



# KGC-301



## 10/100/1000Base-T to 100/1000Base-X Media Converters

### Product Highlights:

- Full wire speed performance
- SFP flexibility
- Manual port configuration
- Link fault pass through function
- Low power consumption
- Center Chassis installation support
- Options for Bi-Di communication
- Options for CWDM

DIN-Rail Mounting Bracket  
KC-3DR



Center Chassis



The media converter is designed to convert three different line rates of copper Ethernet signals to/from two line rates of fiber signals. It is used to extend the connection distance up to 70km or more between two Gigabit Ethernet devices via fiber cable transparently with no performance degradation. With the SFP 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 deployment is required. With pre-configured fiber transceivers, the converter also can support Bi-Di WDM and CWDM fiber network applications

### Key Features:

- Tri-speed 10/100/1000Mbps copper to dual-speed 1G/100Mbps fiber conversion
- Support full wire speed conversion
- Support jumbo frame conversion
- Provide direct conversion with shortest latency between two links in same line rates
- Support transparent conversion of any packet types with no packet modification
- Support auto-negotiation with link partners
- Provide link fault pass through function for media converter applications
- Provide SFP slot on fiber port for mounting variety of fiber options
- Support center chassis installation to achieve the advantages of central power, optional power redundancy and management

### Specifications:

|                      |   |
|----------------------|---|
| Standard             | IEEE 802.3i, 802.3u, 802.3z, 802.3ab, 802.3az   |
| Copper Port          | Shielded RJ-45, 10/100/1000Mbps, Full/Half duplex<br>Auto-negotiation, Auto-MDI/MDI-X   |
| Fiber Port           | SFP connector with pre-configured SFP fiber transceiver<br>1G/100Mbps, Full duplex, Auto-negotiation<br>FEFI (100FX), Remote fault signaling (1000FX) |
| 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 at all frame size conversion)  |
| LED Indication       | Power status, port link status, port speed 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  |



## Ordering Information:

### KGC-301-X

| Model Ext. | 1000M 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         |
| -W3410     | LC                 | Tx1310<br>Rx1490 | Bi-Di SMF          | 10km         |
| -W4310     | LC                 | Tx1490<br>Rx1310 | Bi-Di SMF          | 10km         |

| Model Ext. | 100M Fiber |                  |           | Distance |
|------------|------------|------------------|-----------|----------|
| -FM        | LC         | 1310             | MMF       | 2km      |
| -FS30      | LC         | 1310             | SMF       | 30km     |
| -FS60      | LC         | 1310             | SMF       | 60km     |
| -FS100     | LC         | 1550             | SMF       | 100km    |
| -FW3520    | LC         | Tx1310<br>Rx1550 | Bi-Di SMF | 20km     |
| -FW5320    | LC         | Tx1550<br>Rx1310 | Bi-Di SMF | 20km     |

|         |                           |
|---------|---------------------------|
| KC-3DR  | DIN-Rail mounting bracket |
| KC-1300 | Managed center chassis    |



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Environment Operating Temperature: -40°C ~ 70°C (Main device)  
 0°C ~ 40°C (External power adapter)  
 Storage Temperature: -40°C ~ 85°C  
 Relative Humidity: 5% ~ 90% non-condensing

Dimension 72.5 x 108 x 23 mm (WxDxH)

Approval FCC Class A, CE mark Class A, VCCI Class A, LVD

## Fiber Optical Specifications:

| Model Ext. | 1000M Fiber  | Wavelength             | Tx Power*    | Rx Sens. | Rx Max. |
|------------|--------------|------------------------|--------------|----------|---------|
| -SX        | LC MMF       | 850nm                  | -9.5 ~ -4dBm | -18dBm   | 0Bm     |
| -LX        | LC SMF       | 1310nm                 | -9.5 ~ -3dBm | -20dBm   | -3dBm   |
| -LX20      | LC SMF       | 1310nm                 | -8 ~ -2dBm   | -23dBm   | -1dBm   |
| -LX30      | LC SMF       | 1310nm                 | -4 ~ +1dBm   | -24dBm   | -3dBm   |
| -LX50      | LC SMF       | 1550nm                 | -4 ~ +1dBm   | -24dBm   | -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   | -1dBm   |
| -W3520     | Bi-Di LC SMF | Tx 1310nm<br>Rx 1550nm | -8 ~ -2dBm   | -23dBm   | -1dBm   |
| -W5320     | Bi-Di LC SMF | Tx 1550nm<br>Rx 1310nm | -8 ~ -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   |
| Model Ext. | 100M Fiber   | Wavelength             | Tx Power*    | Rx Sens. | Rx Max. |
| -FM        | LC MMF       | 1310nm                 | -20 ~ -14dBm | -31dBm   | -8dBm   |
| -FS30      | LC SMF       | 1310nm                 | -15 ~ -8dBm  | -34dBm   | 0dBm    |
| -FS60      | LC SMF       | 1310nm                 | -5 ~ 0dBm    | -35dBm   | 0dBm    |
| -FS100     | LC SMF       | 1550nm                 | -5 ~ 0dBm    | -35dBm   | 0dBm    |
| -FW3520    | Bi-Di LC SMF | TX 1310nm<br>RX 1550nm | -14 ~ -8dBm  | -32dBm   | 0dBm    |
| -FW5320    | Bi-Di LC SMF | TX 1550nm<br>RX 1310nm | -14 ~ -8dBm  | -32dBm   | 0dBm    |

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