Industrial Interface Solutions

Comprehensive, Flexible Portfolio for Many Applications

TEXAS INSTRUMENTS

Accelerate Time-to-Market with Reliable Solutions that Reduce System Size and Design Complexity

Texas Instruments is the world's #1 supplier of analog semiconductor ICs, and offers a complete interface portfolio – including digital isolation, CAN transceivers, and RS-485 transceivers. TI Industrial Interface Solutions enable value added designs, while reducing your system size, cost and design complexity. This winning combination gives you faster time to market and superior performance.

Industrial Interfaces from TI Offer
- Products meet and exceed industry standards
- Wide product portfolio to fit a broad range of applications

Recommended Applications
- Building & Factory Automation
- Motor Drive & Control
- Metering & Power Infrastructure
- Servers
- Communications Equipment

- In Vehicle Networking
- Field transmitter & Sensor Networks
- Communications Equipment
- Security

Industrial Interface

Digital Isolation

CAN Transceivers

RS-485 Transceivers

Digital Isolation Solutions
Industry-Leading Protection with Communication

Digital Isolation from Texas Instruments protects delicate equipment. The capacitive based technology comes in various channel counts, configurations, speed grades, and failsafe outputs to meet many design needs. It also is paired with RS-485, CAN, and other linking topologies to reduce system complexity and size by combining two key components into one simple package.

Competitive Advantages
- High reliability with low Fail In Time (FIT) rating
- Superior timing and immunity
- Approved by major certifications boards

Recommended Applications
- Building & Factory Automation
- Servers
- Communications Equipment
- Metering & Power Infrastructure
- Motor Drive & Control

Featured Digital Isolators

Part Number	ISO Rating	Total Channel	FWD/REV Channels	Data Rate [Mbps]	Power [3.3V 1Mbps mA/ch (typ)]	Prop Delay Typ ns	Package	Key Features
ISO7310	3.0kVrms	1	1/0	25 Mbps	1.2	37	8 SOIC	PREVIEW: 3.0Vrms Single Channel Isolation, 25Mbps, Low Power, with Noise Filter
ISO71xxCC	2.5kVrms	3-4	2/1, 4/0, 3/1, 2/2	50 Mbps	0.85-1.5	21-23	16 SSOP	2.5kVrms Small-Footprint Triple and Quad Channel Digital Isolators with Noise Filter
ISO7521C	5.0kVrms	2	1/1	1 Mbps	1.1	9	16 SOIC	5 KVrms Low-Power Dual Digital Isolators
ISO7420FCC	2.5kVrms	2	2/0	50 Mbps	1.75	20	8 SOIC	2.5kVrms Low-Power 2/0 Dual Channel Digital Isolator with Fail-Safe Output Low and Noise Filter
ISO7631FM	2.5kVrms	3	2/1	150 Mbps	1.8	7	16 SOIC	2.5kVrms Low Power Triple Channel, 150Mbps Digital Isolator
ISO7230M	2.5kVrms	3	3/0	150 Mbps	3.16	18	16 SOIC	2.5kVrms Triple Channel, 3/0, 150Mbps, Digital Isolator
ISO7242M	2.5kVrms	4	2/2	150 Mbps	3	19	16 SOIC	2.5kVrms Quad Channel, 2/2, 150Mbps, Digital Isolator
ISO7641FM	5kVrms	4	3/1	150 Mbps	1.33	7	16 SOIC	5kVrms Low Power Quad Channels, 150Mbps Digital Isolators
ISO7640FM	5kVrms	4	4/0	150 Mbps	1.02	7	16 SOIC	5kVrms Low Power Quad Channels, 150Mbps Digital Isolators

Visit **ti.com/iso** to learn more about TI's Digital Isolation technologies.

CAN Transceivers
Widest Portfolio of High-Speed Industrial CAN Solutions

CAN is serial communications bus that enables multiple hosts on a single network to communicate without the need for a host controller. A single network may require different CAN solutions complicating the design. TI's industry-leading transceivers solve the specialized networking requirements for various applications and power supply systems.

Competitive Advantages
- Optimized loop times with Flexible Data (FD) rate support
- Low emission and high ESD protection
- Various operating modes (Silent, Standby, Sleep)
- Integrated level shifting for low voltage microprocessors

Recommended Applications
- Building & Factory Automation
- Motor Drive & Control
- In Vehicle Networking
- Field transmitter & Sensor Networks
- Communications Equipment

Featured CAN Transceivers

Part Number	I/O and Supply Voltage	Short Circuit Protection (V)	Supply Current Typical (mA)	Low Power Mode / Typical Current (µA)	Key Features
SN65HVD265, 266, 267	3.3V/5V	-27V to +40V	10	N/A	Flexible Data Rate, Short Prop Delay, TXD Dominant Time Out, Multi-topology (optional), Level shifting (optional)
SN65HVD255, 256, 257	3.3V/5V	-27V to +40V	10	N/A	Short Prop Delay, TXD Dominant Time Out, Multi-topology (optional), Level shifting (optional)
SN65HVD253	5V	-27V to +40V	13	N/A	DeviceNet, Autobaud Loop Back
SN65HVD252	5V	-27V to +40V	13	N/A	DeviceNet
SN65HVD251	5V	-36V to +36V	14	Standby / 275	Slope Control
SN65HVD234	3.3V	-36V to +36V	6	Standby / 200, Sleep / 0.05	Multi Power Modes, Slope Control
SN65HVD233, SN65HVD235	3.3V	-36V to +36V	6	Standby / 200	Slope Control, Diagnostic Loop Back (optional), Autobaud Loop Back (optional)
SN65HVD232	3.3V	-4V to +16V	10	N/A	Economical
SN65HVD231	3.3V	-4V to +16V	10	Sleep / 0.04	Slope Control
SN65HVD230	3.3V	-4V to +16V	10	Standby / 370	Slope Control
SN65HVD1050	5V	-27V to +40V	6	N/A	TXD Dominant Time Out
SN65HVD1040	5V	-27V to +40V	6	Standby / 5	Bus Wake-up, TXD Dominant Timeout
ISO1050	5V	-27V to +40V	10.3	N/A	Isolated CAN with 2.5kV$_{RMS}$ or 5kV$_{RMS}$ Isolation

Visit **ti.com/CAN** to learn more about TI's CAN transceivers.

RS-485 Transceivers
Broadest, Most Robust RS-485 Portfolio in the Industry

RS-485 is a physical layer standard defining the bidirectional characteristics of drivers and receivers used to implement a balanced multipoint transmission line. It is especially valuable in long lines or in severe electrical environments. TI offers the broadest RS-485 portfolio in the industry with transceivers that meet the standard at 5V, 3.3V or 1.8V supply voltage and in half or full duplex modes.

Competitive Advantages
- Robust IEC ESD protection
- Reliable in high noise environments
- Innovative products that enable higher speeds over longer networks
- Integrated digital isolation

Recommended Applications
- Motor Drive & Control
- Building & Factory Automation
- Communications Equipment
- Metering & Power Infrastructure
- Security

Featured RS-485 Transceivers

Part Number	Duplex	Supply Voltage	Signaling Rate	Common Mode Voltage	Key Features
SN65HVD01	Half	1.8V/3.3V	20 Mbps	-7V to +12V	1.8V supply, selectable data rate
SN65HVD75, 78	Half	3.3V	50 Mbps	-7V to +12V	IEC ESD, high speed
SN65HVD73, 74	Full	3.3V	20 Mbps	-7V to +12V	IEC ESD, low power
SN65HVD72, 82	Half	3.3V/5V	0.25 Mbps	-7V to +12V	Noise immunity
SN65HVD308x	Half/Full	5V	20 Mbps	-7V to +12V	Small package at value
SN65HVD888	Half	5V	0.25 Mbps	-7V to +12V	Tolerating cross wire faults
SN65LBC184	Half	5V	0.25 Mbps	-7V to +12V	IEC ESD, integrated transient voltage suppressor
SN65HVD23, 24	Half	5V	25 Mbps	-20V to +25V	High-speed data over long distance
SN65HVD178x, SN65HVD179x	Half/Full	5V	10 Mbps	20V to +25V	70V fault protection
ISO1176T	Half	5V	40 Mbps	-7V to +12V	PROFIBUS with Integrated transformer driver
ISO3080, 3082, 3086, 3088	Half/Full	5V	20 Mbps	-7V to +12V	Integrated isolation RS-485

Visit **ti.com/rs485** to learn more about TI's RS-485 transceivers.

Design Resources and References

TI provides many tools and resources to help you design systems faster. They include an EVM list with schematics, GUI, layout and a user's guide. The user's guide arms you with important information on proper device usage, configurations, test modes and more, so you can create your applications using optimal design methods and materials.

Get more information on TI's entire family of Industrial Interface products at
ti.com/interface

E2E Interface Forum
ti.com/e2einterface

TI E2E™ Community

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