1 GHz Coaxial Tree Switch Plug-in Eight 1x4 and Four 1x2 1260-X153

- **High-Density Coaxial Connector Interface**
- **Software Re-configurable**
- **Excellent Signal Integrity**
- **No Un-terminated Stubs**

Racal Instruments 1260-X153 is a high frequency, coaxial 1x4 binary tree switch plug-in for use in the X-series Adapt-a-Switch® 1260-100X VXI carrier.

The 1260-X153 is intended to switch signals to and from the following types of high-speed instruments; oscilloscopes, digitizers, arbitrary waveform generators, function generators, pulse/pattern generators and counter/timers.

This module is highly configurable via software. Configurations include:

- **Ten (1x4)**
- **Eight (1x4) and Four (1x2)**
- **Nine (1x4) and Two (1x2)**
- **Four (1x8) and Two (1x4)**

High signal fidelity is maintained through the use of high quality RF relays and coaxial connectors. This high quality design reduces insertion loss while maintaining excellent isolation and crosstalk.

When used with the Racal 1260-100X VXI carrier, the 1260-X153 requires an Option 01T to communicate with the switch cards and to provide both message-based operation for ease of use and register-based operation for maximum speed.

An IVI-COM driver is available for this module.

1260-X153 PRODUCT SPECIFICATIONS

INPUT PERFROMANCE

Maximum Voltage
200V peak

Maximum Switching Voltage
110 VDC, 125 VAC

Switching Current
1 Amp, 2 Amps Carry

Switching Power
30 W, 37.5 VA, 1W RF

DC PERFORMANCE

Initial Path Resistance
< 0.5 ohm

Insulation Resistance
> 10^8 ohms to ground
> 10^9 ohms open channel

AC PERFORMANCE (into 50 Ω)

Bandwidth (-3 dB)
> 1 GHz

Insertion Loss
<0.4 dB to 100 MHz
<1.2 dB to 500 MHz
<2.0 dB to 800 MHz
<3.0 dB to 1 GHz

VSWR

<1.1:1 to 100 MHz
<1.6:1 to 500 MHz
<1.8:1 to 1 GHz

Crosstalk
<-70 dB to 1 MHz
<-65 dB to 100 MHz
<-45 dB to 500 MHz
<-35 dB to 1 GHz

Isolation
>70 dB to 1 MHz
>65 dB to 100 MHz
>40 dB to 500 MHz
>30 dB to 1 GHz

Capacitance
<100 picofarads to ground
<10 picofarads open channel

INTERFACE DATA

Current Draw
+5 VDC at 1.0 Amp Max
+5 VDC at 27 mA per energized relay

Cooling Requirements
See 1260-100X cooling data

Maximum Overall Power Dissipation
60 W

ENVIRONMENTAL DATA

Temperature
Operating: 0° C to + 55° C
Non-operating: -40° C to + 75° C

Relative Humidity
85% ± 5% non-condensing at < 35° C

Altitude
Operating: 10,000* ft.
Non-operating: 15,000 ft.

Shock
30 g, 11 ms, ½ sine wave

Vibration
0.013 in. (pk-pk), 5-55 Hz

EMC

Emissions**
EN55011A with limits in accordance with EN50081-1

Immunity**
IEC901-2,3,4 with limits in accordance with EN50082-1

SAFETY**

EN61010-1
Impulse Withstand 1000 V

RELIABILITY

Relay Settling Time
< 10 ms

MTBF (MIL-HDBK-217 E)
> 130,000 hrs at 25 ° C

Relay Life
Mechanical: 50,000,000
Electrical: 100,000 At full rated load
500,000 At 12W or 18.75 VA

MECHANICAL

Bench Handling
4-inch drop at 45°

Weight
18 oz. (0.51 kg)

Dimensions
4.4" H X 0.75" W X 12.6" D

Front Panel I/O Interface Connectors
2, 26-pin connectors

* Operation at 15,000 feet requires de-rating of maximum overall power dissipation to 49 W.

** Certification Pending

ORDERING INFORMATION

MODEL/DESCRIPTION	PART NUMBER
Racal Instruments 1260-X153, 8 (1x4), 4 (1x2) Coaxial switch card plug-in	408011
Mating Connector Backshell	602221-126
Mating Connector Pin	602221-903
Cable Assembly, 2 ft., 50 Ω, Single Coax Cable w/(2) Coax Plugs	407746-001
Cable Assembly, 6 ft., 50 Ω, Single Coax Cable w/(2) Coax Plugs	407746-003
Cable Assembly, 12 ft., 50 Ω, Single Coax Cable w/(2) Coax Plugs	407746-006
Additional User Manual	980824-X153

EADS North America Defense Test and Services
1.800.722.2528/1.949.859.8999 sales@eads-nadefense.com