

Installation Guide 1000BASE-X Multimode-Single mode Media Converter

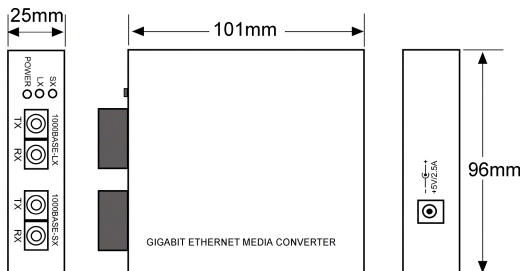
KC-220G

DOC. 020225-KC220G-K Rev.1.1
P/N: 750-0164-001

General Description

The KC-220G Gigabit Ethernet media converter series are designed to convert a 1000BASE-X multimode fiber signal to single mode fiber signal. It is used to extend the connection distance between two Gigabit Ethernet fiber optic devices via single mode fiber cable transparently with no performance degradation.

The outline of the converter is:

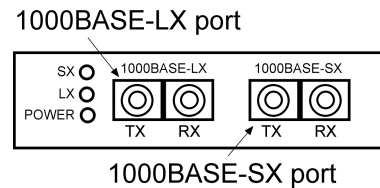


Specifications

- Complies with IEEE 802.3z 1000BASE-X std.
- Signal conversion between 1000BASE-SX connection and 1000BASE-LX connection
- Full wire speed conversion
- Operates with connected devices running on full duplex or half duplex mode transparently
- Frame types supported :
IEEE 802.3 Std. 64~1518Bytes frames
VLAN tagged frames (plus 4 bytes tag)
- Complies with Class 1 FDA and IEC-825 laser safety
- Operating temperature: -10 ~ 50°C (cold start)
- Storage Temperature: -20°C ~ 75°C
- Relative Humidity: 0% ~ 70%
- Dimensions: 101mm x 96mm x 25mm
- Power: Rating +5V / 2.5A minimum
Operating voltage range +5V +/-5%
- DC plug type:

Connectors & Cables

The converter provides one 1000BASE-SX fiber port and one 1000BASE-LX fiber port as shown below:



Both ports are compliant to IEEE 802.3z 1000BASE-X standard and can convert multimode optical signal to single mode optical signal up to bandwidth 2000Mbps transparently with a minimal delay time.

1000BASE-SX Port Specifications

Connector	Duplex SC
Standard	1000BASE-SX
Wavelength	850nm
Data Speed	1000Mbps
Output Power	-9.5 ~ -4 dBm
Input Sensitivity	-12.5dBm max.

1000BASE-LX Port Specifications

Connector	Duplex SC
Standard	1000BASE-LX
Wavelength	1310nm
Data Speed	1000Mbps
Output Power	-9.5 ~ -3 dBm
Input Sensitivity	-14.4dBm max.

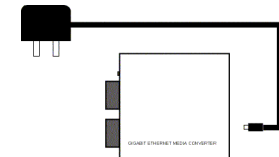
Optic Fiber Cables

Port	Fiber Used	Cable Length
1000BASE-SX	MM 62.5/125mm	220 meters
	MM 50/125mm	500 meters
1000BASE-LX	MM 62.5/125mm	550 meters
	MM 50/125mm	550 meters
	SM 9/125mm	10Km

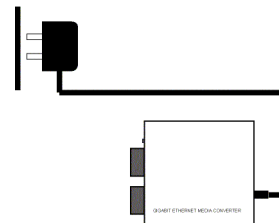
MM: Multimode
SM: Single mode

Installation

1. Install the media converter with the DC power adapter provided.



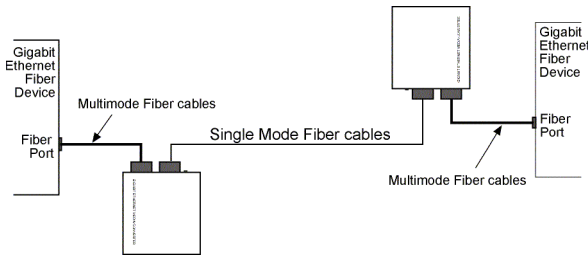
2. Connect the power adapter cable to the media converter before connecting the adapter to the AC outlet.



Making Network Connections

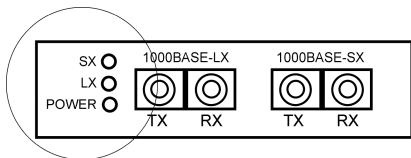
The converters serve as a conversion path between two Gigabit Ethernet fiber devices. To both devices, the conversion is transparent.

The following figure illustrates one connection example that two Gigabit Ethernet devices far away are connected through single mode fiber cables.



Important rule: When a connection is established, make sure the devices located at both ends of the path are configured and operated using the same duplex mode and the maximum distance must comply with specifications.

Interpreting LED Indicators



LED	Status	State	Interpretation
POWER	Power status	On	Converter is on.
		Off	Converter is off.
LX	Port link	On	1000BASE-LX link on
		Off	1000BASE-LX link off
SX	Port link	On	1000BASE-SX link on
		Off	1000BASE-SX link off

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TRADEMARKS

Ethernet is a registered trademark of Xerox Corp.

WARNING:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual may cause harmful interference in which case the user will be required to correct the interference at his own expense.

NOTICE:

- (1) The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- (2) Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits.

CISPR A COMPLIANCE:

This device complies with EMC directive of the European Community and meets or exceeds the following technical standard.

EN 55022 - Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment. This device complies with CISPR Class A.

WARNING: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

CE NOTICE

Marking by the symbol  indicates compliance of this

equipment to the EMC directive of the European Community. Such marking is indicative that this equipment meets or exceeds the following technical standards:

EN 55022: Limits and Methods of Measurement of Radio Interference characteristics of Information Technology Equipment.

EN 50082/1: Generic Immunity Standard -Part 1: Domestic Commercial and Light Industry.

EN 60555-2: Disturbances in supply systems caused by household appliances and similar electrical equipment - Part 2: Harmonics.