



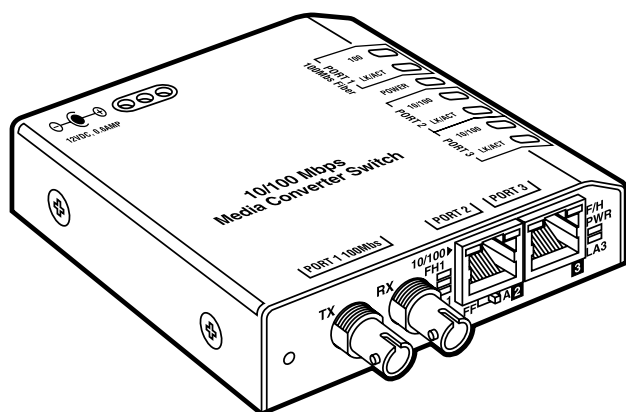
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Black Box Corporation.

# BLACK BOX<sup>®</sup>

## NETWORK SERVICES

Black Box Network Services (UK) Ltd • 464 Basingstoke Road • Reading, berkshire, RG2 0BG • Tech Support: 0118 965 6000 • [www.blackbox.co.uk](http://www.blackbox.co.uk)

## STANDARD MEDIA CONVERTER SWITCHES



***Media Converter Switches  
for the office environment.***

### Key Features

- **Support VLAN tagging and spanning tree passthrough.**
- **Suitable for office environments.**
- **Provide one 100-Mbps fibre port and two 10-/100-Mbps UTP switch ports.**
- **RJ-45 ports support autonegotiation, so you can easily attach any 10- or 100-Mbps device.**

Media Converter Switches from Black Box are the versatile way to extend your network. They're easy to use—literally plug-and-play—and offer many choices of fibre types, power types, and mounting options.

#### **It's a media converter and a switch!**

Media Converter Switches do more than just adapt from one cable type to another. They're true Ethernet switches and behave like switches within your Ethernet network. This means you can connect them together indefinitely without worrying about interrepeater links. Each Media Converter Switch features non-blocking switching architecture with a 2K MAC address table. The 128K buffer memory makes it easy to interconnect 10- and 100-Mbps devices.

Use them in your office; extend them to the factory floor.

Standard Media Converter Switches are for use in clean, temperature-controlled environments such as offices and wiring closets.

Media Converter Switches are also available in hardened versions for industrial environments and extreme versions for outdoor environments. Because all three types work together seamlessly, you can use inexpensive Standard Media Converter Switches in the protection of the wiring closet and choose the more robust Hardened or Extreme Media Converter Switches for harsh locations at your network's edge.

#### **Distance isn't a problem.**

Because they're switches as well as media converters, Media

Converter Switches provide more options in network topology, overcoming the distance limitations inherent with simple media converters—to add extra distance, just daisychain another Media Converter Switch. If you need more ports at your remote location, just add a Convenient Switch.

Multimode models support up to 2 kilometres (1.2 miles) between Media Converter Switches. For longer distances, choose single-mode models for up to 20 kilometres (12.4 miles).

#### **The features you're looking for.**

Media Converter Switches are simple to set up and use—just plug and go!

Both copper ports are auto-sensing for speed and duplex, adjusting to the connected device automatically.

Plus, the UTP ports feature auto-MDI/MDI-X, eliminating the need for crossover cables.

Media Converter Switches each have two full sets of LED indicators: one set on the front for viewing convenience when the Media Converter is DIN rail or wallmounted, and one set mounted in the end next to the media ports for easy viewing when units are in a rackmount tray.

#### **115-VAC or 240-VAC power.**

Standard Media Converter Switches come with 115-VAC power supplies for use in the United States or with 240-VAC power supplies for overseas use. The 240-VAC versions feature IEC power connectors for use with any IEC standard power cord, making them adaptable to most international locations.

#### **Mounting options galore.**

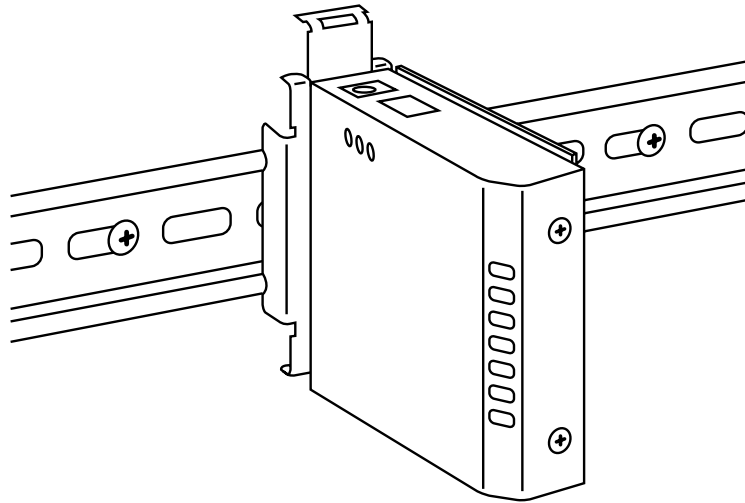
Media Converter Switches fit in where you need them. They come with neat, removable rubber feet so you can use them as standalone units. Or you can easily panelmount them with the included brackets and screws.

To use Standard Media Converter Switches with DIN rails, order the optional DIN Rail Mounting Bracket. This handy bracket features springmounting,

enabling you to easily pop your Media Converter Switches on and off the DIN rail without using a screwdriver or tightening set screws. DIN-rail-ready Media Converter Switches are also available—for details, contact Tech Support.

For rackmounting in a central location, choose the Rackmount Tray or the Powered Rackmount Tray. The powered tray provides power for up to eight units.

***The Media Converter Switch mounts on a DIN rail with the optional DIN Rail Mounting Bracket.***



## Specifications

**Distance (Maximum):** Multimode models: 2 km (1.2 mi.); Single-mode SC models: 20 km (12.4 mi.); Single-mode LC models: 15 km (9.3 mi.)

**MAC Addresses:** 2K

**Standards:** IEEE 802.3, IEEE 802.3u, IEEE 802.1p/q

#### **Connectors:**

LBH100A-ST, LBH100AE-ST:  
(2) RJ-45, (1) pair of ST\*;  
LBH100A-SC, LBH100AE-SC,  
LBH100A-SSC, LBH100AE-SSC,  
LBH100A-SSCL, LBH100AE-SSCL:  
(2) RJ-45, (1) pair of SC;  
LBH100A-MT, LBH100AE-MT:  
(2) RJ-45, (1) pair of MT-RJ;  
LBH100A-SLC, LBH100AE-SLC:  
(2) RJ-45, (1) pair of LC

**Indicators:** (14) LEDs: (2) Power, (4) 10/100, (6) LK/ACT, (2) 100

#### **Temperature Tolerance:**

Storage: -40 to +185°F (-40 to +85°C);  
Operating: 32 to 104°F (0 to 40°C)

**Humidity:** 5 to 95%, noncondensing

**Altitude:** -200 to 13,000 ft. (-60.9 to 3962.4 m)

**Enclosure:** Steel

**Power:** 115-VAC models: 115-VAC, 60-Hz external power supply; 240-VAC models: 240-VAC, 50-Hz external power supply with IEC power connector

**Size:** 3.5"H x 3"W x 1"D (8.9 x 7.6 x 2.5 cm)

**Weight:** Media Converter Switch: 0.3 lb. (0.1 kg); Power Supply: 0.4 lb. (0.2 kg)

# Ordering Information

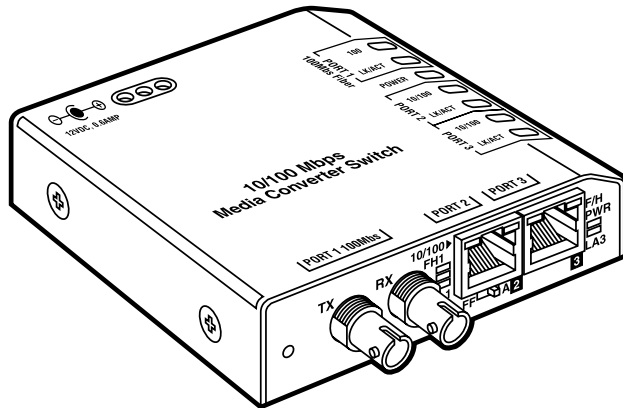
## ITEM

## CODE

Standard Media Converter Switches, 10-/100-Mbps Copper to 100-Mbps Fibre

115-VAC, Multimode, ST .....	LBH100A-ST
240-VAC, Multimode, ST .....	LBH100AE-ST
115-VAC, Multimode, SC .....	LBH100A-SC
240-VAC, Multimode, SC .....	LBH100AE-SC
115-VAC, Multimode, MT-RJ .....	LBH100A-MT
240-VAC, Multimode, MT-RJ .....	LBH100AE-MT
115-VAC, Single-Mode, SC .....	LBH100A-SSC
240-VAC, Single-Mode, SC .....	LBH100AE-SSC
115-VAC, Single-Mode, Long-Distance, SC .....	LBH100A-SSCL
240-VAC, Single-Mode, Long-Distance, SC .....	LBH100AE-SSCL
115-VAC, Single-Mode, SLC .....	LBH100A-SLC
240-VAC, Single-Mode, SLC .....	LBH100AE-SLC
Spare AC Power Supply for Standard Media Converter Switches, 115-VAC .....	LBH100A-115-VAC
Spare AC Power Supply for Standard Media Converter Switches, 240-VAC .....	LBH100AE-240-VAC
DIN Rail Mounting Bracket .....	DIN-RAIL MC2
Rackmount Tray .....	LE1505-RACK
Powered Rackmount Tray .....	LH1505P-RACK

# HARDENED MEDIA CONVERTER SWITCHES



## *Media Converter Switches for industrial environments.*

### Key Features

- ▶ **Function as both a media converter and a switch.**
- ▶ **Suitable for dusty or dirty environments with a temperature range between -13 and +140°F (-25 to +60°C).**
- ▶ **Provide one 100-Mbps fibre port and two 10-/100-Mbps UTP switch ports.**
- ▶ **RJ-45 ports support autonegotiation, so you can easily attach any 10- or 100-Mbps device.**

Media Converter Switches are the versatile way to extend your network. They're easy to use—literally plug-and-play—and offer many choices of fibre types, power types, and mounting options.

#### **It's a media converter and a switch!**

Media Converter Switches do more than just adapt from one cable type to another. They're true Ethernet switches and behave like switches within your Ethernet network. This means you can connect them together indefinitely without worrying about interpeater links. Each Media Converter Switch features non-blocking switching architecture with a 2K MAC address table. The 128K buffer memory makes it easy to interconnect 10- and 100-Mbps devices.

#### **Tough enough for the factory floor.**

Hardened Media Converter Switches are for dusty or dirty environments with temperatures that range between -13 and +140°F (-25 to +60°C). They use the metal case as a heat sink so no internal airflow is needed for

cooling. The case is sealed to resist environmental contaminants such as dust, dirt, moisture, smoke, and insects. They're an ideal choice for demanding industrial applications such as factory floors.

Media Converter Switches are also available in standard versions for office or wiring closet environments and extreme versions for outdoor environments. Because all three types work together seamlessly, you can use inexpensive Standard Media Converter Switches in the protection of the wiring closet and choose the more robust Hardened or Extreme Media Converter Switches for harsh locations at your network's edge.

#### **Distance isn't a problem.**

Because they're switches as well as media converters, Media Converter Switches provide more options in network topology, overcoming the distance limitations inherent with simple media converters—to add extra distance, just daisychain another Media Converter Switch. If you need more ports at your remote location, just add a Convenient Switch.

Multimode models support up to 2 kilometres (1.2 miles) between Media Converter Switches. For longer distances, choose single-mode models for up to 20 kilometres (12.4 miles) or single-mode, long-distance models for an incredible 40 kilometres (24.9 miles) between links.

#### **The features you're looking for.**

Media Converter Switches are simple to set up and use—just plug and go!

Both copper ports are auto-sensing for speed and duplex, adjusting to the connected device automatically. Plus, the UTP ports feature auto-MDI/MDI-X, eliminating the need for crossover cables.

Media Converter Switches each have two full sets of LED indicators: one set on the front for viewing convenience when the Media Converter is DIN rail or wallmounted, and one set mounted in the end next to the media ports for easy viewing when units are in a rackmount tray.

### AC or DC power

Hardened Media Converter Switches have the power options to support harsh environments, too. Models with AC power supplies support 100–240-VAC power. The power supplies with recessed IEC power connectors work with any IEC standard power cord, making them adaptable to most international locations.

DC-powered units have internal screw terminals for connecting DC power in addition to an AC power jack. Because these models have dual power connections, you can use them simultaneously with both your DC power supply and an AC power adapter (sold separately) to provide redundant power input.

### Mounting options galore.

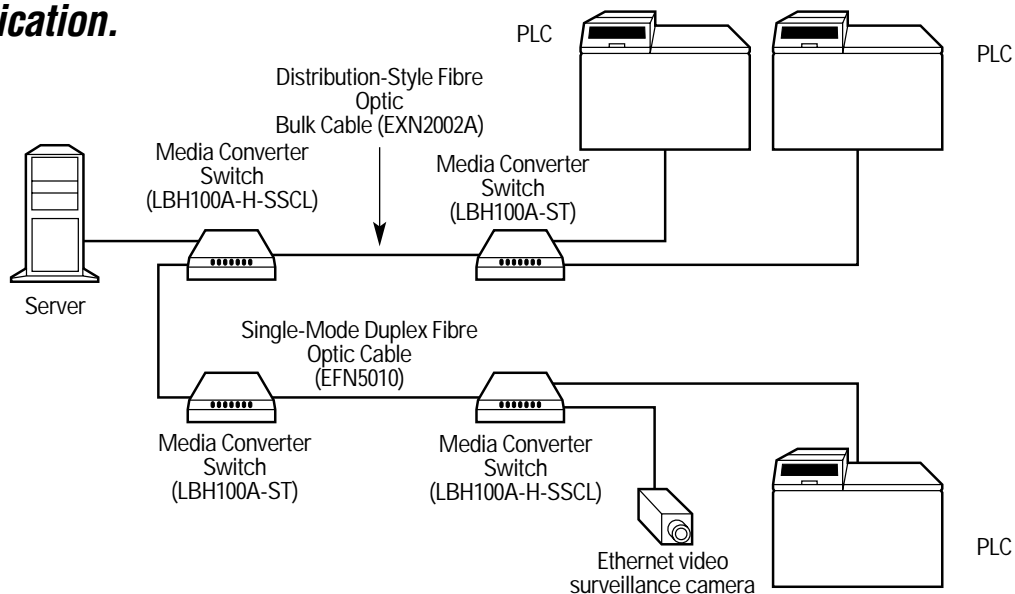
Media Converter Switches fit in where you need them. They come with neat, removable rubber feet so you can use them as standalone units. Or you can easily panelmount them with the included brackets and screws.

For use with DIN rails, order the optional DIN Rail Mounting Bracket. This handy bracket features springmounting, enabling

you to easily pop your Media Converter Switches on and off the DIN rail without using a screwdriver or tightening set screws. DIN-rail-ready Media Converter Switches are also available.

For rackmounting in a central location, choose the Rackmount Tray or the Powered Rackmount Tray. The powered tray provides power for up to eight units.

## Typical application.



## Specifications

**Distance (Maximum):** Multimode models: 2 km (1.2 mi.); Single-mode SC models: 20 km (12.4 mi.); Single-mode LC models: 15 km (9.3 mi.); Single-mode, long-distance SC models: 40 km (24.9 mi.)

**MAC Addresses:** 2K

**Standards:** IEEE 802.3, IEEE 802.3u, IEEE 802.1p/q

**Connectors:** LBH100A-H-ST, LBH100AE-H-ST, LBH100A-H-ST-12, LBH100A-H-ST-24, LBH100A-HD-ST-24, LBH100A-H-ST-48: (2) RJ-45, (1) pair of ST®; LBH100A-H-MT, LBH100AE-H-MT, LBH100A-H-MT-12,

### Connectors (continued):

LBH100A-H-MT-24, LBH100A-HD-MT-24, LBH100A-H-MT-48: (2) RJ-45, (1) pair of MT-RJ; LBH100A-H-SC, LBH100AE-H-SC, LBH100A-H-SC-12, LBH100A-H-SC-24, LBH100A-HD-SC-24, LBH100A-H-SC-48, LBH100A-H-SSC, LBH100AE-H-SSC, LBH100A-H-SSC-12, LBH100A-H-SSC-24, LBH100A-HD-SSC-24, LBH100A-H-SSC-48, LBH100A-H-SSCL, LBH100AE-H-SSCL, LBH100A-H-SSCL-12, LBH100A-H-SSCL-24, LBH100A-HD-SSCL-24, LBH100A-H-SSCL-48: (2) RJ-45, (1) pair of SC; LBH100A-H-SLC, LBH100AE-H-SLC, LBH100A-H-SLC-12, LBH100A-H-SLC-24, LBH100A-HD-SLC-24, LBH100A-H-SLC-48: (2) RJ-45, (1) pair of LC

**Indicators:** (1) Power LED; Per port LEDs: 10/100, full/half-duplex, Link/Act

**Power:** AC models: 100–240-VAC, 47–63-Hz external power supply; 12-VDC models: Internal terminal block for 12-VDC power plus jack for AC power supply (not included); 24-VDC models: Internal terminal block for 24-VDC power plus jack for AC power supply (not included); -48-VDC models: Internal terminal block for -48-VDC power plus jack for AC power supply (not included)

### Temperature Tolerance:

Storage: -40 to +185°F (-40 to +85°C); Long-term operating: -13 to +140°F (-25 to +60°C); Short-term operating: -40 to +185°F (-40 to 85°C); Cold start to -4°F (-20°C)

**Humidity:** 5 to 95%, noncondensing

**Altitude:** -200 to 13,000 ft. (-60.9 to 3962.4 m)

**Enclosure:** Steel

**Size:** 3.5"H x 3"W x 1"D (8.9 x 7.6 x 2.5 cm)

**Weight:** Media Converter Switches: 0.3 lb. (0.1 kg); Power Supplies: 0.4 lb. (0.2 kg)

# Ordering Information

## ITEM

## CODE

### Hardened Media Converter Switches, 10-/100-Mbps Copper to 100-Mbps Multimode Fibre

100-240-VAC, SC	LBH100A-H-SC
100-240-VAC, ST	LBH100A-H-ST
100-240-VAC, MT-RJ	LBH100A-H-MT
100-240-VAC with IEC, SC	LBH100AE-H-SC
100-240-VAC with IEC, ST	LBH100AE-H-ST
100-240-VAC with IEC, MT-RJ	LBH100AE-H-MT
12-VDC, SC	LBH100A-H-SC-12
12-VDC, ST	LBH100A-H-ST-12
12-VDC, MT-RJ	LBH100A-H-MT-12
24-VDC, SC	LBH100A-H-SC-24
24-VDC, SC, DIN Rail Mountable	LBH100A-HD-SC-24
24-VDC, ST	LBH100A-H-ST-24
24-VDC, ST, DIN Rail Mountable	LBH100A-HD-ST-24
24-VDC, MT-RJ	LBH100A-H-MT-24
24-VDC, MT-RJ, DIN Rail Mountable	LBH100A-HD-MT-24
48-VDC, SC	LBH100A-H-SC-48
48-VDC, ST	LBH100A-H-ST-48
48-VDC, MT-RJ	LBH100A-H-MT-48

### Hardened Media Converter Switches, 10-/100-Mbps Copper to 100-Mbps Single-Mode Fibre

100-240-VAC, SC	LBH100A-H-SSC
100-240-VAC, LC	LBH100A-H-SLC
100-240-VAC with IEC, SC	LBH100AE-H-SSC
100-240-VAC with IEC, LC	LBH100AE-H-SLC
12-VDC, SC	LBH100A-H-SSC-12
12-VDC, LC	LBH100A-H-SLC-12
24-VDC, SC	LBH100A-H-SSC-24
24-VDC, SC, DIN Rail Mountable	LBH100A-HD-SSC-24
24-VDC, LC	LBH100A-H-SLC-24
24-VDC, LC, DIN Rail Mountable	LBH100A-HD-SLC-24
48-VDC, SC	LBH100A-H-SSC-48
48-VDC, LC	LBH100A-H-SLC-48
100-240-VAC, Long-Distance, SC	LBH100A-H-SSCL
100-240-VAC with IEC, SC	LBH100AE-H-SSCL
12-VDC, Long-Distance, SC	LBH100A-H-SSCL-12
24-VDC, Long-Distance, SC, DIN Rail Mountable	LBH100A-HD-SSCL-24
24-VDC, Long-Distance, SC	LBH100A-H-SSCL-24
48-VDC, Long-Distance, SC	LBH100A-H-SSCL-48

AC Power Supply for Hardened Media Converter Switches, 100-240-VAC, 47-63-Hz ..... LBH100A-H-PS

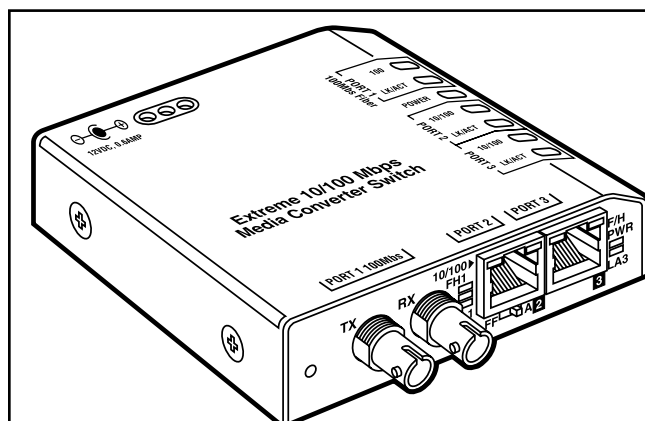
AC Power Supply for Hardened Media Converter Switches, 100-240-VAC,  
47-63-Hz with IEC Connector ..... LBH100AE-H-PS

DIN Rail Mounting Bracket ..... DIN-RAIL MC2

Rackmount Tray ..... LE1505-RACK

Powered Rackmount Tray ..... LH1505P-RACK

# EXTREME MEDIA CONVERTER SWITCHES



## ***Media Converter Switches for harsh outdoor environments.***

### Key Features

- ***Suitable for harsh outdoor environments.***
- ***Provide one 100-Mbps fibre port and two 10-/100-Mbps UTP switch ports.***
- ***RJ-45 ports support autonegotiation, so you can easily attach any 10- or 100-Mbps device.***
- ***Available with many choices of AC and DC power supplies.***

Media Converter Switches are the versatile way to extend your network. They're easy to use—literally plug-and-play—and offer many choices of fibre types, power types, and mounting options.

#### **It's a media converter and a switch!**

Media Converter Switches do more than just adapt from one cable type to another. They're true Ethernet switches and behave like switches within your Ethernet network. This means you can connect them together indefinitely without worrying about interpeer links. Each Media Converter Switch features non-blocking switching architecture with a 2K MAC address table. The 128K buffer memory makes it easy to interconnect 10- and 100-Mbps devices.

#### **Tough enough for outdoor use.**

Choose Extreme Media Converter Switches for outdoor use in exposed locations with temperature ranges of -40 to +167°F (-40 to +75°C)—all they need in the way of protection is shelter from direct rainfall. Like our hardened models, Extreme Media Converter Switches feature a sealed case that uses its

own metal shell as a heat sink. Choose them for applications such as traffic signal control or for sensors or surveillance cameras in outdoor plants. Extreme Media Converter Switches are rated for above-the-ceiling plenum installation.

Media Converter Switches are also available in standard versions for office or wiring closet environments and hardened versions for demanding indoor environments such as factory floors. Because all three types work together seamlessly, you can use inexpensive Standard Media Converter Switches in the protection of the wiring closet and choose the more robust Hardened or Extreme Media Converter Switches for harsh locations at your network's edge.

#### **Distance isn't a problem.**

Because they're switches as well as media converters, Media Converter Switches provide more options in network topology, overcoming the distance limitations inherent with simple media converters—to add extra distance, just daisychain another Media Converter Switch. If you need more ports at your remote location, just add a Convenient Switch.

Multimode models support up to 2 kilometres (1.2 miles) between Media Converter Switches. For longer distances, choose single-mode models for up to 20 kilometres (12.4 miles) or single-mode, long-distance models for an incredible 40 kilometres (24.9 miles) between links.

#### **The features you're looking for.**

Media Converter Switches are simple to set up and use—just plug and go!

Both copper ports are auto-sensing for speed and duplex, adjusting to the connected device automatically. Plus, the UTP ports feature auto-MDI/MDI-X, eliminating the need for crossover cables.

Media Converter Switches each have two full sets of LED indicators: one set on the front for viewing convenience when the Media Converter is DIN rail or wallmounted, and one set mounted in the end next to the media ports for easy viewing when units are in a rackmount tray.

#### **AC or DC power.**

Extreme Media Converter Switches have the power options to support harsh environments,

too. Models with AC power supplies support 100–240-VAC power. The power supplies with recessed IEC power connectors work with any IEC standard power cord, making them adaptable to most international locations.

DC-powered units have internal screw terminals for connecting DC power in addition

to an AC power jack. Because these models have dual power connections, you can use them simultaneously with both your DC power supply and an AC power adapter (sold separately) to provide redundant power input.

### Mounting options galore.

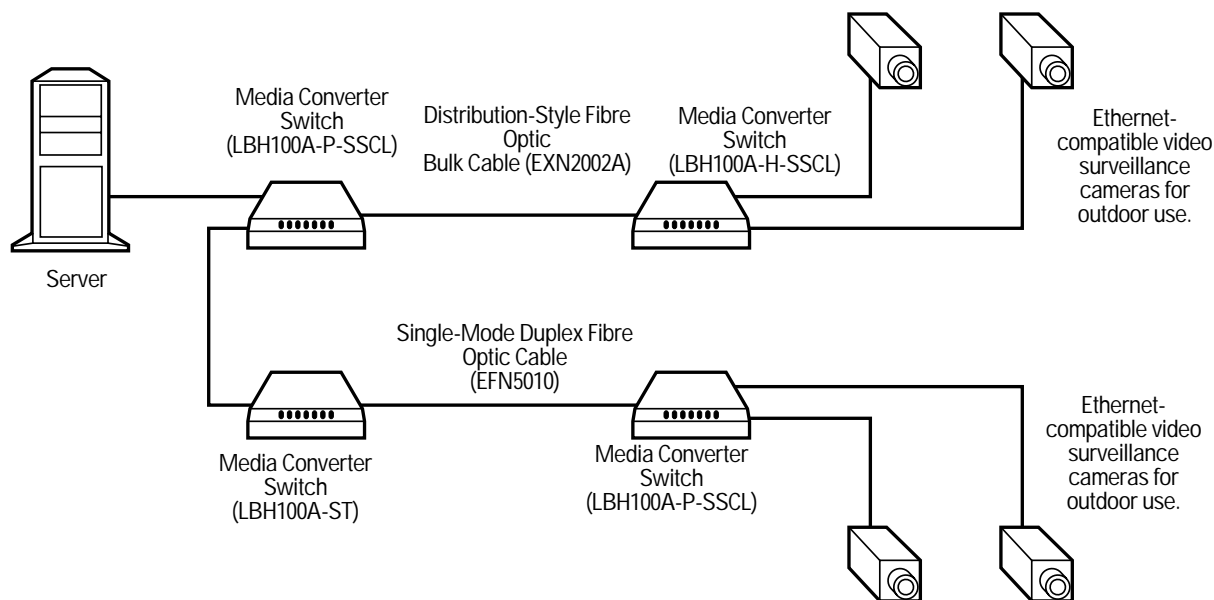
Media Converter Switches fit in where you need them. They

come with neat, removable rubber feet so you can use them as standalone units. Or you can easily panelmount them with the included brackets and screws.

For use with DIN rails, order the optional DIN Rail Mounting Bracket. This handy bracket features springmounting, enabling you to easily pop your Media

Converter Switches on and off the DIN rail without using a screwdriver or tightening set screws. DIN-rail-ready Media Converter Switches are also available.

For rackmounting in a central location, choose the Rackmount Tray or the Powered Rackmount Tray. The powered tray provides power for up to eight units.



## Specifications

**Distance (Maximum):** Multimode models: 2 km (1.2 mi.); Single-mode SC models: 20 km (12.4 mi.); Single-mode LC models: 15 km (9.3 mi.); Single-mode, long-distance SC models: 40 km (24.9 mi.)

**MAC Addresses:** 2K

**Standards:** IEEE 802.3, IEEE 802.3u, IEEE 802.1p/q

**Connectors:** LBH100A-P-ST, LBH100AE-P-ST, LBH100A-PD-SC, LBH100A-P-ST-12, LBH100A-P-ST-24, LBH100A-PD-ST-24, LBH100A-P-ST-48; (2) RJ-45, (1) pair of ST\*;

### Connectors (continued):

LBH100A-P-MT, LBH100AE-P-MT, LBH100A-P-MT-12, LBH100A-P-MT-24, LBH100A-PD-MT-24, LBH100A-P-MT-48; (2) RJ-45, (1) pair of MT-RJ; LBH100A-P-SC, LBH100AE-P-SC, LBH100A-P-SC-12, LBH100A-P-SC-24, LBH100A-PD-SC-24, LBH100A-P-SC-48, LBH100A-P-SSC, LBH100AE-P-SSC, LBH100A-P-SSC-12, LBH100A-P-SSC-24, LBH100A-PD-SSC-24, LBH100A-P-SSC-48, LBH100A-P-SSCL, LBH100AE-P-SSCL, LBH100A-P-SSCL-24, LBH100A-PD-SSCL-24, LBH100A-P-SSCL-48; (2) RJ-45, (1) pair of SC;

### Connectors (continued):

LBH100A-P-SLC, LBH100A-P-SLC, LBH100AE-P-SLC, LBH100A-P-SLC-12, LBH100A-P-SLC-24, LBH100A-PD-SLC-24, LBH100A-P-SLC-48; (2) RJ-45, (1) pair of LC

### Temperature Tolerance:

Storage: -40 to +185°F (-40 to +85°C); Long-term operating: -40 to +167°F (-40 to +75°C); Short-term operating: -58 to +212°F (-50 to +100°C); Cold start to -40°F (-40°C)

**Humidity:** 5 to 95%, noncondensing

**Altitude:** -200 to 13,000 ft. (-60.9 to 3962.4 m)

**Enclosure:** Steel

**Power:** AC models: 100–240-VAC, 47–63-Hz external power supply; 12-VDC models: Internal terminal block for 12-VDC power plus jack for AC power supply (not included); 24-VDC models: Internal terminal block for 24-VDC power plus jack for AC power supply (not included); -48-VDC models: Internal terminal block for -48-VDC power plus jack for AC power supply (not included)

**Size:** 3.5"H x 3"W x 1"D (8.9 x 7.6 x 2.5 cm)

**Weight:** Media Converter Switches: 0.3 lb. (0.1 kg); Power Supplies: 0.5 lb. (0.2 kg)



# Ordering Information

## ITEM

## CODE

### Extreme Media Converter Switches, 10-/100-Mbps Copper to 100-Mbps Multimode Fibre

100-240-VAC, SC	LBH100A-P-SC
100-240-VAC, SC, DIN Rail Mountable	LBH100A-PD-SC
100-240-VAC, ST	LBH100A-P-ST
100-240-VAC, MT-RJ	LBH100A-P-MT
100-240-VAC with IEC, SC	LBH100AE-P-SC
100-240-VAC with IEC, ST	LBH100AE-P-ST
100-240-VAC with IEC, MT-RJ	LBH100AE-P-MT
12-VDC, SC	LBH100A-P-SC-12
12-VDC, ST	LBH100A-P-ST-12
12-VDC, MT-RJ	LBH100A-P-MT-12
24-VDC, SC	LBH100A-P-SC-24
24-VDC, SC, DIN Rail Mountable	LBH100A-PD-SC-24
24-VDC, ST	LBH100A-P-ST-24
24-VDC, ST, DIN Rail Mountable	LBH100A-PD-ST-24
24-VDC, MT-RJ	LBH100A-P-MT-24
24-VDC, MT-RJ, DIN Rail Mountable	LBH100A-PD-MT-24
48-VDC, SC	LBH100A-P-SC-48
48-VDC, ST	LBH100A-P-ST-48
48-VDC, MT-RJ	LBH100A-P-MT-48

### Extreme Media Converter Switches, 10-/100-Mbps Copper to 100-Mbps Single-Mode Fibre

100-240-VAC, SC	LBH100A-P-SSC
100-240-VAC, LC	LBH100A-P-SLC
100-240-VAC with IEC, SC	LBH100AE-P-SSC
100-240-VAC with IEC, LC	LBH100AE-P-SLC
12-VDC, SC	LBH100A-P-SSC-12
12-VDC, LC	LBH100A-P-SLC-12
24-VDC, SC	LBH100A-P-SSC-24
24-VDC, SC, DIN Rail Mountable	LBH100A-PD-SSC-24
24-VDC, LC	LBH100A-P-SLC-24
24-VDC, LC, DIN Rail Mountable	LBH100A-PD-SLC-24
48-VDC, SC	LBH100A-P-SSC-48
48-VDC, LC	LBH100A-P-SLC-48
100-240-VAC, Long-Distance, SC	LBH100A-P-SSCL
100-240-VAC with IEC, SC	LBH100AE-P-SSCL
12-VDC, Long-Distance, SC	LBH100A-P-SSCL-12
24-VDC, Long-Distance, SC, DIN Rail Mountable	LBH100A-PD-SSCL-24
24-VDC, Long-Distance, SC	LBH100A-P-SSCL-24
48-VDC, Long-Distance, SC	LBH100A-P-SSCL-48

AC Power Supply for Hardened Media Converter Switches, 100-240-VAC, 47-63 Hz. LBH100A-P-PS

AC Power Supply for Hardened Media Converter Switches, 100-240-VAC, 47-63 Hz

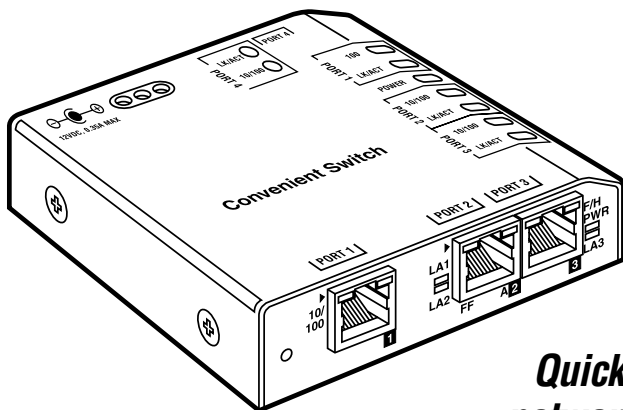
with IEC Connector LBH100AE-P-PS

DIN Rail Mounting Bracket DIN-RAIL MC2

Rackmount Tray LE1505-RACK

Powered Rackmount Tray LH1505P-RACK

# CONVENIENT SWITCHES



***Quickly add Ethernet ports anywhere in your network—even in harsh outdoor environments.***

## Key Features

- ***Use this handy four-port switch to quickly add additional ports anywhere in your network.***
- ***Models available to stand up to environments ranging from the friendly wiring closet to harsh outdoor applications.***
- ***Provide four 10-/100-Mbps UTP switch ports.***
- ***All ports support autonegotiation, so you can easily attach any 10- or 100-Mbps device.***

Convenient Switches are versatile, autosensing, four-port switches that enable you to quickly add ports anywhere on your Ethernet network. They're designed as a part of our Media Converter Switch family and are available in the same chassis choices to fit environments ranging from comfortable offices to demanding outdoor installations. You can also choose from a wide range of power supplies and mounting options.

Although Convenient Switches were designed to match our Media Converter Switches, you can also use them just like any other 10-/100-Mbps Ethernet switch to add ports anywhere on your network or even to build a small freestanding network.

### **Adapt to nearly any environment.**

Convenient Switches come in three versions to adapt to nearly any environment. Because all three types work together seamlessly with each other and also with our family of Media Converter Switches, you can use inexpensive switches in the protection of the wiring closet and choose the more robust Hardened or Extreme Convenience

Switches for harsh locations at your network's edge.

**Standard**—These are our basic Convenient Switches for use in clean, temperature-controlled environments such as offices and wiring closets. Even though these models are designed for use in controlled environments, you'll find that they feature the same heavyweight metal case as our more robust models.

**Hardened**—These Convenient Switches are for dusty or dirty environments with temperatures that range between -13 and +140°F (-25 to +60°C). They use the metal case as a heat sink so no internal airflow is needed for cooling. The case is sealed to resist environmental contaminants such as dust, dirt, moisture, smoke, and insects. They're an ideal choice for demanding industrial applications such as factory floors.

**Extreme**—Choose these robust units for outdoor use in exposed locations with temperature ranges of -40 to +167°F (-40 to +75°C)—all they need in the way of protection is shelter from direct rainfall. Like our hardened models, Extreme Convenient

Switches feature a sealed case that uses its own metal shell as a heat sink. Choose them for applications such as traffic signal control or for sensors or surveillance cameras in outdoor plants. Extreme Convenient Switches are rated for above-the-ceiling plenum installation.

### **The features you're looking for.**

Convenient Switches are literally plug-and-play.

All four UTP ports are autosensing for speed and duplex, adjusting to the connected device automatically. Plus, all ports feature auto-MDI/MDI-X, eliminating the need for crossover cables.

Each switch features non-blocking switching architecture with a 2K MAC address table. The 128K buffer memory makes it easy to interconnect 10- and 100-Mbps devices.

The switches each have two full sets of LED indicators: one set on the front for viewing convenience when the switch is DIN rail or wallmounted, and one set mounted in the end next to the media ports for easy viewing when units are in a rackmount tray.

### AC and DC power.

Like our Media Converter Switches, Convenient Switches have the power options to support harsh environments. Standard models are available with AC power adapters only, in a choice of 115 or 240 VAC. Hardened and Extreme Convenient Switches with AC power supplies feature 100–240-VAC power supplies built to the same tough standards.

The power supplies with recessed IEC power connectors

work with any IEC standard power cord, making them adaptable to most international locations.

DC-powered Hardened and Extreme units have internal screw terminals for connecting DC power in addition to an AC power jack. Because these models have dual power connections, you can use them simultaneously with both your DC power supply and an AC power adapter (sold separately) to provide redundant power input.

### Mounting options galore.

Convenient Switches fit in where you need them. The switches come with neat, removable rubber feet so you can use them as standalone units. Or you can easily panelmount them with the included brackets and screws.

For use with DIN rails, order the optional DIN Rail Mounting Bracket. This handy bracket features springmounting, enabling you to easily pop your Convenient

Switches on and off the DIN rail without using a screwdriver or tightening set screws. DIN-rail-ready Media Converter Switches are also available—for details, contact Tech Support.

For rackmounting in a central location, choose the Rackmount Tray or the Powered Rackmount Tray. The powered tray provides power for up to eight units.

## Specifications

### MAC Addresses: 2K

**Standards:** IEEE 802.3, IEEE 802.3u, IEEE 802.1p/q

**Connectors:** (4) RJ-45

**Indicators:** (2) Power, (8) 10/100, (8) LK/ACT

### Temperature Tolerance:

All models: Storage: -40 to +185°F (-40 to +85°C);

Standard models: Operating: 32 to 104°F (0 to 40°C);

Hardened models: Long-term operating: -13 to +140°F (-25 to +60°C);

Short-term operating: -40 to +185°F (-40 to +85°C);

### Temperature Tolerance (continued):

Cold start to -4°F (-20°C);

Extreme models: Long-term operating: -40 to +167°F

(-40 to +75°C);

Short-term operating: -58 to +212°F (-50 to +100°C);

Cold start to -40°F (-40°C)

**Humidity:** 5 to 95%, noncondensing

**Altitude:** -200 to 13,000 ft. (-60.9 to 3962.4 m)

**Enclosure:** Steel

**Power:** Standard 115-VAC models: 115-VAC, 60-Hz external power supply;

### Power (continued):

Standard 240-VAC models: 240-VAC, 50-Hz external power supply with IEC power connector;

Hardened and Extreme AC models: 100–240-VAC, 47–63-Hz external power supply;

12-VDC models: Internal terminal block for 12-VDC power plus jack for AC power supply (not included);

24-VDC models: Internal terminal block for 24-VDC power plus jack for AC power supply (not included);

### Power (continued):

-48-VDC models: Internal terminal block for -48-VDC power plus jack for AC power supply (not included)

**Size:** 3.5"H x 3"W x 1"D (8.9 x 7.6 x 2.5 cm)

**Weight:** Switch: 0.3 lb. (0.1 kg); Standard and Hardened Power Supplies: 0.4 lb. (0.2 kg); Extreme Power Supplies: 0.5 lb. (0.2 kg)

# Ordering Information

## ITEM

## CODE

### Convenient Switches

#### Standard

115-VAC ..... LBH101A  
240-VAC ..... LBH101AE

#### Hardened

100–240-VAC ..... LBH101A-H  
100–240-VAC with IEC ..... LBH101AE-H  
12-VDC ..... LBH101A-H-12  
24-VDC with DIN Rail Mountable ..... LBH101A-HD-24  
24-VDC ..... LBH101A-H-24  
48-VDC ..... LBH101A-H-48

#### Extreme

100–240-VAC ..... LBH101A-P  
100–240-VAC with IEC ..... LBH101AE-P  
12-VDC ..... LBH101A-P-12  
24-VDC with DIN Rail Mountable ..... LBH101A-PD-24  
24-VDC ..... LBH101A-P-24  
48-VDC ..... LBH101A-P-48

### AC Power Supplies for Convenient Switches

#### Standard

115-VAC ..... LBH100A-115VAC  
240-VAC ..... LBH100AE-240VAC

#### Hardened

100–240-VAC, 47–63-Hz ..... LBH100A-H-PS  
100–240-VAC, 47–63-Hz with IEC Connector ..... LBH100AE-H-PS

#### Extreme

100–240-VAC, 47–63-Hz ..... LBH100A-P-PS  
100–240-VAC, 47–63-Hz with IEC Connector ..... LBH100AE-P-PS

DIN Rail Mounting Bracket ..... DIN-RAIL MC2

Rackmount Tray ..... LE1505-RACK

Powered Rackmount Tray ..... LH1505P-RACK

