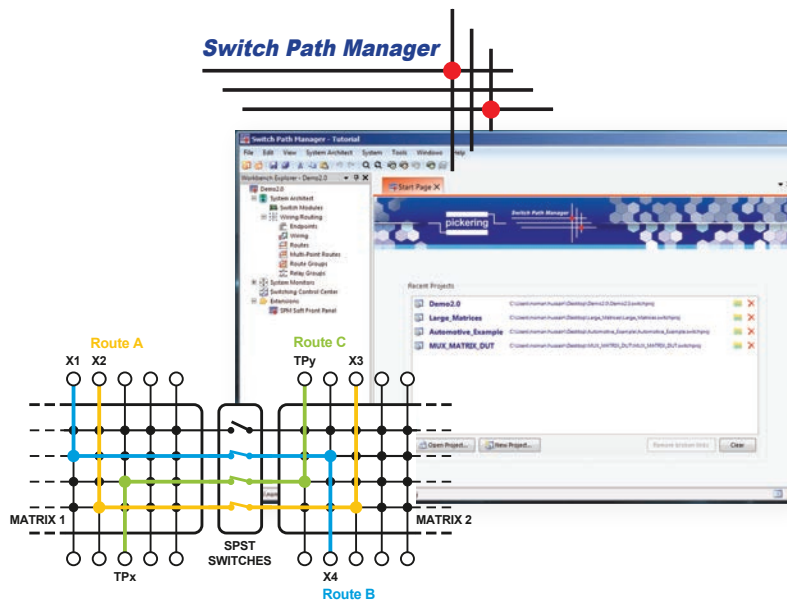
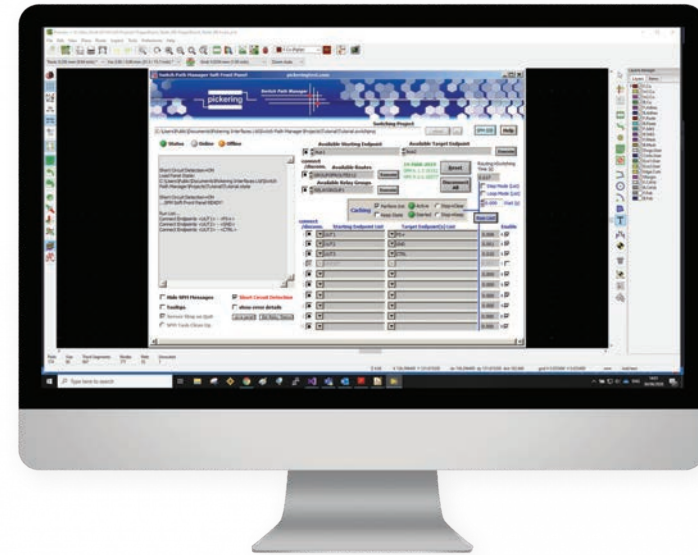
Take advantage of our in-house cable manufacturing, from simple mating connectors to complex cable assemblies and terminal blocks. We have standard cables already designed for all of our products. Every accessory is designed to ensure you have a trouble-free experience connecting our products to your test system.

If you need a custom cable, you can design your own using our **Cable Design Tool**, or we can design one for you and deliver as little as one to many. Learn more at [pickeringtest.com/cdt](https://www.pickeringtest.com/cdt)



Signal Routing Software

Our signal routing software, Switch Path Manager (SPM), simplifies signal routing through switching systems and speeds up the development of switching system software. SPM supports our switching modules and the interconnection between them. Once a switching system model has been created, simply defining the endpoints required to be connected can perform signal routing—the ability to automate signal routing results in effective and easy switching system management—safely and quickly. SPM is available in a full version and a lower-cost lite version. For information, please look at the SPM resources available on our website.



- Manages complex switching systems and reduces switching software development effort
- Provides automated or pre-defined signal routing and static or dynamic routing
- Signal isolation & endpoint protection technology
- Manual control capability
- Supports PXI, LXI & PCI systems
- Modules pack for all Pickering switch modules
- APIs available for C, .NET, Python, LabWindows™/CVI and LabVIEW™
- Windows 32-bit or 64-bit compatible
- Free software upgrades & lifetime support, no software subscription required

Pickering Interfaces

Pickering Interfaces was formed in 1988 and is headquartered in Clacton-on-Sea, United Kingdom. We have two manufacturing facilities—in the UK and the Czech Republic. We also have direct sales and support offices throughout Asia, Europe and North America. Our employees share a customer-centric approach and are dedicated to quickly getting our products functioning at their peak and into our customers' hands.



Today, we offer modular signal switching, simulation, software and services to streamline the development and deployment of high-performance electronic test and verification systems. We provide the most extensive range of switching and simulation solutions in the industry for PXI, LXI, USB and PCI applications. To support our switching and simulation solutions, we also offer application software and software drivers along with a full range of supporting connectivity and cabling solutions.

The Pickering Group of companies has been in switching technology since 1968 when our reed relay division, Pickering Electronics, introduced its first reed relays. It comprises Pickering Electronics, Pickering Interfaces—the switching and simulation division and Pickering Connect—the connection division. Together we deliver high-quality switching and simulation products and a full range of standard and custom cable and connector solutions.





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Lit-099, Issue 2, Oct 2023

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