Multimode to Single Mode

Optical Fiber Media Converters

KGC-311 Series

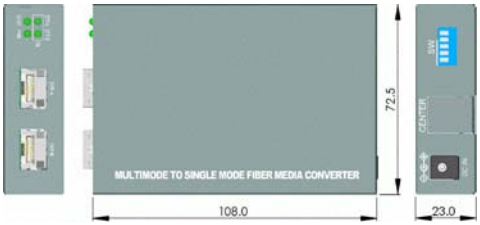
Installation Guide

DOC.111122-KGC311

General

The KGC-311 is a mode to mode optical fiber converter series which provide the following conversions:

- 1000BASE-SX MM fiber to/from 1000BASE-LX SM fiber
- 100BASE-FX MM fiber to/from 100BASE-FX SM fiber



Features

- Complies with IEEE 802.3z 1000Base-SX/LX and IEEE 802.3u 100Base-FX standard
- Provides media conversion between single mode and multimode optical fiber media types
- Supports both 1000Mbps Gigabit Ethernet fiber and 100Mbps Fast Ethernet fiber applications
- Provides two SFP slots to support standard SFP fiber transceivers
- Transparent conversion to any type of packet frame
- No packet length limitation
- Provides LEDs for easy network monitoring
- Center chassis installation : support installation in a center chassis rack with benefits of central software management, central power and redundant power backup.
- Diversified mounting support : desktop mounting, wall mounting, optional Din-Rail support
- Support wide range of single mode fiber options: short reach up to long reach, Bi-directional single fiber, and CWDM
- Low power consumption

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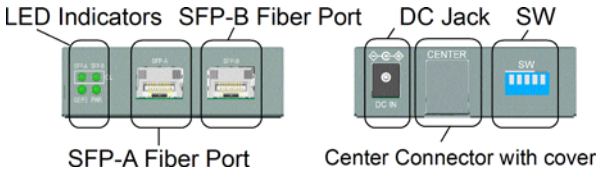
Specifications



Fiber Optic Interfaces (SFP-A & SFP-B Ports)

Compliance	IEEE 802.3z 1000BASE-SX/LX std. IEEE 802.3u 100BASE-FX std.
Connectors	SFP for pluggable fiber transceiver
Data Speed	1000Mbps, full duplex (SW1-3: Off) 100Mbps. full duplex (SW1-3: On)
Cable Types	SFP-A MMF - 50/125, 62.5/125 µm SFP-B SMF - 9/125 µm
Eye Safety compliance	IEC825 Class 1

Center Interface

Interface	For center chassis mounting
Connector	FutureBus

DC Power Input

Interface	DC Jack (-D6.3mm/+D2.0mm)
Operating Voltages	DC input +5V ~ +12V
Power consumption	max 2W @+7.5VDC input

SW (Configuration Switches)

SW1	ON - Gigabit Ethernet MM to SM OFF - Fast Ethernet MM to SM
SW2 ~ SW5	Reserved

Mechanical

Dimension (base)	W 108mm x D 72.5mm x H 23mm
Housing	Enclosed metal with no fan
Weight	206g

LED Indicators

PWR	ON	Power on
	OFF	Power off
GE/FE	ON	GE MM to GE SM
	OFF	FE MM to FE SM
SFP-A OL	ON	SFP-A port optical signal detected
	OFF	No optical signal
SFP-B OL	ON	SFP-B port optical signal detected
	OFF	No optical signal

Environmental

Operating Temperature	-5 ~ 55°C
Storage Temperature	-20 ~ 85°C
Relative Humidity	10% ~ 70%

Design Compliance

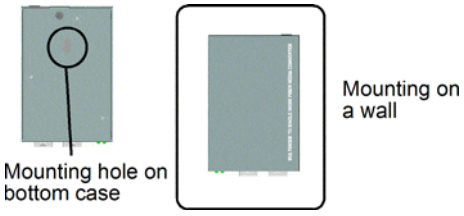
FCC Part 15 Class B, CE / CISPR 22 Class B, IEC60950 Safety

Desktop Mounting

The device can be mounted on a desktop or shelf. Make sure that there is proper heat dissipation from and adequate ventilation around the device. Do not place heavy objects on the device.

Wall Mounting

The device provides a mounting hole on the bottom case as shown in the figure. Use the hole for a wall mounting.



Applying Power

Before you begin the installation, check the AC voltage of your area. The AC power adapter which is used to supply the DC power for the device should have the AC voltage matching the commercial power voltage in your area. The DC power input of the converter is: DC IN 0.24A min. @ 7.5V

Installing SFP Fiber Transceiver

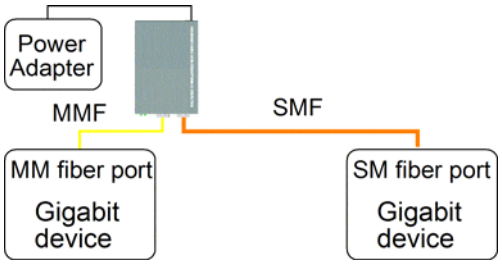
To install an fiber transceiver into an SFP slot, the steps are:

1. Turn off the power to the device unit.
2. Insert the SFP fiber transceiver into the slot. Normally, a bail is provided for every SFP transceiver. Hold the bail and make insertion.
3. Until the SFP transceiver is seated securely in the slot, place the bail in lock position.

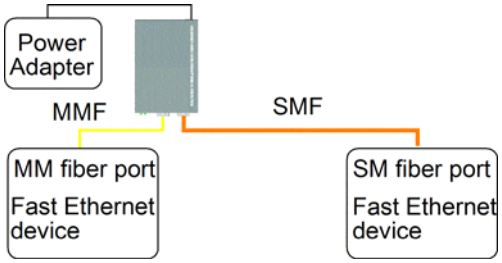
Note that SFP-A is reserved for MM transceiver and SFP-B is reserved for Single mode transceiver.

Typical Applications

Gigabit Ethernet 1000Mbps MMF to 1000Mbps SMF



Fast Ethernet 100Mbps MMF to 100Mbps SMF

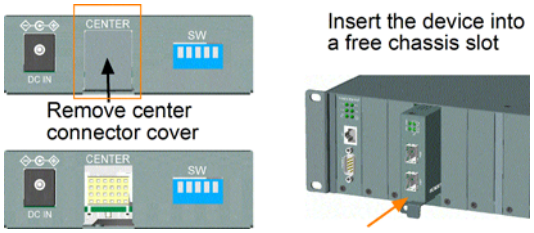


DIN-Rail Mounting

For a Din-Rail chassis, the media converter can support mounting on a Din-Rail. An optional Din-Rail bracket, KC-3DR can be purchased separately. Consult your dealer for details. The following figures show an example after bracket installation:

Center Chassis Installation

The media converter can also be installed in KC-1300 center chassis. The center chassis provides the power supply to the converter also with optional power redundancy. Up to 16 units can be installed in one chassis. Unscrew and remove the cover of the center connector before inserting the converter into the chassis. Refer to the operation manual of center chassis KC-1300 for more information.



FCC NOTICE

This device complies with Part 15 Class B the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including the interference that may cause undesired operation.

CE NOTICE

Marking by the symbol CE 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:

EMC Class B	
EN61000-6-3	IEC61000-6-1
EN55022	CISPR22
EN61000-3-2	IEC61000-3-2
EN61000-3-3	IEC61000-3-3
EN61000-6-1	IEC61000-6-1
EN55024	CISPR24
EN61000-4-2	IEC 61000-4-2
EN61000-4-3	IEC 61000-4-3
EN61000-4-4	IEC 61000-4-4
EN61000-4-5	IEC 61000-4-5
EN61000-4-6	IEC 61000-4-6
EN61000-4-8	IEC 61000-4-8
EN61000-4-11	IEC 61000-4-11

Trademarks

Ethernet is a registered trademark of Xerox Corp.

KGC-311 Series
Model Optical Specifications

DOC.070808-KGC311

Fast Ethernet MM to SM (KGC-311-Fxxx)

Model	SFP-A (MM)	SFP-B (SM)
-FSL3	LC 1310nm MM 2km	LC 1310nm SMF 30km
-FSL6	LC 1310nm MM 2km	LC 1310nm SMF 60km
-FSL10	LC 1310nm MM 2km	LC 1310nm SMF 100km
-FW3520	LC 1310nm MM 2km	BiDi LC single fiber 20km Tx 1310nm Rx 1550nm
-FW5320	LC 1310nm MM 2km	BiDi LC single fiber 20km Tx 1550nm Rx 1310nm

* BiDi: Model -FWxxxx use SM single fiber for bi-directional transmission.

	SFP-A (MM)		SFP-B (SM)	
Model	Tx power	Rx sens.	Tx power	Rx sens.
-FSL3	-20 ~ -14	-31	-15 ~ -8	-34
-FSL6	-20 ~ -14	-31	-5 ~ 0	-35
-FSL10	-20 ~ -14	-31	-5 ~ 0	-35
-FW3520	-20 ~ -14	-31	-14 ~ -8	-32
-FW5320	-20 ~ -14	-31	-14 ~ -8	-32

Gigabit Ethernet MM to SM (KGC-311-xxxx)

Model	SFP-A (MM)	SFP-B (SM)
-LX	LC 850nm MM 500m	LC 1310nm SMF 10km
-LX20	LC 850nm MM 500m	LC 1310nm SMF 20km
-LX30	LC 850nm MM 500m	LC 1310nm SMF 30km
-LX50	LC 850nm MM 500m	LC 1550nm SMF 50km
-LX70	LC 850nm MM 500m	LC 1550nm SMF 70km
-W3510	LC 850nm MM 500km	BiDi LC SM SF 10km Tx 1310nm Rx 1550nm
-W5310	LC 850nm MM 500km	BiDi LC SM SF 10km Tx 1550nm Rx 1310nm
-W3410	LC 850nm MM 500km	BiDi LC SM SF 10km Tx 1310nm Rx 1490nm
-W4310	LC 850nm MM 500km	BiDi LC SM SF 10km Tx 1490nm Rx 1310nm

	SFP-A (MM)		SFP-B (SM)	
Model	Tx power	Rx sens.	Tx power	Rx sens.
-LX	-9.5 ~ -4	-18	-9.5 ~ -3	-20
-LX20	-9.5 ~ -4	-18	-8 ~ -2	-23
-LX30	-9.5 ~ -4	-18	-4 ~ +1	-24
-LX50	-9.5 ~ -4	-18	-4 ~ +1	-24
-LX70	-9.5 ~ -4	-18	0 ~ +5	-24
-W3510	-9.5 ~ -4	-18	-9 ~ -3	-21
-W5310	-9.5 ~ -4	-18	-9 ~ -3	-21
-W3410	-9.5 ~ -4	-18	-9 ~ -3	-21
-W4310	-9.5 ~ -4	-18	-9 ~ -3	-21

All models listed are shipped with a pre-installed SFP fiber transceiver.