

EX72SF

DC-20 GHZ, 26.5 GHZ, 40 GHZ HIGH PERFORMANCE MODULAR MICROWAVE SWITCH

EXPERIENCE THE MODULARITY OF LXI

excellent performance in a compact footprint

The EX72SF is a high-density microwave switching platform that is designed to address applications that demand maximum performance, flexible design options, and an operating range to either 20 GHz, 26.5 GHz or 40 GHz. Configuration options include self-termination of unused ports and an expected lifetime of > 5 million cycles. Any combination of up to twelve latching building blocks can be housed in a single 2U rack LXI Class A enclosure. Building block topologies include SPDT, SP4T, SP6T, and transfer switches, as well as a 6-line pass-through adapter and 32-bit TTL I/O bus that can be used to drive external circuitry.

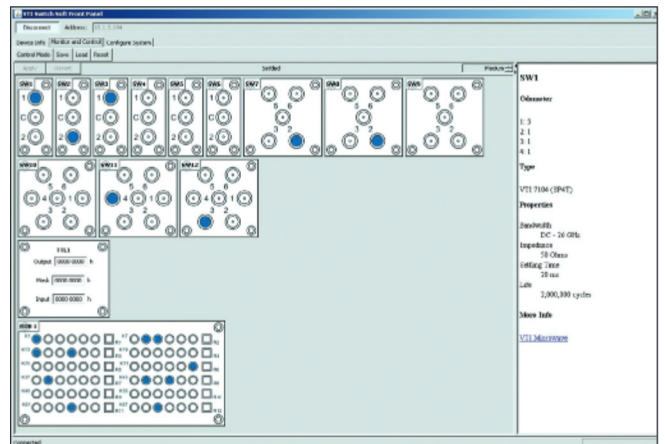
To configure your switch simply follow these three steps

- Step 1** Start with the EX72SF base unit. It holds up to twelve microwave building blocks in two rack U (3.5") height
- Step 2** Select up to six SPDT and six multiport switches
- Step 3** Contact VTI Microwave for price and delivery

intuitive command and control

The EX72SF software architecture has been developed to allow it to be easily integrated with other GPIB, PXI, VXI, or LXI instruments. The software drivers are based on the IVI industry standard and can be used within virtually any application development environment in addition to Windows and Linux operating systems. An intuitive graphical web-based interface provides the necessary tools for controlling and monitoring an EX72SF through local or remote access using familiar web browsers.

The EX72SF leverages the EX7000-OEM feature set and provides users with tools that can be used to enhance the efficiency of their application, such as scan lists, exclude lists, programmable MBB and BBM, pre-defined configuration storage, LXI Class A Trigger Events and IEEE-1588 synchronization and triggering, and TTL I/O control of other devices.



EX72SF Monitor and Control Panel



EX72SF with 6 multi-throw and 6 SPDT 26.5 GHz relays

FEATURES

- Combine up to 6 SPDT and 6 multiport high-performance building blocks in 2U footprint
- Extended life and self-terminating options provide maximum design flexibility
- Excellent repeatability (< 0.03 dB) over lifetime minimizes measurement uncertainty
- Latching relay design reduces power consumption and improves repeatability and thermal stability
- Embedded web interface provides interactive utility to monitor and control relays from anywhere in the world
- Flexible API supports IVI and Linux development environments minimizing software investment
- LXI Class A Trigger Event implementation provides seamless test synchronization with external devices
- Store up to 128 relay configurations for quick recall, including automatic power-up state
- Define exclude lists to avoid setting an undesirable configuration
- Relay odometer tracks closures to facilitate preventative maintenance
- Access to 32-bit TTL I/O for monitor and control of external devices

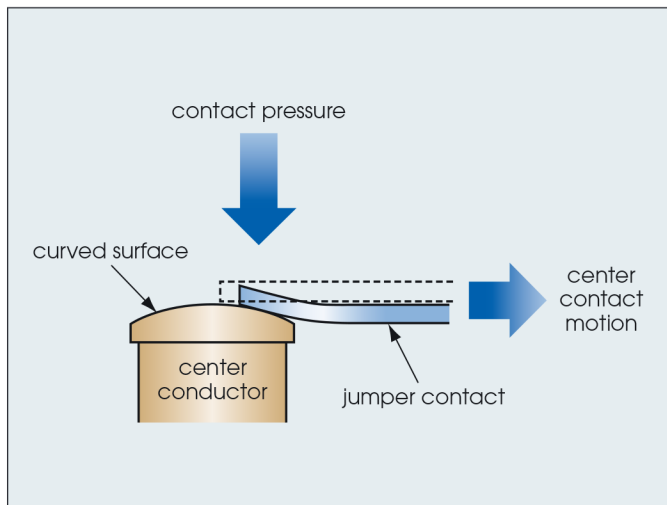
measurement integrity, repeatability and long life

The goal of a system engineer is to make a switching interface as invisible as possible to the rest of the system in order to maximize the integrity of the signals passing through it. The EX72SF uses relays that employ superior design technology and deliver unmatched isolation and minimal crosstalk resulting in a high-degree of confidence in measurement accuracy. However, the quality of a system design also depends on its ability to deliver repeatable measurement performance. Repeatability specifies the measure of change that occurs in insertion loss over the rated life of the switch, and systems that utilize relays with performance that drifts over time drive the need for costly recalibration of the system. EX72SF switches guarantee an industry-leading repeatability of insertion loss within a maximum of 0.03 dB throughout their rated lifetime to provide consistent measurement performance.

The EX72SF platform further drives down the total cost of ownership by providing operating life of > 2 million cycles. Many automated test systems can execute thousands of cycles per day on a single relay, and for demanding applications such as these, extended life (EL) options are available to extend the operating life to > 5 million cycles. With a powerful combination of economical price and outstanding performance, the EX72SF is capable of handling a wide array of application spaces ranging from aerospace and defense to commercial wireless products.

patented relay technology

The EX72SF relays employ a unique design that ensure highly repeatable closures over time. The center conductor profiles are designed with a spherical mating surface that produces a wiping action as the jumper contact mates with the center conductor. The wiping action removes debris that forms between the contacts of electro-mechanical relays and causes measurement instability. The result is a higher degree of confidence in repeatable data throughout the life of the product.



Microscopic Wiping of Electromechanical Switch

EX72SF DC-20 GHz, 26.5 GHz, 40 GHz High Performance Modular Microwave Switch

Specifications

	VSWR	Insertion Loss	Isolation (EL*)
DC-4 GHz	1.20:1	0.36 dB	90 dB (100 dB)
4-8 GHz	1.35:1	0.42 dB	90 dB (100 dB)
8-12 GHz	1.35:1	0.48 dB	90 dB (100 dB)
12-15 GHz	1.45:1	0.52 dB	70 dB (80 dB)
15-18 GHz	1.45:1	0.57 dB	65 dB (70 dB)
18-20 GHz	1.70:1	0.60 dB	65 dB (70 dB)
20-26.5 GHz	1.70:1	0.70 dB	60 dB (65 dB)
26.5-40 GHz	1.95:1	1.10 dB	(65 dB)

*(EL) = With Extended Life Option

Switching Time	<15 ms
RF Impedance	50 ohm
Lifespan (EL)	2 million cycles (5 million cycles)
Repeatability	<0.03 dB, absolute
Connector	DC - 26.5 GHz SMA DC - 40 GHz 2.92 (f)
Dimensions	88.2mm (3.5") H x 438.2mm (17.3") W x 366.7mm (14.5") D

Ordering Information

Model	Relay Type
EX72SF	2U LXI Class A enclosure
7200	Adapter, 6 universal 24 V driver lines
7202-20	SPDT, latching 20 GHz
7202-26	SPDT, latching 26.5 GHz
7202-20T	SPDT, self-terminated, 20 GHz
7202-26T	SPDT, self-terminated, 26 GHz
7202-20TEL	SPDT, self-terminated, EL, 20 GHz
7202-26TEL	SPDT, self-terminated, EL, 26 GHz
7222-26	Transfer, 26 GHz
7222-26EL	Transfer, EL, 26 GHz
7204-20	SP4T, 20 GHz
7204-26	SP4T, 26 GHz
7204-20T	SP4T, self-terminated, 20 GHz
7204-26T	SP4T, self-terminated, 26 GHz
7204-20TEL	SP4T, self-terminated, EL, 20 GHz
7204-26TEL	SP4T, self-terminated, EL, 26 GHz
7204-40TEL	SP4T, self-terminated, EL, 40 GHz
7206-20	SP6T, 20 GHz
7206-26	SP6T, 26 GHz
7206-20T	SP6T, self-terminated, 20 GHz
7206-26T	SP6T, self-terminated, 26 GHz
7206-20TEL	SP6T, self-terminated, EL, 20 GHz
7206-26TEL	SP6T, self-terminated, EL, 26 GHz
7206-40TEL	SP6T, self-terminated, EL, 40 GHz