BLACK BOX®
NETWORK SERVICES

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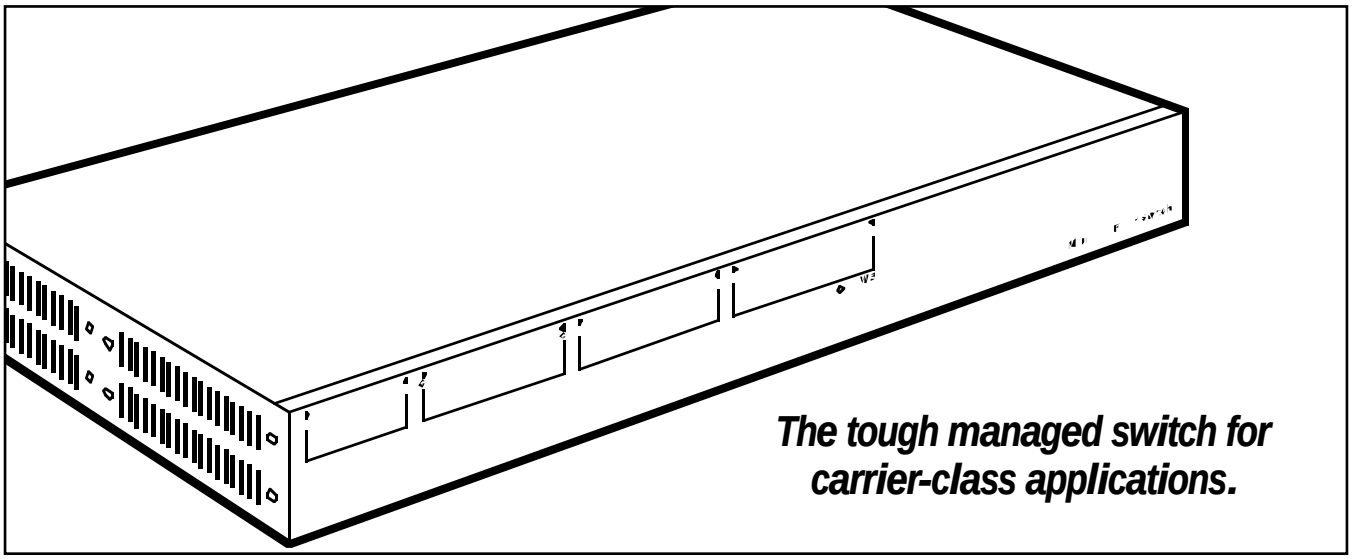
MANAGED FIBRE SWITCH



The tough managed switch for carrier-class applications.

Key Features

- ***Level 3 certified to withstand harsh environments.***
- ***Four modular slots enable you to add up to 25 10-, 100-, or 1000-Mbps Ethernet ports.***
- ***Non-blocking wire-speed performance.***
- ***802.1p QoS traffic prioritization.***
- ***Universal autosensing power supply.***
- ***Ideal for demanding industrial, telecomm, or municipal installations.***

This adaptable high-speed modular switch is built to carrier-class standards. Use it as a backbone switch in network data centres to boost throughput and performance for your entire network.

The Managed Fibre Switch is an extremely versatile modular fibre switch with a wide range of interface options and support for Gigabit links. Modular architecture enables you to adapt the switch to nearly any application up to and including Gigabit backbone inter-connections between network centres. It's easily adaptable to a variety of applications including Metropolitan Area Networks (MANs), client/server computing, secure VLAN links for departmental networks, and LAN traffic centres.

The switch has four slots for modules. The first three slots (A, B, and C) are full-sized slots which can be used for copper or fibre ports at 10 or 100 Mbps. The fourth slot (D) is a ¼-size slot which can only be configured as a Gigabit uplink port with the LE2432C module.

Mixed-media capability makes the switch ideal for upgrading existing LANs where existing cabling must be accommodated.

NEBS Level 3 certification ensures that the Managed Fibre Switch is up to the challenge of the most demanding applications. (See *What is NEBS Level 3* on **page 2**). The switch withstands extremes of temperature and humidity, is encased in a rugged chassis, and is adaptable to nearly any power situation.

The switch is efficient, too. Non-blocking architecture means fast throughput and industry-standard IEEE 802.1p QOS prioritisation provides high performance for both streaming and "bursty" traffic.

The Managed Fibre Switch is easy to install and use. It automatically learns and maintains addresses of attached nodes to keep up with network expansion and changes. LEDs show port status.

The included industry-standard SNMP MIBs integrate with HP OpenView™ or SNMPc™ and enable you to access a wide range of management features (see **page 2**).

The Managed Fibre Switch uses space efficiently, packing up to 25 ports into a chassis only 1U high.

The power supply is a universal internal autosensing AC power supply. Rackmount ears for a 19" rack are included.

What is NEBS Level 3?

Network Equipment Building System (NEBS) standards set requirements for telco equipment. The standards are maintained by Telcordia Technologies, Inc., formerly Bellcore. Bellcore Special Report, SR-3580 defines three distinct functional levels of NEBS compliance. The third of these levels, NEBS Level 3, is the most stringent, certifying carrier-class equipment intended for long-term use in variable environments.

NEBS Level 3 certifies that a piece of equipment can be safely used in an extreme environment. To become certified at NEBS Level 3, a device must meet strict physical, electrical, and environmental requirements to prove it will operate safely and reliably in extreme conditions. It must pass a series of tests that include extreme heat, humidity, fire, earthquakes (Zone 4), light, and noise.

The Managed Fibre Switch features software support for:

- SNMP
- RMON with statistics, history, alarms, and events
- Command Line Interface (CLI) with multi-level password security
- VLANs, port-based
- Spanning Tree Protocol, 802.1d
- Telnet™, client and server
- Telnet security
- Port Mirroring for selective traffic analysis
- Event Log for the 1000 most recent events
- Port Security Settings Control for both copper and fiber ports
- Remote access security at the IP address level
- SNTP with worldwide time zones
- FTP and TFTP for load/save convenience
- BootP/DHCP for auto-configuration
- Updates and documentation over the Internet
- QoS
- DHCP
- IGMP
- SNMPc and OpenViewGUIs

Specifications

Approvals: UL® Listed (UL80950), cUL, CE, Emissions meet FCC Part 15, Class A, NEBS Level 3, ETSI

Cooling Method — (3) fans at 7 cfm each

Filtering/Forwarding Rate:
Ethernet: 14,880 pps;
Fast Ethernet: 148,000 pps;
Gigabit Ethernet; 1,488,000 pps

MAC Addresses: 4000 nodes, self learning, with address aging

Network Standards:
IEEE 802.3: 10BASE-T;
IEEE802.3u: 100BASE-TX/FX;
IEEE, 802.3z, IEEE 802.3ab: 1000BASE-X;
IEEE 802.1d: Spanning Tree;
IEEE 802.1p: Priority protocol;
IEEE 802.3x: Flow control

Switching Method: Store and Forward with IEEE 802.3x full-duplex flow control, non-blocking

Connectors: LE2425A: DB9 RS-232 console port; (4) modular slots;
LE2426C: (4) pair SC;
LE2427C: (4) pair ST;
LE2428C: (8) RJ-45;
LE2429C: (4) RJ-45, (2) pair ST;
LE2430C–LE2431C: (4) RJ-45, (2) pair SC;
LE2432C–LE2433C: (1) GBIC open port;
LE2436C: (8) MT-RJ;
LE2437C: (8) LC;
LE2434C: (1) pair SC

Indicators: LEDs:
Per RJ-45 port: (1) Link, (1) Activity, (1) Full/Half Duplex, (1) 10/100;
Per fibre port: (1) Link, (1) Activity, (1) FDX/HDX

Environmental: Temperature:
Ambient: 25 to 130°F (-4 to +54°C);
Storage: -40 to +185°F (-40 to +85°C);
Humidity: 5 to 95% noncondensing;
Altitude: -200 to +13,000 ft. (-61 to +3962.4 m)

Power: Input: 100–240 VAC, 47–63 Hz, autosensing; -48-VDC, 24-VDC, and 125-VDC power supplies available on request;
Power consumption: 55 watts typical, 60 watts maximum (for a fully-loaded fibre switch), 35 watts for a fully-loaded copper-only switch

Size: 1.75"H (1U) x 17"W x 9"D (4.4 x 43.2 x 22.9 cm)

Weight: 5 lb. (2.3 kg)

Ordering Information

ITEM	CODE
First, order the switch chassis…	
Managed Fibre Switch	LE2425A
…then select the modules for your application.	
(4) 100BASE-FX, 2-km Range SC, Multimode	LE2426C
(4) 10BASE-FL, 2-km Range ST®, Multimode	LE2427C
(8) 10-/100-Mbps RJ-45	LE2428C
(4) RJ-45 plus (2) 100BASE-FX, 2-km Range ST, Multimode	LE2429C
SC, Multimode	LE2430C
(4) RJ-45 plus (2) 100BASE-FX, 20-km Range SC, Single-Mode	LE2431C
(8) 100BASE-FX, 2-km Range MT-RJ, Multimode	LE2436C
(8) 100BASE-FX, 15-km Range LC, Single-Mode	LE2437C
Gigabit Module (for 1 D-Slot)	LE2432C
Gigabit Module (for 1 A-, B-, or C-Slots)	LE2433C
For each Gigabit Module, you'll need…	
GBIC Transceiver, (1) 1000BASE-SX Port, 220-m Range, Multimode SC (For use in LE2432C or LE2433C)	LE2434C
You may also need…	
Blank Covers for Unused A-, B-, or C-Slots	LE2435C

For optional DC power supplies, special fibre modules, ETSI rackmounting, or 23" telco rackmounting, call our FREE Tech Support.