

OPTICAL SWITCH

IQS-9100

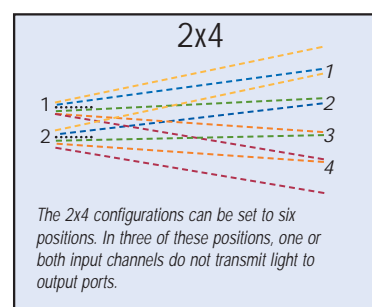
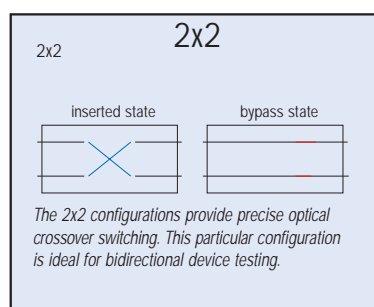
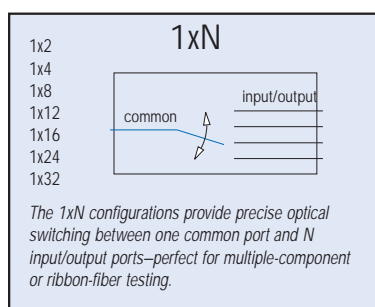
 R&D AND MANUFACTURING – OPTICAL



- 1x2, 1x4, 1x8, 1x12, 1x16, 1x24, 1x32, 2x2, 2x4
- Singlemode and multimode
- High performance
- Variety of connector options

The Optical Switching Solution

The IQS-9100 Optical Switch series provides highly accurate and repeatable fiber-to-fiber switching. As part of the IQS-500 Intelligent Test System, the IQS-9100 Optical Switch offers a choice of 1x2, 1x4, 1x8, 1x12, 1x16, 1x24, 1x32, 2x2 and 2x4 modules. Designed for minimal reflectance, the switches integrate precision optical components into a compact modular package. Both singlemode and multimode versions are available and offer a solution for all your optical switching needs.



A variety of switch configurations are available for both singlemode and multimode fibers. Singlemode options may be configured specifically for low PDL.

THE IQS-500 INTELLIGENT TEST SYSTEM

The new IQS-500 Intelligent Test System provides a flexible approach to optical test and measurement for manufacturing, automation, optical qualification and R&D. It combines powerful features and control capabilities for up to 100 modules.

Based on standard industrial PC architecture, the IQS-500 Intelligent Test System is a scalable modular platform that includes controllers, expansion units and a comprehensive range of plug-in test modules. The IQS-500 is also backward-compatible with most of EXFO's IQ-generation modules, allowing you to maximize the return on previous investments. The IQS-500 Intelligent Test System offers a powerful, easy-to-use environment to match your most demanding needs.



An IQS-9100 Optical Switch, an IQS-5250B Optical Spectrum Analyzer and an IQS-1600 High-Speed Power Meter combined with an IQS-505P five-slot controller

KEY FEATURES

- Reduced instrument requirements
- Reduced manual intervention
- Increased flexibility
- Increased overall efficiency

MEASUREMENT APPLICATIONS

The IQS-9100 is ideal for the following measurement applications:

- Multiple-component testing
- Bidirectional testing
- Remote testing
- Signal routing
- Multichannel monitoring
- Complex automated testing
- Ribbon-fiber testing
- Bypass switching

User-Friendly Interface

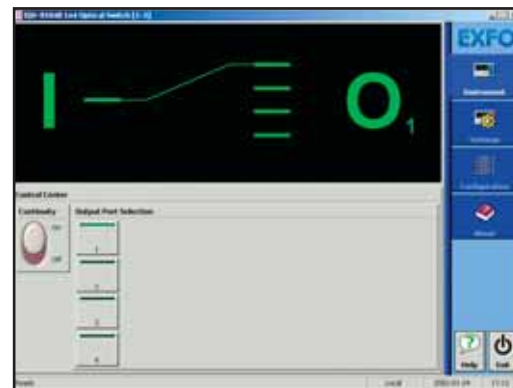
SIMPLE AND FLEXIBLE GUI

- Windows interface
- Easy software control with buttons, front panel keys or keyboard
- Multiple-user configuration storage
- Simultaneous multiple applications for true multitasking
- Online help

IMPRESSIVE PERFORMANCE

- 0.5 dB insertion loss (typical)
- ± 0.01 dB repeatability
- 80 dB crosstalk
- 55 dB backreflection
- Bidirectional
- Low-PDL option (singlemode)
- Over 10 million cycles

IQS-9100 OPTICAL SWITCH APPLICATION INTERFACE



Simple manual-switch operation

SPECIFICATIONS ^a

Model Mode	1x2		1x4, 1x8, 1x12, 1x16, 1x24, 1x32, 2x4 ^f		2x2		
	Singlemode	Multimode	Singlemode	Multimode	Singlemode	Multimode	
Insertion loss ^b (dB)	typical	0.5	0.5	0.7	0.5	0.8	0.5
	maximum	1.5	1.5	1.7	1.7	1.5	1.5
Backreflection ^c (dB)	maximum	-55	-24	-55	-24	-55	-24
Repeatability ^d (dB)	maximum	± 0.01	± 0.01	± 0.03	± 0.03	± 0.01	± 0.01
Operating wavelengths (nm)	1290 to 1570	780 to 1350	1290 to 1650	780 to 1350	1290 to 1570	780 to 1350	
Polarization-dependent loss ^e (dB)	typical	≤ 0.05	-	≤ 0.05	-	≤ 0.05	-
	standard maximum	0.10	-	0.10	-	0.10	-
	on request maximum	0.05	-	0.05	-	0.05	-
Maximum input power (dBm)	+24	+24	+24	+24	+24	+24	+24
Switching time (ms)	25	25	25 per channel + 425 (debouncing)		25	25	25
Number of channels	1x2	1x2	1x4, 1x8, 1x12, 1x16, 1x24, 1x32		2x2	2x2	2x2
Crosstalk (dB)	-80	-80	-80	-80	-80	-80	-80

NOTES

- Specifications valid at 23 °C ± 5 °C.
- Insertion loss per module, excluding connectors, measured at singlemode wavelengths of 1310 nm and 1550 nm, and multimode wavelength of 850 nm.
- Backreflection is measured at singlemode wavelengths of 1310 nm and 1550 nm, with APC connectors, and multimode wavelength of 850 nm.
- Repeatability values are for 100 cycles per switch module at constant temperature with stabilized source/meter at singlemode wavelengths of 1310 nm and 1550 nm, and multimode wavelengths of 850 nm and 1300 nm.
- Measured at 1550 nm. Lower polarization-dependent loss is available upon request.
- Non-blocking.

GENERAL SPECIFICATIONS

Switch	1x2	1x4	1x8, 1x12	1x16	1x24, 1x32	2x2	2x4	
Number of slots	1	1	2 ^h	3 ^a	5	1	2 ^b	
Dimensions	Width	3.6 cm (1 7/16 in)	3.6 cm (1 7/16 in)	7.4 cm (2 15/16 in)	11.2 cm (4 7/16 in)	18.8 cm (7 7/16 in)	3.6 cm (1 7/16 in)	7.4 cm (2 15/16 in)
	Height	12.5 cm (4 15/16 in)	12.5 cm (4 15/16 in)	12.5 cm (4 15/16 in)	12.5 cm (4 15/16 in)	12.5 cm (4 15/16 in)	12.5 cm (4 15/16 in)	12.5 cm (4 15/16 in)
	Depth	28.2 cm (11 1/8 in)	28.2 cm (11 1/8 in)	28.2 cm (11 1/8 in)	28.2 cm (11 1/8 in)	28.2 cm (11 1/8 in)	28.2 cm (11 1/8 in)	28.2 cm (11 1/8 in)
Weight	0.5 kg (1.1 lb)	0.8 kg (1.8 lb)	0.9 kg (2.0 lb)	0.9 kg (2.0 lb)	1.4 kg (3.2 lb)	0.5 kg (1.1 lb)	1.0 kg (2.3 lb)	
Switch life	10 million cycles minimum							
Temperature	operating	10 °C to 40 °C		(50 °F to 104 °F)				
	storage	-20 °C to 60 °C		(-4 °F to 140 °F)				
Relative humidity maximum	80 % non-condensing at 40 °C							

Instruments Drivers

LabVIEW™ drivers, SCPI commands and COM/DCOM libraries

Remote Control

With IQS-500: GPIB (IEEE-488.1, IEEE-488.2) Ethernet and RS-232

Standards Accessories

User Guide and Certificate of Compliance

NOTES

- a. 2 slots for MU/UPC connectors
- b. 1 slot for MU/UPC connectors
- c. 2xN configurations available only with 2- and 4-channel options.
- d. Singlemode only.
- e. Multimode only.
- f. Available on 1x2, 1x4, 1x8, 1x12, 1x24, 2x2 and 2x4 switches.
- g. Available for singlemode units. Not with FC/APC, SC/APC or MU/UPC connectors.
- h. 1x12 switches w/ EU1 connectors use 3 slots.

ORDERING INFORMATION

IQS-9100-XX-XX-X-XX-XX

Switch configuration

- 01 = 1xN
- 02 = 2xN^c

Channel configuration

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

Fiber

- B = 9/125 µm singlemode
- C = 50/125 µm multimode
- D = 62.5/125 µm multimode

Low-PDL

- 00 = No Low-PDL requested
- LP = Low-PDL^g

Connector

- 50 = FC/PC^e
- 54 = SC/PC^e
- 58 = FC/APC^d narrow key
- 74 = ST/PC^e
- 88 = SC/APC^d
- 89 = FC/UPC^d
- 90 = ST/UPC^d
- 91 = SC/UPC^d
- 99 = MU/UPC^d
- EI-EUI-28 = UPC/DIN 47256^f
- EI-EUI-76 = UPC/HMS-10/AG^f
- EI-EUI-89 = UPC/FC narrow key^f
- EI-EUI-90 = UPC/ST^f
- EI-EUI-91 = UPC/SC^f
- EI-EUI-95 = UPC/E-2000^f
- EA-EUI-28 = APC/DIN 47256^{d,f}
- EA-EUI-89 = APC/FC narrow key^{d,f}
- EA-EUI-91 = APC/SC^{d,f}
- EA-EUI-95 = APC/E-2000^{d,f}

Example: IQS-9100-01-04-B-LP-EI-EUI-89

Also available for the IQ-200 Optical Test System

Find out more about EXFO's extensive line of high-performance portable instruments by visiting our website at www.EXFO.com.

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EXFO is certified ISO 9001 and attests to the quality of these products. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. EXFO has made every effort to ensure that the information contained in this specification sheet is accurate. All of EXFO's manufactured products are compliant with the European Union's WEEE directive. For more information, please visit www.EXFO.com/recycle. However, we accept no responsibility for any errors or omissions, and we reserve the right to modify design, characteristics and products at any time without obligation. Units of measurement in this document conform to SI standards and practices. Contact EXFO for prices and availability or to obtain the phone number of your local EXFO distributor. For the most recent version of this spec sheet, please go to the EXFO website at <http://www.EXFO.com/specs>. In case of discrepancy the Web version takes precedence over any printed literature.