FTBx-9160

MEMS OPTICAL SWITCH

EXFO | MULTILINK

Provides highly accurate and repeatable fiber-to-fiber switching.

KEY FEATURES

Singlemode 1 x N up to 1 x 32

Fast switching time of ≤30 ms

Lifetime expectancy of more than 1×10^9 cycles

Variety of connector options

COMPATIBLE PRODUCTS AND ACCESSORIES

Rackmount platform
LTB-8

Rackmount platform
LTB-2

Variable attenuator
FTBx-3500

Multi-user interface
EXFO Multilink

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MEMS-BASED DESIGN

With its MEMS-based design, EXFO's FTBx-9160 delivers durable performance in a compact package. Fast switching time and a 1-billion-cycle lifetime expectancy make it the perfect optical switch for demanding manufacturing applications. The TBx-9160 MEMS optical switch is available for singlemode fibers with a choice of 1 x 2, 1 x 4, 1 x 8, 1 x 12, 1 x 16, 1 x 24 and 1 x 32 modules.

The 1 x N configurations provide precise optical switching between one common port and N input/output ports—perfect for multiple-component or ribbon-fiber testing.
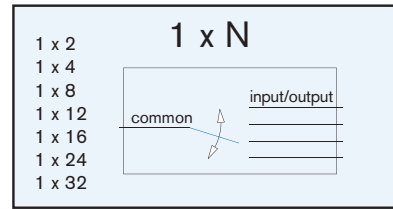
SUPPORTING VARIOUS APPLICATIONS

Optical switches are basic components integrated in almost every test station. The FTBx-9160 offers the specifications and features to support a wide variety of applications. Choose it to:

- Analyze transmitted signals using several types of test instruments, such as an optical spectrum analyzer and a bit-error-rate tester

- Reconfigure an R&D or manufacturing test station to allow testing of several types of devices

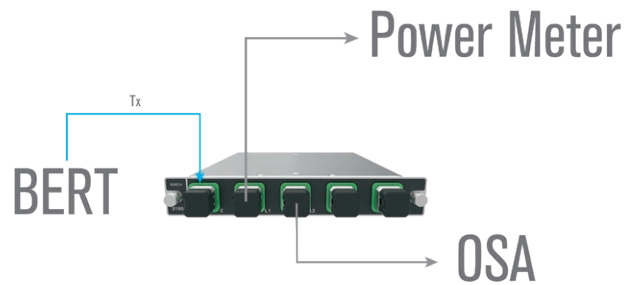- Test multiple devices under test (DUTs) in parallel

LTB-8 PLATFORM

The LTB-8 is a highly scalable and compact platform featuring the industry's best 100G port density and hot-swap capabilities for no downtime or interruption in tests, and greatly improved efficiency.

The FTBx-9160 can be easily remote-controlled by means of the standard LAN or optimal GPIB interface using SPCI commands, IVI drivers or any other automation software.

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SPECIFICATIONS [a]

Switch	1 x 2, 1 x 4	1 x 8	1 x 12	1 x 16	1 x 24, 1 x 32
Insertion loss (dB) at 1310 nm [b, c]	0.9	1.2	1.6	1.8	2.0
Insertion loss (dB) at 1530 nm to 1650 nm [b, c]	0.7	1.0	1.2	1.4	1.5
Operating wavelength (nm)	1290 to 1650				
Repeatability (dB) [d]	±0.02				
Backreflection (dB) (typical)	−50 (−55)				
Crosstalk (dB) (typical)	50 (60)				
Polarization-dependent loss (dB) (typical) [e]	0.09 (0.06)			0.11 (0.08)	
Switching time (ms) [c]	20	30			
Fiber type	Singlemode 9/125 µm				
Input power (damage threshold) (dBm)	27				

GENERAL SPECIFICATIONS

Switch	1 x 2, 1 x 4	1 x 8	1 x 12	1 x 16, 1 x 24	1 x 32
Number of slots	1	2	3	4	4

Dimensions   height
          width
          depth
	25 mm (1 in)
	159 mm (6 ¼ in)
	185 mm (7 ⁵⁄₁₆ in)
		50 mm (2 in)
		159 mm (6 ¼ in)
		185 mm (7 ⁵⁄₁₆ in)
			75 mm (3 in)
			159 mm (6 ¼ in)
			185 mm (7 ⁵⁄₁₆ in)
				100 mm (4 in)
				159 mm (6 ¼ in)
				185 mm (7 ⁵⁄₁₆ in)
					100 mm (4 in)
					159 mm (6 ¼ in)
					185 mm (7 ⁵⁄₁₆ in)

Switch life	1 billion (10^9) cycles minimum				
Temperature operating storage	0 °C to 40 °C (32 °F to 104 °F) −40 °C to 70 °C (−40 °F to 158 °F)				
Maximum relative humidity	80 % non-condensing at 40 °C				
Instrument drivers	IVI drivers and SCPI commands				
Remote control	With LTB-8 and Ethernet				
Standard accessories	User guide, certificate of compliance and calibration certificate				

a. Specifications valid at 23 °C ± 5 °C.

b. Insertion losss per module, including one connector.

c. Typical specifications.

d. Repeatability values are for 100 cycles per switch module at constant temperature with stabilized source/meter.

e. At 1550 nm.

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ORDERING INFORMATION

FTBx-9160-01-XX-B-XX

Channel configuration [a]
02 = 2 channels
04 = 4 channels
08 = 8 channels
12 = 12 channels
16 = 16 channels
24 = 24 channels
32 = 32 channels

Example: FTBx-9160-01-04-B-EI-EUI-98

Connector
58 = FC/APC narrow key
88 = SC/APC
89 = FC/UPC
91 = SC/UPC
101 = LC/UPC [c]
104 = LC/APC [c]
EI-EUI-89 = UPC/FC narrow key [b]
EI-EUI-90 = UPC/ST [b]
EI-EUI-91 = UPC/SC [b]
EI-EUI-98 = UPC/LC [b]
EA-EUI-89 = APC/FC narrow key [b]
EA-EUI-91 = APC/SC [b]
EA-EUI-98 = APC/LC [b]

a. For 2 x N and multimode configurations, please refer to the FTBx-9150 ordering information.

b. Not available for 1 x 32 switches.

c. Available for 1 x 32 switches only.

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