Interface and Isolation Update

Summer, 2012

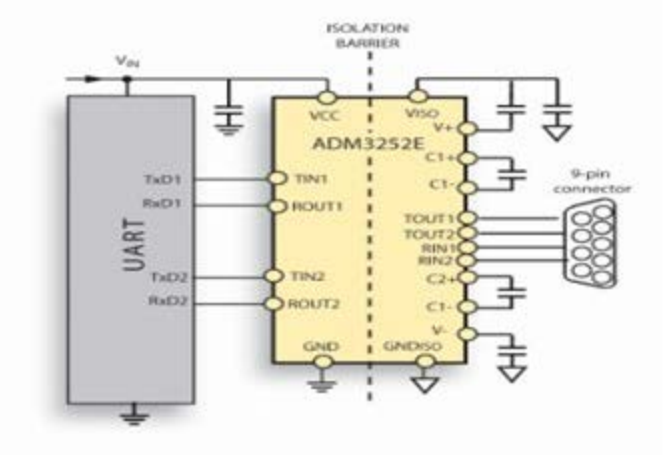
In addition to our award winning digital isolator products, Analog Devices also offers a wide range of interface products. In order for you to be updated on our wide breadth of interface and digital isolator products and solutions, we've expanded our Digital Isolator Update to now be called the Interface and Isolation Update. Look for your Update quarterly!

New Products

World's Smallest Fully Isolated (Data and Power) Dual-Channel RS-232 Transceiver in a Surface Mount Package

The ADM3252E is a 2.5kV rms fully isolated (data and power) dual channel RS-232 transceiver in a surface mount package enabling an easy to design, robust and reliable RS-232 data interface. The ADM3252E is Ideal for operating in electrically harsh environments or where RS-232 cables are frequently plugged and unplugged. The ADM3252E is typically used in isolated diagnostic port in typically found in I&I, medical applications, RS323 data links and other communication designs.

ADM3252E Block Diagram:



» Learn more about the ADM3252E

Analog Devices' Multipoint LVDS Transceivers Deliver Industry's Highest ESD Protection for High-Speed, Multi-Node Applications

The ADN4690E and ADN4697E are the latest in a family of eight Multipoint LVDS (MLVDS) transceivers to be released. The ADN469xE products are capable of connecting 32 data/clock nodes using a single differential cable pair at data rates of 100 Mbps or 200 Mbps. The ADN469xE have the highest ESD (electrostatic discharge) protection of any MLVDS transceivers.

» Learn more about the ADN4690E
» Learn more about the ADN4697E
» View the full MLVDS portfolio

3kV rms Dual-Channel Digital Isolators

The ADuM128x 3 kV rms dual-channel family of digital isolators offers low propagation delays with data rates up to 100 Mbps. Unlike optocoupler alternatives, the ADuM128x family has a patented refresh feature that ensures DC correctness in the absence of input logic transitions. The ADuM1280 (2/0 channel directionality) and the ADuM1281 (1/1 channel directionality) have a default high output while the ADuM1285 (2/0 channel directionality) and the ADuM1286 (1/1 channel

Ask the Expert

Have a question about ***Solving Digital Isolation Challenges in Power Conversion Applications?*** Ask our expert now!
Join the discussion.

Inside *i*Coupler Technology:

Implementing an Isolated Half-Bridge Gate Driver

An isolated half-bridge driver's function is to drive the gates of high-side and low-side N-channel MOSFETs (or IGBTs) with a low output impedance to reduce the conduction losses and a fast switching time to reduce the switching losses. The high-side and low-side drivers need very close matching of the timing characteristics to allow accurate and efficient switching. This reduces the deadtime from one switch of the half bridge turning off before the second switch turns on. A number of approaches have been used in the past, each involving the use of optocouplers to provide isolation; as this article describes, digital isolators integrated with gate drivers have significant benefits over these legacy approaches.
Learn more here.

*N**App**kin **Notes** - written expressly for the* Interface and Isolation Update *- are ideas, hints, and tips for building with interface and iCoupler digital isolator technologies. This issue we present:* **A Robust Battery Monitoring Solution Using the Latch-Up Proof ADG5408 8:1 Multiplexer**.
Read whole note here.

directionality) have a default low output.

» Learn more about the ADuM128x Family

Isolated Half-Bridge Gate Drivers with *i*Coupler Digital Isolator Technology Deliver Industry-best Speed and Reliability

The ADuM3223 and ADuM4223 are the fastest and most reliable isolated half-bridge gate drivers in the industry. These 4A gate drivers feature sub 55 ns propagation delays and less than 5 ns delay matching which is 4X faster than gate drivers designed using less effective optocoupler technology. The ADuM3223 and ADuM4223 meet safety standards for up to 5 kV rms reinforced isolation and have been designed to improve the performance and efficiency of AC-to-DC and DC-to-DC power supplies, solar-power inverters and motor control designs.

» Learn more about the ADuM3223
» Learn more about the ADuM4223
» Watch a video and learn more about the full Isolated Gate Driver Portfolio

***ez*LINX: *i*Coupler Interface Development Environment**

The plug-and-play ezLINX™ *i*Coupler® isolated interface development environment significantly reduces development time by enabling the evaluation of eight physical layer, digitally-isolated communication standards simultaneously (USB, RS-422, RS-485, RS-232, CAN, 2 x SPI, I²C, and LVDS). The tool was developed to assist embedded designers and system architects in designing and evaluating isolated communication interfaces using ADI's isolated interface transceivers with integrated *i*Coupler and *iso*Power® digital isolation technology.

» Learn more about *ez*LINX
» Watch a video about the new tool here.
» Enter to win an ezLINX board through EE Times!

Featured Video

***i*Coupler Digital Isolators in Motor Control Designs**

Check out What Else is New from the Interface and Isolation Teams

Webcast: Solving Isolation Challenges in Power Conversion Applications.
This webcast will present solutions to isolation challenges in power conversion applications. Among the topics to be discussed are the limitations of traditional methods of isolation (such as utilization of optocouplers and pulse transformers) vs. more efficient and cost effective solutions that utilize digital isolators.

Technical Article: Surging Across the Barrier: Digital Isolators Set the Standard for Reinforced Insulation

Technical Article: Digital Isolators Simplify Design and Ensure System Reliability

Analog Devices, Inc.
Corporate Headquarters
3 Technology Way
Norwood, MA 02062
U.S.A.