



Industrial MultiPower Media Converters

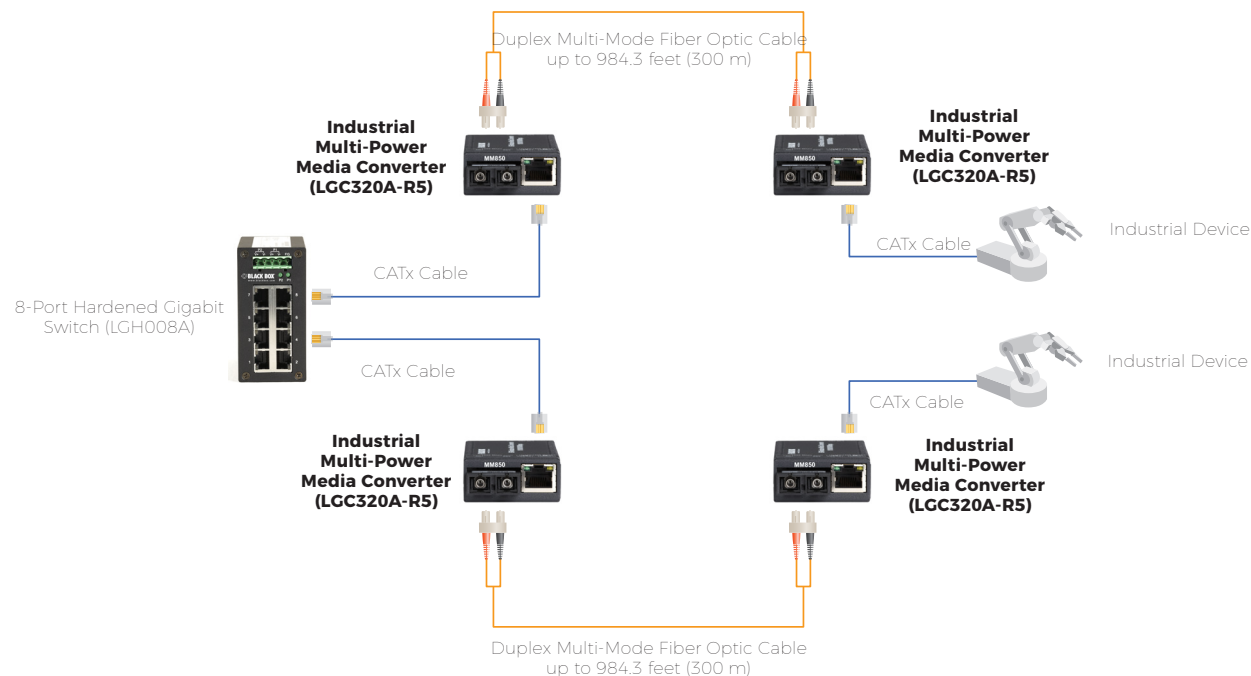
**Choose from four  
different ways to  
power these hardened  
media converters.**



## FEATURES

- » Bring fiber to the desktop more economically than fiber NICs.
- » Four power options.
- » Convert 10/100/1000 Mbps copper to duplex or single-strand 1000 Mbps fiber, autonegotiating for speed on the copper side.
- » Single-mode Long versions support distances up to 24.9 miles (40 km).
- » Operational from -25 to +170° F.
- » Include clips for mounting on DIN rails.

Industrial Multipower Media Converters extend your 10/100/1000BASE-T network beyond the 100-m (328-foot) limit—perfect for connecting remote workstations.



## OVERVIEW

Now it's easier than ever to add fiber to your network, no matter if your network is spread across a business campus, a large industrial site, or great distances, and/or subjected to temperature extremes.

These hardened media converters can be powered up one of four ways and operate in temperature extremes from -13 to +158° F (-25 to +70° C).

### Good things, small packages.

The media converters are easy to install (literally plug-and-play), tiny enough to fit in anywhere, and very economical.

Use them to bring fiber to the desktop or add fiber segments to your network to gain extra distance—up to 24.9 miles (40 km) with single-mode fiber.

### Twice the conversion power.

An Industrial MultiPower Media Converter enables you to connect 10-Mbps and 100-Mbps twisted-pair network segments to fiber optic cabling. It's both a media and data-rate converter with 10/100 auto-negotiation on the twisted-pair port. The fiber port operates at 100 Mbps.

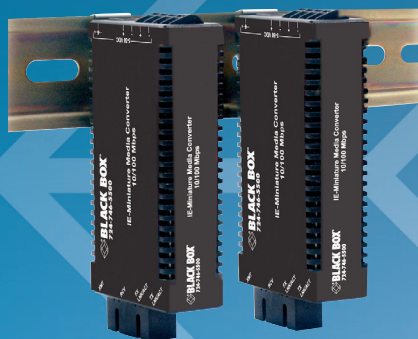
You can also choose Gigabit models to link 1000BASE-TX twisted-pair network segments to 1000BASE-LX fiber optic cabling.

All Industrial MultiPower Media Converters have an HDX/FDX function for half- and full-duplex autosensing.





Power Tray (LHC018A-AC-R2)  
filled with Industrial  
MultiPower  
Media Converters.



Industrial MultiPower  
Media Converters.  
installed on a DIN rail

### Installation is easy.

Just connect an Industrial MultiPower Media Converter to the RJ-45 connector on your PC's 10- or 100-Mbps Ethernet port using CATx cable, then connect fiber optic cable to the other side of the media converter.

What's more, these tiny converters tuck unobtrusively behind your PC.

### Go the distance with fiber.

The converters using multimode fiber support distances of up to 984.2 feet (300 m) or 1.2 miles (2 km)—enough distance for most LAN applications. For more extensive campus applications, choose single-mode or single-mode, single-strand models for long-distance runs of up to 6.2, 12.4, or 24.8 miles (10, 20, or 40 km).

### More power to you.

Industrial MultiPower Media Converters can be powered one of four ways: by an external AC power supply included with each unit, by using 5-50-VDC terminal block power, by an optional USB Power Adapter Cable that plugs into a PC's USB port, or by an optional rackmount PowerTray.

Plus, Industrial MultiPower Media Converters are designed for use in harsh industrial environments.

The AC power supply is a universal external transformer that requires a nearby AC power outlet. The PowerTray provides power for up to 18 converters in only 1.5U of rack space. Rackmount ears are included.

You can even use multiple power options at the same time to provide maximum redundancy and ensure that your mission-critical applications remain up and running. For instance, you can connect a converter to a 5-50-VDC power source while also using AC adapter power and USB bus power. Then, if any one of these power sources fails, the other sources will continue to supply power to the converter seamlessly.

The converters come with DIN clips, so you can attach them to a DIN rail. When installing multiple Industrial MultiPower Media Converters on a DIN rail, use one DC input source, then cascade from one DC block to the next until you reach the maximum current available.





Power Tray (LHC018A-AC-R2)  
filled with Industrial  
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Media Converters



LIC024A-R3

## TECH SPECS

### Cable Requirements

Twisted pair: CAT5e or above, shielded or unshielded;  
Multimode fiber: 50-/125- $\mu$ m or 62.5-/125- $\mu$ m duplex or single-strand;  
Single-mode fiber: 9-/125- $\mu$ m duplex or single-strand

### Environmental

Temperature  
Using AC adapter: +32 to +122° F (0 to +50° C);  
Using other available power sources: -13 to +158° F (-25 to +70° C);  
Humidity: 5 to 95% noncondensing

**Mounting** — With included DIN clip on DIN-35 rails

### Standards

IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX, 100BASE-FX; IEEE  
802.3ab 1000BASE-T; IEEE 802.3z 1000BASE-SX, 1000BASE-LX

**Switching Engine** — Store-and-forward; autonegotiating; broadcast  
storm protection; supports oversized packets up to 1916 bytes

**CE Approval** — Yes

**RoHS Compliant** — Yes

**Connectors** — All: (1) RJ-45, with autocross for MDI-II/MDI-X;  
LIC022A-R4, LIC024A-R4: (1) pair of ST;  
LIC023A-R4, LIC025A-R4, LGC320A-R5, LGC321A-R5, LGC322A-R5:  
(1) pair of SC;  
LGC324A-R5, LGC325A-R5: (1) SC;

### Power

From the included external 100-240-VAC, 50-60-Hz adapter;  
Via the terminal block: 5 to 50 VDC;  
Via the USB Power Adapter Cable (LHC021A) connected to a  
computer's USB port

**Size** — 0.8"H x 1.8"W x 3.4"D (2 x 4.6 x 8.6 cm)

## TECH SUPPORT/CONTACT INFORMATION

Visit [blackbox.com/discover-bb/global-presence](http://blackbox.com/discover-bb/global-presence) for regional techni-  
cal support and contact information.



Item	Code
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Industrial MultiPower Media Converters  
10-/100-Mbps Copper to 100-Mbps Fiber

#### Duplex Fiber

Multimode 1300-nm, 2 km

ST®

SC

Single-Mode 1310-nm, 40 km

ST

SC

LIC022A-R4

LIC023A-R4

LIC024A-R4

LIC025A-R4

Item	Code
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10-/100-/1000-Mbps Copper to 1000-Mbps

#### Duplex Fiber

Multimode, 850-nm, 300 m

SC

Single-Mode, 1310-nm, 10 km

SC

Single-Mode, 1310-nm, 40 km

SC

Single-Strand Fiber

Single-Mode, 1310-nm/1550-nm, 10 km

SC

Single-Mode, 1550-nm/1310-nm, 10 km

SC

LGC320A-R5

LGC321A-R5

LGC322A-R5

LGC324A-R5

LGC325A-R5

NOTE: All single-strand Industrial MultiPower Media Converters  
must be used in matched pairs. For example, if you order an  
LGC324A-R3 for one end of your 10 kilometer link, you must order  
an LGC325A-R3 for the other end of the link.

**To power a single media converter via your computer's USB  
port, order...**

USB Power Adapter Cable

LHC021A

**For rackmounting and powering Industrial MultiPower Media  
Converters, order...**

Miniature Media Converter Power Tray, 18-Slot

AC Power

LHC018A-AC-R2

