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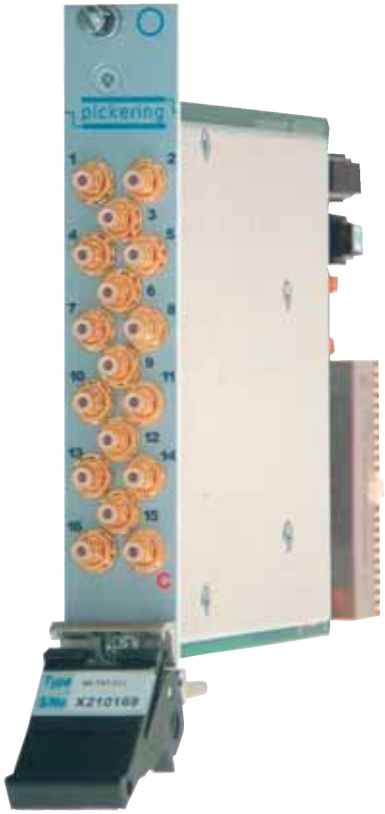
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Find the *Pickering 40-747-511* at our website: ***Click HERE***

40-747
Single 16-Channel RF Multiplexer



- 1GHz Bandwidth
- Choice of Coaxial Connectors
- VISA, IVI & Kernel Drivers Supplied for Windows XP/Vista/7/8
- Supported in PXI or LXI Chassis
- 3 Year Warranty

The 40-747 is a single 16 to 1 RF MUX available in 50Ω or 75Ω versions occupying a single PXI slot (2 slots for versions fitted with SMA connectors).

The module is available with SMB or SMA connectors for 50Ω versions or, 1.0/2.3 or SMB connectors for 75Ω versions. This allows users to simplify their cable interfacing issues in test systems by matching them to other connectors in the system.

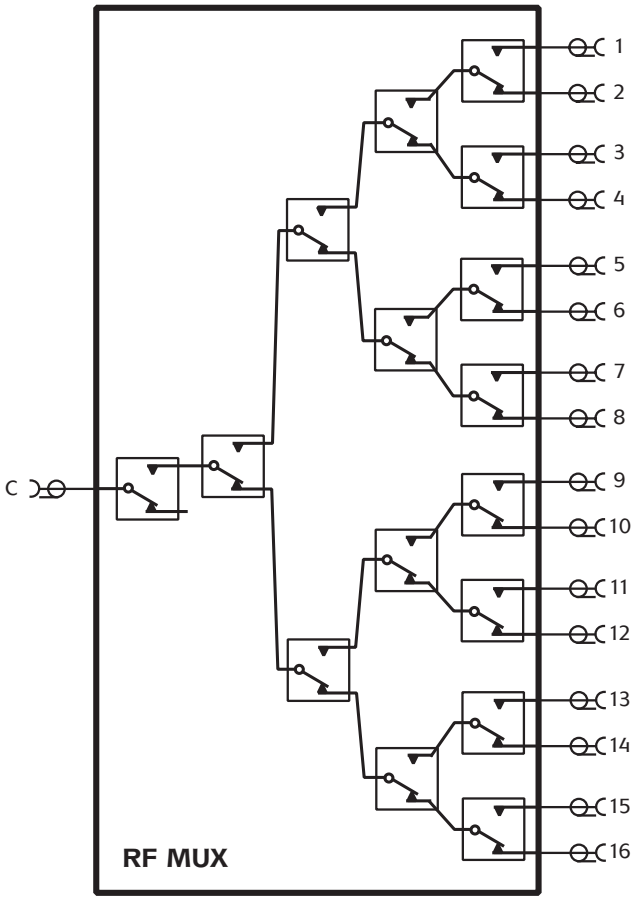
Applications for the 40-747 include routing high frequency signals to and from oscilloscopes, analysers, signal generators and synthesizers, telecoms tributary switching, video/audio switching and switching high frequency logic signals.

The 40-747 is supplied with drivers that allow users to support the module in all the popular PXI software environments. In addition the 40-747 can be supported in Pickering Interfaces' **LXI/PXI Modular Chassis**, permitting users to choose an LXI or PXI switching platform while retaining the same high performance characteristics and driver environment.

For applications that require SMB or MCX connectors, Pickering offer newer designs with significantly improved performance at lower cost.

The 40-875 (50Ω) and 40-835 (75Ω) are 16-channel multiplexers with bandwidths to 3GHz





40-747 Single 16 to 1 RF MUX Switching Diagram (Default Switch Paths Shown)

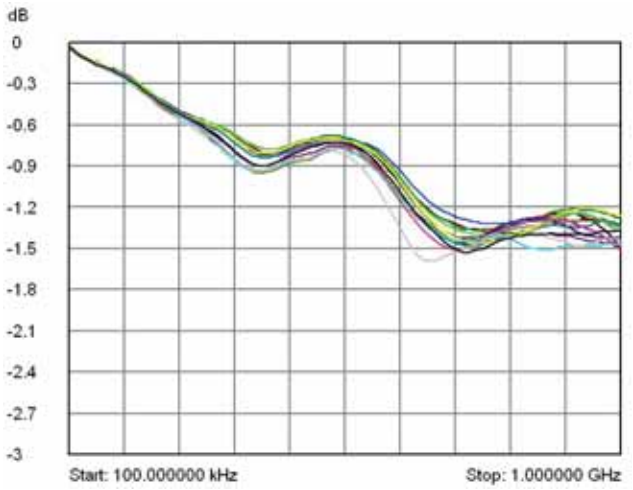
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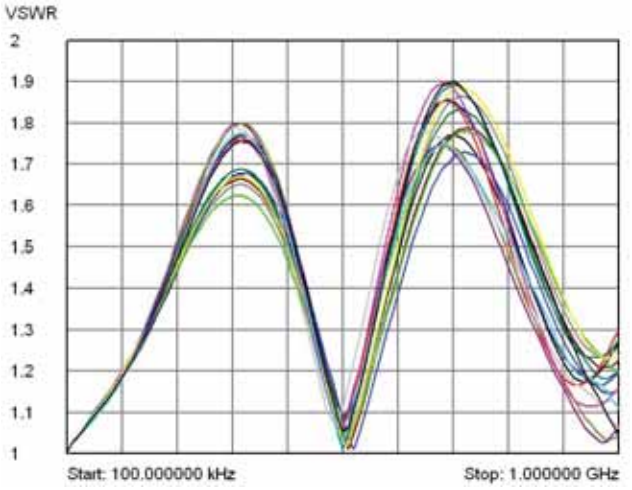
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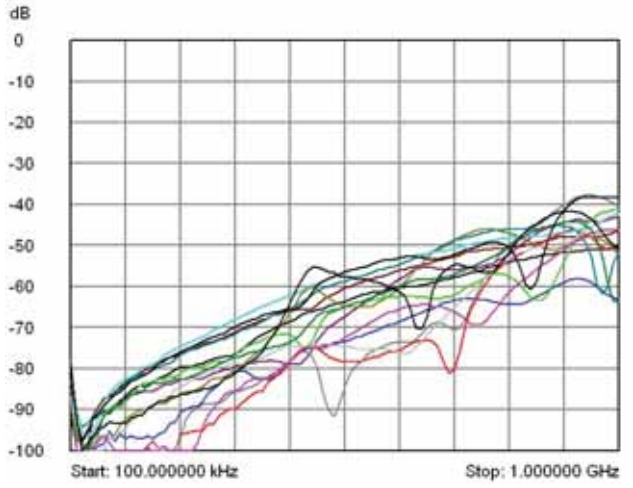
40-747-511/521 Perfomance Plots (Plots taken from typical sample showing all connecting paths for parameter)



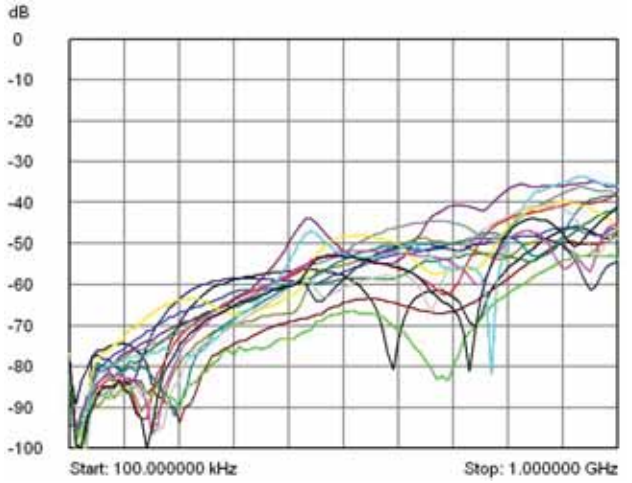
40-747-511/521 (50Ω) Typical insertion loss plots for each channel.



40-747-511/521 (50Ω) Typical VSWR plots for each channel.

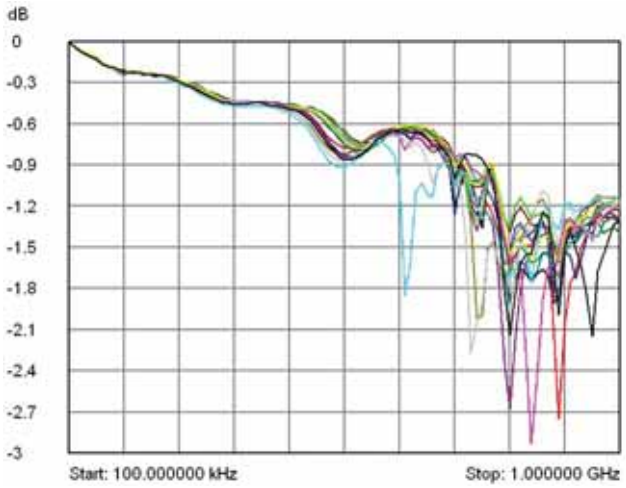


40-747-511/521 (50Ω) Typical crosstalk between neighbouring multiplexer channels.

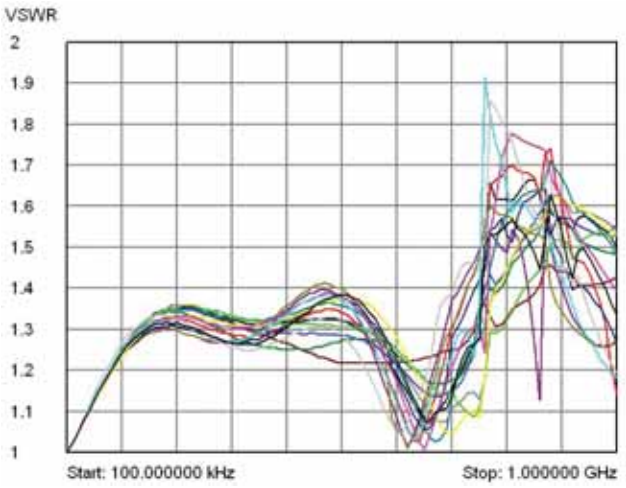


40-747-511/521 (50Ω) Typical Isolation Plots for each input channel.

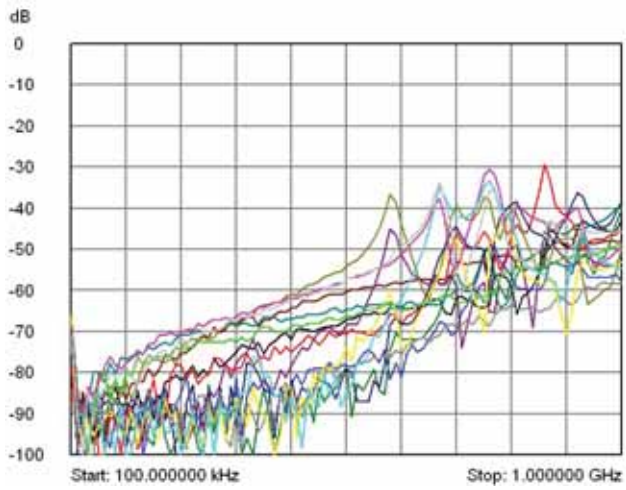
40-747-731/751 Perfomance Plots (Plots taken from typical sample showing all connecting paths for parameter)



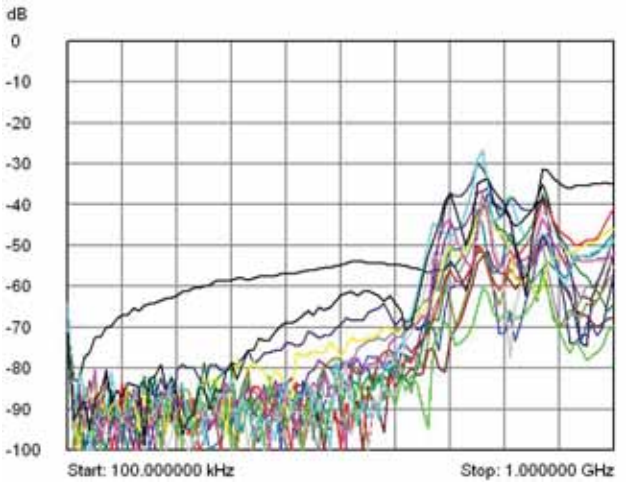
40-747-731/751 (75Ω) Typical insertion loss plots for each channel.



40-747-731/751 (75Ω) Typical VSWR plots for each channel.



40-747-731/751 (75Ω) Typical crosstalk between neighbouring multiplexer channels.



40-747-731/751 (75Ω) Typical Isolation Plots for each input channel.

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RF Specification - 50Ω Versions

RF Frequency Range:	DC to 1GHz
Insertion Loss:	Typically <1.0dB to 500MHz Typically <1.6dB to 1GHz
VSWR:	Typically <1.8:1 to 500MHz Typically <1.9:1 to 1GHz

Note: VSWR measurements were carried out for each selected input with the 50Ω load fitted to the common terminal of the MUX.

Isolation:	Typically >44dB to 500MHz Typically >33dB to 1GHz
Crosstalk:	Typically <-55dB to 500MHz Typically <-37dB to 1GHz

RF Specification - 75Ω Versions

RF Frequency Range:	DC to 1GHz
Insertion Loss:	Typically <1.0dB to 500MHz Typically <2.9dB to 1GHz
VSWR:	Typically <1.42:1 to 500MHz Typically <1.92:1 to 1GHz

Note: VSWR measurements were carried out for each selected input with the 75Ω load fitted to the common terminal of the MUX.

Isolation:	Typically >54dB to 500MHz Typically >27dB to 1GHz
Crosstalk:	Typically <-54dB to 500MHz Typically <-29dB to 1GHz

Other Switching Specifications

Maximum RF Power:	10W
Maximum DC Voltage:	30V
Maximum DC Current:	0.5A
Operating Time:	5ms typical
Life Expectancy:	>20 million operations (low power) >300,000 operations (max power)

Power Requirements from PXI Power Supply

+3.3V	+5V	+12V	-12V
0	320mA (typ 240mA)	0	0

Mechanical Characteristics

SMA connector version: Dual slot 3U PXI (CompactPCI card).
All other versions: Single slot 3U PXI (CompactPCI card).

Module weight: 300g (40-747-511)
300g (40-747-751)

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 via front panel mounted coaxial connectors, type dependant upon product code.

Product Order Codes

Single 16:1 RF MUX SMB 50Ω 1GHz	**40-747-511**
Single 16:1 RF MUX SMA 50Ω 1GHz	**40-747-521**
Single 16:1 RF MUX 1.0/2.3 75Ω 1GHz	**40-747-731**
Single 16:1 RF MUX SMB 75Ω 1GHz	**40-747-751**

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 kits for the 40-747 range are as follows:

91-100-031 kit for 40-747-511
91-100-031 kit for 40-747-521
91-100-031 kit for 40-747-731
91-100-029 kit for 40-747-751

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

Mating Connectors & Cabling

For connection accessories for the 40-747 range please refer to the **90-011D** RF Cable Assemblies data sheets where a complete list and documentation can be found for accessories, or refer to the Connection Solutions catalog.

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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 Switching chassis. For information on driving your switching solution in an LXI environment refer to the LXI Product Guide.



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

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