

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Visit our website - *Click HERE*

20-745
2GHz RF Multiplexer Module



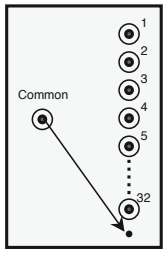
- R.F. Multiplexer with up to 2GHz Bandwidth
- Configurable as 32 to 1, Dual 16 to 1 or Quad 8 to 1 Multiplexer
- Wide Choice of Connectors: SMB, BNC, BT Type 43/SMZ, SMA or 1.0/2.3
- Built-In Self Test
- Front Panel LED Indicators
- Suitable for Building Larger Switching Networks
- 75Ω Version Suitable for Telecoms and High Quality Video Switching

The 20-745 series are a range high density 2000MHz Multiplexers arranged as a Quad 8 to 1, Dual 16 to 1 or Single 32 to 1 configuration, all with excellent Insertion Loss, VSWR & Isolation, available in a choice of 50Ω or 75Ω versions with SMA, SMB, Type 43/SMZ, BNC or 1.0/2.3 Connectors.

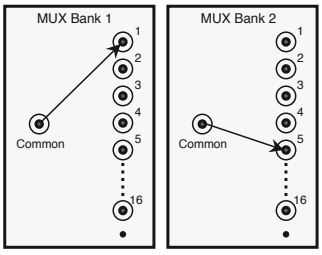
This module may also be easily configured as a Single 32 to 1, Dual 16 to 1 or Quad 8 to 1 multiplexer, to ease the construction of large RF switching systems.

This module is a higher density version of type 20-740 with the automatic termination function removed, the RF performance specification is similar. It is an equivalent to the 20-730-902 balanced 120Ω multiplexer.

Applications for the 20-745 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.



Single 32 Channel Mode



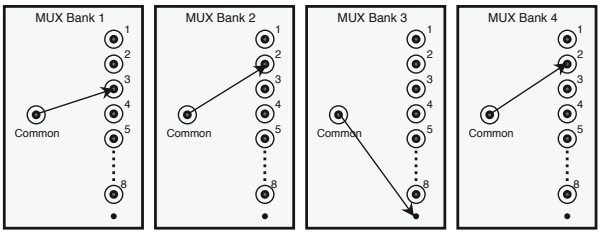
Dual 16 Channel Mode

Programming

The Multiplexer module is simple to program:-

`ARESET a`	Open all channels on device `a`
`DELAY t`	Force a minimum delay of `t` milliseconds between two instructions
`DIAGNOSTIC?`	Report any Self Test errors
`RESET`	Open all switches on all modules
`VIEW? a`	View status of device `a`

`CHAN a,b,c` Select channel `c` on multiplexer `a`, bank `b`



Quad 8 Channel Mode

Self Test

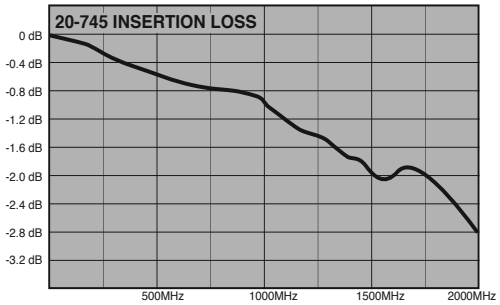
Self-Test is invoked at power on and may also be operated under software (*TST?) or via a recessed push button. Self-Test pass is indicated on a front panel LED with a full pass/fail description available using the DIAGNOSTIC? command. Self-Test comprises 2 levels:-

1. **Logic Test**
2. **Relay Coil Test**

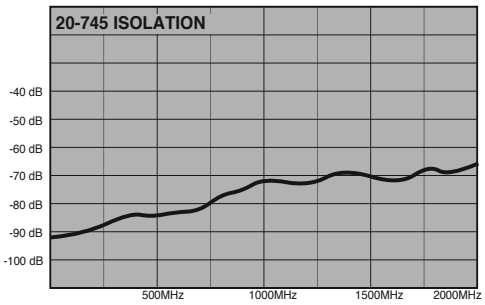
These two levels of testing will find the majority of failures, however please note that the relay contacts themselves are not tested.

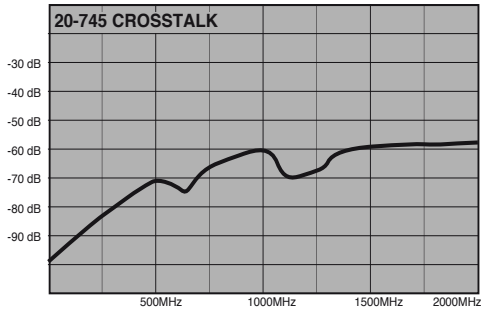
ISSUE 3, OCT 2006

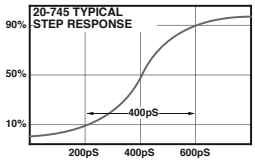
Artisan Scientific - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisan-scientific.com











Typical RF Performance Plots for 20-745 in Dual 16 to 1 Mode (SMB/Type 43 connector)

Operating/Storage Conditions

Operating Conditions

Operating Temperature:	0°C to 55°C
Humidity:	Up to 95% non-condensing
Altitude:	5000m

Storage and Transport Conditions

Storage Temperature:	-20°C to +75°C
Humidity:	Up to 95% non-condensing
Altitude:	15000m

Latest Details

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

Specification (16 to 1 Mode)

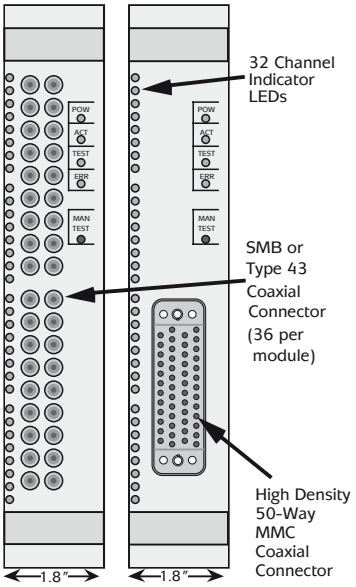
Characteristic Impedance:	50Ω or 75Ω
Maximum Frequency:	1500MHz
Rise Time:	<0.5ns
Maximum Insertion Loss:	<2dB
V.S.W.R. (at 1300MHz):	<1:1.6
Isolation (at 2000MHz):	>75dB
Crosstalk (at 2000MHz):	>55dB
Maximum Voltage:	100V DC
Maximum Power:	10W
Termination Resistor Max Power:	0.25W
Maximum Switch Current:	0.1A
On Path Resistance:	<250mΩ
Off Path Resistance:	$>10^8$Ω
Differential Thermal Offset:	<20µV
Switching Time:	10ms
Expected Life (Low power):	$>2x10^7$ operations
Expected Life (Full power):	$>3x10^5$ operations

Additional Specification (8 to 1 Mode)

Maximum Frequency:	2000MHz

Additional Specification (32 to 1 Mode)

Maximum Frequency:	1000MHz



Width and Dimensions

All modules conform to the 6U height (262mm) Eurocard standard and are 160mm deep, panel width is 1.8 Inches (45.7mm).

Connectors

The 20-745 RF Multiplexer Module is available with BNC, SMA, SMB, Type 43/SMZ or 1.0/2.3 connectors. Other connector types are available to order, please contact the sales office for details.

Product Order Codes

2000MHz RF Multiplexer, 50Ω, SMB	**20-745-501**
2000MHz RF Multiplexer, 50Ω, SMA	**20-745-521**
1300MHz RF Multiplexer, 50Ω, BNC	**20-745-531**
1500MHz RF Multiplexer, 75Ω, Type 43/SMZ	**20-745-701**
1000MHz RF Multiplexer, 75Ω, BNC	**20-745-731**
1500MHz RF Multiplexer, 75Ω, 1.0/2.3	**20-745-741**

The default configuration should be specified when ordering (Quad 1 to 8, Dual 16 to 1 or Single 32 to 1).

Mating Connectors & Cabling

50Ω SMB to SMB Lead, 1m length	**10-987-510**
50Ω SMA to SMA Lead, 1m length	**10-981-510**
50Ω BNC to BNC Lead, 1m length	**10-980-510**
75Ω 1.0/2.3 to 1.0/2.3 Lead, 1m length	**40-977-731**
75Ω SMZ to SMZ Lead, 0.5m length	**10-988-705**
MMC Co-ax crimp Pins, 50Ω	**10-986-005**
MMC Co-ax crimp Pins, 75Ω	**10-986-007**

© Copyright (2006) Pickering Interfaces. All Rights Reserved
Pickering Interfaces maintains a commitment to continuous product development, consequently we reserve the right to vary from the description given in this data sheet.

Artisan Scientific - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisan-scientific.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP