Ethernet Media Converters Tutorial

What is an Ethernet Media Converter?

An Ethernet Media Converter is a network device used to extend network connection beyond the 100 meter maximum segment length of traditional copper UTP/STP Ethernet cabling. It is also useful if EMI/RFI emissions or interference are of concern as the device will convert the electrical data signals into light pulses that will travel over the fiber optic cabling. This has two additional benefits. It electrically isolates both network nodes from each other eliminating any ground loop concerns or voltage spikes from lightning. It also provides a measure of security to your network transmissions as it is virtually impossible to tap into the transmitted signal without detection.

How is an Ethernet Media Converter used?

Ethernet Media Converters typically have two types of ports; one for the copper (UTP/STP) side of the conversion, (usually an RJ45 jack), and one for fiber side, which can vary depending on the unit (usually ST, SC or LC). Once you have selected the media converter that meets your needs, you simply plug your copper network cable into the RJ45 jack and then make your connection to your Fiber optic cabling. For the majority of unmanaged Ethernet Media Converters once you power up the unit you are done with your installation.

Where are Ethernet Media Converters used?

Ethernet Media Converters are used when long network runs are required that exceed the 100 meter maximum segment length of traditional copper UTP/STP such as large Corporate or University campuses, large high rise buildings or Municipal buildings that cover a wide area or wherever ground loops or voltage spikes from lightning may be cause for concern. You will also find these products wherever intense EMI/RFI which could interfere with your network is present such as Industrial/Manufacturing Facilities or in environments where the introduction of stray electrical signals are strictly regulated such as hospitals, clean rooms and aircraft just to provide a few examples.

Distance Limitations of Copper and Fiber Optic Network Cabling Types:

Cable Type	Distance Limitation	Cable Type	Distance Limitation
Category 5/5e/6 UTP and STP cable	100 Meters Max.	Multimode Fiber Cable 50/125μ	2 Km Max. (550m for some Gigabit applications)
Multimode Fiber Cable 62.5/125μ	2 Km Max. (220m for some Gigabit applications)	Single mode Fiber Cable 9/125μ	*15 Km to 80 Km (Typical)
*Note: Some Single mode fiber media converters can extend up to 100 Km. These devices use special high powered laser transceivers to achieve these distances.			

Form Factors

There are typically three styles of Ethernet Media Converters, 1) Standalone units with completely enclosed cases, 2) Card based chassis only models and 3) DIN Rail Mount Industrial Models. Standalone converters are typically used in locations where only one or two conversions are needed. The chassis based options are often used in large MDF or IDF locations where multiple fiber links are converted to UTP. The DIN Rail Mount Industrial Ethernet Media Converters as the name would suggest are used in large manufacturing plants where the harsh conditions and limited space and power options make it ideally suited. Note: some standalone unmanaged models can also be used in special multi-slot chassis designed specifically for them.

Standalone   page 247
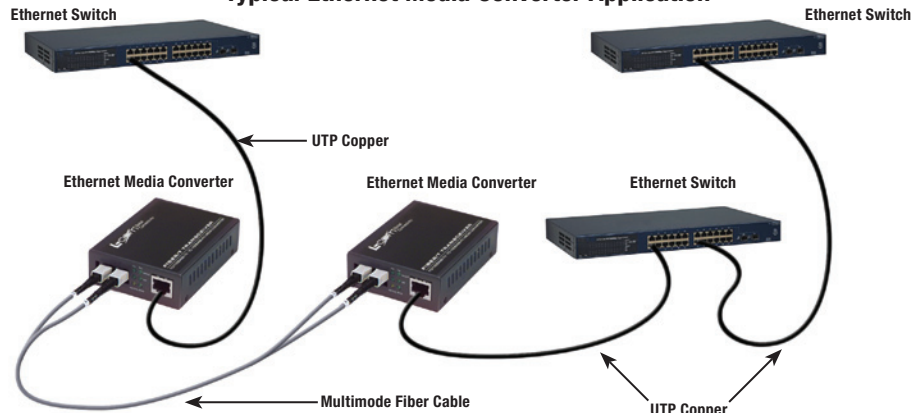
Chassis   page 248

Industrial   page 249

Managed and Unmanaged

Unmanaged or "plug and play" Ethernet Media Converters are easy to install and trouble shoot. The disadvantage with unmanaged converters is when a network issue is occurring, there is no way to access the Ethernet Media Converter to see exactly what might be causing the issue. Many chassis based Ethernet Media Converter solutions feature an option for an SNMP card that shows statistics and overall health of all the media converters in the chassis. This is helpful when you have multiple chassis filled with Ethernet Media Converters in a large data center. Additionally there are some standalone converters on the market today that support SNMP management.

Typical Ethernet Media Converter Application

Ethernet Switch

Ethernet Switch

UTP Copper

Ethernet Media Converter

Ethernet Media Converter

Ethernet Switch

Multimode Fiber Cable

UTP Copper

Item #	Description	Maximum Segment Length	List Price

L-com 10Base-T RJ45 to 10Base-5 DB15M AUI Media Converter / Transceiver

L-com's Super-Slim 10Base-T transceiver is small & lightweight, designed to connect your existing Thick Ethernet Adapter Card to a 10Base-T UTP network. This super-slim model accommodates installation into narrow slot spaces typically found in older SUN SPARC™, IBM®, RISC/6000™ and old Apple Macintosh™ systems. The transceiver converts 10Base-5 signals via a DB15M/AUI connector to a standard RJ45 Jack for 10Base-T Ethernet transmission over Unshielded Twisted-Pair (UTP) cable. Port powered, no external power required.

LCTP-10BT-10B5	L-com Ethernet Media Converter / Transceiver, 10Base-T RJ45 to 10Base-5 DB15M AUI	100m / 500m	44.54

LCTP-10BT-10B5

L-com 10Base-T RJ45 to 10Base-2 Thinnet Coax BNC Media Converter

L-com 10Base-T RJ45 to 10Base-2 media converter is designed to connect your existing Thin Ethernet adapter card or Thin Ethernet Network to a 10Base-T UTP network. This converter repeats signals from Thin Ethernet for transmission over Unshielded Twisted-Pair (UTP) cable to a 10Base-T hub. Powered by an external 12V DC 1.0A power supply (included).

LCTP-10BT-10B2	L-com Ethernet Media Converter, 10Base-T RJ45 to 10Base-2 Thinnet Coax BNC	100m / 185m	93.24

LCTP-10BT-10B2

L-com 10 / 100TX to 100FX Fast Ethernet Media Converters

L-com's LCMC series of economical plug and play media converters are the perfect solution for extending Ethernet LANs. These robust media converters support half and full duplex operation, and feature easy to read system status LEDs. These converters are powered by an external 5V DC power supply (included).

LCMC-MC-2	L-com Ethernet Media Converter 10/100TX RJ45 to 100FX Multimode Duplex SC	100m / 2km	61.14
LCMC-SA-25	L-com Ethernet Media Converter 10/100TX RJ45 to 100FX Single mode Duplex SC	100m / 25km	91.19
LCMC-SA-40	L-com Ethernet Media Converter 10/100TX RJ45 to 100FX Single mode Duplex SC	100m / 40km	132.63
LCMC-SA-60	L-com Ethernet Media Converter 10/100TX RJ45 to 100FX Single mode Duplex SC	100m / 60km	153.36
LCMC-SA-80	L-com Ethernet Media Converter 10/100TX RJ45 to 100FX Single mode Duplex SC	100m / 80km	236.25

LCMC-MC-2

L-com 10/100/1000TX to 1000FX ST/SC Gigabit Ethernet Media Converters

L-com's LC-MCGxx-XX line of gigabit ethernet media converters offer users a cost effective solution to extend their gigabit network over fiber optic cabling to a maximum distance up to 20km. Our LC-MCGxx-XX series of media converters are fully compliant with IEEE802.3, IEEE802.3U, IEEE802.3ab, 10/100/1000Base-Tx, and IEEE802.3z 1000Base-SX/LX standards. They can be used as standalone converters or installed into our LC-MCC14AA 14 slot media converter chassis. Operation status can be locally monitored through a set of diagnostic LEDs located on the front panel. These converters are powered by an external 5V DC power supply (included).

LC-MCGMM-ST	L-com Ethernet Media Converter 10/100/1000TX RJ45 to 1000SX Multimode ST	100m / 2km	77.69
LC-MCGMM-SC	L-com Ethernet Media Converter 10/100/1000TX RJ45 to 1000SX Multimode SC	100m / 2km	77.69
LC-MCGSM-ST	L-com Ethernet Media Converter 10/100/1000TX RJ45 to 1000LX Single mode ST	100m / 20km	113.96
LC-MCGSM-SC	L-com Ethernet Media Converter 10/100/1000TX RJ45 to 1000LX Single mode SC	100m / 20km	113.96

LC-MCGMM-SC

LC-MCGSM-ST

L-com 10/100/1000TX to 1000SX/LX (SFP) Slot Gigabit Ethernet Media Converter

L-com's LC-MCGSFP gigabit Ethernet media converter is designed to meet the various needs for extending your network and is able to extend a copper based network via fiber cable to a maximum distance up to 80km. Our LC-MCGSFP is fully compliant with IEEE802.3, IEEE802.3U, IEEE802.3ab, 10/100/1000Base-Tx, and IEEE802.3z 1000Base-SX/LX standards. It can be used as a standalone converter or installed into our LC-MCC14AA Series 14 slot media converter chassis. Operation status can be locally monitored through a set of diagnostic LEDs located on the front panel. Powered by an external 5V DC power supply (included).

LC-MCGSFP	L-com Ethernet Media Converter 10/100/1000TX RJ45 to Single SFP Socket		77.69
LC-SFPMM-220-550M	L-com SFP Module Multimode Duplex LC (850nm)	220 / 550m	36.25
LC-SFPMM-2	L-com SFP Module Multimode Duplex LC (1310nm)	2km	46.61
LC-SFPSM-10	L-com SFP Module Single mode Duplex LC (1310nm)	10km	67.33
LC-SFPSM-20	L-com SFP Module Single mode Duplex LC (1310nm)	20km	77.69
LC-SFPSM-40	L-com SFP Module Single mode Duplex LC (1310nm)	40km	88.06
LC-SFPSM-60	L-com SFP Module Single mode Duplex LC (1550nm)	60km	98.42
LC-SFPSM-80	L-com SFP Module Single mode Duplex LC (1550nm)	80km	108.78
LC-SFP-CAP	L-com SFP Module Replacement Cap, Pkg / 10		7.23

LC-MCGSFP

LC-SFPMM-220-550M

L-com 14 Slot Media Converter Chassis with Dual Power Supplies

L-com's LC-MCC14AA 14 slot media converter chassis provides real-time power backup. Each chassis comes equipped right out of the box with dual redundant power supplies. The LC-MCC14AA chassis is compatible with any of the L-com LC-MCG series media converters found on this page. The LC-MCG series media converters can be hot-swapped to change configuration requirements or replace malfunctioning units without the need to power down the chassis. Both power supplies feature status LEDs (Green = Functioning) (Red = Problem) to help you quickly identify which unit is experiencing a problem. There is also an audible alarm that sounds to alert you to the situation. The Dual power supplies are also truly hot-swappable, allowing you to replace a bad unit while the second unit continues to power the chassis and installed converters minimizing network disruptions. L-com also offers replacement power supplies so that you can keep an emergency spare on hand or be able to quickly order a replacement in the event you need one.

LC-SFPSM-40

LC-SFP-CAP
10 per package

- 19 Inch Rack Mount Ready
- Supports up to 14 Media Converters
- Hot Swap Media Converters
- Easy to Install and Maintain
- Dual Redundant Power Supplies
- Hot Swap Power Supplies
- Status LEDs and Audible Alarm to Alert of Power Supply Problem

LC-MCC14AA	L-com 14 Slot Media Converter Chassis Dual 120V - 220V AC 60/50 Hz Power Supplies		233.12

LC-MCC14AA
Front

Accessories

LC-MCCPWR-AC	L-com Replacement AC Power Supply for LC-MCC14AA Chassis		56.97
LC-MCC14-BRKT	L-com Replacement Retention Bracket for LC-MCC14AA Chassis, Pkg / 5		10.34
LC-MCC14-SCRW	L-com Replacement Media Converter Bracket Screw for LC-MCC14AA Chassis, Pkg / 10		3.09

LC-MCC14AA
Back

L-com® Global Connectivity

Item #	Description	Maximum Segment Length	List Price

TN-S4120-1048

Transition Networks 10GBase-T to SFP+ Media Converter

The Transition Networks 10GBase-T to SFP+ media converter is the perfect way to help growing networks using high speed 10G signals to span long distances, or even to easily convert over to a network switch. This device uses the SFP+ format on the fiber end, which allows for a wide variety of mode and distance options. **As an authorized Transition Networks reseller, we can bid on RFQs for any Transition Networks part numbers. Contact us to request a non-obligatory quote.**

TN-S4120-1048	Transition Networks 10GBase-T to SFP+ Media Converter		1835.11

Transition Networks Point System Media Converter Modules

The Transition Networks TN-DAC-10G-SFP series of copper direct attached cables provide a low cost, easy to use solution to short range 10G connectivity. These cables are ideal for a desktop when only a SFP+ port is available, or to stack two network switches. These cables connect two SFP+ ports using one simple plug and play cable. A**s an authorized Transition Networks reseller, we can bid on RFQs for any Transition Networks part numbers. Contact us to request a non-obligatory quote.**

TN-DAC-10G-SFP-01M	Transition Networks 10G Direct Attached Cable SFP+ 1 Meter		70.46
TN-DAC-10G-SFP-03M	Transition Networks 10G Direct Attached Cable SFP+ 3 Meters		101.55
TN-DAC-10G-SFP-05M	Transition Networks 10G Direct Attached Cable SFP+ 5 Meters		134.71
TN-DAC-10G-SFP-07M	Transition Networks 10G Direct Attached Cable SFP+ 7 Meters		165.79

TN-DAC-10G-SFP-01M

PLANET 10G SFP+ PCI Express Card

The PT-ENW-9801 is a PCI Express 10Gbps ethernet adapter designed to meet high-performance system application requirements. With the innovative PCI Express Bus Architecture, the PT-ENW-9801 provides superior performance over 32/64bit PCI architecture network cards. It provides the best solution to one of the largest issues of Server Farm Networks - communication speed. Ten times faster than the existing 1000Base-SX/LX fiber solutions, the PLANET PT-ENW-9801 is designed to connect your servers and workstations, guaranteeing extremely high throughput and excellent signal quality. Moreover, the PT-ENW-9801 supports IEEE 902.1Q VLAN which allows it to operate in a flexible and secure network environment. With 16K Jumbo Frame ability and IEEE 802.3 Flow Control support, it further optimizes throughput and wire-speed packet transfer performance without risk of packet loss. The high data throughput of the device makes it ideal for most 10 Gigabit Ethernet environments. **As an authorized PLANET reseller, we can bid on RFQs for any PLANET part numbers. Contact your L-com Sales Representative to request a non-obligatory quote.**

PT-ENW-9801

PT-ENW-9801	PLANET 10G SFP+ PCI Express Card		262.16

PLANET 10G RJ45 PCI Express Card

The PLANET PT-ENW-9803 provides a fast and easy way to upgrade an existing system to be able to handle 10G speeds. The standard RJ45 interface will accept Cat6a or Cat7 cables, removing the need to bring fiber directly to the desktop. This card is also a great add-on for a network attached storage device (NAS), providing a fast 10G uplink to archive large blocks of data quickly. **As an authorized PLANET reseller, we can bid on RFQs for any PLANET part numbers. Contact your L-com Sales Representative to request a non-obligatory quote.**

PT-ENW-9803

PT-ENW-9803	PLANET 10G RJ45 PCI Express Card		357.49

PLANET 10G XFP and SFP+ Single Mode and Multimode Modules

The PLANET PT-MTB series of 10G SFP+ and XFP modules provide a flexible option when using a 10G switch or media converter that contains the applicable port. With single mode and multimode options and distances from 300 meters up to 10 kilometers, there is an option available for most high speed data applications. **As an authorized PLANET reseller, we can bid on RFQs for any PLANET part numbers. Contact your L-com Sales Representative to request a non-obligatory quote.**

PT-MTB-LR

PT-MTB-LR	PLANET 10G Single mode LC SFP+ 10km		217.60
PT-MTB-SR	PLANET 10G Multimode LC SFP+ 300m		129.53
PT-MTB-XLR	PLANET 10G Single mode LC XFP 10km		430.02
PT-MTB-XSR	PLANET 10G Multimode LC XFP 300m		310.86

LCR5000-17HS

Metrobility / Telco Systems Radiance Series Converter Chassis - 1, 2 and 17 Slot Options

As an authorized Metrobility / Telco Systems reseller, we can bid on RFQs for any Metrobility / Telco Systems part numbers. Contact us to request a non-obligatory quote.

LCR5000-17HS	Telco Systems 17 Slot Radiance 19" (48.3cm) Rack Mountable Chassis		574.05
LCACPS-17HS	Telco Systems AC Power Supply for the LCR5000 Chassis		133.67
LCDCPS-17HS	Telco Systems DC Power Supply for the LCR5000 Chassis		553.33
LCR1000-AAF	Telco Systems 2 Slot Chassis with 2 Front Facing AC Power Supplies		641.41
LCR200-AC	Telco Systems 1 Slot Chassis with Single AC Power Supply		258.01
LCR200-DC	Telco Systems 1 Slot Chassis with Single DC Power Supply		304.64

LCR1000-AAF

Metrobility / Telco Systems 10 / 100 Mbps Ethernet Intelligent AutoTwister Modules for Radiance Series Chassis

As an authorized Metrobility / Telco Systems reseller, we can bid on RFQs for any Metrobility / Telco Systems part numbers. Contact us to request a non-obligatory quote.

LCR643-13	Telco Systems 10/100Base-TX, RJ45 to 100Base-FX, Multimode SC	100m/2km	263.19
LCR643-15	Telco Systems 10/100Base-TX, RJ45 to 100Base-FX, Multimode ST	100m/2km	304.64
LCR643-1K	Telco Systems 10/100Base-TX, RJ45 to 100Base-FX, Multimode LC	100m/2km	387.54
LCR643-14	Telco Systems 10/100Base-TX, RJ45 to 100Base-FX, Single mode SC	100m/15km	447.64
LCR643-17	Telco Systems 10/100Base-TX, RJ45 to 100Base-FX, Single mode SC	100m/40km	506.70
LCR643-1J	Telco Systems 10/100Base-TX, RJ45 to 100Base-FX, Single mode SC	100m/100km	1750.14
LCR643-1M	Telco Systems 10/100Base-TX, RJ45 to 100Base-FX, Single mode LC	100m/15km	527.43

LCR643-13

Metrobility / Telco Systems Radiance SNMP Management Module

As an authorized Metrobility / Telco Systems reseller, we can bid on RFQs for any Metrobility / Telco Systems part numbers. Contact us to request a non-obligatory quote.

LCR502-M	Telco Systems SNMP Management Module for Radiance R5000 Chassis		615.50

Metrobility / Telco Systems 100 Mbps Fast Ethernet "Twister" Modules for Radiance Series Chassis

As an authorized Metrobility / Telco Systems reseller, we can bid on RFQs for any Metrobility / Telco Systems part numbers. Contact us to request a non-obligatory quote.
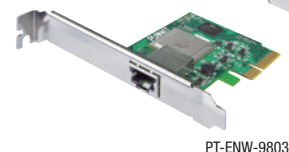
LCR502-M   LCR231-13

LCR231-13	Telco Systems 100Base-TX, RJ45 to 100Base-FX, Multimode SC	100m/2km	615.50

Metrobility / Telco Systems 10 / 100 Mbps Fast Ethernet Twister Stand-alone Media Converters

As an authorized Metrobility / Telco Systems reseller, we can bid on RFQs for any Metrobility / Telco Systems part numbers. Contact us to request a non-obligatory quote.

LC2643-14

LC2643-13	Telco Systems 10/100Base-TX, RJ45 to 100Base-FX, Multimode SC	100m/2km	335.73
LC2643-15	Telco Systems 10/100Base-TX, RJ45 to 100Base-FX, Multimode ST	100m/2km	351.27
LC2643-1K	Telco Systems 10/100Base-TX, RJ45 to 100Base-FX, Multimode LC	100m/2km	392.72
LC2643-14	Telco Systems 10/100Base-TX, RJ45 to 100Base-FX, Single mode SC	100m/15km	480.80
LC2643-17	Telco Systems 10/100Base-TX, RJ45 to 100Base-FX, Single mode SC	100m/40km	527.43
LC2643-1J	Telco Systems 10/100Base-TX, RJ45 to 100Base-FX, Single mode SC	100m/100km	1796.77
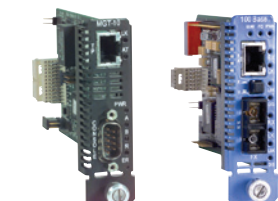
Item #	Description	List Price

L-com 10/100TX to 100FX Industrial Fast Ethernet Media Converters (24 VDC)

L-com offers a series of plug and play industrial Ethernet media converters which feature dual 10/100TX RJ45 ports as well as one duplex SC fiber port. The LCMC series consist of multimode and single mode versions with optics supporting up to 80 kilometers over single mode for long haul industrial media converter applications. Each unit is powered by an external 24V DC power supply (sold separately) and is 35mm DIN rail mountable. Easy to read LEDs provide at-a-glance systems status information. Operating temperature -40°C to +70°C (-40°F to 158°F).

LCMC-M-2	L-com Industrial Ethernet Media Converter (2) 10/100TX to 100FX Multimode Duplex SC 2km	163.72
LCMC-S-20	L-com Industrial Ethernet Media Converter (2) 10/100TX to 100FX Single mode Duplex SC 20km	236.25
LCMC-S-40	L-com Industrial Ethernet Media Converter (2) 10/100TX to 100FX Single mode Duplex SC 40km	319.15
LCMC-S-60	L-com Industrial Ethernet Media Converter (2) 10/100TX to 100FX Single mode Duplex SC 60km	588.56
LCMC-S-80	L-com Industrial Ethernet Media Converter (2) 10/100TX to 100FX Single mode Duplex SC 80km	930.51

24 Volt DC DIN Rail Mount Power Supplies

The LCPS series of power supplies provide a cost effective and reliable 24V DC power source for L-com's line of industrial Ethernet switches and media converters. These units can be installed on any standard 35mm DIN Rail and are NEC class 2/LPS compliant. They also provide protection against short circuits, overloads and over voltages.

LCPS-4024	DIN Rail Mount Power Supply 24V DC 40W (1.6A)	81.86
LCPS-6024	DIN Rail Mount Power Supply 24V DC 60W (2.5A)	93.26

EtherWAN 10/100TX to 100FX Industrial Fast Ethernet Media Converters (-10°C to +60°C) (12 to 48 VDC)

EtherWAN's EX42011 series of industrial media converters are able to function at temperatures ranging from -10°C to 60°C (14°F to 140°F) and can be conveniently mounted to any standard 35mm DIN Rail. The single 10/100Base-TX port supports Auto-Negotiation, Auto-MDI/MDIX. The duplex fiber port is available in both multimode and single mode versions. Complies with IEC61000-6-2 EMC generic standard immunity for industrial environment. The variable power terminal block input can support voltages ranging from 12 to 48 VDC. **As an authorized EtherWAN reseller, we can bid on RFQs for any EtherWAN part numbers. Contact us to request a non-obligatory quote.**

EW-EX42011-1A-1-A	EtherWAN Industrial Media Converter 10/100 TX to 100FX, Multimode Duplex SC 2km	162.66
EW-EX42011-2A-1-A	EtherWAN Industrial Media Converter 10/100 TX to 100FX, Single mode Duplex SC 20km	274.57

EtherWAN 10/100TX to 100FX Industrial Fast Ethernet Media Converters (-10°C to +60°C) with PoE/PSE

EtherWAN's EL1032 series of industrial media converters are able to function at temperatures ranging from -10°C to 60°C (14°F to 140°F) and can be conveniently mounted to any standard 35mm DIN Rail. The single 10/100Base-TX port supports Auto-Negotiation, Auto-MDI/MDIX. The duplex fiber port is available in both multimode and single mode versions. Easy power source management from dual power interfaces. The EL1032 supports 48 VDC. The EL1032P support voltages ranging from 48 to 52 VDC up to 15.4 Watts or 52 to 57 VDC up to 30 Watts. The EL1032 series also supports the IEEE802.3af PoE/PSE standard and is available in standard 15.4W versions as well as a 30W high power version. **As an authorized EtherWAN reseller, we can bid on RFQs for any EtherWAN part numbers. Contact us to request a non-obligatory quote.**

EW-EL1032-10B	EtherWAN Industrial Media Converter 10/100 TX to 100FX, Multimode Duplex SC (15.4W 802.3af PoE/PSE) 2km	454.87
EW-EL1032P-20B	EtherWAN Industrial Media Converter 10/100 TX to 100FX, Multimode Duplex ST (30W High Power PoE/PSE) 2km	512.92
EW-EL1032-A0B	EtherWAN Industrial Media Converter 10/100 TX to 100FX, Single mode Duplex SC (15.4W 802.3af PoE/PSE) 20km	595.79

EtherWAN 10/100TX to 100FX NEMA Hardened Fast Ethernet Media Converters (-40°C to +75°C) (12 to 48 VDC)

EtherWAN's EL900 series of NEMA hardened media converters function at temperatures ranging from -40°C to 75°C (-40°F to 167°F) and are tested for functional operation up to 85°C (185°F). Whether on the factory floor or the street corner, the EL900 will provide flawless communications when you need it most. The RJ45 ports on these units provide Auto-MDIX and auto-negotiation. The link-fault-pass-through feature allows the network management agent on adjacent equipment to react to a broken link. Flexibility is the main feature of the EL900, it may be DIN rail or panel mounted and comes with power options to match the applications that require a tough, environmentally hardened product. Complies with NEMA TS1 & TS2 environmental requirements for traffic control equipment. Complies with IEC61000-6-2 EMC generic standard immunity for industrial environment, ISA 12.12.01 (UL1604) Class I, Division 2 Classified for use in hazardous locations (Applicable to versions with DC Terminal Block power option). The variable power terminal block input can support voltages ranging from 12 to 48 VDC. **As an authorized EtherWAN reseller, we can bid on RFQs for any EtherWAN part numbers. Contact us to request a non-obligatory quote.**

EW-EL900-A-B-1-A	EtherWAN Media Converter 10/100 TX to 100FX, MM, 2km, SC	233.15
EW-EL900-A-N-1-A	EtherWAN Media Converter 10/100 TX to 100FX, SM, 20km, SC	347.13

EtherWAN 1000TX to 1000SX/LX NEMA Hardened Gigabit Ethernet Media Converters (-40°C to +75°C)

EtherWAN's EL9000 series of NEMA hardened media converters function at temperatures ranging from -40°C to 75°C (-40°F to 167°F) and are tested for functional operation up to 85°C (185°F). Whether on the factory floor or the street corner, the EL9000 will provide flawless communications when you need it most. The RJ45 ports on these units provide Auto-MDIX and auto-negotiation. The link-fault-pass-through feature allows the network management agent on adjacent equipment to react to a broken link. Flexibility is the main feature of the EL9000, it may be DIN rail, panel or rack mounted and comes with power options to match the applications that require a tough, environmentally hardened product. Complies with NEMA TS1 & TS2 environmental requirements for traffic control equipment. Complies with IEC61000-6-2 EMC generic standard immunity for Industrial environment, ISA 12.12.01 (UL1604) Class I, Division 2 Classified for use in hazardous locations (Applicable to versions with DC Terminal Block power option). The variable power terminal block input can support voltages ranging from 12 to 48 VDC. **As an authorized EtherWAN reseller, we can bid on RFQs for any EtherWAN part numbers. Contact us to request a non-obligatory quote.**

EW-EL9000-A-B-1-A	EtherWAN Gigabit Media Converter 1000Base T to 1000Base SX, MM, 550km, SC	326.38
EW-EL9000-A-C-1-A	EtherWAN Gigabit Media Converter 1000Base T to 1000Base SX, MM, 2km, SC	435.20
EW-EL9000-A-N-1-A	EtherWAN Gigabit Media Converter 1000Base T to 1000Base LX, SM, 20km, SC	528.46

Hirschmann PROFIBUS, MODBUS and GENIUSBUS Fiber to Copper DIN Rail Media Converters (24 VDC)

Hirschmann's PROFIBUS, MODBUS and GENIUSBUS media converters are perfect for transmitting data over several miles/kilometers. They connect terminal devices such as computers, image-processing devices, programmable logic controllers (PLCs) and peripheral devices together. With their high availability and redundancy, they are able to hold their own in the harsh world of industrial applications. Fiber optic cables can be laid directly on high-power equipment or parallel to power cables, reducing planning and commissioning costs. Each converter in this series can be mounted on a DIN rail and is powered by an external 24 VDC power supply. **As an authorized Hirschmann reseller, we can bid on RFQs for any Hirschmann part numbers. Contact us to request a non-obligatory quote.**

PROFI-TX-FX	Hirschmann PROFIBUS Media Converter DB9F to BFOC Multimode	645.55
OZD PROFI 12M G12	Hirschmann PROFIBUS Media Converter DB9F to 2 BFOC Multimode	863.15
PROFI-TX-FX-SM	Hirschmann PROFIBUS Media Converter DB9F to BFOC Single mode	1826.82
PROFI-TX-2FX-SM	Hirschmann PROFIBUS Media Converter DB9F to 2 BFOC Single mode	2424.71
MODBUS-TX-2FX	Hirschmann MODBUS Media Converter DB9F to 2 BFOC Multimode	901.49
MODBUS-TX-2FXSM	Hirschmann MODBUS Media Converter DB9F to 2 BFOC Single mode	1896.25
GENIUS-TX-2FX	Hirschmann GENIUSBUS Media Converter 4-Pin Terminal to 2 BFOC Multimode	1180.23
GENIUS-TX-2FXSM	Hirschmann GENIUSBUS Media Converter 4-Pin Terminal to 2 BFOC Single mode	1865.16

LCMC-M-2

LCPS-4024

LCPS-6024

EW-EX42011-1A-1-A

EW-EL1032-10B

EW-EL900

EW-EL9000

PROFI-TX-FX

GENIUS-TX-2FX

MODBUS-TX-2FXSM

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