

## PXI/cPCI High-Density, 500 MHz, RF Multiplexer (MUX) Switching Module

- ◆ **Adapt-a-Switch® High-Density RF MUX Module on a Racal Instruments PXI Carrier**
- ◆ **Extended Depth Providing High Channel Count and Market-Leading Performance**
- ◆ **500 MHz Bandwidth**
- ◆ **Excellent Signal Integrity with Low Crosstalk, Isolation, and Insertion Loss**

Racal Instruments 1260-1150, a PXI, RF MUX switch, is an innovative, seamless integration of an off-the-shelf Adapt-a-Switch® RF MUX module on a Racal Instruments PXI carrier. The module installs without the need for user-supplied software or hardware to install or operate.

The module's extended 12.1" length has market-leading performance that utilizes the available service area between the front of the chassis and a cable/connector receiver. The 1260-1150 has 85% greater component density than a typical PXI RF MUX module, providing higher switch performance.

Its 10 individual, 1x4 MUX's are at least 250% more channels than a typical RF MUX with four individual MUX's.

The 1260-1150 has a 500 MHz bandwidth. Additionally, specifications are provided for up to 1 GHz bandwidth, including cables that have been tested up to 1 GHz. These cables are available for purchase in 2, 6, or 12 foot lengths. Also, by cutting the cable in half, the user can support 2 channels per cable and alleviate the need for a special crimp tool. A coaxial connector housing (shell) is included with each 1260-1150 while connector pins are available for purchase.

The module's excellent crosstalk isolation, and insertion loss make the 1260-1150 ideal for use with function/pulse generators, universal counter/timers, oscilloscopes, high-speed digital test units and other instruments involving high-frequency for fast pulse signals.

The electromechanical relays are interchangeable input/outputs, able to meet the most demanding of test requirements.

In keeping with cPCI requirements, the module can be ordered either as a 5 V or 3.3 V PXI bus voltage module. The module includes drivers for LabWindows/CVI 5.1 and LabVIEW 7.0.

# 1260-1150 PRODUCT SPECIFICATIONS

## INPUT

### Maximum Switching Voltage

100 VDC or 100 VAC

### F Maximum Switching Current

0.25 A

### Maximum Switching Power

RF: 2 W

## DC PERFORMANCE

### Path Resistance

<1.0 Ω

### Insulation Resistance

10<sup>9</sup> Ω

### Thermal EMF

<50μV

## AC PERFORMANCE

### Bandwidth (-3dB)

500 MHz

### Insertion Loss

500 MHz: <3 dB

800 MHz: <6 dB

1 GHz: <9 dB

### Isolation

>35 dB to 250 MHz

>20 dB to 800 MHz

>10 dB to 1 GHz

### Crosstalk

>35 dB: to 250 MHz

>20 dB: 250 to 800 MHz

>10 dB: 800 to 1 GHz

### Capacitance

Channel-Chassis: 100 pF

Open Channel: 10 pF

### VSWR

<1.5 to 1 at 250 MHz

<2.0 to 1 at 1 GHz

## INTERFACE DATA

### Cooling

Airflow: 3.0 l/s

Back Pressure: 0.7 mm H<sub>2</sub>O

## Power Requirements

+5 VDC at 150 mA plus 30 mA per energized relay (1.5 A max.)

## ENVIRONMENTAL DATA

### Temperature

Operating: 0° to 55° C

Storage: -40° C to 75° C

### Relative Humidity

85% ±5%, non-condensing at <30° C

### Altitude

Operating: 10,000 ft.

Non-Operating: 15,000 ft.

### Shock

30 G, 11 ms, ½ sine wave

### Vibration

0.013 inch: double amplitude 5-55 Hz

### Bench Handling

4-inch drop at 45°

## EMC

### Emissions

EN55011A with limits in accordance with EN50081-1

### Immunity

IEC801-2, 3, 4 with limits in accordance with EN50082-1

### Safety

EN61010-1

## RELIABILITY

### Switching Time

<10 ms (includes settling time)

### Rated Switch Operations

>100,000,000 operations at 1 mW

### MTBF

559,408 hours (MIL-HDBK-217E) not including relays

### MTTR

<5 minutes

## MECHANICAL

### Weight

14 oz. (0.45 kg)

### Dimensions

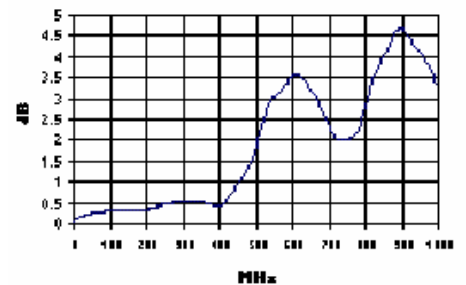
4.5: H x 0.75" W x 9.5" D

### Front Panel I/O Interface Connector

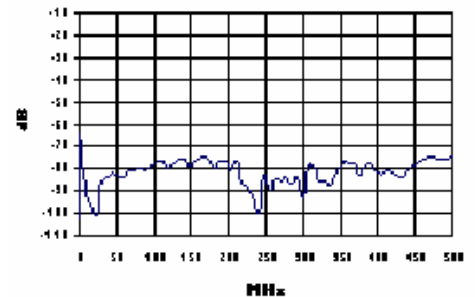
26-pin Rack & Panel w/Coaxial Pins

## TYPICAL CHANNEL

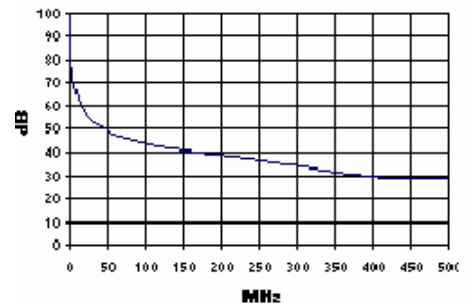
### Insertion Loss



### Crosstalk



### Isolation



## ORDERING INFORMATION

### MODEL/DESCRIPTION

Racal Instruments 1260-1150-3,, PXI, AaS, 10-channel SP4T, 500 MHz, 3.3V Bus Voltage

Racal Instruments 1260-1150-5, PXI, AaS, 10-channel SP4T, 500 MHz, 5V Bus Voltage

Racal Instruments PXI to AaS Carrier/Enclosure 3.3V Kit

Racal Instruments PXI to AaS Carrier/Enclosure 5V Kit

Mating Coaxial Pins

Single Coaxial Cable w/Connectors, 2 ft

Single Coaxial Cable w/Connectors, 6 ft

Single Coaxial Cable w/Connectors, 12 ft.

### PART NUMBER

1260-1150-001

1260-1150-002

408000-001

408000-002

602220-900

407368-001

407368-003

407368-006

Note: The 1260-1150 is supplied with one set of mating backshells. Coaxial pins or cables must be ordered.

**CE** The CE Mark indicates that the product has completed and passed rigorous testing in the area of RF Emissions, Immunity to Electromagnetic Disturbances and complies with European electrical safety standards.

The EADS North America Defense Test and Services policy is one of continuous development, consequently the equipment may vary in detail from the description and specification in this publication.



EADS North America Defense Test and Services

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