

High-Density Multiplexer Plug-In

Racal Instruments 1260-138A is a high-density scanner/multiplexer switch card for use in either Racal Instruments 1260-100 or 1260-101 VXI Carrier or Racal Instruments 1256 GPIB/Ethernet Switching System.

This plug-in provides maximum flexibility to construct a wide range of scanner/multiplexer configurations under software control while maintaining excellent bandwidth and signal integrity.

All relays are bi-directional, enabling use as either a scanner or multiplexer. Each (1x8) multiplexer can be used to connect any combination of up to 8 two-wire signals to a two-wire common. These commons can be linked under program control to construct any combination of larger multiplexers. Possible configurations include:

- One (1x64) two-wire
- Two (1x32) two-wire
- Four (1x16) two-wire
- One (1x16) two-wire plus One (1x48) two-wire
- Many other configurations

Multiple plug-ins can be linked under program control via the Adapt-a-Switch carrier or 1256 analog bus to form large two and four-wire multiplexers. This allows the user to construct very large multiplexers without external wiring. This eases the integration/wiring task while maintaining signal integrity.

This card was designed for true differential switching, which makes it ideal for telecom and datacom applications. However it has great single ended characteristics as well with >85MHz bandwidth. With its combination of density, versatility, expandability, and high signal integrity, the 1260-138A is ideal for construction of large switching systems, as well as applications where the final switching requirements are not fully defined. The 1260-138A is an excellent choice for continuity testing, audio, video, telecom, datacom, and multipurpose ATE systems

The Option-01T interface (for VXI) controls the 1260-138A using either register-based or message-based commands. The 1256 (for GPIB/Ethernet) supports message-based operations. Refer to the Option-01T/1256 literature for more information about product specifications and features such as include, exclude, and scan lists, user-defined path names, and reset states.

The Adapt-a-Switch® series includes VXIplug&play support for WIN98/NT/2000/XP frameworks, including drivers for LabWindows/CVI and LabVIEW.

- ◆ **Eight 1x8, Two-wire Scanner/Multiplexer**
- ◆ **Link 1x8 Cells Under Program Control**
- ◆ **Link up to 6 Plug-Ins Under Program Control**
- ◆ **True Differential Design Ideal for Telecom and Datacom Applications**
- ◆ **Two and Four-wire Switching Modes**
- ◆ **Standard Adapt-a-Switch® Plug-In Design for Ease of Replacement**

1260-138A PRODUCT SPECIFICATIONS

INPUT

Maximum Switching Voltage
300 VDC or 300 VAC

Maximum Switching Current
2 ADC or 2 AAC

Maximum Switching Power
60 W, 125 VA

DC PERFORMANCE

Path Resistance
1x8 (2-wire): <500 m Ω
1x64 (2-wire): <500 m Ω

Insulation Resistance
10⁹ Ω

Thermal EMF
1x8 (2-wire): <15 μ V
1x64 (2-wire): <20 μ V

AC PERFORMANCE (into 50 Ω)

Bandwidth (-3 dB)
1x8: >85 MHz
1x64: >4 MHz

Insertion Loss (1X8)
100 kHz: <0.1 dB
1 MHz: <0.2 dB
10 MHz: 1.7 dB
30 MHz: <1.7 dB

Isolation (1x8)
100 kHz: >88 dB
1 MHz: >78 dB
10 MHz: >44 dB
30 MHz: >40 dB

Crosstalk (1X8)
100 kHz: <-63 dB
1 MHz: <-63 dB
10 MHz: <-41 dB
30 MHz: <-34 dB

Capacitance
1x8 (Channel to Chassis): <50 pF
1x8 (Open Channel): <5 pF
1x8 (Hi to Lo): <110 pF
1x64 (Hi to Lo): <400 pF

INTERFACE DATA

Cooling Requirements
See 1260-100 cooling data.

Power Requirements
+5 VDC at 150 mA plus 30 mA per energized relay (2 A)

ENVIRONMENTAL DATA

Temperature
Operating: 0 $^{\circ}$ C to 55 $^{\circ}$ C
Storage: -40 $^{\circ}$ C to 75 $^{\circ}$ C

Relative Humidity
85% \pm 5%, non-condensing at <30 $^{\circ}$ C

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

Shock
30 g, 11 ms, 1/2 sine wave

Vibration
0.013 inch P-P, 5-55 Hz

Bench Handling
4-inch drop at 45 $^{\circ}$

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
<3 ms max. (includes settling time)

Rated Switch Operations
Mechanical: 1 x 10⁸
Electrical: 1 x 10⁶ @ 50 V, 0.1 A
1 x 10⁶ @ 10 V, 10 mA

MTBF

MIL-HDBK-217E: 183,169 hrs.
Bellcore: 154,107 hrs.

MTRR

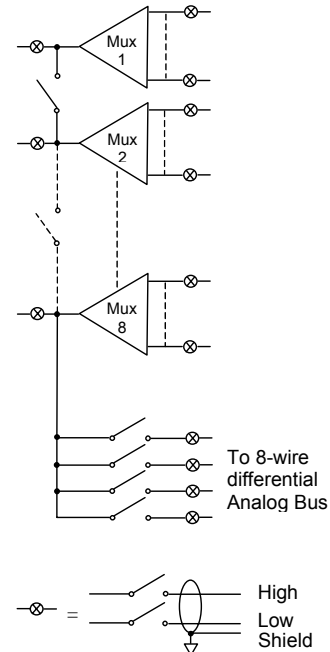
<5 minutes

MECHANICAL

Weight
13 oz. (0.45 kg)

Dimensions
4.5" H x 0.75" W x 9.5" D

Front Panel I/O Interface Connector
160 pin DIN Connector



1260-138A Block Diagram

ORDERING INFORMATION

MODEL/DESCRIPTION

Racal Instruments 1260-138A Adapt-a-Switch High-Density Multiplexer Plug-in Module
160-pin Mating Connector, 160-pin connector w/pins
160-pin Cable Assembly, 6ft., 24AWG

PART NUMBER

407723
407664
407408-001

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.



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