Digital Isolator Update

ANALOG DEVICES

Fall 2010

Product news and resources from ADI's iCoupler® isolation technology group

New Products

ADuM3160

2.5kV rms Full/Low Speed USB Isolator

The ADuM3160 electrically isolates instrumentation and controls by protecting equipment from damaging surges or spikes by eliminating down time when using non-isolated ports. Features of the ADuM3160 include:

- USB 2.0 compatible
- Enhanced system-level ESD performance
- 4.0V to 5.5V operation
- Bidirectional communication
- Upstream short-circuit protection
- High temperature operation: 105°C

» The ADuM3160 is in production and is available to order from ADI and its distributors here.

» Still want to isolate USB with a single chip but need a 5kV rms isolation rating? The ADuM4160 is in production and is available to order from ADI and its distributors here.

ADM2481

Half-Duplex, iCoupler Isolated RS-485 Transceiver

The ADM2481 is an integrated 2.5kV rms, signal isolated RS-485/422 transceiver designed for bidirectional data communication on balanced, multipoint bus transmission lines. The ADM2481 combines a three-channel iCoupler isolator, a three-state differential driver, and a differential input receiver into a single package. The receiver is open and short failsafe with 1/8 unit load impedance. Other features of the ADM2481 include:

- 500 kbps data rate
- Slew rate-limited driver outputs
- Low power operation: 2.5mA maximum
- Suitable for 5V or 3.3V operations (V_{DD1})
- High common-mode transient immunity: >25kV/µs
- High temperature operation: 105°C

» The ADM2481 is in production and is available to order from ADI and its distributors here.

Check out three reference circuits for hub, peripheral, and cable isolation using the ADuM4160 5kV rms USB isolator. **See the Circuits here**.

Circuits from the Lab

Did you know...?

Did you know that Analog Devices is participating in the "Avnet Virtual Power Design Forum?"

» Integrated Devices for Crossing the Isolation Barrier in SMPS

AVNET electronics marketing

Inside iCoupler Technology

Multi-Die Packaging

*i*Coupler digital isolation products utilize industry standard surface mount packages that incorporate unique design features in order to meet stringent safety requirements. The need for isolation within the package requires the use of multiple dies with a specially designed lead frames that creates two or more ground references that are galvanically isolated from one another. The lead frame design, therefore, is a key factor to meet regulatory safety requirements.

» Learn more about *i*Coupler multi-die packaging here.

*N**App**kin **Notes** – written expressly for the* Digital Isolation Update *– are ideas, hints, and tips for building with iCoupler technology. This issue we present:* **Using *i*Coupler Digital Isolators for System Diagnostic Interfaces**

» Read the whole note here.

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