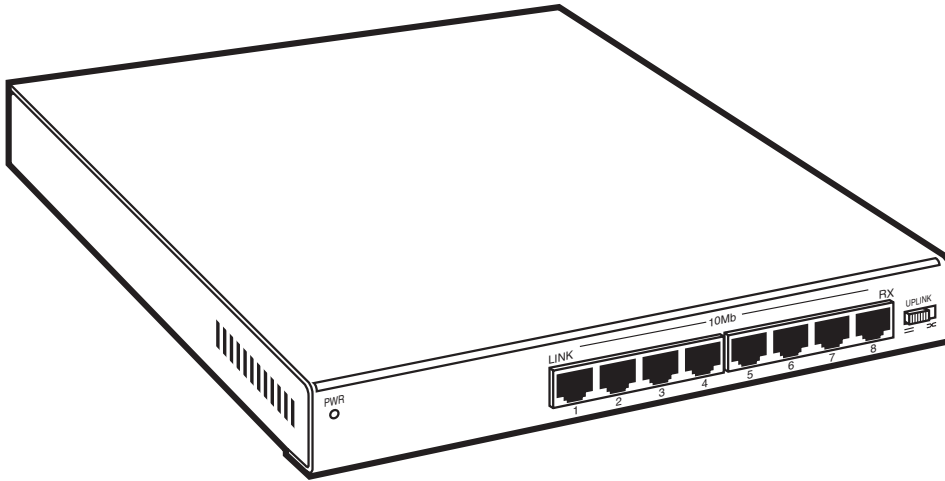




BLACK BOX[®]

NETWORK SERVICES

Mini Ethernet Switch



*The first-time
Ethernet Switch
for the switchphobic.*

Key Features

- ▶ *Improve network performance by segmenting network traffic.*
- ▶ *Low-cost, low-end fixed-configuration solution with plug-and-play setup.*
- ▶ *Offers eight 10BASE-T ports plus two optional 100BASE-TX ports for connection to high-speed segments.*
- ▶ *Full-speed filtering and forwarding across all ports.*
- ▶ *Supports full- and half-duplex.*
- ▶ *Large dynamic address tables and packet buffers.*

Divide your Ethernet network into segments to reduce congestion and increase efficiency. Even a small network of just two or three workgroups can benefit from the extra throughput a strategically placed switch or two can provide. And the Mini Ethernet Switch makes segmenting your network easy because it's simple, plug-and-play, and pre-configured—perfect for the first-time switch installer.

Use the LB9501A to ease congestion of your existing 10-Mbps segments. You'll see better performance immediately.

Use the LB9502A to add a 100BASE-TX segment to your 10BASE-T network and create your own 10/100 mixed-speed network. Use the two 100-Mbps ports to add high-speed segments as your network grows. For example, each 10-Mbps switched port can serve a subnet of workgroups, while the 100-Mbps

ports can connect to a server farm, a group of Fast Ethernet users, or other Fast Ethernet devices.

The new LB9503 adds a 100-Mbps fiber port—either single-mode or multimode, ST or SC. It also has a 100-Mbps RJ-45 port, in addition to its eight 10BASE-T ports.

Plug-and-Play Operation

The Mini Ethernet Switch is designed to be easy to use with little or no input required from you.

The 100-Mbps ports are auto-negotiating, so they sense and respond to 10 or 100 speed automatically.

Store-and-forward operation and self-learning 2K-node address table perform like large-network switches. Addresses of attached nodes

are automatically learned and maintained. When you change the network, the switch adapts automatically without any input from you.

Even the power supply is adaptable, sensing 115- or 230-VAC power and adapting automatically.

Big-Switch Performance

For maximum performance on all ports, a dynamically allocated 1-MB packet buffer automatically adapts to changes in network traffic, even with unbalanced loads.

The dynamic 2K-node address table allows the Switch to support even large networks—up to 8000 node addresses. Store-and-forward switching filters all faulty packets to minimize traffic congestion.

Typical Application

Connect a high-performance 100BASE-TX workgroup to your 10BASE-T Ethernet network.

Specifications

Address-Table Capacity — 2K (1954) node addresses

Agency approvals — UL listed (UL 1950), cUL, CE, Emissions meet FCC Part 15 Class A

Aggregate Filtering Rate —

10BASE-T ports: 119,040 frames per second;
100BASE-TX ports, Fiber Multimode ST, Fiber Multimode SC,
Fiber Single-Mode ST, Fiber Single-Mode SC: 297,600 frames
per second

Aggregate Forwarding Rate — 59,520 frames per second
per (4) 10BASE-T pairs;
148,800 frames per second per 100BASE-TX pair

Buffer Size — 1 MB

Cooling Method — Fan cooled @ 9cfm

Connectors — LB9501A: (8) RJ-45; LB9502A: (10) RJ-45;
LB9503A: (9) RJ-45, (1) ST or SC

Data Rate — LB9501A: 10 Mbps;
LB9502A: 10 Mbps and 100 Mbps;
LB9503A-ST, -SC, -SMST, -SMSC: 10 Mbps and 100 Mbps

Latency — 15 μ s + packet time (10 Mbps to 10 Mbps);
15 μ s + packet time (10 Mbps to 100 Mbps);
5 μ s + packet time (100 Mbps to 100 Mbps)

LED Indicators, Chassis — Power and Auto (steady on when
100-Mbps ports have autonegotiating enabled)

LED Indicators, 100-Mbps Ports — 100, steady on when the port
is operating at 100 Mbps; 10, steady on when the port is
operating at 10 Mbps; F/H, on when the port is operating at
full-duplex

LED Indicators, RJ-45 Ports — FDX, on for full-duplex
operation; LKJ/RX, flashing when receiving data; LK/RX,
when twisted-pair link is operational

Maximum Ethernet Segment Lengths —
Unshielded twisted-pair: 100 meters (328 ft.);
Shielded twisted-pair: 150 meters (492 ft.)

Network Standards — Ethernet V1.0/V2.0 IEEE 802.3:
10BASE-T;
IEEE 802.3u: 100BASE-TX

Operating Environment — Ambient Temperature: 32 to 122° F
(0 to 50° C);
Storage Temperature: -4 to +140° F (-20 to +60° C);
Ambient Relative Humidity: 10% to 95% (non-condensing)

Power — 90 to 260 VAC, 47 to 63 Hz, autosensing

Size — 1.3"H x 8.5"W x 9.6"D (3.3 x 21.5 x 24.3 cm)

Weight — 2.5 lb. (1.2 kg)

For these and other components...

Call our expert Technical Support Staff for all your LAN needs. They'll help you find the best equipment for your application.

Ethernet congestion can sneak up on you one node at a time. The Mini Ethernet Switch is a painless solution for the bogged-down network.

Technically Speaking

A common application for the Mini Ethernet Switch is to connect one Switch to another Switch or to another 100-Mbps device by means of a fiber cable and a pair of media converters.

In this application, it is usually preferable to operate the fiber link at 100 Mbps in order to take advantage of fiber's wide bandwidth.

The Mini Ethernet Switch's 100-Mbps ports can be set either at fixed 100-Mbps speed or at an auto-sensing mode in which the port automatically detects port speed. Most Black Box media converters will support that auto-sensing mode. However, many standard media converters do not: They require a fixed-speed 100-Mbps port.

Because this is such a common application for the Mini Ethernet Switch, the factory-default setting is for fixed 100-Mbps speed. You can easily converter the port to auto-sensing mode via an internal jumper.

Additional equipment you may need:

Category 5 Cable, Solid-Conductor, Straight-Pinned PVC.....	EYN737MS
Plenum,.....	EYN738MS
Terminated Fiber Optic Cable, ST-ST Riser	EFN062
Plenum,	EFP062
Crossover Media Converter, 100BASE-TX/Fiber-ST (Multimode)	LH1500A-ST

Ordering Information

This information will help you place your order quickly.

PRODUCT NAME	ORDER CODE
Mini Ethernet Switches	
(8) 10BASE-T	LB9501A
(8) 10BASE-T with (2) 100BASE-TX	LB9502A
(8) 10BASE-T with (1) 100BASE-TX & (1) Fiber Multimode ST	LB9503-ST
(8) 10BASE-T with (1) 100BASE-TX & (1) Fiber Multimode SC	LB9503A-SC
(8) 10BASE-T with (1) 100BASE-TX & (1) Fiber Single-mode ST	LB9503A-SMST
(8) 10BASE-T with (1) 100BASE-TX & (1) Fiber Single-mode SC	LB9503A-SMSC