# KGC-300


## 1000Base-T to 1000Base-X Gigabit Media Converters

## Product Highlights:

- Full wire speed performance
- SFP flexibility
- Low power consumption
- Optional DIN-Rail mounting
- Center Chassis installation support
- Options for Bi-Di communication
- Options for CWDM

DIN-Rail Mounting Bracket
KC-3DR

Managed Center Chassis
KC-1300

Powered via optional USB cable

The Gigabit media converter is designed to convert 1000Base-T signals to/from 1000Base-X fiber signals. It is used to extend the connection distance between two Gigabit Ethernet devices via fiber cable transparently with no performance degradation.

With the SFP (Mini-GBIC) connector design, the media converter not only supports existing variety of multimode and single mode fibers, but also preserves the flexibility to adapt to any change of your fiber network in the future. It also supports center chassis installation with optional power redundancy and management features when a larger fiber network is required. With pre-configured fiber transceivers, the converter also can support Bi-Di WDM and CWDM fiber network applications.

**Key Features:**

- Comply with IEEE 802.3ab 1000Base-T, 802.3z 1000Base-SX/LX standard
- Provide direct media conversion for Gigabit copper and Gigabit fiber
- Support full wire speed conversion
- Support transparent conversion of any packet types with no packet length limitation
- Support auto-negotiation with link partners
- Provide link fault pass through between copper and fiber link
- Provide SFP on fiber port for mounting variety of fiber options
- Support optional DIN-Rail installation
- Support center chassis installation to achieve the advantages of central power, optional power redundancy and management
- Ideal solution for multimode, short reach up to long reach single mode fiber, Bi-Di and CWDM applications

## Specifications:

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|---|---|
| Standard | IEEE 802.3ab, 802.3z |
| Copper Port | Shielded RJ-45, 1000Mbps, Auto-negotiation capable, Auto-MDI/MDI-X |
| Fiber Port | SFP connector with pre-configured SFP fiber transceiver<br>support remote fault indication |
| Network Cables | Copper port: Cat.5e recommended or higher up to 100m<br>Fiber port: MMF 50/125µm, 62.5/125µm, SMF 9/125µm |
| Port-to-Port Latency | 1µs (Cut-through latency for all frame sizes) |
| LED Indication | Power status, SFP On status, Link status, Optical link status |
| Mounting | Desktop, Wall, DIN-Rail (optional), Center chassis |
| Center Chassis | Up to 16 units in one rack chassis with one central power<br>Support optional power redundancy and management |
| Power Input | +5 ~ +12VDC (±5%)<br>Consumption 2W max. @7.5V |
| Environment | Operation Temperature: -5°C ~ 55°C<br>Storage Temperature: -40°C ~ 85°C<br>Relative Humidity: 5% ~ 90% non-condensing |

## Ordering Information:

| Model | Fiber | | | Distance |
|---|---|---|---|---|
| | No SFP Transceiver | | | |
| -SX | LC | 850 | 50/125<br>62.5/125 | 500m<br>200m |
| -LX | LC | 1310 | MMF<br>SMF | 550m<br>10km |
| -LX20 | LC | 1310 | SMF | 20km |
| -LX30 | LC | 1310 | SMF | 30km |
| -LX50 | LC | 1550 | SMF | 50km |
| -LX70 | LC | 1550 | SMF | 70km |
| -W3510 | LC | Tx1310<br>Rx1550 | Bi-Di SMF | 10km |
| -W5310 | LC | Tx1550<br>Rx1310 | Bi-Di SMF | 10km |
| -W3520 | LC | Tx1310<br>Rx1550 | Bi-Di SMF | 20km |
| -W5320 | LC | Tx1550<br>Rx1310 | Bi-Di SMF | 20km |
| -W3540 | LC | Tx1310<br>Rx1550 | Bi-Di SMF | 40km |
| -W5340 | LC | Tx1550<br>Rx1310 | Bi-Di SMF | 40km |
| -W3410 | LC | Tx1310<br>Rx1490 | Bi-Di SMF | 10km |
| -W4310 | LC | Tx1490<br>Rx1310 | Bi-Di SMF | 10km |
| -W3410S | SC | Tx1310<br>Rx1490 | Bi-Di SMF | 10km |
| -W4310S | SC | Tx1490<br>Rx1310 | Bi-Di SMF | 10km |
| -ESX | LC | 850 | MMF | 500m |
| -ELX | LC | 1310 | SMF | 10km |

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|---|---|
| Dimension | 72.5 x 108 x 23 mm (WxDxH) |
| Approval | FCC Class B, CE mark Class B |

## Fiber Ordering Information:

| Model | Fiber Port | Wavelength | Tx Power* | Rx Sens. | Rx Max. |
|---|---|---|---|---|---|
| -SX | LC MMF | 850nm | -9.5 ~ -4dBm | -18dBm | 0dBm |
| -LX | LC SMF | 1310nm | -9.5 ~ -3dBm | -20dBm | -3dBm |
| -LX20 | LC SMF | 1310nm | -8 ~ -2dBm | -23dBm | -1dBm |
| -LX30 | LC SMF | 1310nm | -4 ~ +1dBm | -23dBm | -3dBm |
| -LX50 | LC SMF | 1550nm | -4 ~ +1dBm | -23dBm | -3dBm |
| -LX70 | LC SMF | 1550nm | 0 ~ +5dBm | -24dBm | -3dBm |
| -W3510 | Bi-Di LC SMF | Tx 1310nm<br>Rx 1550nm | -9 ~ -3dBm | -21dBm | -1dBm |
| -W5310 | Bi-Di LC SMF | Tx 1550nm<br>Rx 1310nm | -9 ~ -3dBm | -21dBm | -3dBm |
| -W3520 | Bi-Di LC SMF | Tx 1310nm<br>Rx 1550nm | -8 ~ -3dBm | -23dBm | -3dBm |
| -W5320 | Bi-Di LC SMF | Tx 1550nm<br>Rx 1310nm | -8 ~ -3dBm | -23dBm | -3dBm |
| -W3540 | Bi-Di LC SMF | Tx 1310nm<br>Rx 1550nm | -3 ~ +2dBm | -23dBm | -1dBm |
| -W5340 | Bi-Di LC SMF | Tx 1550nm<br>Rx 1310nm | -3 ~ +2dBm | -23dBm | -1dBm |
| -W3410 | Bi-Di LC SMF | Tx 1310nm<br>Rx 1490nm | -9 ~ -3dBm | -21dBm | -1dBm |
| -W4310 | Bi-Di LC SMF | Tx 1490nm<br>Rx 1310nm | -9 ~ -3dBm | -21dBm | -1dBm |
| -W3410S | Bi-Di SC SMF | Tx 1310nm<br>Rx 1490nm | -9 ~ -3dBm | -21dBm | -1dBm |
| -W4310S | Bi-Di SC SMF | Tx 1490nm<br>Rx 1310nm | -9 ~ -3dBm | -21dBm | -1dBm |

*Data for 62.5/125μm MMF, 9 /125μm SMF

**Extended operating temperature -10 ~ 70°C**

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|---|---|---|---|---|---|
| -ESX | LC MMF | 850nm | -9.5 ~ -4dBm | -18dBm | 0dBm |
| -ELX | LC SMF | 1310nm | -9.5 ~ -3dBm | -20dBm | -3dBm |