



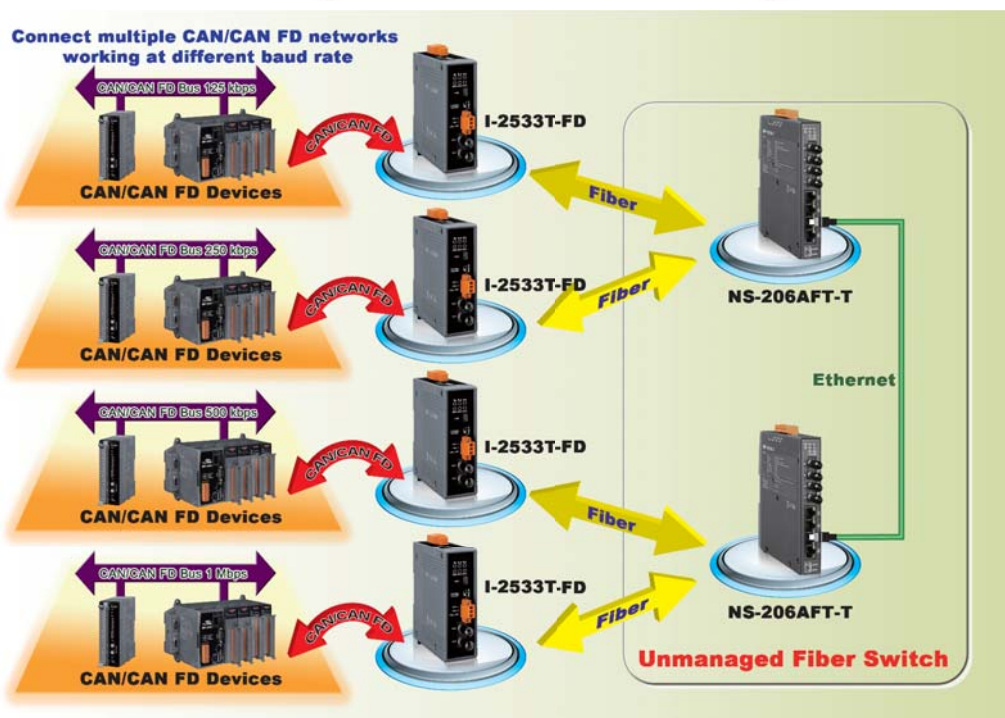
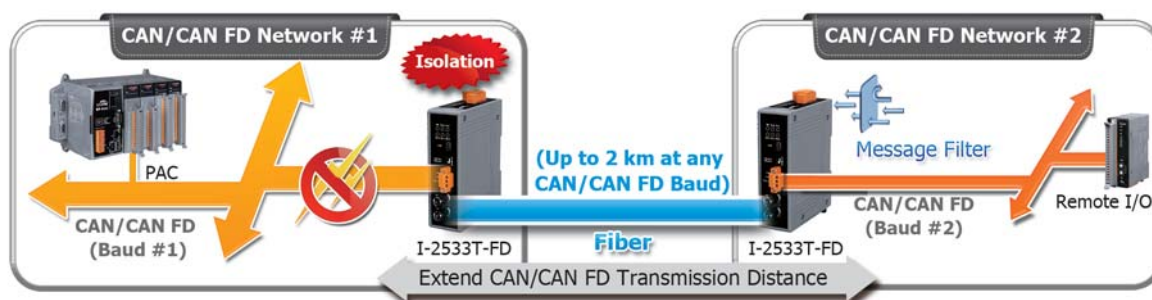
## I-2533T-FD

CAN/CAN FD to Multi-Mode Fiber Bridge

### Introduction

The I-2533T-FD is a local CAN/CAN FD (CAN with Flexible Data-Rate) bridge used to establish a connection between two CAN bus system via multi-mode fiber optic transmission medium. In order to solve the problem between CAN/CAN FD and fiber transmission medium, The I-2533T-FD is specially designed for converting the electrical CAN/CAN FD bus signal to fiber optic cables. Besides, I-2533T-FD has three more important features. First, the transmission distance limitation of the CAN bus system will not be affected due to the different CAN/CAN FD baud rate. It means that the total CAN/CAN FD bus working distance can be extended. Second, the bus error on one CAN/CAN FD network will not affect the operation of another CAN/CAN FD network. Finally, the two CAN/CAN FD network can communicate with each other by using different CAN/CAN FD baud rate for highly flexibility.

### Applications



### Features

- Compatible with the ISO 11898-2 standard
- Compatible with CAN specification 2.0 A/B and FD
- CAN FD support for ISO and Non-ISO (Bosch) standards switchable
- CAN FD bit rates for data field from 100 kbps to 10000 kbps
- CAN bit rates from 10 kbps to 1000 kbps
- Fiber broken line detection
- Support CAN Bus message filter configuration
- Support firmware update via USB
- Basic CAN message routing function via Group ID settings
- Built-in switchable 120 ohm terminal resistor for CAN Bus

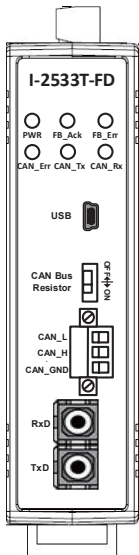


## Specifications

| CAN Interface            |   |
|--------------------------|---|
| Transceiver              | TI TCAN1042HG   |
| Channel Number           | 1   |
| Connector                | 3-pin terminal-block connector  |
| Transmission Speed       | CAN bit rates: 10 ~ 1000 kbps,<br>CAN FD bit rates for data field: 100 ~ 10000 kbps |
| Terminal Resistor        | DIP switch for the 120 Ω terminal resistor  |
| Isolation                | 3000 VDC for DC-to-DC, 2500 Vrms for photocoupler                                   |
| Specification            | ISO 11898-2, CAN 2.0 A/B and FD   |
| CAN Filter Configuration | Selectable via Utility tool   |
| Receive Buffer           | 128 data frames   |
| USB Interface            |   |
| Connector                | 1 x USB (Mini-B)  |
| Compatibility            | USB 2.0 High Speed (480Mbps)  |
| Software Driver          | Built-in Windows 7/8.1/10   |

| Fiber Interface           |   |
|---------------------------|---|
| Type                      | ST type ; Multi-mode ; 100 Base-FX          |
| Wave Length (nm)          | 1310  |
| Fiber Cable (μm)          | 50/125, 62.5/125 or 100/140                 |
| Transmission Distance     | 2 km (62.5/125 μm recommended)              |
| Min. TX Output (dBm)      | -20   |
| Max. TX Output (dBm)      | -14   |
| Max. RX Sensitivity (dBm) | -32   |
| Max. RX Overload (dBm)    | -8  |
| Budget (dBm)              | 12  |
| LED Indicators            |   |
| System LED Indicator      | 1 x Power, 2 x Fiber status, 3 x CAN status |
| Power                     |   |
| Power Consumption         | 0.125 A @ 24V                               |
| Mechanical                |   |
| Installation              | DIN-Rail                                    |
| Casing                    | Plastic                                     |
| Dimensions (mm)           | 33.0 mm x 127 mm x 101 mm (W x L x H)       |
| Environment               |   |
| Operating Temperature     | -25 ~ +75°C                                 |
| Storage Temperature       | -30 ~ +80°C                                 |
| Humidity                  | 10 ~ 90% RH, Non-condensing                 |

## Pin Assignments

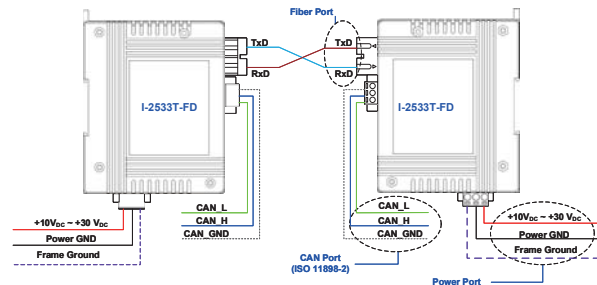


| Pin. No. | Meaning                        |
|----------|--------------------------------|
| USB      | Used for configuration utility |
| CAN_L    | CAN_L pin of CAN bus           |
| CAN_H    | CAN_H pin of CAN bus           |
| CAN_GND  | CAN_GND pin of CAN bus         |
| RxD      | Fiber RxD port                 |
| TxD      | Fiber TxD port                 |

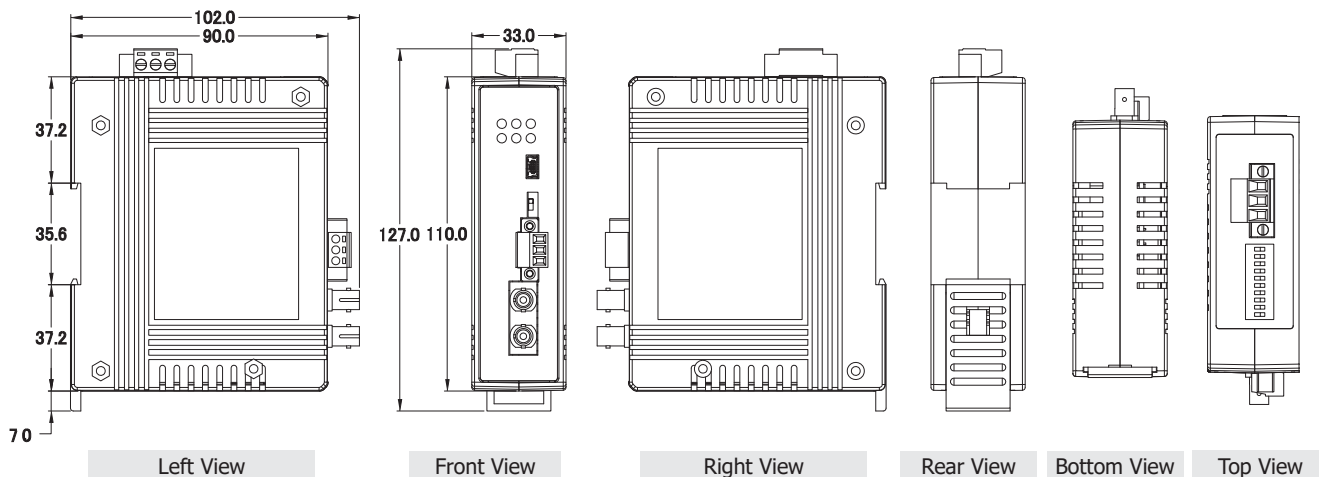
### Attention:

The maximum CAN FD data rate can be exceeded depending on the concrete operating conditions (cable length, network topology, settings,...), but it can also not be reached.

## Wire Connections



## Dimensions (Units: mm)



## Ordering Information

|            |  |
|------------|--|
| I-2533T-FD | CAN/CAN FD to Multi-Mode Fiber Bridge (RoHS) |
|------------|--|