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Find the *Pickering 40-796-922* at our website: ***Click HERE***

40-795/796
8/16 Tributary Daisy Chain Switch Balanced

- Suitable For Testing SONET/SDH Transmission Multiplexers
- Suitable For Switching 100/120Ω Balanced Lines
- 8 or 16 Tributaries Per 1-Slot Module
- Up To 272 Tributaries Per 18 Slot PXI Chassis
- Expandable To Any Size: 8, 16, 24...
- All Tributaries Can be Daisy-Chained to One Signal
- VISA, IVI & Kernel Drivers Supplied for Windows XP/Vista/7/8
- Supported by PXI or LXI Chassis
- Diagnostic Tool Available (PI-MXT)
- 3 Year Warranty



The 40-795/796 Daisy Chain Switching Module is designed for telecom test applications. It allows production or verification testing of SONET/SDH transmission multiplexers switching 2MBit/s (E1) or 1.5MBit/s (T1) data over 100Ω or 120Ω balanced lines. The following modules are available:

- 8 Tributary Daisy Chain Switch Balanced Module (40-795-001)
- 16 Tributary Daisy Chain Switch Balanced Module (40-796-001)

Multiple modules can be cascaded together to form very large systems, for example a 7-slot PXI chassis can contain a 112 tributary switching system and an 18-slot PXI chassis can contain up to 272 tributaries.

The Daisy Chain Switching Module allows traffic to be sequentially Daisy-Chained through all tributaries (or any selection of tributaries) and modules can be cascaded to test any number of tributaries. Multiplexers are provided to allow transmit or receive instrumentation to be connected to any tributary. This allows specific testing of a port, for example for the measurement of pulse shape distortion or return loss.

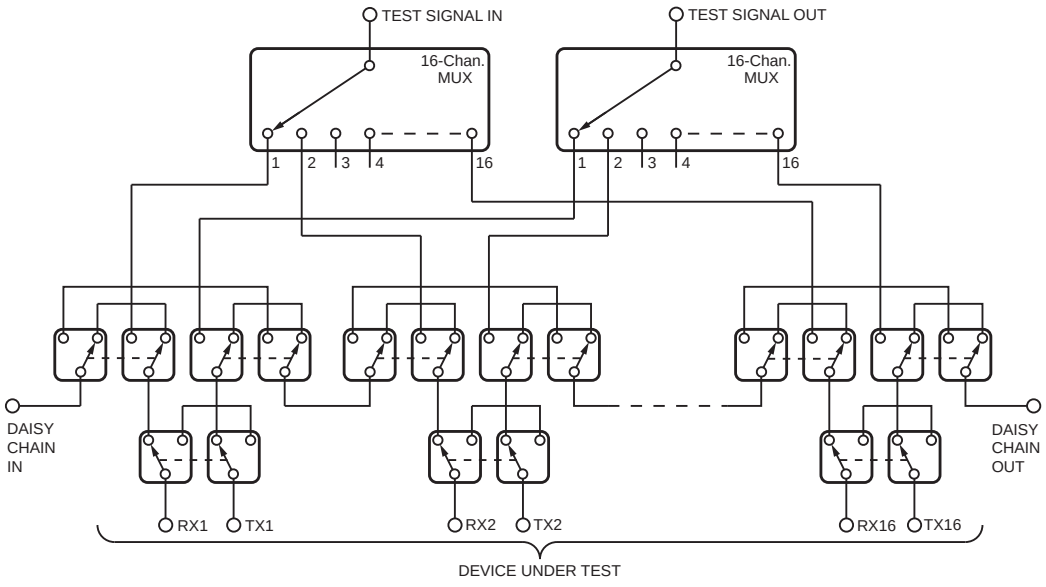
SDH/SONET Tributary Testing is a very specialised area, please contact Pickering Interfaces for additional application information and to discuss your exact requirements.

Pickering Interfaces also have SDH/SONET switching solutions in our System 30 (VXI) and system 20 (IEEE-488) switching systems.

Simplified Block Diagram for the 16 Tributary Daisy Chain Switch Balanced Module (40-796).

The 8 Tributary version (40-795) is the same configuration with half the channels.

Note that each path and switch shown represents a two-pole balanced connection.



ISSUE 6.0 MAY 2013

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General Specification

Maximum Voltage:	100VDC/100VAC
Maximum Power:	30W
Maximum Switch Current:	1A
On Path Resistance:	<1.5Ω for all connections (except for Daisy Chain In – Daisy Chain Out, which is <5Ω)
Off Path Resistance:	>1x10^{8}Ω
Expected Life (Low Power):	>1x10^8 operations
Expected Life (Max Power):	>2x10^5 operations
Total Switching Time:	10ms
Relay Mechanical Setting Time:	<3ms

R.F. Specification

Characteristic Impedance:	100/120Ω
Insertion Loss	
Test Signal to Rx/Tx:	<0.25dB to 10MHz
Daisy Chain:	<0.5dB (40-795) and <1dB (40-796) to 10MHz
VSWR	
Test Signal to Rx/Tx:	<1.3 to 10MHz
Daisy Chain:	<1.5 to 10MHz (40-795) and to 5MHz (40-796)

Power Requirements

+3.3V	+5V	+12V	-12V
0	500mA	0	0

Width and Dimensions

Single width 3U PXI/CompactPCI instrument module consisting of mother and daughter cards (40-796) or mother card only (40-795)

3D models for all versions in a variety of popular file formats are available on request.

Connectors

PXI bus: 32-bit P1/J1 backplane connector

Front panel connector: 96-way male SCSI style micro-D

Using The Tributary Daisy Chain Switch

The 40-795/796 comprises 2 sections (see graphic on previous page).

1. Daisy-Chain switches. These are used to feed 2M signals into and out of the DUT (device under test), any selection of tributaries may be routed (e.g. all even, all odd, etc).

2. Breakout multiplexer. This is used to test a specific tributary.

The 40-795/796 is programmed as a 4x16 matrix:-

1st row is used to route the Daisy-Chain switches. The default setting is for all tributaries to be selected.

2nd row is used to switch polarity.

3rd row is used to select the receive multiplexer to a specific tributary.

4th row is used to select the transmit multiplexer to a specific tributary.

Product Order Codes

8-Tributary Daisy Chain Switch Balanced Module	**40-795-001**
16-Tributary Daisy Chain Switch Balanced Module	**40-796-001**

Support Products

Self-Test Diagnostic Tool (PI-MXT)

These modules are compatible with Pickering's 90-100 PI-MXT test tool. This enables all switch paths to be automatically tested so that faulty relays can be easily identified. The tool consists of a Windows executable program and an adapter for the specific module, a user supplied multimeter capable of 4-wire resistance measurement is also required.

The PI-MXT test adapter required for the Tributary Daisy Chain Switch module is as follows:

90-100-229 supports 40-795-001 & 40-796-001

For further details on the PI-MXT tool, please refer to the 90-100 data sheet and user manual available from the Pickering website.

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 40-795/796 range are as follows:

91-100-040 & 91-100-023 kits for 40-795-001
91-100-040 & 91-100-023 kits for 40-796-001

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

Mating Connectors & Cabling

For connection accessories for the 40-795/796 modules please refer to the **90-016D** 96-way SCSI style micro-D connector data sheet 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.



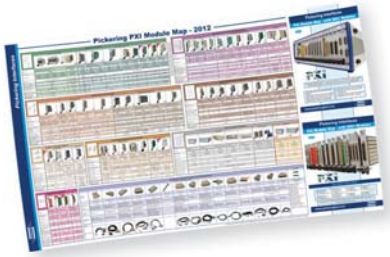
"**The Big PXI Catalog**" gives full details of Pickering's entire range of PXI switch modules, instrument modules and support products.
At over 500 pages, the Big PXI Catalog is available on request or can be downloaded from the Pickering website.



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.

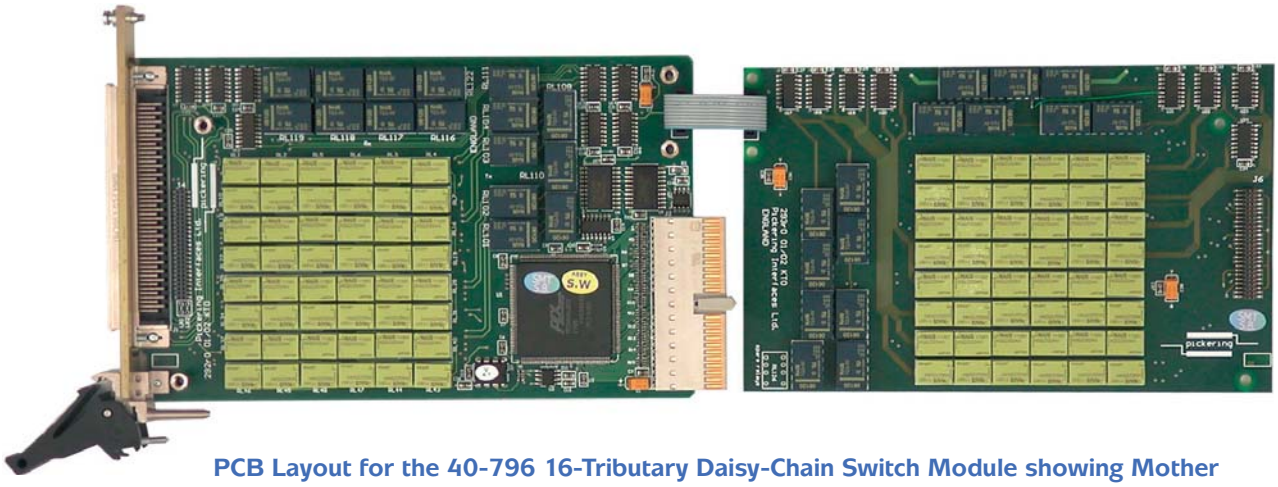


The "**PXI Module Map**" - a simple fold-out selection guide to all Pickering's 600+ PXI Modules.

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PCB Layout for the 40-796 16-Tributary Daisy-Chain Switch Module showing Mother and Daughter cards. The 8-tributary version (40-795) consists of the Mother card only.

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