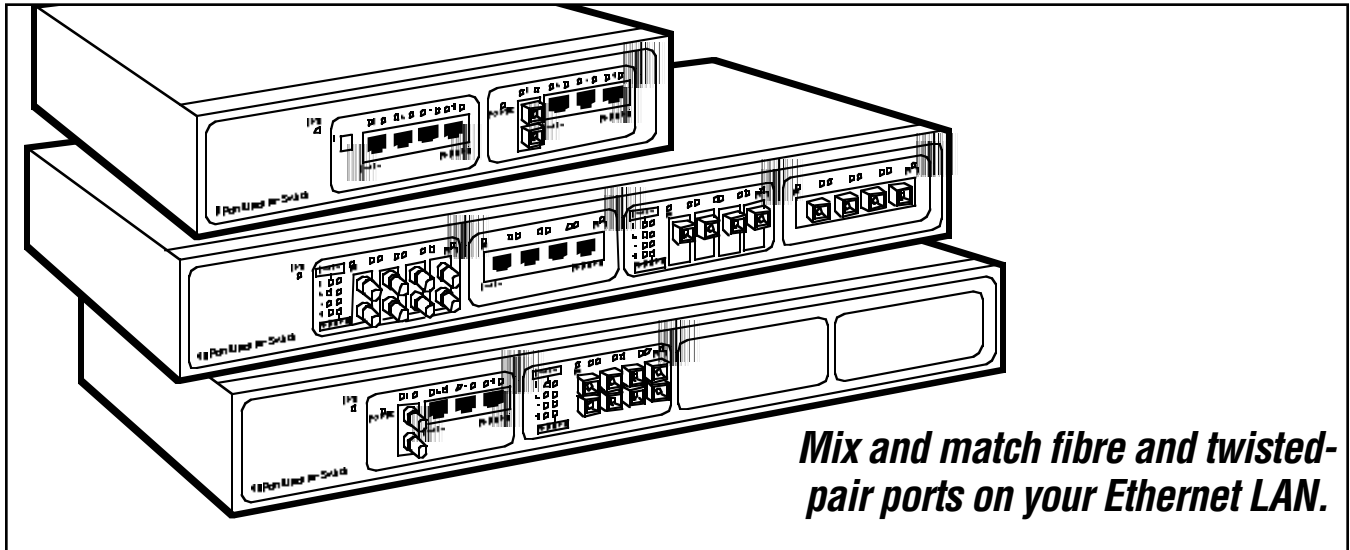# BLACK BOX®
NETWORK SERVICES

MODULAR FIBRE SWITCHES

Mix and match fibre and twisted-pair ports on your Ethernet LAN.

Key Features

▶ *100-Mbps switching services for large, high-performance LANs.*

▶ *Mixed-media configurations for maximum flexibility.*

▶ *Configurable with fiber ports, all connector types and speeds.*

▶ *Configurable with RJ-45 (copper) ports, 10/100 auto-negotiation.*

▶ *Full-duplex or half-duplex operation, auto-sensing.*

With the Modular Switch, you can configure any mix of fibre or RJ-45, 100-Mbps or 10-Mbps switched ports and connector types. The Switch provides the switching speed and the reliability to smoothly support multiple workgroups, each with its own switched 100 Mbps or 10 Mbps domain, for increased performance using any available fibre media type or twisted-pair cabling.
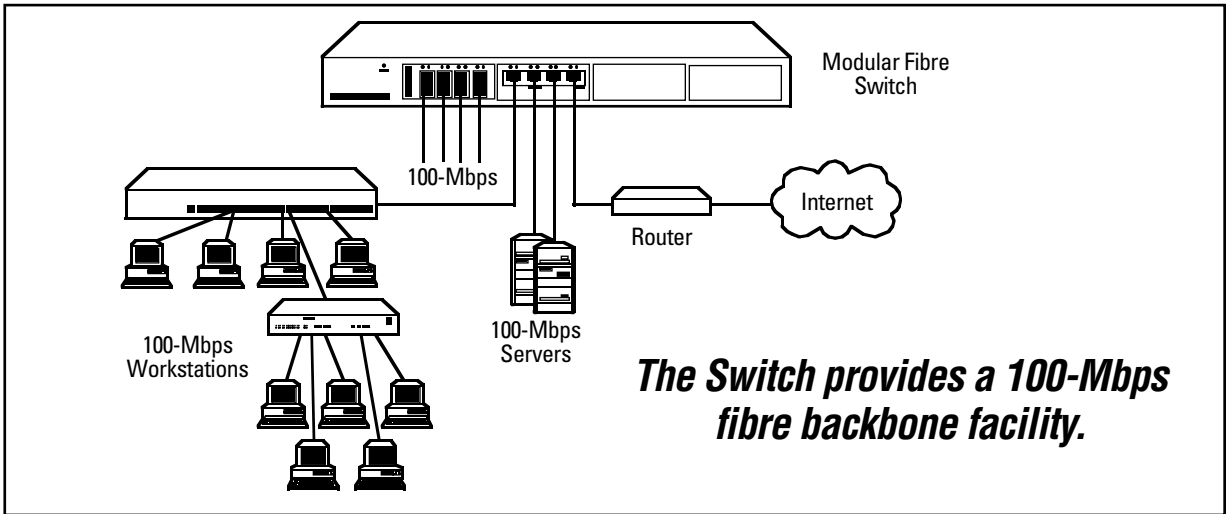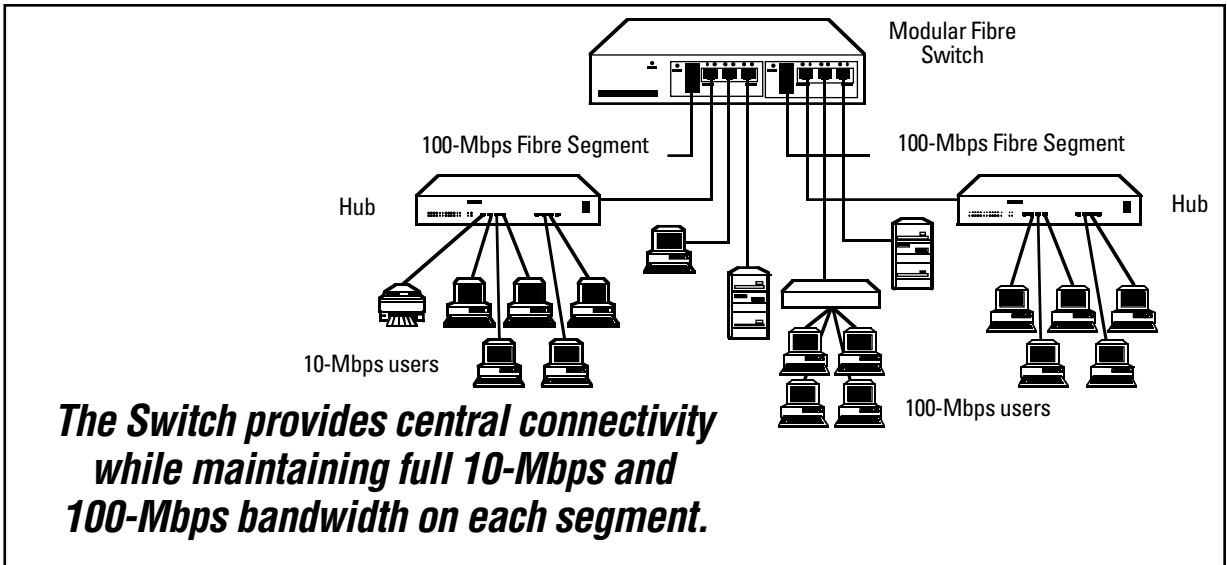
Choose from a variety of connectors. The twisted-pair ports are 10/100 auto-negotiating. Mixed-media combination modules are also supported by the Switch.

In a typical application, groups of standard dual-speed 10/100-Mbps hubs, or 100-Mbps hubs and switches, will form a series of subnets for workgroups or multi-system power users. Each subnet is served by a separate switched port on the Modular Switch, and each of these subnets has full 100-Mbps or 10-Mbps bandwidth. Local traffic on one subnet, either 100 Mbps or 10 Mbps, is switch-isolated from the other subnets for high overall network performance.

For remote offices, campus environments, ISPs, or telecommunications facilities, select the 100-Mbps multimode SC fiber module (LE1421C-40K). It supports full-duplex transmissions up to 40 kilometers (24.8 miles). That's twice the distance of the other 100-Mbps fibre modules.

Easy to install and use, the Modular Switch is designed for organizations with multiple workgroups, remote offices, and network traffic centers. The Switch automatically learns and maintains addresses of attached nodes, so it adapts to network changes and expansions for plug-and-play operation. Front-mounted LEDs provide status information on each port.

Modular Fibre
Switch

100-Mbps Fibre Segment   100-Mbps Fibre Segment

Hub   Hub

10-Mbps users

100-Mbps users

***The Switch provides central connectivity
while maintaining full 10-Mbps and
100-Mbps bandwidth on each segment.***

Modular Fibre
Switch

100-Mbps

Internet

Router

100-Mbps
Servers

100-Mbps
Workstations

***The Switch provides a 100-Mbps
fibre backbone facility.***

▼ Specifications

Address Table: 24K nodes with address aging

Cooling Method: Fan cooled, internal @ 9 cfm

Filtering and Forwarding Rate: 16-port aggregate; 2380K packets per second

Latency: 100 Mbps: 5 µs + packet time; 10 Mbps: 15 µs + packet time

Packet Buffers: 8 MB dynamic

Processing Type: Store and forward with IEEE 802.3x full-duplex flow control

Standards: IEEE 802.3: 10BASE-T, 10BASE-FL; IEEE 802.3u: 100BASE-TX, 100BASE-FX

Indicators: Chassis: Power, Per port: LK: ON when link is operational; ACT: ON with port activity; FDX/HDX: ON for full-duplex mode, OFF for half-duplex mode; 10/100: ON for 100 Mbps, OFF for 10 Mbps

Connectors:
LE1401A, LE1408A: (1) power, (2) slots for modules; LE1416A: (1) power, (4) slots for modules; LE1424C, LE1428C: (4) pairs of ST®; LE1419C, LE1421C, LE1421C-40K: (4) pairs of SC; LE1422C: (4) MT-RJ; LE1423C: (4) VF-45; LE1425C: (4) RJ-45; LE1427C: (3) RJ-45, (1) pair of ST; LE1426C, LE1426C-SM: (3) RJ-45, (1) pair of SC

Power: Input: 110 to 240 VAC, 47 to 63 Hz, autosensing, internal; Consumption: LE1401A, LE1408A: 20 W, typical; LE1416A: 35 W, typical

Size: LE1401A: 4.4 x 22.9 x 22.9 cm; LE1408A, LE1416A: 4.4 x 43.2 x 22.9 cm

Weight: LE1401A: 1.1 kg; LE1408A, LE1416A: 1.8 kg

▼ *Ordering Information*

ITEM	CODE
Modular Fibre Switch Chassis	
8-Port	LE1401A
8-Port Rackmount	LE1408A
16-Port	LE1416A
(The LE1408A and LE1416A include a 19" rackmount kit.)	
Fibre Modules, 4-Port	
10-Mbps	
Multimode-ST	LE1424C
100-Mbps	
Multimode-ST	LE1428C
Multimode-SC	LE1419C
Multimode-MT-RJ	LE1422C
Multimode-VF-45	LE1423C
Single-Mode-SC	LE1421C
100-Mbps for Transmissions up to 40 km	
Single-Mode-SC	LE1421C-40K
Twisted-Pair Module, 4-Port (One with Uplink)	
10/100-Mbps RJ-45	LE1425C
Mixed-Media Modules, 4-Port	
(3) 10/100-Mbps RJ-45, (1) 100-Mbps Fiber	
Multimode-ST	LE1427C
Multimode-SC	LE1426C
Single-Mode-SC	LE1426C-SM
Remember to order cables…	
Category 5 Patch Cable, 100-MHz, 4-Pair, Straight-Pinned, PVC, Beige,	
10-ft. (3-m)	EVMSL05-0010
Duplex Fibre Optic Cable, PVC, ST-ST,	
Custom Lengths	EFN062-CC
Duplex Fibre Optic Cable, PVC, SC-SC,	
Custom Lengths	EFN4025