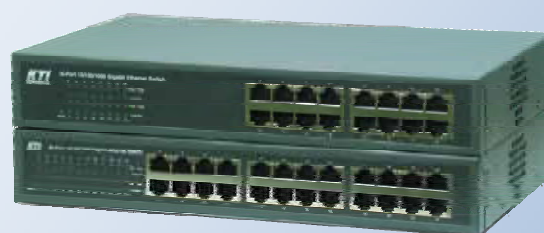
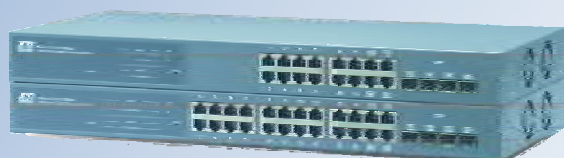


ACTIVE PRODUCTS



ETHERNET MEDIA CONVERSION SOLUTION

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INDUSTRIAL ETHERNET MEDIA CONVERSION SOLUTION

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GIGABIT ETHERNET SWITCHES

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➤ 10/100Base-TX to 100Base-FX Media Converters



KC-300D, KC-300DM



The media converters are designed to convert 10Base-T or 100Base-T signals to/from 100Base-FX fiber signals. It is used to extend the connection distance between two Ethernet devices via fiber cable transparently with no performance degradation. The media converters not only support existing variety of multimode and single mode fibers but also support Bi-Di WDM and CWDM fiber network applications. It is also featured with design to support center chassis installation with optional power redundancy and management features when a larger fiber network is required.

Key Features:

- Convert speed and media type in full wire speed
- Support 10/100M dual speed on TP connections, auto-negotiation, and auto-MDI/MDI-X detection
- Link fault pass through function
- Transparent to 802.1Q VLAN tagged packets
- Far End Fault function on FX port
- Support desktop, wall, and DIN-rail mounting
- Support center chassis installation
- Low power consumption
- Support wide range of fiber options
- Provide user accessible settings for TP port configuration, disabling link fault pass through function

KC-300DM Specific

- Provides indications of remote media converter's TP port status
- Provides Loop Back Test function with connected remote media converter

Specifications:

TP Port	IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX Shielded RJ-45 jacks with Auto MDI/MDI-X detection Auto-negotiation for speed and duplex auto detection Forced mode with speed and duplex settings Speed for 10Mbps or 100Mbps, Full-duplex or half-duplex support
FX Port	IEEE 802.3u 100Base-FX compliant Forced 100Mbps, Full duplex (factory default) Far end fault Function
Cable	Cat. 5 UTP cable, MMF - 62.5/125µm, 50/125µm, SMF - 9 /125µm
LEDs	KC-300D: Power status TP Ports: Link/Act, Speed, Duplex status FX Ports: Link/Act status, Fiber signal detected KC-300DM: Power status TP Ports: Link/Act, Speed, Duplex status FX Ports: Link/Act status, Fiber signal detected Remote TP Ports: Link, Speed, Duplex status

KC-3DR:
Din-Rail mounting bracket



Configuration Switches Accessible settings:

	KC-300D - TP mode, TP duplex, TP speed, Link fault pass through KC-300DM - TP mode, TP duplex, TP speed, Link fault pass through, Auto status report
Packet Size	Up to 1522 bytes for store-and-forward mode No packet size limit for smart-forward mode (100-to-100)
Environment	Operating Temperature: -5°C to 50°C Storage Temperature: -20°C to 60°C (KC-300D-EC, KC-300DM-EC) Relative Humidity: 5% to 95% non-condensing
Weight	KC-300D: 210g, KC-300DM: 213g
Dimension	108 x 72.5 x 23 mm (WxDxH)
Operating voltage	+5V ~ +12VDC (+/-5%)(Device DC Input)
Power Consumption	2 watts. (max.)
Approval	FCC class B, CE class B

Fiber Optical Specifications : KC-300D-X, KC-300DM-X

Model	Connector	FiberCable	Wavelength	Tx Power	Sensitivity	Rx Max.
-T	ST Duplex	MMF	1310nm	-19 ~ -14dBm	-31dBm	-14dBm
-C	SC Duplex	MMF	1310nm	-19 ~ -14dBm	-31dBm	-14dBm
-EC	SC Duplex	MMF	1310nm	-20 ~ -14dBm	-31dBm	0dBm
-JM	MT-RJ	MMF	1310nm	-19 ~ -14dBm	-31dBm	-14dBm
-VM	VF-45	MMF	1310nm	-20 ~ -14dBm	-31dBm	-14dBm
-SA2	SC Duplex	SMF	1310nm	-15 ~ -8dBm	-31dBm	-7dBm
-SL2	SC Duplex	SMF	1310nm	-15 ~ -7dBm	-32dBm	-3dBm
-SL3	SC Duplex	SMF	1310nm	-15 ~ -8dBm	-34dBm	0dBm
-SL4	SC Duplex	SMF	1310nm	-5 ~ 0dBm	-34dBm	-3dBm
-SL5	SC Duplex	SMF	1310nm	-5 ~ 0dBm	-35dBm	0dBm
-SL7	SC Duplex	SMF	1310nm	-3 ~ +3dBm	-37dBm	0dBm
-SL9	SC Duplex	SMF	1310nm	0 ~ +5dBm	-37dBm	0dBm
-SL10	SC Duplex	SMF	1550nm	-3 ~ +3dBm	-37dBm	0dBm
-SL12	SC Duplex	SMF	1550nm	0 ~ +5dBm	-37dBm	0dBm
-W3515	Bi-Di SC	SMF	TX 1310nm RX 1550nm	-14 ~ -8dBm	-31dBm	0dBm
-W5315	Bi-Di SC	SMF	TX 1550nm RX 1310nm	-14 ~ -8dBm	-31dBm	0dBm
-W3540	Bi-Di SC	SMF	TX 1310nm RX 1550nm	-8 ~ 0dBm	-34dBm	0dBm
-W5340	Bi-Di SC	SMF	TX 1550nm RX 1310nm	-8 ~ 0dBm	-34dBm	0dBm
-CxxW40	CWDM SC	SMF	Tx 1xx0nm RX 1100-1850nm	-5 ~ 0dBm	-35dBm	0dBm
-CxxW80	CWDM SC	SMF	Tx 1xx0nm RX 1100-1850nm	0 ~ +5dBm	-37dBm	0dBm

MMF : Multimode fiber 62.5/125µm, 50/125µm
SMF : Single Mode fiber 9 /125µm

Ordering Information:

KC-300D-X KC-300DM-X	Fiber Mode	Connector	Ref. Distance
-T	MM	Dual ST	2km
-C	MM	Dual SC	2km
-EC	MM	Dual SC	2km
-JM	MM	MT-RJ	2km
-VM	MM	VF-45	2km
-SA2	SM	Dual SC	20km
-SL2	SM	Dual SC	20km
-SL3	SM	Dual SC	30km
-SL4	SM	Dual SC	40km
-SL5	SM	Dual SC	60km
-SL7	SM	Dual SC	70km
-SL9	SM	Dual SC	90km
-SL10	SM	Dual SC	100km
-SL12	SM	Dual SC	120km
-W3515	SM	Bi-Di SC	15~20km
-W5315	SM	Bi-Di SC	15~20km
-W3540	SM	Bi-Di SC	40km
-W5340	SM	Bi-Di SC	40km
-CxxW40	SM	CWDM SC	40km
-CxxW80	SM	CWDM SC	80km

MM: Multimode Fiber
SM: Single Mode Fiber
Ref. Distance: Reference connection distance

➤ Web Smart 10/100/1000Base-T to 1000Base-X Gigabit Media Converter



KGC-310M



Key Features :

- Tri-speed 10/100/1000Mbps copper to 1000M fiber conversion
- Comply with IEEE 802.3, 802.3u, 802.3ab, 802.3z standard
- Support full wire speed conversion for Gigabit copper to Gigabit fiber
- Support auto-negotiation with link partners
- Provide SFP on fiber port for mounting variety of fiber options
- Provide loop back test function with link partner over fiber link
- Provide monitoring function for remote link partner's copper link status
- Support optional Din-Rail installation
- Support center chassis installation to achieve the advantages of central power, optional power redundancy and network management
- Ideal solution for multimode, short reach up to long reach single mode fiber, Bi-Di applications
- Web-based configuration management support
- Port operating mode, flow control and status monitoring functions
- Tagged or untagged packet filtering
- 802.1Q VLAN tag stripping and tagging
- Support Q-in-Q application with double tag capability
- Quality of Service (QoS) function with 802.1p, DSCP priority classifications
- Supports SNMP trap for port link change

Specifications:

Standard	IEEE 802.3, 802.3u, 802.3ab, 802.3z
Copper Port	Shielded RJ-45, 10/100/1000Mbps, Full/half duplex Auto-negotiation, Auto-MDI/MDI-X
Fiber Port	SFP connector with pre-configured SFP fiber transceiver 1000Mbps full duplex, Auto-negotiation Far End Fault support
Network Cables	Copper port: Cat.5e recommended or higher up to 100m Fiber port: MMF 50/125µm, 62.5/125µm, SMF 9/125µm
DIP Switches	Copper port operating mode Flow control Auto report for remote copper link status
LED Indication	Power status Local copper port status – link, speed, duplex Local fiber port link status Remote copper port status – link, speed, duplex Loop back test status

KC-3DR:
Din-Rail mounting bracket



Loop Back Test	Push button to start loop back test with link partner over fiber link
Mounting	Desktop, Wall, Din-Rail (optional), Center chassis
Center Chassis	Up to 16 units in one rack chassis with central power Support optional power redundancy and management
Power Input	+5 ~+12VDC (+/-5%) Consumption 2.5W max.@7.5V
Environment	Operating Temperature: -5°C ~ 55°C Storage Temperature: -20°C ~ 85°C Relative Humidity: 10% ~ 80%non-condensing
Dimension	108 x 72.5 x 23 mm (WxDxH)
Approval	FCC Class A, CE mark, CISPR 22 Class A
Management	
Management	Web-based browser interface
Port Control	Operating mode, flow control
Packet Filtering	802.1Q tagged packet filtering, Untagged packet filtering
802.1Q VLAN	Ingress 802.1Q tag stripping, Egress 802.1Q tagging (tag insertion)
QoS	Four priority levels: 802.1p, DSCP-based priority classifications Service policy – strict priority, WFQ (Weighted Fairness Queuing)
Monitoring	Local Port status, Remote Port status, Port statistics
Maintenance	Restore factory default, reboot, firmware update
SNMP Trap	Trap events : boot up, Login failure, Copper port link change, Fiber port link change

Fiber Optical Specifications:

KGC-310M-x

Model Ext.	Fiber Port	Wavelength	Tx Power	Rx Sens.	Rx. max.
-SX	LC MMF	850nm	-9.5 ~ -4dBm	-18dBm	-1dBm
-LX	LC SMF	1310nm	-9.5 ~ -3dBm	-20dBm	-3dBm
-LX20	LC SMF	1310nm	-7 ~ 0dBm	-24dBm	-3dBm
-LX30	LC SMF	1310nm	-4 ~ +3dBm	-23dBm	-3dBm
-LX50	LC SMF	1550nm	-4 ~ +1dBm	-23dBm	-3dBm
-LX70	LC SMF	1550nm	0 ~ +5dBm	-23dBm	-3dBm
-W3510	Bi-Di LC SMF	Tx 1310nm Rx 1550nm	-9 ~ -3dBm	-21dBm	-3dBm
-W5310	Bi-Di LC SMF	Tx 1550nm Rx 1310nm	-9 ~ -3dBm	-21dBm	-3dBm
-W3520	Bi-Di LC SMF	Tx 1310nm Rx 1550nm	-8 ~ -3dBm	-23dBm	-3dBm
-W5320	Bi-Di LC SMF	Tx 1550nm Rx 1310nm	-8 ~ -3dBm	-23dBm	-3dBm
-W3410	Bi-Di LC SMF	Tx 1310nm Rx 1490nm	-9 ~ -3dBm	-20dBm	-3dBm
-W4310	Bi-Di LC SMF	Tx 1490nm Rx 1310nm	-9 ~ -3dBm	-20dBm	-3dBm
-W3410S	Bi-Di SC SMF	Tx 1310nm Rx 1490nm	-9 ~ -3dBm	-20dBm	-3dBm
-W4310S	Bi-Di SC SMF	Tx 1490nm Rx 1310nm	-9 ~ -3dBm	-20dBm	-3dBm

Ordering Information:

KGC-310M-x

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

KC-3DR	Din-Rail mounting bracket
KC-1300	Managed center chassis

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



KGC-300

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 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:

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 Far End Fault support
Network Cables	Copper port : Cat.5e recommended or higher up to 100m Fiber port : MMF 50/125µm, 62.5/125µm, SMF 9/125µm
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 Support optional power redundancy and management
Power Input	+5 ~ +12VDC (+/-5%) Consumption 2W max.@7.5V
Environment	Operation Temperature: -5°C ~ 55°C Storage Temperature: -20°C ~ 85°C Relative Humidity: 10% ~ 90% non-condensing
Dimension	108 x 72.5 x 23 mm (WxDxH)
Approval	FCC Class B, CE mark, CISPR 22 Class B

KC-3DR:
Din-Rail mounting bracket



Fiber Ordering Information:

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

Extended operating temperature -10 ~ 70°C

-ESX	LC MMF	850nm	-9.5 ~ -4dBm	-18dBm	-1dBm
-ELX	LC SMF	1310nm	-9.5 ~ -3dBm	-20dBm	-3dBm

Ordering Information:

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

➤ Multimode to Single Mode Fiber Media Converters



KGC-311

Key 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 and supports standard SFP fiber transceivers
- Support center chassis installation with advantages of central power, power redundancy and management
- Provides LEDs for easy network monitoring

Specifications:

Standard	IEEE 802.3z 1000Base-SX/LX, IEEE 802.3u 100Base-FX
Fiber Ports	MM port: SFP-A slot for Multimode fiber transceiver SM port: SFP-B slot for Single mode fiber transceiver
Fiber Cable	MM port: MMF 62.5/125µm, 50/125µm SM port: SMF 9/125µm
LEDs	Power status, GE / FE status MM port optical link status, SM port optical link status
Mounting	Desktop, Wall, Din-Rail (optional), Center chassis
Center Chassis	Up to 16 units in one KC-1300 rack chassis Support optional power redundancy and management
Power Input	+5 ~ +12VDC (+/-5%), Consumption 2W max.@7.5V
Environment	Operation Temperature: -5°C ~ 55°C Storage Temperature: -20°C ~ 85°C Relative Humidity: 10% ~ 70% non-condensing
Dimension	108 x 72.5 x 23 mm (WxDxH)
Compliance	FCC Class A, CE mark, CISPR 22 Class A

KC-3DR:
Din-Rail mounting bracket



Fiber Ordering Information:

Model Ext#	Port Type	Port Tx Power (dBm)	Connector	Rx Sensitivity (dBm)	Wavelength (nm)	Ref. Distance
FE 100Mbps series						
-FSL3	MM	-20 ~ -14	LC	-31	1310	2 km
	SM	-15 ~ -8	LC	-34	1310	30 km
-FSL6	MM	-20 ~ -14	LC	-31	1310	2 km
	SM	-5 ~ 0	LC	-35	1310	60 km
-FSL10	MM	-20 ~ -14	LC	-31	1310	2 km
	SM	-5 ~ 0	LC	-35	1550	100 km
-PW3520	MM	-20 ~ -14	LC	-31	1310	2 km
	SM	-14 ~ -8	Bi-Di LC	-32	Tx 1310 Rx 1550	20 km
-PW5320	MM	-20 ~ -14	LC	-31	1310	2 km
	SM	-14 ~ -8	Bi-Di LC	-32	Tx 1550 Rx 1310	20 km
GE 1000Mbps series						
-LX	MM	-9.5 ~ -4	LC	-18	850	200m/500m
	SM	-9.5 ~ -3	LC	-20	1310	10 km
-LX20	MM	-9.5 ~ -4	LC	-18	850	200m/500m
	SM	-8 ~ -2	LC	-23	1310	20 km
-LX30	MM	-9.5 ~ -4	LC	-18	850	200m/500m
	SM	-4 ~ +3	LC	-23	1310	30 km
-LX50	MM	-9.5 ~ -4	LC	-18	850	200m/500m
	SM	-4 ~ +1	LC	-23	1550	50 km
-LX70	MM	-9.5 ~ -4	LC	-18	850	200m/500m
	SM	0 ~ +5	LC	-23	1550	70 km
-W3510	MM	-9.5 ~ -4	LC	-18	850	200m/500m
	SM	-9 ~ -3	Bi-Di LC	-21	Tx 1310 Rx 1550	10 km
-W5310	MM	-9.5 ~ -4	LC	-18	850	200m/500m
	SM	-9 ~ -3	Bi-Di LC	-21	Tx 1550 Rx 1310	10 km
-W3410	MM	-9.5 ~ -4	LC	-18	850	200m/500m
	SM	-9 ~ -3	Bi-Di LC	-21	Tx 1310 Rx 1490	10 km
-W4310	MM	-9.5 ~ -4	LC	-18	850	200m/500m
	SM	-9 ~ -3	Bi-Di LC	-21	Tx 1490 Rx 1310	10 km
-W3520	MM	-9.5 ~ -4	LC	-18	850	200m/500m
	SM	-8 ~ -3	Bi-Di LC	-23	Tx 1310 Rx 1550	20 km
-W5320	MM	-9.5 ~ -4	LC	-18	850	200m/500m
	SM	-8 ~ -3	Bi-Di LC	-23	Tx 1550 Rx 1310	20 km

* GE: Gigabit Ethernet, FE: Fast Ethernet
* 200m/500m: 200 meters with MMF 62.5/125, 500 meters with MMF 50/125

Ordering Information:

Model: KGC-311	FE/GE	MM Port	SM Port
-FSL3	FE	2km	30km
-FSL6	FE	2km	60km
-FSL10	FE	2km	100km
-PW3520	FE	2km	Tx 1310nm Bi-Di 20km
-PW5320	FE	2km	Tx 1550nm Bi-Di 20km
-LX	GE	200/500m	10km
-LX20	GE	200/500m	20km
-LX30	GE	200/500m	30km
-LX50	GE	200/500m	50km
-LX70	GE	200/500m	70km
-W3510	GE	200/500m	Tx 1310nm Bi-Di 10km
-W5310	GE	200/500m	Tx 1550nm Bi-Di 10km
-W3410	GE	200/500m	Tx 1310nm Bi-Di 10km
-W4310	GE	200/500m	Tx 1490nm Bi-Di 10km
-W3520	GE	200/500m	Tx 1310nm Bi-Di 20km
-W5320	GE	200/500m	Tx 1550nm Bi-Di 20km

➤ Intelligent Media Converter Center Chassis

KC-1300



Intelligent Media Converter Center Chassis

Product Highlights:

- Supports 16 slots for hot-plug converters
- 19" rack mountable
- Supports 90-264VAC and -48VDC power
- Power redundancy design
- Management
 - In-band console support
 - Web-based management
 - SNMP management
 - Telnet management
 - SNMP trapP

KC-1300 Intelligent Media Converter Center Chassis provides 16 slots for standalone media converters. A variety of optional media converts is provided and includes Gigabit copper to fiber and Fast Ethernet copper to fiber.

The chassis provides centered power supply to the installed media converters and serves as a converter center and wiring concentrator. The power system is featured with power redundancy for commercial AC and DC power input. For easy monitoring the media converter operation in each slot, KC-1300 also provides many network management interfaces including in-band console, telnet, web browsing, SNMP, and event SNMP trap for different application needs.

Key Features:

- Managed Media Converter Center with 19-inch rack-mountable 2U chassis
- Managed system accommodates up to 16 media converters
- Highly modularized chassis design with
 - modular media converters
 - modular management module
 - two system power modules for power redundancy
- Provides high availability and maintainability
- Power backup (dual power inputs) featured with two power chassis
- Visible system status indication
- Supports in-band Telnet, SNMP and web-based management
- Supports out-of-band direct console management
- Management from anywhere and any platform using a web browser
- Easy-to-use point and click user interface
- Photographic quality interface to configure and monitor the system
- Supports in-band event SNMP trap report
- TFTP Software Upgrade

Optional Media Converters

- Gigabit copper to Gigabit fiber converter
- Tri-speed 10/100/1000 copper to Gigabit fiber converter series
- 10/100 Fast Ethernet Copper to Fast Ethernet fiber converter series
- Multimode to single mode optical fiber media converter series

KC-300D



KGC-300



KGC-310M



KGC-311



KC-300DM



Ordering Informations:

Chassis	Slots	Managed	Power
KC-1300L-1A	16	None	1 AC
KC-1300L-2A	16	None	2 AC
KC-1300-1A	16	Yes	1 AC
KC-1300-2A	16	Yes	2 AC
KC-1300L-1D	16	None	1 DC
KC-1300L-2D	16	None	2 DC
KC-1300-1D	16	Yes	1 DC
KC-1300-2D	16	Yes	2 DC



FCC Part 15, Class A
CISPR 22 Class A

Specifications:

System Model	KC-1300-1A	KC-1300-2A	KC-1300-1D	KC-1300-2D
Management	Managed	Managed	Managed	Managed
System Model	KC-1300L-1A	KC-1300L-2A	KC-1300L-1D	KC-1300L-2D
Management	Unmanaged	Unmanaged	Unmanaged	Unmanaged
LEDs	Power1 , Power2 , CPU status, Fan status, Console Rx status, port link status			
Number of Power	1 AC power	2 AC power	1 DC power	2 DC power
Input Voltage	90-264VAC	90-264VAC	-48VDC	-48VDC
Power Supply	60W	60W	60W	60W
19" Rack Mount	Yes	Yes	Yes	Yes
Number of MC Slots	16	16	16	16

Mechanical:

Chassis Height (2U)	88mm	88mm	88mm	88mm
Dimension	443x88x300 mm	443x88x300 mm	443x88x300 mm	443x88x300 mm
Weight	5.5kg	6.2kg	5.5kg	6.2kg

(with 1 or 2 AC power, management module and no MC converters)

Environmental:

Operating Temperature	-5°C ~ 40°C
Storage Temperature	-20°C ~ 80°C
Relative Humidity	5% ~ 95% non-condensing
Approval	FCC class A, CE class A

Information of Optional Standalone Media Converters:

KC-300D	10/100Base-TX to 100Base-FX media converter series
KC-300DM	10/100Base-TX to 100Base-FX media converter series with remote loopback test and remote TP link monitoring functions
KGC-300	1000Base-T to 1000Base-X media converter series
KGC-310	10/100/1000Base-T to 1000Base-X media converter series with remote loopback test and remote TP link monitoring functions
KGC-310M	Web Smart 10/100/1000Base-T to 1000Base-X media converter series with remote loopback test, remote TP link monitoring functions and web-based management
KGC-311	Multimode to single mode optical fiber media converter series

➤ Industrial 10/100Base-TX to 100Base-FX Media Converters

KCD-300



Industrial 10/100Base-TX to 100Base-FX Media Converters

DIN Rail Mounting Bracket



Panel Mounting Bracket



The industrial KCD-300 media converter series provides industrial strength Ethernet copper-to-fiber media conversion, allowing for 10Base-T-100Base-FX or 100Base-TX-100Base-FX over multi-mode or optional single-mode fiber optical media.

Benefits:

- Comprehensive configuration settings to increase flexibility for application needs
- Wide operating temperature range for temperature critical environment
- Support DIN rail mounting and panel mounting
- Provide two power input types to meet more application needs
- Accept wide power input voltage range for application flexibility
- Industrial-rated Emission and Immunity performance

Key Features:

- Support full wire speed conversion for 10/100 speed and media types
- Support auto-negotiation 10/100Mbps or forced mode on TP copper port
- Auto MDI/MDI-X crossover function on the TP copper port
- Provide Link Fault Pass Through function
- Provide comprehensive manual configuration settings
- Transparent conversion to 802.1Q VLAN tagged packets
- Provides Far End Fault function on FX (fiber) port
- Low power consumption
- Two power interface types: screw terminal block and DC Jack
- Supports wide power input voltage range
- Supports DIN rail mounting and optional screwed plane mounting
- Supports wide operating temperature range
- Industrial-rated Emission and Immunity performance

Specifications:

Conversion	10BASE-T to 100BASE-FX, 100BASE-TX to 100BASE-FX
Conversion Methods	Smart-forward mode: - Store-and-forward for 10M to 100M - Direct conversion for 100M to 100M Store-and-forward always mode
Packet Types	Transparent conversion with no modification to: - Standard IEEE 802.3 Ethernet packet frames - IEEE 802.1Q tagged packet frames
TP Port	Shielded RJ-45 jack Auto MDI/MDI-X crossover function Auto-negotiation function for speed and duplex mode Full-duplex and half-duplex support 10Mbps - Supports Cat. 3,4,5 UTP cable up to 100m 100Mbps - Supports Cat. 5 UTP cable up to 100m
Fiber (FX) Port	Multimode ST, SC, Single mode SC 100Mbps Full-duplex and half-duplex support

➤ Industrial 10/100Base-TX to 100Base-FX Media Converters

EMI EMS Safety Environmental Tests:

Test	Standard	Specifications
FCC/EMI	FCC Rule Part 15	Class B
CE/EMC/EMI	EN55022, CISPR 22	Class B
CE/EMC/Harmonic	EN 61000-3-2	< 75 W
CE/EMC/VFF	EN 61000-3-3	Clause 5
CE/EMC/EMS	EN 55024	
ESD Test	IEC 61000-4-2	+/- 8KV
RS Test	IEC 61000-4-3	Strength: 10V/m
EFT/BURST	IEC 61000-4-4	Power: +/- 4KV
Surge Immunity	IEC 61000-4-5	Data: +/- 2KV
CS Test	IEC 61000-4-6	Level 3
Magnetic Field Imm.	IEC 61000-4-8	50Hz 40A/m
Voltage Dips Imm.	IEC 61000-4-11	Interruption: C Dips: A
Safety	EN 60950, IEC 60950	
Dielectric Voltage	IEEE 802.3	TP, 1500VAC/60sec.
Insulation Resistance	IEEE 802.3	TP, 500VDC/10Mohm
Cold Test	IEC 68-2-1 Test Ad	-20°C, 96hrs
Dry Heat Test	IEC 68-2-2 Test Bd	+70°C 40%RH 96hrs
Damp Heat Test	IEC 68-2-3	+60°C 90%RH 96hrs
Storage Test	IEC 68-2-4B	-20°C 96hrs +85°C 40%RH 96hrs
Vibration Test	IEC 68-2-34	

Ordering Informations:

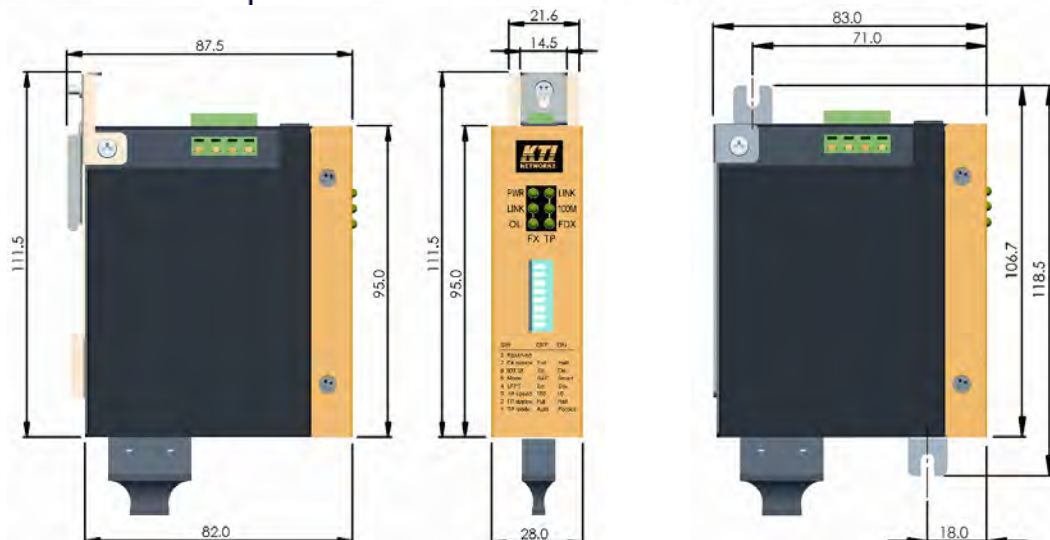
Model KCD-300-xxx	FX Port Fiber	Ref. Distance	Operating Temperature
-T	ST MMF	2km	-10 ~ 70°C
-C	SC MMF	2km	-10 ~ 70°C
-C1	SC MMF	2km	-20 ~ 70°C
-SL2	SC SMF	20km	-20 ~ 70°C
-SL3	SC SMF	30km	-20 ~ 70°C
-SL4	SC SMF	40km	-20 ~ 70°C
-SL6	SC SMF	60km	-20 ~ 70°C
-SL8	SC SMF	80km	-40 ~ 85°C
-SL10	SC SMF	100km	-20 ~ 70°C
-SL12	SC SMF	120km	-40 ~ 85°C
-W3515	Bi-Di SC SMF	15~20km	-20 ~ 70°C
-W5315	Bi-Di SC SMF	15~20km	-20 ~ 70°C
KCD-3PB	Panel mounting bracket for KCD-300		

MMF 50/125µm, 62.5/125µm fiber cable
SMF 9/125µm cable
Far End Fault Indication support

Flow Control	IEEE 802.3x for full-duplex, Back pressure for half-duplex
LEDs	- Power status - TP port link, activity, speed, duplex status - Per FX port link, activity, optical link status
Configuration Setting Switches	Auto/forced mode, TP speed, TP duplex FXduplex
DC Power Input	Screwed terminator block: 2 pairs of +/- contacts DC jack: -D 6.3mm / + D 2.0mm Operating voltage range: +7 ~ +30VDC
Power Consumption	3W max. @30VDC power input
Dimension	28 x 82 x 95 mm, Weight: 250g
Housing	Enclosed metal with no fan
Mounting Support	DIN Rail mounting, Panel mounting
Environment	Operating Temperature: See ordering information Storage Temperature: -20°C ~ 85°C Relative Humidity: 5% ~ 95% non-condensing
Approval	FCC Class B, CE/EMC Class B, EN60950 safety

Fiber Optical Specifications:

Model	FX & Cable	Wavelength	Tx Power	Rx Sens.	Rx Max.
-T	ST MMF	1310nm	-19 ~ -14dBm	-31dBm	-14dBm
-C	SC MMF	1310nm	-19 ~ -14dBm	-31dBm	-14dBm
-C1	SC MMF	1310nm	-20 ~ -14dBm	-31dBm	0dBm
-SL2	SC SMF	1310nm	-15 ~ -8dBm	-30dBm	-7dBm
-SL3	SC SMF	1310nm	-15 ~ -8dBm	-34dBm	0dBm
-SL4	SC SMF	1310nm	-5 ~ 0dBm	-34dBm	0dBm
-SL6	SC SMF	1310nm	-5 ~ 0dBm	-35dBm	0dBm
-SL8	SC SMF	1310nm	0 ~ +5dBm	-36dBm	0dBm
-SL10	SC SMF	1550nm	-5 ~ 0dBm	-35dBm	-3dBm
-SL12	SC SMF	1550nm	0 ~ +5dBm	-35dBm	-3dBm
-W3515	Bi-Di SC SMF	Tx 1310nm Rx 1550nm	-14 ~ -8dBm	-31dBm	0dBm
-W5315	Bi-Di SC SMF	Tx 1550nm Rx 1310nm	-14 ~ -8dBm	-31dBm	0dBm



➤ Industrial 1000Base-T to 1000Base-X Gigabit Media Converters

KCD-400



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

The industrial KCD-400 media converter series provides industrial strength Gigabit Ethernet copper-to-fiber media conversion, allowing for 1000Base-T-to-1000Base-X over multi-mode or optional single-mode fiber optical media. 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.

Benefits:

- Plug and play design with no configuration setting
- Wide operating temperature range for temperature critical environment
- Support DIN-rail mounting and panel mounting
- Provide two power input types to meet more application needs
- Accept wide power input voltage range for application flexibility
- Industrial-rated Emission and Immunity performance

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 pass through between copper and fiber link
- Provide SFP on fiber port for mounting variety of fiber options
- Low power consumption
- Two power interface types: screw terminal block and DC Jack
- Supports DIN-rail mounting and optional screwed plane mounting

Specifications:

Standard	IEEE 802.3au, 802.3z
Conversion	Direct 1000BASE-T to 1000BASE-X with minimum latency
Packet Types	Transparent conversion with no modification to: - Standard IEEE 802.3 Ethernet packet frames - IEEE 802.1Q tagged packet frames
Copper Port	Shielded RJ-45, 1000Mbps Auto-negotiation capable Auto-MDI/MDI-X crossover function
Fiber Port	SFP connector with pre-configured SFP fiber transceiver Far End Fault support
Network Cables	Copper port: Cat.5e recommended or higher up to 100m Fiber port: MMF 50/125µm, 62.5/125µm, SMF 9/125µm
LEDs	Power status, SFP ON status Link status, Optical link status

DIN Rail Mounting Bracket



Panel Mounting Bracket



➤ Industrial 1000Base-T to 1000Base-X Gigabit Media Converters

EMI EMS Safety Environmental Tests:

Test	Standard	Specifications
FCC/EMI	FCC Rule Part 15	Class B
CE/EMC/EMI	EN55022, CISPR 22	Class B
CE/EMC/Harmonic	EN 61000-3-2	< 75 W
CE/EMC/VFI	EN 61000-3-3	Clause 5
CE/EMC/EMS	EN 55024	
ESD Test	IEC 61000-4-2	Contact: +/-6KV Air: +/-8KV
RS Test	IEC 61000-4-3	Strength: 10V/m
EFT/BURST	IEC 61000-4-4	DC IN: +/-3KV TP: +/-4KV
Surge Immunity	IEC 61000-4-5	+/-4KV
CS Test	IEC 61000-4-6	Level 3
Magnetic Field Imm.	IEC 61000-4-8	50Hz 40A/m
Voltage Dips Imm.	IEC 61000-4-11	Interruption: C Dips: A
Safety	EN 60950, IEC 60950	
Dielectric Voltage	IEEE 802.3	TP: 1500VAC/60sec.
Insulation Resistance	IEEE 802.3	TP: 500VDC/10Mohm
Cold Test	IEC 68-2-1 Test Ad	-20°C, 96hrs
Dry Heat Test	IEC 68-2-2 Test Bd	+70°C 40%RH 96hrs
Damp Heat Test	IEC 68-2-3	+60°C 90%RH 96hrs
Storage Test	IEC 68-2-48	-20°C 96hrs +85°C 40%RH 96hrs
Vibration Test	IEC 68-2-34	

Ordering Informations:

Model	Fiber Mode	Connector	Ref. Distance
KCD-400-xxx			
-SX	62.5/125 50/125	LC	200m 500m
-LX	MM SM	LC	550m 10km
-LX20	SM	LC	20km
-LX100	SM	LC	100km

Network Cables	Copper port: Cat.5e recommended or higher up to 100m Fiber port: MMF 50/125µm, 62.5/125µm, SMF 9/125µm
LEDs	Power status, SFP On status Link status, Optical link status
DC Power Input	Screwed terminator block: 2 pairs of +/-contacts 1 pair of power alarm relay output contacts DC jack: -D 6.3mm /+D 2.0mm Operating voltage range: +7 ~ +30VDC
Power Consumption	2W max.@30VDC power input
Dimension	28 x 82 x 95 mm (WxDxH)
Weight	240 g
Housing	Enclosed metal with no fan
Mounting Support	DIN-Rail mounting, Panel mounting
Environment	Operating Temperature: -20°C ~ 70°C Storage Temperature: -20°C ~ 85°C Relative Humidity: 5% ~ 95%non-condensing
Approval	FCC Class B CE/EMC Class B, EN60950 safety

Fiber Optical Specifications: KCD-400-xxx

Model	Fiber	Wavelength	Tx Power	Rx Sens.	Rx Max.	Distance
-SX	LC 62.5/125 MMF 50/125 MMF	850nm	-9.5 ~ -4dBm	-18dBm	-1dBm	220m 500m
-LX	LC MMF SMF	1310nm	-9.5 ~ -3dBm	-20dBm	-3dBm	550m 10km
-LX20	LC SMF	1310nm	-7 ~ 0dBm	-24dBm	-3dBm	20km
-LX100	LC SMF	1550nm	0 ~ +5dBm	-30dBm	-8dBm	100km

