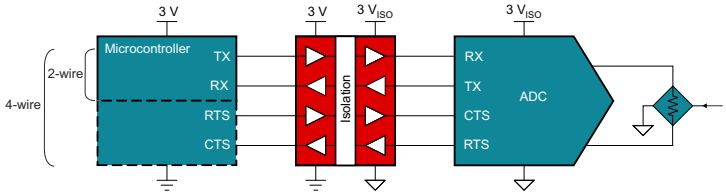
Product Overview

Isolating UART Signals

Design Considerations



Example UART Isolation Block Diagram

- Prevents DC and unwanted AC currents between controller devices and peripheral ICs
- Allows signal and power transfer between controller devices and peripheral ICs
- Protects low voltage parts in a system from high voltage circuits
- Diminishes the effect of ground potential difference
- [FAQ] What is the difference between basic and reinforced digital isolators?
- [FAQ] Can I power the two sides of a digital isolator with different voltages?
- Digital Isolator Design Guide
- Understanding Functional Isolation
- Top Design Questions About Digital Isolators
- Need additional assistance? Ask our engineers a question on the *TI E2E™ Isolation Support Forum*

Recommended Parts

Part Number	AEC-Q100	Supported UART Topology	Voltage Range	Data Rate	Features
ISO6521		2-wire	1.71 - 5.5V	50Mbps	High CMTI Functional Isolation with small footprint for compact design
ISO6721		2-wire	1.71 - 5.5V	50Mbps	High CMTI Reinforced and basic isolation General purpose
ISO6721-Q1	✓				
ISO6742		4-wire			
ISO6742-Q1	✓				
ISO7721		2-wire	2.25- 5.5V	100Mbps	High CMTI Reinforced and basic isolation High-speed
ISO7721-Q1	✓				
ISO7742		4-wire			
ISO7742-Q1	✓				
ISO7021		2-wire	1.71 - 5.5V	4Mbps	Ultra-low power
ISO7821			2.25 - 5.5V	100Mbps	Extra-wide creepage and clearance package

For more devices, browse through the *online parametric tool* where you can sort by desired voltage, channel numbers, and other features.

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