KTI NETWORKS

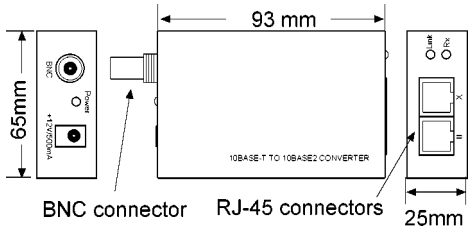
Installation Guide
Ethernet Media Converters
10BASE-T to 10BASE2

KC-10BM

DOC. 981103-KC10BM-K Rev.1
P/N: 750-0119-001

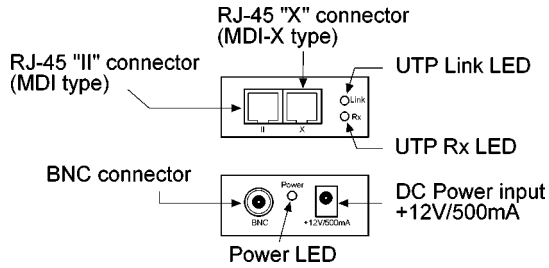
General Description

The KC-10BM Ethernet media converter is designed to be a connection interface between a 10BASE-T Ethernet UTP cable and a 10BASE2 RG-58 coaxial cable. It features two RJ-45 connectors and a BNC connector.



Specifications

Standard : IEEE 802.3 10BASE-T, 10BASE2



10BASE-T RJ-45 Connector
Two RJ-45 connectors are provided and selectable for connecting to a UTP cable. The connector labeled "II" is a standard MDI type jack and the "X" connector is a MDI-X type jack, which provides internal crossover function. The following table illustrates the pin assignments:

RJ-45 Pin	"X" connector	"II" connector
1	Rx+	Tx+
2	RX-	Tx-
3	Tx+	Rx+
6	Tx-	Rx-

10BASE-T UTP Cable : Cable type: Category 3, 4 or 5
Maximum cable distance: 100 meters (328 feet)

BNC Connector : female

10BASE2 Coaxial Cable : RG-58A/U thin coaxial cable

LEDs : Power, UTP Link, UTP Rx (receiving status)

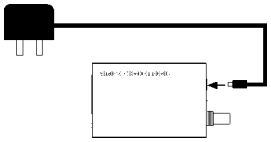
Environment
Temperature 0° - 40°C
Humidity 10-90% non condensing

Dimension : 93mm x 62mm x 25mm (3.7 x 2.5 x 1 inch)

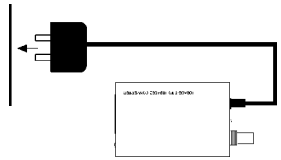
Power : +12V / 500mA minimum
DC plug type: – —●— +

Installation

1. Install the media converter with the DC power adapter provided. (+12VDC, 500mA)



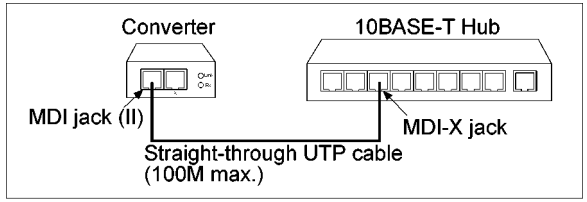
2. Connect the power adapter cable to the media converter before connecting the adapter to the AC outlet.

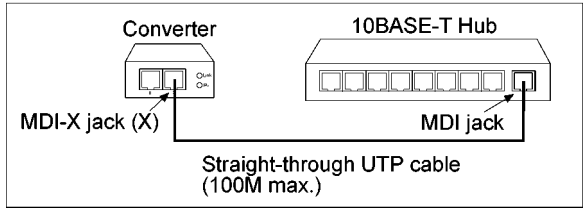


Making UTP Connection

When using a straight-through UTP cable for the connection, make sure "MDI-X jack to MDI jack" rule is followed. Use "X" connector if the jack type of the remote device is MDI jack. Use "II" connector if the jack type of the remote device is MDI-X jack.

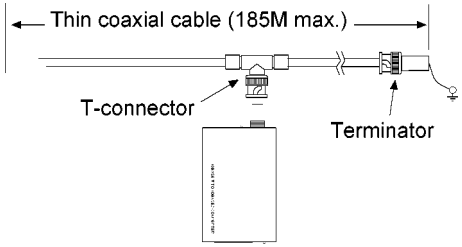
The following examples show how to connect the converter to a 10BASE-T Ethernet hub via straight-through UTP cable.





Make BNC Connection

Connect a BNC T-connector to the BNC female connector on the converter, then connect thin coaxial cable to the T-connector. Make sure either end of the thin coaxial cable segment is terminated by plugging a 50 ohm BNC terminator.

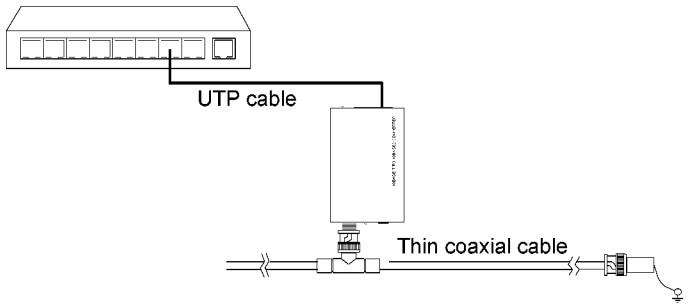


Interpreting LED Indicators

LED	Status	State	Interpretation
Power	Power status	On	Converter is on.
		Off	Converter is off.
Link	UTP link	On	The UTP link is ok.
		Off	No link or the link is faulty.
Rx	Receiving status	Blink	UTP Receiving is in operation.
		Off	No UTP receiving.

Applications

The media converter converts a twisted-pair segment coming from a 10BASE-T hub into a thin coaxial segment.



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 **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:
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.