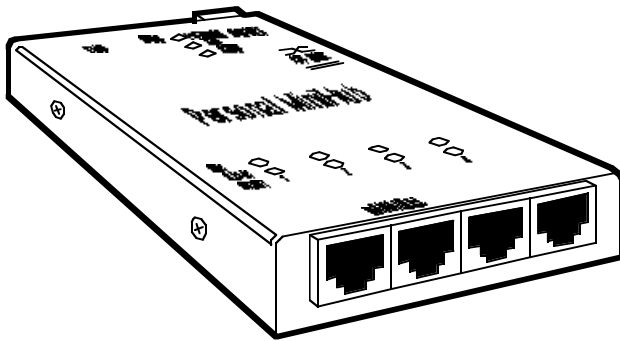


# BLACK BOX<sup>®</sup>

## NETWORK SERVICES

### *Personal MiniHub*



*The fastest way to add  
a 10BASE-T  
workgroup to your  
LAN!*

#### **Key Features**

*Instantly expand your small workgroup.*

*Use it as the central hub of a small 10BASE-T network.*

*Use your existing cable.*

*LEDs show you basic network activity at a glance.*

*Integrate the MiniHub within any standard Ethernet network.*

*Easy to install in almost any office or lab location.*

#### **Overview**

**E**xpand a LAN with the Personal MiniHub. Connect the uplink port directly to a 10BASE-T wall jack for instant expansion—four to eight new ports for a small workgroup.

Or use the Personal MiniHub as the central hub of a miniature standalone 10BASE-T network. Just configure the uplink port as a station port and plug in up to eight additional workstations. You can set up a mobile LAN for tradeshow, presentations, or sales demos. And the external power supply conveniently plugs into any available AC wall outlet or power strip.

The MiniHub is smaller than a paperback book. Pack it in your briefcase and take it with you when you travel. Once on site, set up a five- or nine-node LAN in no time and give your clients hands-on demonstrations.

Or set up a temporary workgroup. Just plug in and set up. When you're done, unplug the modular jacks and pack up. It's perfect for short-term projects.

#### **Typical Applications**

*Use the Personal MiniHub to expand from one to up to eight ports at an existing site. Simply plug the existing networked device's cable into one of the MiniHub's front RJ-45 ports. Then set the uplink port switch to "X" and connect the uplink port to the existing network outlet. Plug the external power supply into an AC power outlet, and plug the DC power plug into the jack on the rear of the unit. In minutes, you have four or eight new ports available for other networked devices.*

## Operational features

The Personal MiniHub is fully compliant with the Ethernet Version 2/IEEE 802.3 repeater specifications for CSMA/CD 10-Mbps operation and will function accordingly.

- Power On (PWR) LED—lights green to show functional DC power.
- Link Status (Link) LED—The Personal MiniHub includes a Link LED for each port. It indicates by lighting up green that there is proper connectivity on its 10BASE-T network segment. The Link LED

will turn off if connectivity is lost between the ends of the segment or a loss of power occurs in the unit at either end.

- Receive Packets (RX) LED—The Rx LEDs, one for each RJ-45 port, flash intermittently in green to indicate that data packets are being received from the segment. This provides a visual indication of network activity, and is also helpful in troubleshooting.
- Partitioning and reconnection—The

Personal MiniHub will automatically partition any port where 32 consecutive collisions occur or after 6.5 milliseconds of continuous transmissions. Network integrity is checked every 800 milliseconds, and the segment is reconnected after one 512-bit packet is transmitted without an error.

- Preamble regeneration—The Personal MiniHub will add bits to the preamble so that the output packet contains at a minimum a 64-bit preamble per the Ethernet standard.

- Collisions—When carrier is detected simultaneously on multiple ports, a jam pattern is generated on each port to create a collision condition. When a collision signal from one port is detected, it generates a jam pattern to the other ports.
- Fragment extension—The Personal MiniHub will automatically add bits to a received data packet of less than 96 bits (a “fragment”), so that the minimum output packet to the other port is 96 bits long.

## Mounting options

### Table-Top or Shelf Mounting

Simply set the MiniHub on a table-top or shelf. The Hub has four rubber feet for stability, which also keep it from scratching finished surfaces. Use a piece of

Velcro® (included) for additional stability.

### Wall or Vertical Surface Mounting

Use Velcro to mount the MiniHub in a vertical position. Stick one side of the Velcro tape on the bottom of the MiniHub between the

rubber feet. Stick the other side of the Velcro to the location where you want the MiniHub mounted. Use this method for mounting the Hub to the wall, on the side of a server unit cabinet, on the back of a desk, or anywhere else where the

associated cables are out of the way.

### Bracket Mounting

As an alternative to Velcro mounting, use small brackets. The metal screws in each side of the MiniHub’s case can be used to attach the brackets. With the brackets installed, you can mount the Hub in almost any position.

## Specifications

**Standards** — IEEE 802.3 10BASE-T Ethernet

**Switches** — (1) Uplink switch on side of unit

**Indicators** — Both: Power; LE2650A: (5) Link, (5) RX; LE2690A: (9) Link, (9) RX

**Connectors** — Both: (1) Switch-selectable uplink/station port; LE2650A: (5) RJ-45 female; LE2690A: (9) RJ-45 female

**Performance** — Data Rate: 10 Mbps, Partitioning: Enforced after 32 consecutive collisions; Reconnect: Occurs after 512 bits of error-free transmission

**Maximum Ethernet Segment Length** — UTP (Unshielded 10BASE-T): 100 m (328 feet)

**MTBF** — 50,000 hours

**Network Standards** — Ethernet V2.0, IEEE 802.3: 10BASE-T (the Hub works on the physical layer in the OSI model, so it operates independently of all software)

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

**Power** — 230 VAC, 50 Hz, 25 watts (external wallmount power supply)

**Size** — LE2650A: 2 x 8.4 x 12.2 cm (0.8"H x 3.3"W x 4.8"D); LE2690A: 2 x 12.7 x 11.2 cm (0.8"H x 5"W x 4.4"D)

**Weight** — LE2650A: 0.8 lb. (0.4 kg); LE2690A: 1 lb. (0.4 kg)

## The complete package

What you get when you order the Personal MiniHub

- Personal Mini Hub, 5- or 9-Port
- User’s manual
- External power supply
- Velcro® strip (approximately 3 inches long)
- (1) Pair of mounting ears or brackets

## Additional equipment you might need

- Category 5 Colour Patch Cables (EVNSL0X)
- Category 4 Patch Cable—Stranded (EVMSL10)

# Ordering Information

This information will help you place your order quickly.

PRODUCT NAME	ORDER CODE
Personal MiniHub	
5-Port (4 + 1) .....	LE2650AE
9-Port (8 + 1) .....	LE2690AE