Racal Instruments™
1260-50C/D
200 MHz RF Multiplexer Module

The Racal Instruments™ 1260-50 is ideal for switching wide-band signals up to 200 MHz. It is intended for use with function/pulse generators, universal counter/timers, oscilloscopes and other instruments where high frequency or fast pulse signals are switched.

Key Features

- **1260-50C configurable as:**
    - **Eight 1x4**
    - **Four 1x9**
    - **Two 1x19**
    - **One 1x39**

- **1260-50D configurable as:**
    - **Sixteen 1x4**
    - **Eight 1x9**
    - **Four 1x19**
    - **Two 1x39**
    - **One 1x79**

- **200 MHz bandwidth with excellent crosstalk and isolation**

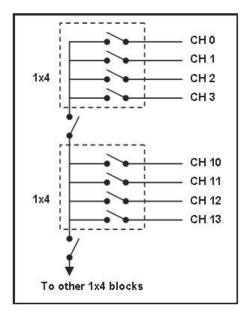- **Software configurable**

- **Coaxial interfaces**

Product Information

The 1260-50C consists of eight 1x4 10W multiplexers and the 1260-50D consists of 16 1x4 50 Ω multiplexers. These multiplexers are bi-directional and reconfigurable via software. This makes reconfiguration easy and eliminates the need to disassemble the module.

The coaxial connector housing (shell) is supplied with the 1260-50C/D. The connector pins must be purchased separately. Coaxial pins complete with cables for this module are also available. Coaxial cables have been tested up to a 1 GHz bandwidth and are available in 2, 6 and 12 foot lengths with a coaxial pin at each end.

Relay coil currents are monitored to provide user selectable confidence checking, which gives the user additional assurance of proper relay operation.

The 1260-50 is controlled by the Racal Instruments™ Option 01 message-based interface, or the Option 01T message-based and register-based interface, which are explained in detail in their respective data sheets. All 1260 control features explained on the data sheets are available to this module.

1x4 Block Diagram

Specifications

Note: The Astronics Test Systems policy is one of continuous development and improvement. Consequently, the equipment may vary in detail from the description and specifications in this publication.

Maximum Switchable Voltage (Signal-Signal Ground, Resistive Load)
• 200 VDC or 200 VAC$_{pk}$

Maximum Switchable Current Per Channel
• 0.5 ADC, 0.5 AAC$_{pk}$

Maximum Carry Current
• 1 ADC, 1 AAC$_{pk}$

Maximum Switchable Power Per Channel
• 10 WDC, 10 VA, 10 W RF into 5 Ω

DC Performance

Path Resistance
• ≤2 Ω

AC Performance (Into 50 Ω)

Bandwidth (-3 dB)
• 200 MHz

Insertion Loss
• 100 MHz: <0.7 dB

Crosstalk
• 10 MHz: ≤-40 dB
• 100 MHz: ≤-40 dB
• 200 MHz: ≤-35 dB

Isolation
• 10 MHz: >40 dB
• 100 MHz: >-40 dB
• 200 MHz: >-35 dB

VSWR
• ≤1.3:1 at 100 MHz

Propagation Delay Time
• 3 ns (typ)

Interface

Power Requirements (I$_{PM}$)
• +5 V: 0.4 A (2.8 A with Option 01 (installed)
• +12 V: 0.5 A

Front Panel I/O Connector
• 1260-50C: Two 20-Pin GMCT connectors (from Souriau)
• 1260-50D: Four 20-Pin GMCT connectors (from Souriau)

Environmental

MTBF
• 181,526 hrs

Mechanical

Dimensions
• C-size, Single-slot VXIbus Module

Weight
• 2.49 lb (1.17 kg) without Option 01
• 2.87 lb (1.29 kg) with Option 01

Life Expectancy
• 250 x 10^6 Operations (Signal <1.0 V, .010 A)

Cooling Requirements
• Without Option 01/01T
  – Airflow: 1.0 l/s
  – Backpressure: 0.05 mm H$_2$0

• With Option 01/01T
  – Airflow: 2.0 l/s
  Backpressure: 0.2 mm H$_2$0

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

Ordering Information

Note: Compatible smart controllers: A smart card must be installed in the left-most slot of a set of 1260-xx series switch cards. There are two options:

• Option 01: Native command set. For use in previously designed switching systems that used the Option 01.
• Option 01T: SCPI command set. For use in new systems and previously designed systems that used the Option 01T.

Note: Includes two mating connector housings with cable and strain relief. Pins not included. Pins can be ordered separately, either un-crimped or attached to a cable.

407366-001 : Racal Instruments™ 1260-50C (Obsolete)
200 MHz RF Multiplexer (8 1x4)

407366-002 : Racal Instruments™ 1260-50D
200 MHz RF Multiplexer (16 1x4)

Options and Accessories:

OPT-401901-005 : Racal Instruments™ Option 01, Smart Control Module installed (manual must be ordered separately; see below)

404820-005 : Racal Instruments™ Option 01, Smart Control Module (not installed) with manual

OPT-405108-001 : Racal Instruments™ Option 01T Smart Control Module installed (manual must be ordered separately; see below)

407531-001 : Racal Instruments™ Option 01T Smart Control Module (not installed) with manual

602220-900 : Mating Coaxial Pin RG316 (1260-50C requires 40 pins for 2 sets of 20 pins; 1260-50D requires 80 pins for 4 sets of 20 pins)

407368-001 : Single Coaxial Cable with pin at each end, 2 ft (-003, 6 ft; -006, 12 ft)

602220-020 : 20-Pin Connector Body

991040 : Crimp Tool, stop brushing, and die set

990922 : Contact Extraction Tool