

## Analog Devices' Digital Isolation Update *iCoupler*® News

Welcome to another edition of the Analog Devices' Digital Isolation Update. Whether you are already using *iCoupler* technology or still designing with optocouplers, this Digital Isolation Update will keep you posted as we continue to introduce a wide array of new isolation products, including gate drivers, transceivers, and multi-channel digital isolators with *isoPower*® isolated, integrated DC/DC converters.

This Digital Isolation Update includes a look at [New Products](#), [General News](#) and a feature filled with insights and interesting facts that we call [Inside \*iCoupler\* Technology](#).

We are always looking for feedback, so please feel free to e-mail us at:  
[iCoupler\\_Isolation@analog.com](mailto:iCoupler_Isolation@analog.com).

### New *iCoupler* Products



#### ***The World's First Signal and Power Isolated RS-485 Transceiver in a SMT Package***

The ADM2587E/82E is the industry's first fully integrated, galvanically isolated RS-485/422 transceiver with integrated dc-to-dc converter to supply isolated power – all in a single surface mount package. Featuring an unmatched level of isolation performance in a tiny 10mm x 13mm footprint, the ADM2587E/82E integrates a line driver, line receiver, oscillator, rectifier, regulator, and transformers into a single-chip that isolates both the data and power lines. The transceiver's SMT package improves

manufacturability by allowing system OEMs to mount the device using fully automated production tools, reducing manufacturing steps, and improving mechanical performance. What's more, the small footprint frees up circuit board space for other system functions. This highly integrated device provides a robust communications interface with isolated power for use in harsh industrial and instrumentation environments. For more information on this RS-485 transceiver, visit the ADM2587/82E product pages: [www.analog.com/ADM2587E](http://www.analog.com/ADM2587E) and [www.analog.com/ADM2582E](http://www.analog.com/ADM2582E).

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### General News

#### ***Introductory Video to Second Generation isoPower Products***

Recently, Mark Cantrell (Applications Engineer) recorded a video discussing the release of the 2nd generation of *isoPower* parts. *isoPower* integrated, isolated power is an extension of ADI's proprietary *iCoupler* technology that utilizes high-speed CMOS and chip-scale micro transformers to isolate

both data and power in a single package. The 2nd generation of *isoPower* products provides substantial improvements in terms of cost, size, performance, power, reliability and ease-of-use. See this new video on *isoPower* [here](#).



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## Inside *iCoupler* Technology SPECIAL VIDEO EDITION

By Mark Cantrell, Applications Engineer



*iCoupler* digital isolators with *isoPower* employ integrated, isolated dc-to-dc converters that switch at frequencies as high as 300 MHz. These high frequencies typically raise concerns about radiated emissions. PCB layout and construction is a very important tool for controlling radiated emissions from applications containing these products. See this video, on the causes and solutions to EMI in *isoPower* devices, [here](#).



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