![KTI NETWORKS logo]

Installation Guide
10BASE-T/10BASE-FL
## Ethernet Media Converter

KC-10TF SERIES

General Description

The KC-10TF Ethernet media converter series are designed to convert a 10BASE-T signal to a 10BASE-FL signal. It is used to extend the connection distance between two Ethernet Twisted-pair devices via fiber cable transparently with no performance degradation. The converter series provide different types of fiber connectors such as ST and SC for MM (multimode) or SM (single mode) fiber cables.

The outline of the converter is:
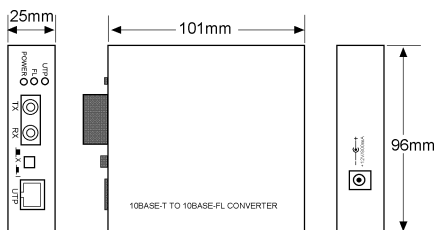
Specifications

• Comply with IEEE 802.3 10BASE-T and 10BASE -FL std.
• Provide a push button to set the crossover function for the TP port
• Provide LEDs for easy network monitoring:
  - Power status
  - Link and receive status for TP port
  - Link and receive status for fiber port
• Fiber optic connectors:
  - multimode ST
  - multimode SC
  - single mode ST
• Environment: Temperature 0 - 40°C
  Humidity 10-90% non condensing
• Dimensions: 101mm x 96mm x 25mm
• Power: +12V / 800mA minimum
• DC plug type:

Connectors & Cables

10BASE-T RJ-45 Connectors (TP Port)

One RJ-45 connector is provided on the converter for 10BASE-T connection. For easy connection to any device using standard straight-through UTP cable, a push button is available to set the crossover function for the RJ-45.
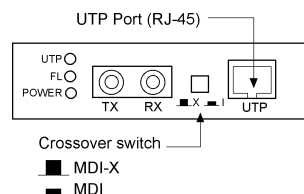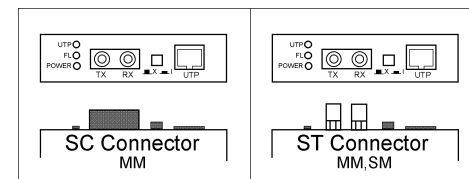

RJ-45 Pin	MDI-X Jack	MDI Jack
1	Rx+	Tx+
2	RX-	Tx-
3	Tx+	Rx+
6	Tx-	Rx-

10BASE-T UTP Cable

Cable: Category 3, 4, or 5 UTP
Maximum cable distance: 100 meters (328 feet)

Fiber Optic Connector (Fiber Port)

The series provides different types of fiber connectors for different applications. The connectors include multimode ST, multimode SC, and single mode ST are shown as follows:

The wavelength used is 850nm. The series also support MM (multimode) fiber cables and SM (single mode) fiber cables. The recommended MM cable is 62.5/125μm and SM cable is 9/125μm.

Models

The following table lists the fiber connectors, fiber cables and the maximum length supported by each converter model:

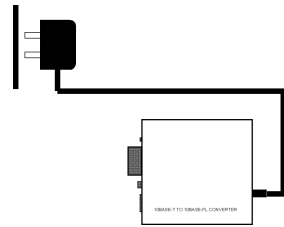| Model	Connector	Cable Used	Cable Length*
KC-10TF/T	ST	MM	2Km
KC-10TF/C	SC	MM	2Km
KC-10TF/S	ST	SM	14Km

* Cable length : the maximum length in point-to-point full duplex operation

Installation

1. Install the media converter with the DC power adapter provided. (+12VDC, 800mA)
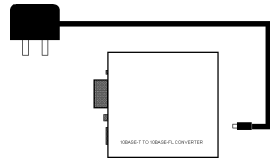
2. Connect the power adapter cable to the media converter before connecting the adapter to the AC outlet.

Making Network Connections

The converters serve as a conversion path between two Ethernet devices. To both devices, the conversion is transparent. The connection could be one of the following configurations:
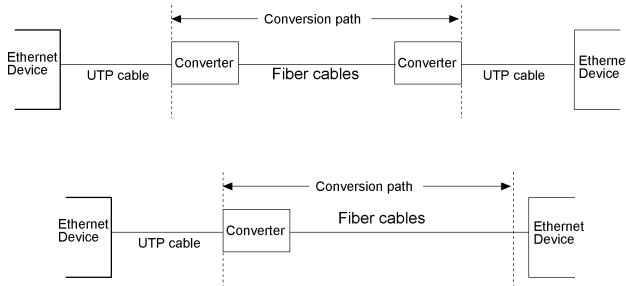
Important rule: When a connection is established, make sure the devices located at both ends of the path are configured and operated using the same duplex mode and the maximum distance must comply with IEEE 802.3 specifications.

Interpreting LED Indicators
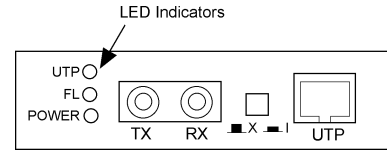
The LED labeled "UTP" is used to indicate the status of the TP port and the LED labeled "FX" is for Fiber port.

LED	Status	State	Interpretation
POWER	Power status	On	Converter is on.
		Off	Converter is off.
UTP	TP port link/Rx	On	The UTP link is ok.
		Off	No link or the link is faulty.
		Blink	Receiving on TP port
FL	Fiber port link/Rx	On	The fiber link is ok.
		Off	No link or the link is faulty.
		Blink	Receiving on Fiber port

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 expressively 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 C E 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.