BLACK BOX®
NETWORK SERVICES

Hardened Mini Industrial Switches

Tough, DIN rail-mountable 10-/100-Mbps Ethernet devices for switching copper or copper/fiber traffic.

FEATURES

» Inexpensive, unmanaged devices for easily integrating a legacy 10-Mbps or 100-Mbps network device into a 100-Mbps network in harsh environments—without taking up much-needed space.

» Available in a 5-port 10BASE-T/100BASE-TX copper-only version and 5-port (4-to-1) 10BASE-T/100BASE-TX plus 100BASE-FX versions.

» Copper/fiber versions extend much farther than the copper-only switch.

» All feature an industrial-strength plastic case and comply with IEC 61000-Part 6-2 Generic standards for electromagnetic compatibility (EMC) in industrial environments.

» Offer full wire-speed forwarding rates across the network.

» Fiber models offer interference-free connections plus extended distances.

» Auto MDI/MDI-X copper ports autonegotiate for 10-/100-Mbps speed and autodetect full- or half-duplex mode.

» Support 2048 MAC addresses and feature a 384 kb buffer memory.

» Can be installed easily on a DIN rail. Mounting kit is included.

OVERVIEW

Add switch segments in harsh environments with the Black Box® Hardened Mini Industrial Switches.

Featuring a rugged industrial case, they're particularly ideal for any factory application where you need unmanaged switching between multiple traffic segments. Or use them in power plants, mining and military sites, or anywhere temperature and contaminants would ordinarily wreak havoc on the switching circuitry.

The Hardened Mini Industrial Switches function at temperatures ranging from 14° to 140° F (-10 to +60° C).

They're also compact. They give you an affordable switching solution for harsh environments where you have limited space for networking hardware, such as in transportation cabinets on roadsides, on shop floors, and in multi-tenant dwellings or fiber-to-the-home (FTTH) applications.

Plug and play, the switches don't have any complicated software to set up and run.

What's more, the Hardened Mini Industrial Switches can be DIN-rail mounted (a mounting kit is included) and are equipped with terminal block power input for use in industrial applications that require Ethernet switching.

Eight versions are available: A copper-only switch with five 10BASE-T/100BASE-TX ports and six 4-to-1 copper/fiber optic switches with four 10BASE-T/100BASE-TX ports and a 100BASE-FX fiber port.

The copper/fiber versions are available with SC or ST® fiber connectors for both multimode and single-mode connectivity. On the LBH120A-H-75K-SC single-mode switch, interconnection between two nodes can reach as far as 75 kilometers (46.6 mi.).

Because they perform standard autonegotiation and include auto-MDI-X on the copper ports, they're cost effective for integrating legacy 10-Mbps networks with 100-Mbps Fast Ethernet networks. The copper ports autonegotiate for 10- or 100-Mbps speed and auto-detect full- or half-duplex mode.

TECH SPECS

Compliance —
EMI: FCC Part 15, Class A; EN61000-6-3: EN55022, EN61000-3-2, EN61000-3-3;
EMS: EN61000-6-2:
EN61000-4-2 (ESD standard),
EN61000-4-3 (radiated RFI standards),
EN61000-4-4 (burst standards),
EN61000-4-5 (surge standards),
EN61000-4-6 (induced RFI standards),
EN61000-4-8 (magnetic field standards),
EN61000-4-11 (voltage dips standards);
Environmental test:
IEC60068-2-6 Fc (vibration resistance),
IEC60068-2-27 Ea (shock),
IEC60068-2-32 Ed (free fall)
Enclosure — Plastic case, IP30 rated
Forwarding Rate —
10BASE-T: 10/20 Mbps half-/full-duplex;
100BASE-TX/100BASE-FX: 100 Mbps/200 Mbps half-/full-duplex
MAC Addresses — 2K
Packet Buffer — 384 kb

Switching Performance —
Ethernet: 14,880 pps;
Fast Ethernet: 148,800 pps
Switching Processing Type — Store and forward with half-duplex back pressure and IEEE 802.3x full-duplex flow control
Standards — IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX/100BASE-FX
CE Approval — Yes
Indicators —
Per unit: Power status (PWR);
Per port: 10/100TX or 100FX - LNK/ACT (green), 100 (yellow)
Connectors —
Ethernet/Fast Ethernet: (1), (4), or (5) RJ-45;
Fiber optic: (1) pair of SC or ST®
Operating Environment —
Temperature: +14 to +140° F (-10 to +60° C);
Humidity: 5 to 95%, non-condensing
Power — Input: 12–48 VDC (terminal block);
Output: Per optional DC or AC power supply ordered
Size — 4.3"H x 1"W x 2.8"D (10.9 x 2.5 x 7.1 cm)
Weight — 0.5 lb. (0.2 kg)

Item			Code
Hardened Mini Industrial Switches			
5-Port			
(5) 10-/100-Mbps Copper			**LBH120A-H**
5-Port (4-to-1)			
(4) 10-/100-Mbps Copper + (1) 100-Mbps Fiber			
Multimode	SC	20 km	**LBH120A-H-SC**
	ST	20 km	**LBH120A-H-ST**
Single-Mode	SC	20 km	**LBH120A-H-20K-SC**
		40 km	**LBH120A-H-40K-SC**
		75 km	**LBH120A-H-75K-SC**
	ST	20 km	**LBH120A-H-20K-ST**

For your switch, choose a DIN rail-mountable DC power supply or an AC power supply…

		Code
DIN Mount Power Supply	24-VDC	**PSD012**
	48-VDC	**PSD014**
External 100–240-VAC Power Adapter		
12-VDC Output Jack	U.S. Cord	**PS002A**
	No Cord	**PS002**
12-VDC Stripped Ends Output	U.S. Cord	**PS003A**
	No Cord	**PS003**