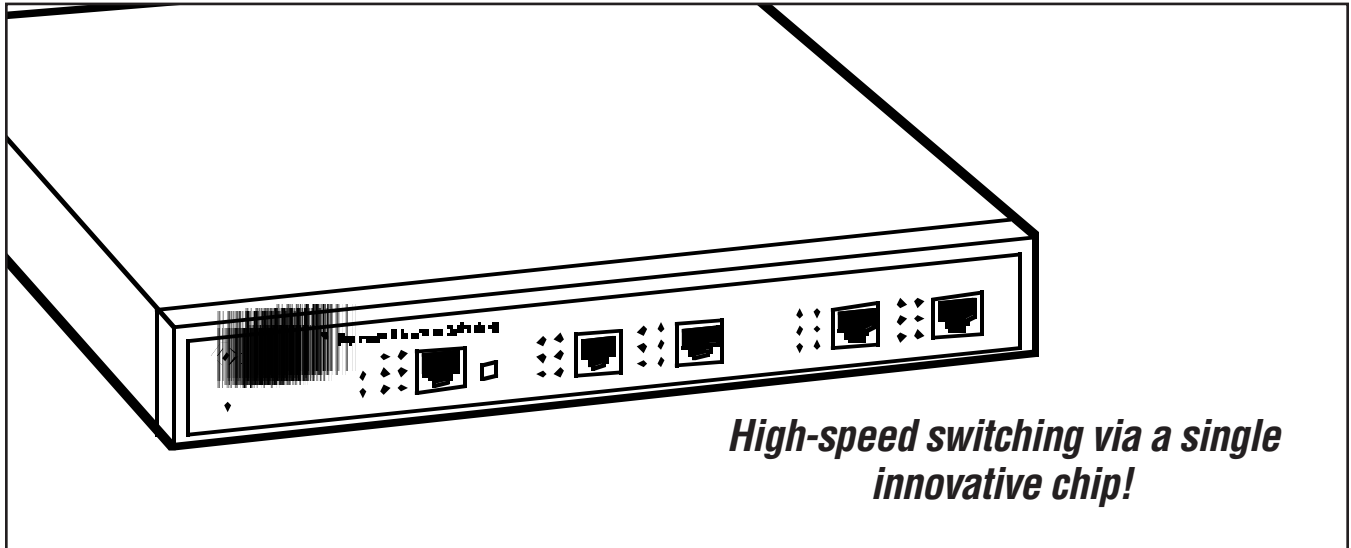# BLACK BOX®

NETWORK SERVICES

EXPRESS ETHERNET SWITCHES

High-speed switching via a single innovative chip!

Key Features

▶ **10/100-Mbps auto-negotiating and auto-sensing.**

▶ **Supports full- and half-duplex on all TX ports.**

▶ **True non-blocking architecture means no packet loss or CRC errors.**

▶ **Single-chip design means low cost and fast performance.**

▶ **8192 or 1024 MAC addresses, depending on model.**

▶ **Flash EEPROM for upgrading firmware in the field.**

With the Black Box Express Ethernet Switches, intelligent switching has never been easier! Adapt to your existing 10-Mbps links, or whisk your data along at Fast Ethernet speeds. All models rely on an innovative single-chip design for unprecedented performance and cost savings.

The switches support both 10-Mbps and 100-Mbps speed and half- and full-duplex transmission modes on the same UTP or fiber port. Standards-based auto-negotiation makes it easier to upgrade network segments and workstations from 10 Mbps to 100 Mbps. And, unlike hub-based 100-Mbps Ethernet networks, there's no distance limit for switch-based Ethernet networks.

Choose the switch model that best suits your needs. There are five models:

• One 4-port model with four 10/100BASE-TX ports and one 100BASE-FX port.

• Three 8-port models with either eight 10/100BASE-TX ports or eight 100BASE-FX ports. We've even added a compact desktop model for small installations.

• One 12-port model with 12 RJ-45 ports for 10BASE-T connections over Category 3, 4, or 5 UTP or 100BASE-TX connections over Category 5 UTP. This version also offers a single MII interface that houses an optional fiber module.

The 8-port models feature 1024 MAC addresses; all other models use 8192 MAC addresses.

Typical Application

Support both 10- and 100-Mbps speed and half- and full-duplex transmission modes on the same port.

21250

Specifications

Standards — IEEE 802.3 10BASE-T, IEEE 802.3u 100BASE-TX/FX

Speed — 10-/100-Mbps autosensing on all UTP ports

Duplex Support — Half- and full-duplex

Switching Engine — Store and forward

Indicators — Per Unit LEDs: (1) Uplink, (1) Power; Per Port LEDs: (1) 10-/100-Mbps speed, (1) Link, (1) TX, (1) Collision, (1) RX, (1) Duplex, (4) Utilization (LB9012A also includes [1] MII status monitor)

Connectors — 10/100BASE-T/TX Ports: RJ-45; 100BASE-FX Ports: (1) pair of SC

Emission Compliance — FCC part 15 Class A, CE mark, VCCI Class A

Safety — UL, CSA, TUV/GS

MTBF — 45,000 hours

Temperature — Operating: 0 to 40°C; Storage: -25 to 70°C

Humidity — Up to 90%

Maximum Altitude — 3048 m

Power — 100–250 VAC, 47–63 Hz internal universal power supply; Input Fuse: 2 A; Power Consumption: LB9005A-FO, LB9008A, LB9008A-FO, LB9108A: 12 W, LB9012A: 30 W

Size — LB9005A-FO: 4.6 x 25.9 x 20.6 cm; LB9008A, LB9008A-FO, LB9012A: 4.6 x 43.9 x 20.6 cm; LB9108A: 13.6 x 25.4 x 13.5 cm

Weight — LB9005A-FO, LB9108A: 1.57 kg, Shipping weight: 2.6 kg; LB9008A, LB9008A-FO: 2.93 kg, Shipping weight: 3.6 kg; LB9012A: 3.15 kg; Shipping weight: 4.26 kg

Technically Speaking

Ethernet switches offer several clear advantages over hubs:

- Dedicated bandwidth per port gives you higher performance.
- Each port has its own collision domain for half-duplex lines. The full-duplex line has its own wires for data transmission.
- Auto-negotiation on all the ports means easy migration from 10 Mbps to 100 Mbps. Just plug and play.
- While hub-based 100-Mbps Ethernet networks can only extend up to 205 meters, switch-based Ethernet networks have no distance limit.
- While hubs broadcast every incoming packet to all the other ports, the Express Ethernet Switches learn the MAC address in their address table and retransmit only to the necessary ports.

What's more, the Express Ethernet Switches offer these advantages over other Fast Ethernet switches:

- Full wire speed.
- Single-chip technology (MAC-plus switching fabric).
- Back-pressure flow control.
- Lower cost.

Ordering Information

ITEM	CODE
Express Ethernet Switches	
(4) 10/100BASE-TX and (1) 100BASE-FX Ports	LB9005A-FO
(8) 10/100BASE-TX Ports (Rackmount)	LB9008A
(8) 100BASE-FX Ports	LB9008A-FO
(12) 10/100BASE-TX Ports	LB9012A
You may also want to order cable…	
Category 5 Solid-Conductor Cable, 4-Pair, Straight-Pinned, PVC, 10-ft. (3-m)	EYN737MS-0010