

Installation Guide

**100BASE-TX/100BASE-FX
Fast Ethernet Media Converter**

NC-200FT/FC

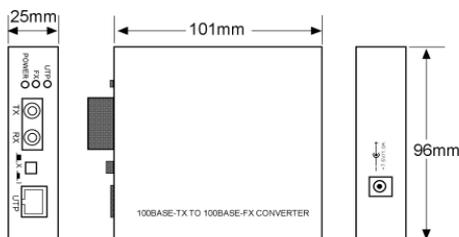
Table of Contents

General Description	3
Specifications	4
Connectors & Cables	5
100BASE-TX RJ-45 Connectors (UTP Port)	5
Fiber Optic Connector (Fiber Port)	6
Optical Specifications	7
Installation	8
Installing Power Adapter	8
Making Network Connections	9
Interpreting LED Indicators	10

General Description

NC-200TF Fast Ethernet media converter series are designed to convert a 100BASE-TX signal to a 100BASE-FX signal. It is used to extend the connection distance between two Fast Ethernet Twisted-pair devices via fiber cable transparently with no performance degradation. The converter series provide different types of fiber connectors for diversified applications.

The outline of the converter is:



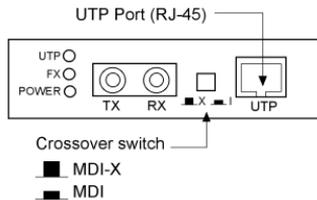
Specifications

- Comply with IEEE 802.3u 100BASE-TX 100BASE -FX std.
- UTP Port (100BASE-TX Port)
 - supports auto-negotiation function
 - supports 100Mbps connection
 - supports full-duplex and half-duplex operation
 - shielded RJ-45 connector with MDI/MDI-X setting
- Fiber Port (100BASE-FX Port)
 - supports 100Mbps connection
 - supports full-duplex operation
 - diversified fiber connector types for selection
 - supports multimode and single mode fiber cables
 - supports ST, SC, ~~MT-RJ~~, ~~VF-45~~ connector types
- Full wire speed conversion
- Plug-and-play installation
- LED indicators for power status, UTP link/activity status and Fiber link/activity status
- Dimensions: 101mm x 96mm x 25mm
- DC input rating: +7.5V / 1.0A
- DC plug type: 
- Operating voltages: +6.5 ~ +12.6V
- Power consumption: 0.5A @+7.5V
- Operating temperature: 0 - 50°C
- Relative humidity: 10-90% non condensing
- Storage temperature: -20 - 75°C
- Certifications: FCC Class B, CISPR 22 Class B, CE
(Model SL4 and SL6 compliant with EMI Class A)

Connectors & Cables

100BASE-TX RJ-45 Connectors (UTP Port)

One RJ-45 connector is provided on the converter for 100BASE-TX 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 Mode	MDI mode
1	Rx+	Tx+
2	Rx-	Tx-
3	Tx+	Rx+
6	Tx-	Rx-

The UTP port is equipped with auto-negotiation capability which supports connection to an auto-negotiation device in full-duplex operation. This feature preserves the connection performance of the connected device.

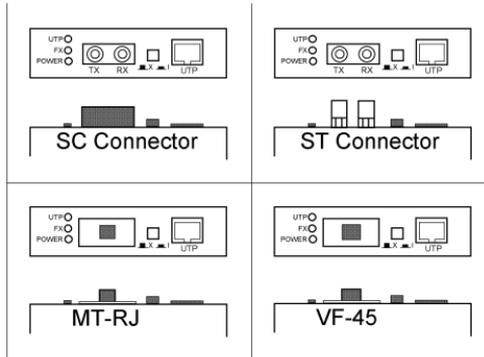
100BASE-TX UTP Cable

Cable: Category 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 ST, SC, ~~MT-RJ~~ and ~~VF-45~~ and are shown as follows:



Fiber Cables

The wavelength used is 1310nm. The series also support MM (multimode) fiber cables and SM (single mode) fiber cables. The recommended MM cable is 62.5/125mm and ~~SM cable is 9/125mm.~~

Optical Specifications

The following table lists the fiber connectors and the related optical specifications supported by each converter model:

<u>Model</u>	<u>Connector</u>	<u>Optical power</u>	<u>Sensitivity</u>
NC-200TF/T	MM TC	-20 ~ -14dBm	-31dBm
NC-200TF/C	MM SC	-20 ~ -14dBm	-31dBm

The following table lists the maximal fiber distance supported each model:

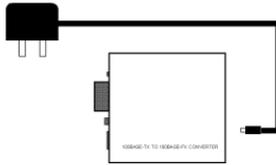
Model	Connector	Distance*
NC-200TF/T	MM ST	2Km
NC-200TF/C	MM SC	2Km

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

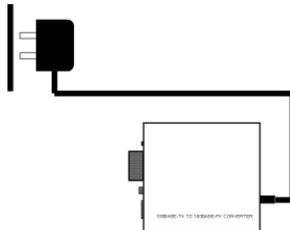
Installation

Installing Power Adapter

1. Install the media converter with the AC power adapter provided. (+7.5VDC, 1A min.)

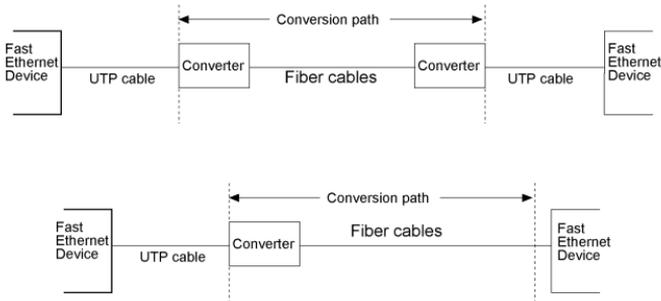


2. Connect the power adapter cable to the media converter before connecting the adapter to the AC outlet.



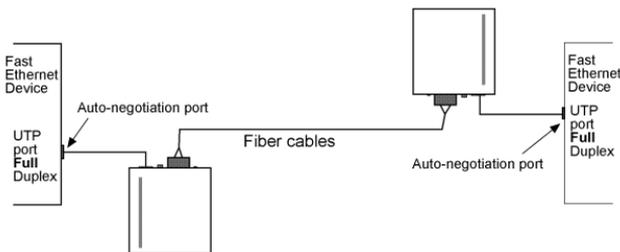
Making Network Connections

The converters serve as a conversion path between two Fast Ethernet devices. To both devices, the conversion is transparent. The connection could be one of the following configurations:

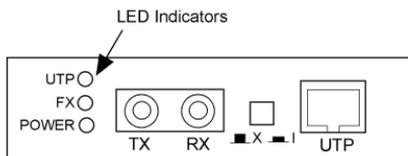


Important rule: When a connection is established, make sure the devices located at both ends of the path are configured and operated using the same duplex mode and the maximum distance must comply with IEEE 802.3u specifications.

The following figure illustrates a connection example between two auto-negotiation devices. Both devices operate in full-duplex mode after a negotiation process with the converters.



Interpreting LED Indicators



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

<u>LED</u>	<u>Status</u>	<u>State</u>	<u>Interpretation</u>
POWER	Power	On	Converter is on.
		Off	Converter is off.
UTP	UTP port link	On	The UTP link is ok.
		Off	No link or the link is faulty.
		Blink	Traffic activities on UTP port
FX	Fiber port link	On	The fiber link is ok.
		Off	No link or the link is faulty.
		Blink	Traffic activities on Fiber port