



## Self-Terminated Modular Microwave Switching Platform

- ◆ **Accepts 1 to 4 Microwave Switch Plug-Ins in a Dual-Slot VXI Module**
- ◆ **Terminated Plug-Ins in SPDT to SP6T Configurations**
- ◆ **32 Relay Driver Channels are Optional**
- ◆ **Latching and Non-Latching Switches are Supported**
- ◆ **18GHz to 40GHz Operation Available**
- ◆ **Plug-in Design for Low MTTR and Easy Sparing**

Racal Instruments 1260-64M is optimized for high-performance, configurable, terminated microwave switching applications.

The 1260-64M module was designed to switch signals used in modern communications systems including Cellular, PCS, and Satcom applications where terminated switch channels are required. It is also ideal for ATE systems designed for testing Military telecommunications, surveillance, and related equipment.

The 1260-64M provides highly reliable and repeatable operation over a conservatively specified lifetime of >1,000,000 operations. Should relay replacement become required, relays can be removed and replaced in less than five minutes without removing the module from the VXI system. This maximizes system uptime and facilitates field upgrades. User connections are made directly to the relay via front panel SMA connectors, eliminating cumulative losses and induced noise. The module is configurable to the user's requirements with terminated SPDT and SP6T plug-ins (other plug-ins available) with latching and non-latching control available.

A Racal Instruments Option 01T is required to communicate with 1260 series modules, and provides message-based operation for ease of use and register-based operation for maximum speed. The Option 01T mounts in the leftmost 1260 series module and does not consume any VXI slots. The Option 01T provides a single point of software control for the switching system with advanced features such as include, exclude, scan, relay monitoring, user defined path names, and reset states.

Racal Instruments 1260 series line includes VXI plug&play support for Win95/NT/2000/XP operating systems including drivers for LabWindows/CVI and LabView. Please refer to the Option 01T data sheet for additional product features and specifications.

# 1260-64M PRODUCT SPECIFICATIONS

## MICROWAVE PERFORMANCE

### Frequency Range

DC to 40 GHz

### Impedance

50  $\Omega$

### Configurations

SPDT, Multi-Position,  
Self-Terminated

### Maximum Power (typical)

100 MHz: 450 W  
1 GHz: 180 W  
10 GHz: 50 W  
18 GHz: 40 W  
40 GHz: 3 W (Avg.)

### Switching Sequence

Break Before Make

### Operating Modes

Normally Open, Latching,  
Failsafe

## 32-CHANNEL DC PERFORMANCE

Two 16x1 Banks  
30 VDC Max  
Per Bank: 4 A  
Per Switch: 0.5 A

### Maximum Switchable Power

30 WDC, 62.5 VA per Module

### Operating Mode

Normally open

## VXIBUS INTERFACE DATA

### Cooling (w/ Option 01T)

1.2 liter/sec @ 0.08 mm H<sub>2</sub>O

### Power Requirements

+5 VDC at 2.6 A w/Option 01T  
+5 VDC at 1.6 A w/o Option 01T  
+12 VDC at 320 mA per energized RF switch

## ENVIRONMENTAL DATA

### Temperature

Operating: 0° C to 55° C  
Storage: -40° C to 71° C  
Relative Humidity  
5 to 95  $\pm$  5% RH non-condensing,  
75  $\pm$  5% RH above 30° C,  
45  $\pm$  5% RH above 45° C

### Altitude

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

### Shock

30 g, 11ms, 1/2 sine wave

### Vibration

Random, 5-500 Hz

### Bench Handling

4-inch drop at 45°

## EMC

EN61326:1997+A1:1998,  
Class A

## Safety

EN61010-1:1993+A2:1995

## RELIABILITY

### Switching Time

<15 ms (includes settling time)

### Rated Switch Operations

Electrical: 1,000,000 operations at full rated load

### MTBF

176,330 Telcordia (Bellcore)  
169,634 (MIL-HDBK-217 FN2)

### MTTR

<5 minutes

## MECHANICAL

### Weight (typical)

5.25 lbs. w/ Option 01T

### Dimensions

C-size, 2-slot VXIbus module

### Front Panel Mating Connector

SMA male, APC 3.5, K

Frequency Range	DC-3GHz	3-8GHz	8-12GHz	12-18GHz	18-40GHz
Insertion Loss	0.2	0.3	0.4	0.5	0.9
Isolation	80	70	60	60	50
VSWR (MAX)	1.2:1	1.3:1	1.4:1	1.5:1	2.0:1

Construct the 1260-64M part number by filling in the required model codes from the table at each position in the Carrier Module as shown in the diagram. Spare plug-ins or blanking plates are ordered by specifying the full 10 digit part numbers.

**407816-WWXXYYZZ**

1st Position Plug-In Code    ↑    ↑    ↑    ↑    4th Position Plug-In Code  
2nd Position Plug-In Code    ———    ———    3rd Position Plug-In Code

# 1260-64M ORDERING INFORMATION

## ORDERING INFORMATION

### MODEL NUMBER

Racal Instruments 1260-64M  
 \*Racal Instruments 1260-64M-S-2465  
 \*Racal Instruments 1260-64M-S-2466  
 Racal Instruments 12620-64M-WW-XX-YY-ZZ  
 00  
 03  
 09  
 13  
 18  
 39

### DESCRIPTION

Four Position Microwave Switch Carrier Module  
 Microwave Switch Module: 3 1x4, 26.5 GHz, Terminated  
 Microwave Switch Module: 2 1x6, 26.5 GHz, Terminated  
 Configured Microwave Switch Carrier Module  
 Blanking Plate (Covers one vacant carrier position)  
 3 SPDT @ 18GHz Plug-In  
 1 SP6T @ 18GHz, Latching Plug-In  
 1 SP6T @ 18GHz, Terminated Plug-In  
 1 SP6T @ 18GHz, Latching, Terminated Plug-In  
 1 SP6T @ 40GHz, Latching Plug-In

### PART NUMBER

407816  
 407816-S-2465  
 407816-S-2466  
 407816-WWXXYYZZ  
 457008  
 407864-103  
 407864-116  
 407864-126  
 407864-136  
 407864-416

\*See Separate Data Sheet for details

**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.



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