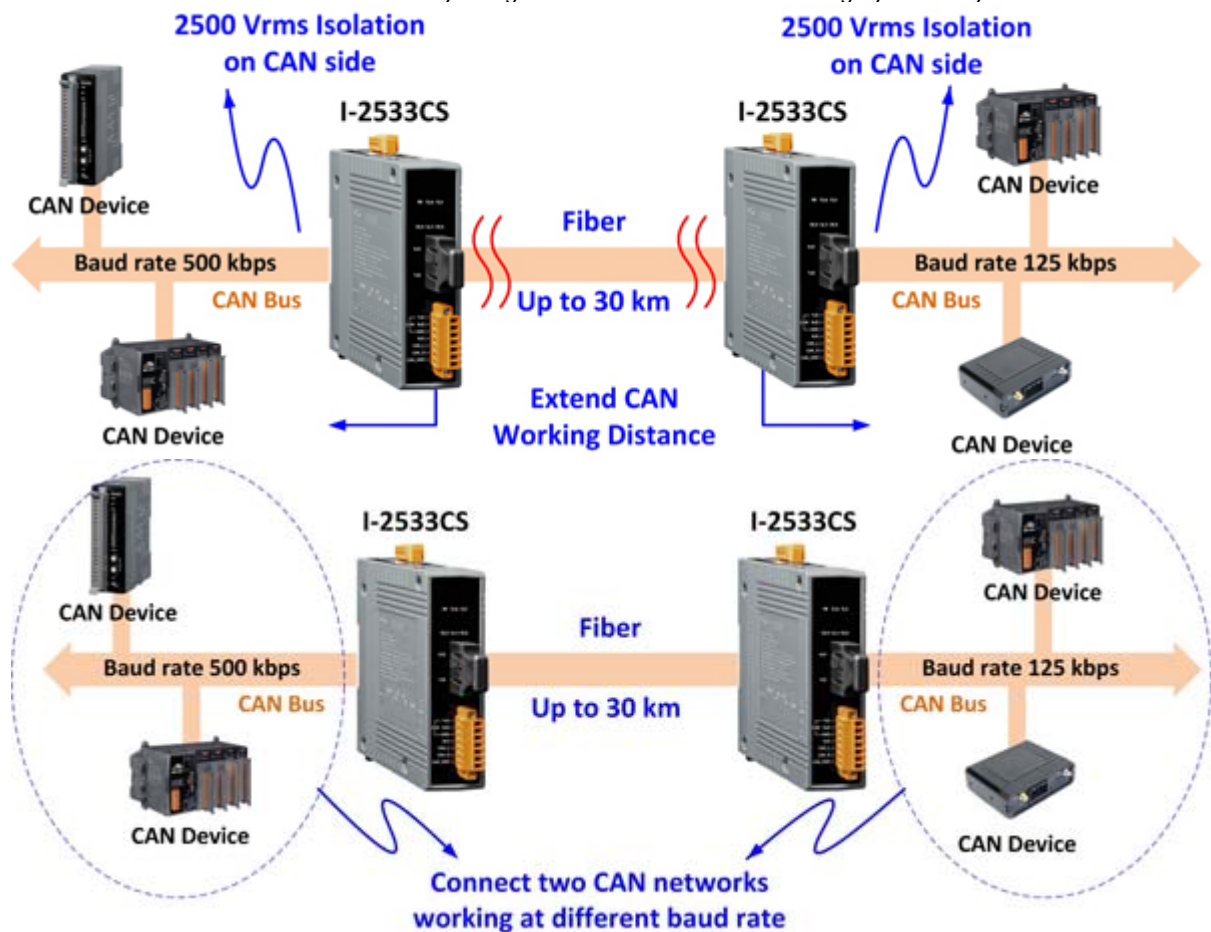




CAN/Fiber Bridge

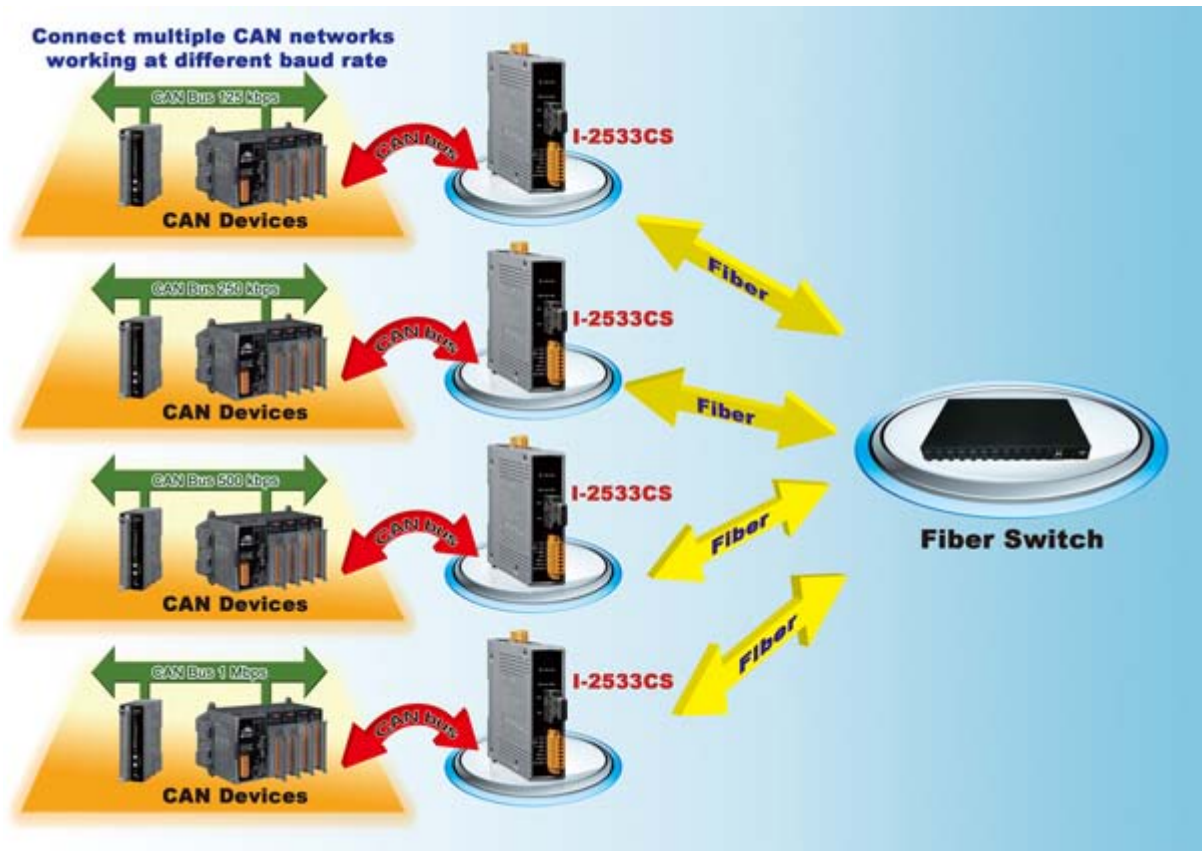
The I-2533CS series (I-2533CS, I-2533CS-60, I-2533CS-A and I-2533CS-B) is a local CAN bridge used to establish a connection between two CAN bus system via single mode fiber optic transmission medium. In order to solve the problem between CAN and fiber transmission medium, the I-2533CS series is specially designed for converting the electrical CAN bus signal to fiber optic cables. Besides, the I-2533CS-A/B supports Wavelength Division Multiplexing (WDM) technology so that only a single fiber cable is needed for transmitting bi-directional CAN data. As the I-2533CS-A and I-2533CS-B must be paired because of hardware limitations, this means that the cost of deploying fiber cable can be effectively reduced.

I-2533CS series has three more important features. First, the transmission distance limitation of the CAN bus system will not be affected due to the different CAN baud rate. It means that the total CAN bus working distance can be extended. Second, the bus error on one CAN network will not affect the operation of another CAN network. Finally, the two CAN networks can communicate with each other by using different CAN baud rates for highly flexibility.



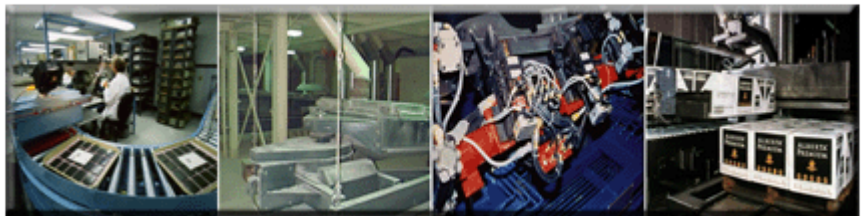
The main difference between I-2533 and I-2533CS series are fiber connectors and transmission distance. The I-2533CS series is designed for single mode fiber, and allow to extend CAN bus to maximum 30 km. Besides, I-2533CS provides the

group function, which is the basic message router. Users can decide the CAN message flows between several CAN bus systems. I-2533CS series also provides the utility tool for user-defined baud rate and filter configuration. By using this tool, it is allowed to have user-defined baud rate and CAN message filter. When users use the I-2533CS series on two CAN network with different CAN baud rate, it may be useful to reduce the bus loading of the network which has low baud rate.



Applications

- Control System
- Building Automation
- Factory Automation
- Distributed data acquisition



Features

- Fiber Type: SC ; Single mode ; 100 Base-FX
- Maximum transmission distance up to 30 km (60km for I-2533CS-60, 15km for I-2533CS-A and I-2533CS-B) at any CAN baud rate
- NXP TJA1042 CAN transceiver
- 2500 Vrms isolation on the CAN side
- Supports both CAN 2.0A and CAN 2.0B
- Fully compatible with the ISO 11898-2 standard
- Rotary switch for CAN baud rate configuration
- Build-in switch for 120 Ω terminator resistor
- Removable terminal block, Mount easily on DIN-Rail
- Allows user-defined CAN baud rate
- Fiber broken line detection
- Utility tool for CAN message filter configuration

- The CAN port with the same Group ID can communicate with each other

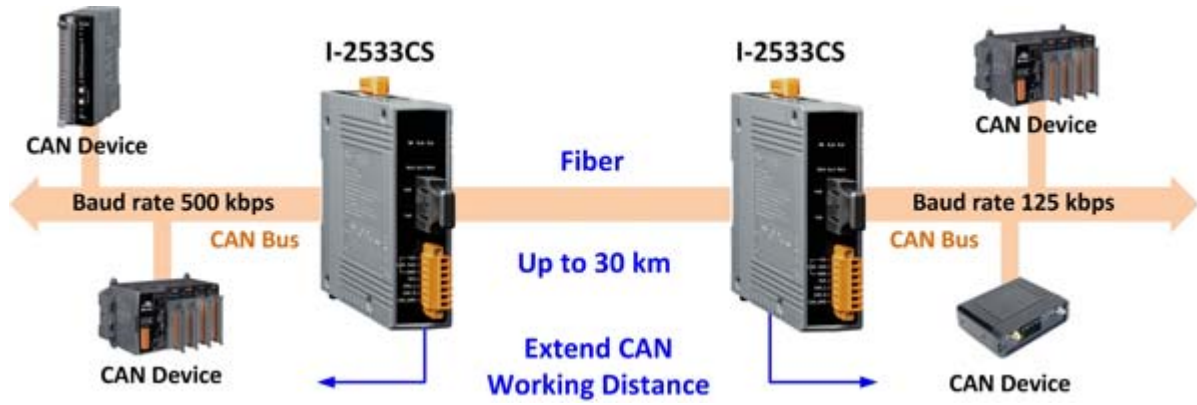
Hardware Specifications

Model Name	I-2533CS	I-2533CS-60	I-2533CS-A / I-2533CS-B
CAN Interface			
Connector	Screwed terminal block (CAN_GND, CAN_L, CAN_H)		
Baud Rate (bps)	10 k ~ 1 M		
Transmission Distance (m)	Depend on baud rate		
Terminator Resistor	Switch for 120Ω terminator resistor		
Isolation	3000 Vdc for DC-to-DC, 2500 Vrms for photo-couple		
Specification	ISO 11898-2, CAN 2.0A and CAN 2.0B		
Fiber Interface			
Type	SC Duplex type ; Single mode ; 100 Base-FX	SC type ; Single mode ; 100 Base-FX	
Wave Length (nm)	1310	TX: 1310, RX: 1550 for I-2533CS-A TX: 1550, RX: 1310 for I-2533CS-B	
Fiber Cable (μm)	8.3/125, 8.7/125, 9/125 or 10/125		
Transmission Distance (km)	30 (indicative only)	60 (indicative only)	15 (indicative only), (9/125 μm recommended)
Min. TX Output (dBm)	-15	-5	-8
Max. TX Output (dBm)	-8	0	-14
Max. RX Sensitivity (dBm)	-34	-35	-31
Max. RX Overload (dBm)	-5		0
Budget (dBm)	19	30	23
UART Interface			
COM1	RS-232 (configuration only)		
COM1 Connector	Screwed terminal block (RXD, TXD, GND)		
LED			
Round LED	PWR, FB_Ack, FB_Err, CAN_Err, CAN_Tx and CAN_Rx LEDs		
Power			
Power supply	Unregulated +10 ~ +30 Vdc		
Protection	Power reverse polarity protection, Over-voltage brown-out protection		
Power Consumption	0.125 @ 24Vdc		
Mechanism			
Installation	DIN-Rail		
Dimensions	33.0 mm x 126 mm x 101 mm (W x L x H)		
Environment			
Operating Temp.	-25 ~ 75 °C		
Storage Temp.	-30 ~ 80 °C		
Humidity	10 ~ 90% RH, non-condensing		

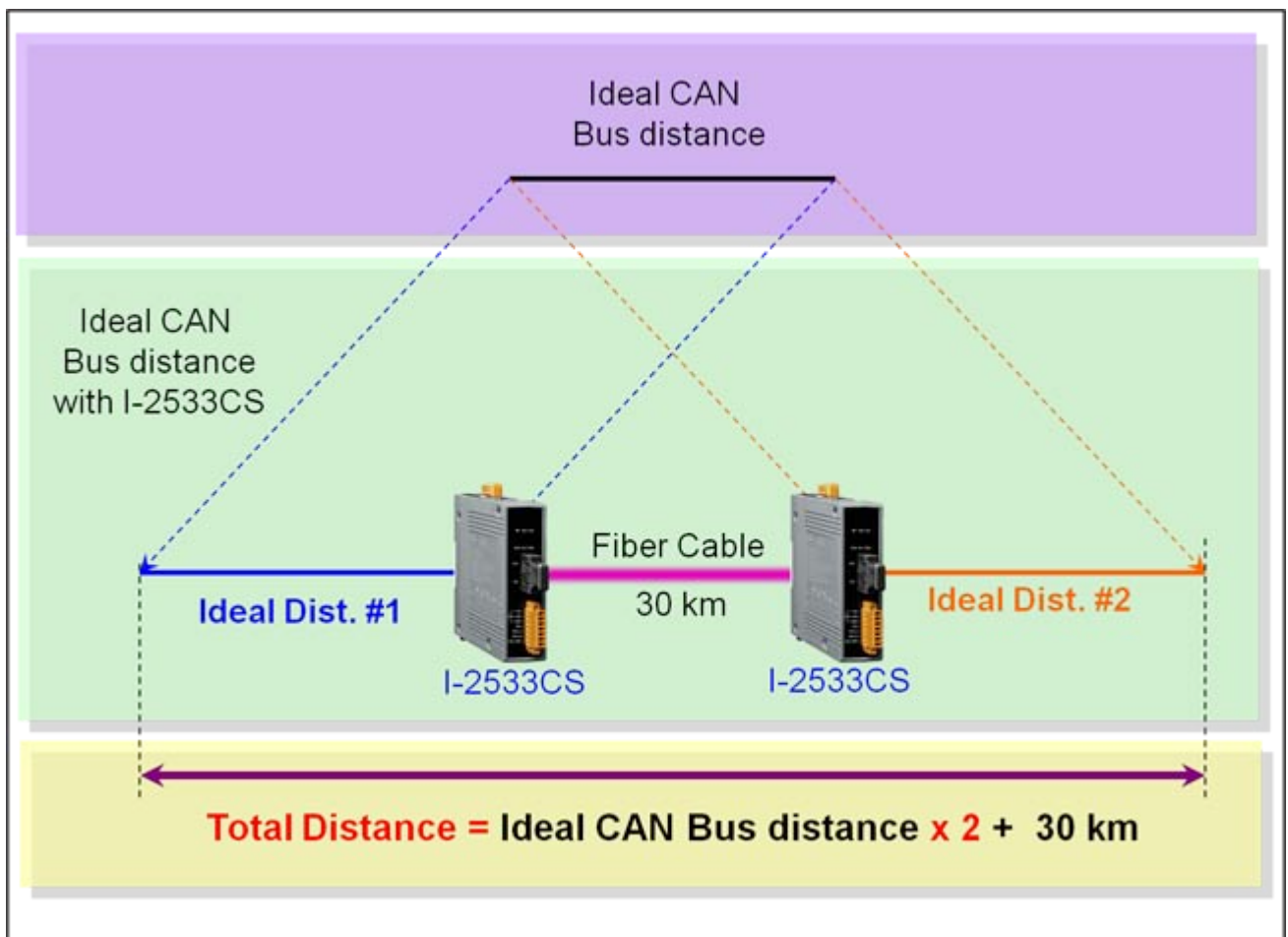
Note:

The I-2533CS-A and I-2533CS-B is a couple. Users must use pair in the applications. Due to this characteristic, the Group ID of the I-2533CS-A and I-2533CS-B is not used..

Network Deployment



CAN Baud rate [bit/sec]	Ideal Fiber Length [km]
1M	30
800K	30
500K	30
250K	30
125K	30
50K	30
20K	30
10K	30



Ordering Information

I-2533CS CR	CAN to Single Mode Fiber Bridge; 1 single mode, SC connector (RoHS)
I-2533CS-60 CR	CAN to Single Mode Fiber Bridge; 1 (60 km) single mode, SC connector (RoHS)
I-2533CS-A CR	CAN to Single Mode Fiber Bridge ; 1 (15 Km) single mode, SC connector, TX 1310 nm, RX 1550 nm (RoHS)
I-2533CS-B CR	CAN to Single Mode Fiber Bridge ; 1 (15 Km) single mode, SC connector, TX 1550 nm, RX 1310 nm (RoHS)

Important Note: You must purchase both I-2533CS-A and I-2533CS-B since these products work as a pair.