

FTBx-9160

OPTICAL SWITCH



- Provides low-loss and repeatable fiber-to-fiber switching. Compact modular format ideal for test system integration.

EXFO | MULTILINK

KEY FEATURES

Singlemode, multimode and polarization maintaining (PM) fiber models

1×N up to 1×32

2×2 insert-bypass switching

Fast, repeatable and long life expectancy

RELATED PRODUCTS AND ACCESSORIES



Rackmount platform
LTB-8



Rackmount platform
LTB-2



Rackmount platform
LTB-12



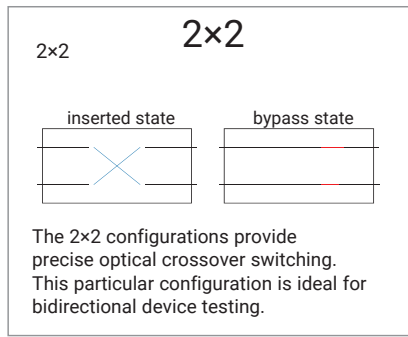
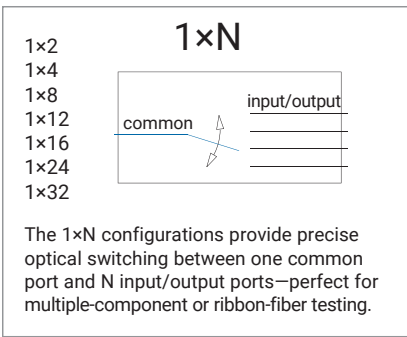
Variable attenuator
FTBx-3500



Light source
FTBx-2150



Power meter
FTBx-1750



SUPPORTING VARIOUS APPLICATIONS

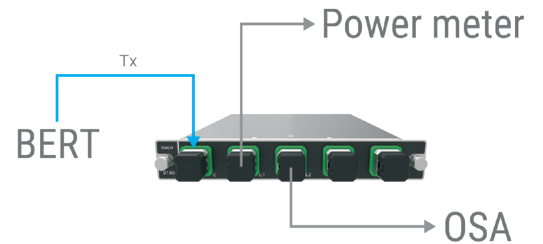
Optical switches are basic components integrated in almost every test station. The FTBx-9160 offers the specifications and features to support a wide variety of applications. Choose it to:

- 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

LABORATORY AND FIELD PLATFORMS

The FTBx-9160 is designed to be used with the LTB-2, LTB-8, LTB-12 or FTB-4 Pro platforms. EXFO platforms are highly scalable and (except FTB-4 Pro) feature hot-swap capabilities for no downtime or interruption in tests, and greatly improved efficiency.

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



SPECIFICATIONS

SINGLEMODE FIBER ^a							
Switch	2×2 XT	1×2 XT	1×4	1×8	1×12	1×16	1×24, 1×32
Technology	Opto-Mech	MEMS					
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
Repeatability (dB) ^d	±0.02						
Back reflection (dB) ^{c,e}	-55	-60		-55			
Crosstalk (dB) ^c	-65	-65		-60			
Polarization-dependent loss (dB) (typical) ^{c,f}	0.10						
Switching time (ms)	20		20	30			
Switch life (cycles)	>10 ⁷	>10 ⁹					
Operating wavelength (nm)	1240 to 1680						
Fiber type	Singlemode 9/125 μm						
Input power (damage threshold) (dBm)	27						

MULTIMODE FIBER ^a					
Switch	2×2	1×2	1×4	1×8	1×12
Technology	Opto-Mech	MEMS			
Insertion loss (dB) ^{b,c,g}	1.0			1.2	
Repeatability (dB) ^{c,d}	±0.02				
Stability (15 minutes) ^c	±0.01				
Back reflection (dB) ^c	-40	-40		-35	
Crosstalk (dB) ^c	-60	-60		-35	
Switching time (ms)	30				
Switch life (cycles)	>10 ⁷	>10 ⁹			
Operating wavelength (nm)	780 to 1360				
Fiber type	50/125 OM3				
Input power (damage threshold) (dBm)	27				

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

b. Excluding connectors.

c. Typical specifications.

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

e. With APC connectors.

f. At 1550 nm.

g. At 1300 nm.

POLARIZATION MAINTAINING FIBER ^a					
Switch	2×2	1×2	1×4	1×8	1×12
Technology	Opto-Mech	MEMS			
Insertion loss (dB) ^{b,c}	1.0		1.2		
Repeatability (dB) ^{c,d}	±0.02				
Back reflection (dB) ^{c,e}	-55	-60			
Stability (15 minutes) ^c	±0.01				
Crosstalk (dB) ^c	-70			-60	
Switching time (ms)	20				
PER (dB) ^c	>20 with FC/APC – Narrow key (-58 connector) >18 for all other connector options				
Axis alignment	Slow axis aligned with key				
Switch life (cycles)	>10 ⁷	>10 ⁹			
Operating wavelength (nm)	1240 to 1680				
Fiber type	PM13 Panda				
Input power (damage threshold) (dBm)	27				

GENERAL SPECIFICATIONS						
Switch	2×2, 1×2, 1×4	1×8	1×12	1×16, 1×24, 1×32		
Number of slots	1	2	3	4		
Dimensions	height width depth	25 mm (1 in) 159 mm (6 1/4 in) 185 mm (7 5/16 in)	50 mm (2 in) 159 mm (6 1/4 in) 185 mm (7 5/16 in)	75 mm (3 in) 159 mm (6 1/4 in) 185 mm (7 5/16 in)	100 mm (4 in) 159 mm (6 1/4 in) 185 mm (7 5/16 in)	
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, SCPI commands and REST API					
Remote control	Via LTB and FTB platform services: GPIB (IEEE-488.1, IEEE-488.2), Ethernet and RS-232					
Standard accessories	User guide (available online only), certificate of compliance and test report					

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

b. Excluding connectors.

c. Typical specifications.

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

e. With APC connector.

ORDERING INFORMATION

FTBx-9160-XX-XX-XX-XX-XX

Switch configuration ■

01 = 1×N
 02 = 2×N^a

Channel configuration ■

02 = 2 channels
 04 = 4 channels
 08 = 8 channels
 12 = 12 channels
 16 = 16 channels^c
 24 = 24 channels^c
 32 = 32 channels^c

Fiber type ■

B = 9/125 μm singlemode
 C = 50/125 μm multimode
 PM13 = PM13 polarization maintaining fiber

Crosstalk optimized^b ■

XT = Crosstalk optimized

Connector ■

58 = FC/APC narrow key^d
 88 = SC/APC^d
 89 = FC/UPC
 91 = SC/UPC
 101 = LC/UPC^{c,e}
 104 = LC/APC^{c,e}
 EI-EUI-89 = UPC/FC narrow key^f
 EI-EUI-90 = UPC/ST^f
 EI-EUI-91 = UPC/SC^f
 EI-EUI-98 = UPC/LC^f
 EA-EUI-89 = APC/FC narrow key^{d,f}
 EA-EUI-91 = APC/SC^{d,f}
 EA-EUI-98 = APC/LC^{d,f}

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

- a. 2×N configurations available only with 2 channel option.
 b. XT option available 1×2 and 2×2 singlemode models.
 c. Singlemode models only.
 d. Singlemode and PM13 fiber only.
 e. Available for 1×32 models only.
 f. Available on 1×2, 1×4, 1×8, 1×12, 1×16, 1×24 and 2×2 models.

EXFO headquarters T +1 418 683-0211 **Toll-free** +1 800 663-3936 (USA and Canada)

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