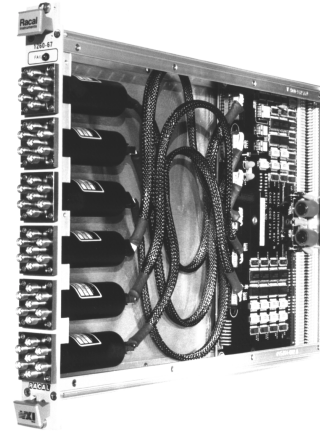## PRODUCT INFORMATION

High-Performance Microwave Switch Module
Model 1260-67

- ◆ **Ideal for Switching Cellular, PCS, and Military Communications Signals**

- ◆ **Bandwidth Greater than 18 GHz**

- ◆ **Up to Six 1x6 Relays in a Single C-size VXIbus Slot**

- ◆ **High-quality Narda Relays**

- ◆ **Self-cleaning Relays for High Repeatability and Accurate System Calibration**

- ◆ **Relays Replaceable from the Front Panel in Under 5 Minutes**

The 1260-67 is optimized for high-performance, high-density, microwave switching applications. This module uses high-quality sealed Narda relays for the ultimate in signal integrity.

The 1260-67 module was designed to switch signals used in modern communications systems including Cellular, PCS, and Satcom applications. It is also ideal for ATE systems designed for testing Military telecommunications, surveillance, and related equipment.

The 1260-67 provides highly reliable and repeatable operation over a conservatively specified lifetime of >1,000,000 operations. Narda's special microwave relay design includes a self-cleaning wiper that cleans the contacts every time it

closes to maintain specifications over its lifetime.

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 SMA connectors at the front panel of the VXI module, eliminating cumulative losses and induced noise.

The module is available in three standard configurations with 2, 4, or 6 six-throw relays, respectively. Custom configurations are available; contact the factory for details. For applications requiring terminations or frequencies up to 40GHz, Racal Instruments recommends the 1260-64M.

An 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 on 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.

The 1260 series line includes VXI *plug&play* support of Win95/NT frameworks including drivers for LabWindows/CVI and LabView. Please refer to the Option 01T data sheet for additional product features and specifications.

1260-67 SPECIFICATIONS

MICROWAVE PERFORMANCE
Bandwidth (-3dB)
>18GHz
Impedance
50Ω
Maximum Power

100MHz:	490W
1GHz:	180W
10GHz:	60W
18GHz:	50W

Frequency Range (GHz)	DC-3	3-8	8-12.4	12.4-18
Insertion Loss (MAX dB)	0.15	0.25	0.35	0.45
Isolation (MIN dB)	85	75	65	65
VSWR (MAX)	1.15:1	1.25:1	1.35:1	1.45:1

Switching Sequence
Break Before Make
Operating Mode
Normally Open

VXIbus INTERFACE DATA
Cooling
Airflow: 4.75 liter/sec
Backpressure: 0.5mm H_2O
Power Requirements
+5VDC at 1.4A w/Option 01T
+5VDC at 0.4A w/o Option 01T
+12VDC at 365mA per energized relay

ENVIRONMENTAL DATA
Temperature
Operating: 0°C to 55°C
Storage: -40°C to 75°C
Relative Humidity
85% ±5% non-condensing at $<30^{\circ}$C
Altitude
Operating: 10,000 ft.
Non-Operating: 15,000 ft.
Shock
30g, 11ms, ½ sine wave
Vibration
0.013-inch: P-P, 5-55Hz
Bench Handling
4 inch drop at 45°

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
<15ms (includes settling time)
Rated Switch Operations
Electrical: 1,000,000 operation at full rated load

MTBF
295,376 Telcordia (Bellcore)
324,239 (MIL-STD-211 FN2)
MTTR
<5 minutes

MECHANICAL
Weight
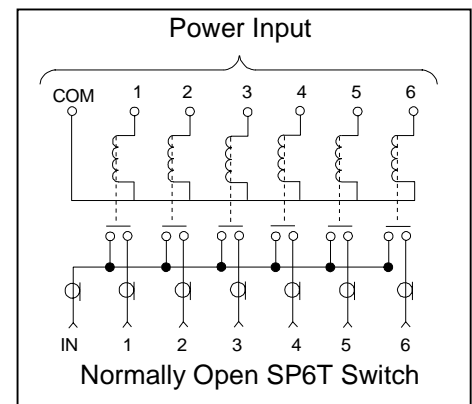3.4 Lbs. w/ Option 01T
3 Lbs 2oz w/o Option 01T
Dimensions
C-size, Single-slot VXIbus module
Front Panel I/O Interface Connector
SMA male (not supplied)

Note: **Front panel SMA connectors are in close proximity to each other; Racal P/N 991017 is recommended.**

TYPICAL CHANNEL

Normally Open SP6T Switch

ORDERING INFORMATION		
Model	**Description**	**Part Number**
1260-67A	Six SP6T Microwave Switch, 18GHz	407716-001
1260-67B	Four SP6T Microwave Switch, 18GHz	407716-002
1260-67C	Two SP6T Microwave Switch, 18GHz	407716-003
991017	5/16" Bit (to be used with MA-COM wrench, P/N 2098-5065-54)	991017
Option 01T	Message-Based and Register-Based Switch Controller (Installed)	OPT-405108-001
*One Option 01T must be ordered with switch system. Please specify the card on which Option 01T will be installed.		

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 Racal policy is one of continuous development and consequently the equipment may vary in detail from the description and specification in this publication.

1.1 - 6/04