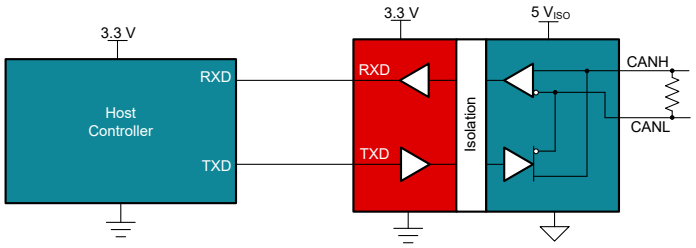
Product Overview

Isolating a CAN Bus



Example CAN Isolation Block Diagram

Design Considerations

- Prevents DC and unwanted AC currents between controller devices and peripheral ICs
- [FAQ] Digital Isolators - Top Questions, Answered
- Isolate Your CAN Systems Without Compromising on Performance or Space
- Top Design Questions About Isolated CAN Bus Design
- Isolated CAN Reference Design
- Digital Isolator Design Guide
- Need additional assistance? Ask our engineers a question on the *TI E2E™ Isolation Support Forum*

Recommended Parts

Part Number	Isolation	Voltage Range	Isolation Voltage	Max Data Rate	Features
ISO1044	Integrated	1.71 - 5.5 V	3 kVrms	CAN FD 5 Mbps	Small package
ISO1042(-Q1)			5 kVrms		70-V bus fault protection
ISO1050		3.3 - 5.5 V	4243 Vrms	1 Mbps	
ISOW1044		1.71 - 5.5 V	5 kVrms	5 Mbps	Integrated low EMI DC-DC converter
TCAN1043A-Q1	ISO6763-Q1	4.5 - 4.0 V	5 kVrms	CAN FD 8 Mbps	Wake/Inhibit, Standby Support
TCAN1044A-Q1	ISO6731-Q1	4.5 - 5.5 V			Standby Support
TCAN1046A-Q1	ISO6762-Q1				2 Channel, Standby Support
TCAN1162-Q1	ISO6742-Q1	5.5 - 28.0 V			Wake/Inhibit, Integrated LDO
TCAN1145-Q1	ISO6762-Q1	5.0 - 28.0 V		CAN FD 5 Mbps	Partial Networking/Selective Wake
TCAN1462-Q1	ISO6731-Q1	4.5 - 5.0 V		CAN FD SIC 8 Mbps	Signal Improvement (CIA 601-4)
TCAN1463-Q1	ISO6762-Q1				Signal Improvement, Wake/Inhibit/Inhibit Mask/Enable Pin
ESD Protection	**Working Voltage**	**Clamp Voltage**	**Capacitance**	**Protocol**	**Features**
ESD2CAN24-Q1	24 V	35 V	3 pF	CAN FD SIC CAN FD	IEC 61000-4-2 (30 kV), ISO 10605 (30 kV)
ESD2CANFD24-Q1		36 V	2.5 pF		IEC 61000-4-2 (25 kV)
ESD2CANXL24-Q1		38 V	1.7 pF	CAN XL	IEC 61000-4-2 (20 kV)

For additional device options, please browse through the online parametric search tool for Digital Isolators, Isolated CAN Transceivers, Non-Isolated CAN Transceivers, and CAN ESD Protection.

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