



## 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 Ω

### 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 ± 5% RH non-condensing,  
75 ± 5% RH above 30° C,  
45 ± 5% RH above 45° C

### Altitude

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

### Shock

30 g, 11ms, ½ 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

<u>MODEL NUMBER</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>
Racal Instruments 1260-64M	Four Position Microwave Switch Carrier Module	407816
*Racal Instruments 1260-64M-S-2465	Microwave Switch Module: 3 1x4, 26.5 GHz, Terminated	407816-S-2465
*Racal Instruments 1260-64M-S-2466	Microwave Switch Module: 2 1x6, 26.5 GHz, Terminated	407816-S-2466
Racal Instruments 12620-64M-WW-XX-YY-ZZ	Configured Microwave Switch Carrier Module	407816-WWXXYYZZ
40	32 Channel Relay Driver	407819-032
00	Blanking Plate (Covers one vacant carrier position)	457008
01	1 Transfer Switch @ 18GHz Plug-In	407864-101
02	1 SPDT @ 18GHz Plug-In	407864-102
03	3 SPDT @ 18GHz Plug-In	407864-103
04	1 SP4T @ 18GHz Plug-In	407864-104
05	1 SP6T @ 18GHz Plug-In	407864-106
06	1 Transfer Switch @ 18GHz, Latching Plug-In	407864-111
07	1 SPDT @ 18GHz, Latching Plug-In	407864-112
08	1 SP4T @ 18GHz, Latching Plug-In	407864-114
09	1 SP6T @ 18GHz, Latching Plug-In	407864-116
10	1 SPDT @ 18GHz, Terminated Plug-In	407864-122
11	3 SPDT @ 18GHz, Terminated Plug-In, Narda	407819-123
12	1 SP4T @ 18GHz, Terminated Plug-In	407864-124
13	1 SP6T @ 18GHz, Terminated Plug-In	407864-126
14	1 SP6T @ 18GHz, Terminated Plug-In, Narda	407819-126
15	1 SPDT @ 18GHz, Latching, Terminated Plug-In	407864-132
16	1 SPDT @ 18GHz, Latching, Terminated Plug-In, Narda	407819-132
17	1 SP4T @ 18GHz, Terminated Plug-In	407864-134
18	1 SP6T @ 18GHz, Latching, Terminated Plug-In	407864-136
19	1 SP6T @ 18GHz, Latching, Terminated Plug-In, Narda	407819-136
20	1 Transfer Switch @ 26.5GHz Plug-In	407864-201
21	1 SPDT @ 26.5GHz Plug-In	407864-202
22	3 SPDT @ 26.5GHz Plug-In	407864-203
23	1 SP4T @ 26.5GHz Plug-In	407864-204
24	1 SP6T @ 26.5GHz Plug-In	407864-206
25	1 Transfer Switch @ 26.5GHz, Latching Plug-In	407864-211
26	1 SPDT @ 26.5GHz, Latching Plug-In	407864-212
27	1 SP4T @ 26.5GHz, Latching Plug-In	407864-214
28	1 SP6T @ 26.5GHz, Latching Plug-In	407864-216
29	1 SPDT @ 26.5GHz, Terminated Plug-In	407864-222
30	1 SPDT @ 26.5GHz, Latching, Terminated Plug-In	407864-232
31	1 Transfer Switch @ 40GHz Plug-In	407864-401
32	1 SPDT @ 40GHz Plug-In	407864-402
33	3 SPDT @ 40GHz Plug-In	407864-403
34	1 SP4T @ 40GHz Plug-In	407864-404
35	1 SP6T @ 40GHz Plug-In	407864-406
36	1 Transfer Switch @ 40GHz, Latching Plug-In	407864-411
37	1 SPDT @ 40GHz, Latching Plug-In	407864-412
38	1 SP4T @ 40GHz, Latching Plug-In	407864-414
39	1 SP6T @ 40GHz, Latching Plug-In	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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