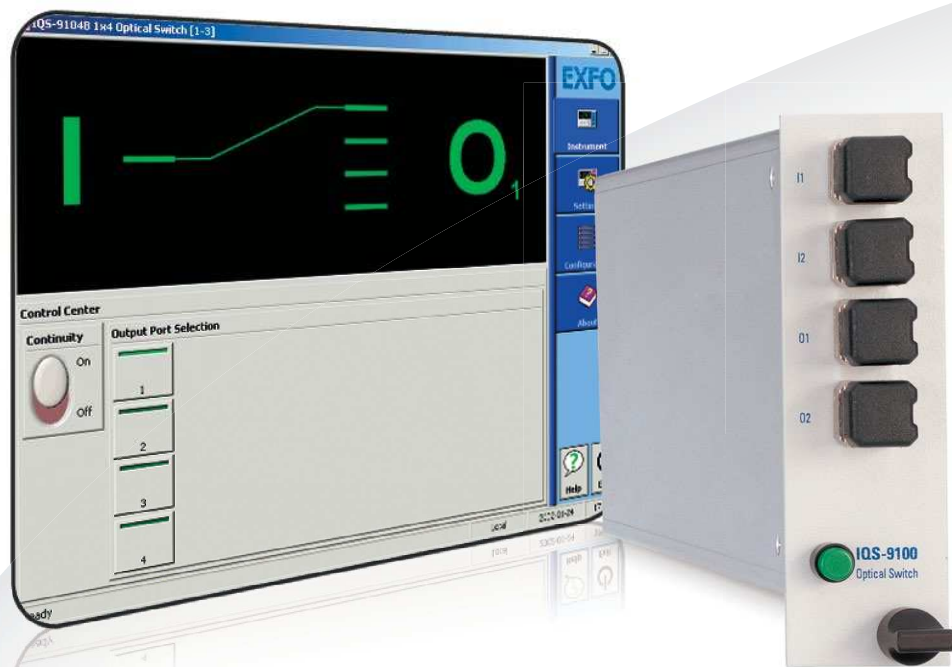


IQS-9100 Optical Switch



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

KEY FEATURES

1 x 2, 1 x 4, 1 x 8, 1 x 12, 1 x 16, 1 x 24, 1 x 32, 2 x 2, 2 x 4

Singlemode and multimode

High performance

Variety of connector options

COMPLEMENTARY PRODUCTS



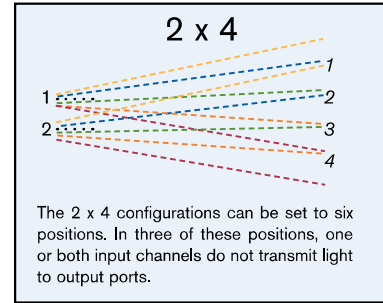
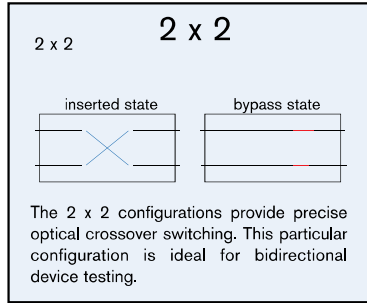
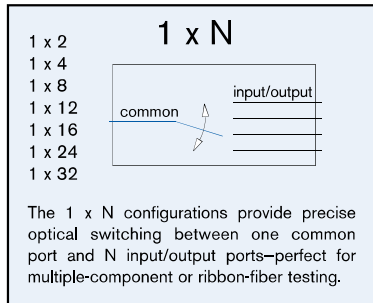
Integrated Qualification System
IQS-600



Intelligent Test system
IQS-500

THE OPTICAL SWITCHING SOLUTION

The IQS-9100 Optical Switch series provides highly accurate and repeatable fiber-to-fiber switching. As part of the IQS-based test systems, the IQS-9100 Optical Switch offers a choice of 1 x 2, 1 x 4, 1 x 8, 1 x 12, 1 x 16, 1 x 24, 1 x 32, 2 x 2 and 2 x 4 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 polarization-dependent loss (PDL).

The IQS Platforms

The IQS platforms provide a flexible approach to optical test and measurement for manufacturing, automation, optical qualification and R&D. They combine powerful features and control capabilities for up to 100 modules.

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

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



Figure 1. 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

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

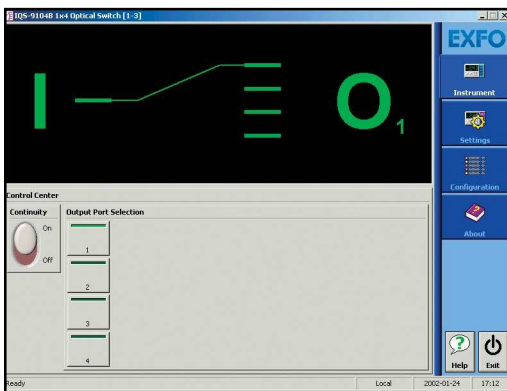


Figure 2. Simple manual-switch operation

SPECIFICATIONS ^a							
Model		1 x 2		1 x 4, 1 x 8, 1 x 12, 1 x 16, 1 x 24, 1 x 32, 2 x 4 ^f		2 x 2	
Mode		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
Switching time (ms)		25	25	25 per channel + 425 (debouncing)		25	25
Number of channels		1 x 2	1 x 2	1 x 4, 1 x 8, 1 x 12, 1 x 16, 1 x 24, 1 x 32		2 x 2	2 x 2
Crosstalk (dB)		-80	-80	-80	-80	-80	-80

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

GENERAL SPECIFICATIONS								
Switch		1 x 2	1 x 4	1 x 8, 1 x 12	1 x 16	1 x 24, 1 x 32	2 x 2	2 x 4
Number of slots		1	1	2 ^g	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								

ORDERING INFORMATION

IQS-9100-XX-XX-XX-XX

Switch configuration

- 01 = 1 x N
- 02 = 2 x N^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

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-EI-EUI-89

Notes

- a. Two slots for MU/UPC connectors.
- b. One slot for MU/UPC connectors.
- c. 2 x N configurations available only with 2- and 4-channel options.
- d. Singlemode only.
- e. Multimode only.
- f. Available on 1 x 2, 1 x 4, 1 x 8, 1 x 12, 1 x 24, 2 x 2 and 2 x 4 switches.
- g. 1 x 12 switches with EUI connectors use three slots.

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