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NVE in the News

The advantages of IsoLoop isolators are detailed in a full-page article in the August 21 issue of the Danish magazine *Aktuel Elektronik*.
[<Links to This and Other Articles About NVE>](#)

Back Issues

Catch up on what you might have missed. [Back issues](#) of this newsletter are on our Website.

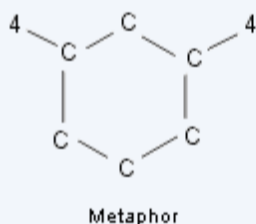
Sensor Evaluation Kits

Have you been dying to try NVE's nifty sensors, but aren't sure exactly what you need?

Sensor evaluation kits are a popular way to get started. They include sensors, magnets, and test circuit boards. Several kit types are in stock for immediate delivery at nominal cost.

Buy Online
\$9.95 shipping

Fun Formulas



Labor Day

MADE IN THE U.S.A. NVE will be closed for business Monday, September 7 for Labor Day. Orders will be processed the following day.

Distributor News

“Witamy” (Welcome)



Welcome to Masters Sp., which has joined NVE's isolator distribution network. Based in Krakow, Poland, Masters has been a leading distributor of electronic components in Central and Eastern Europe for more than 13 years.

NVE products are available in more than 75 countries, and our distributors speak countless languages.

[<Isolator Distributor Network>](#)

Labor Day Application Corner

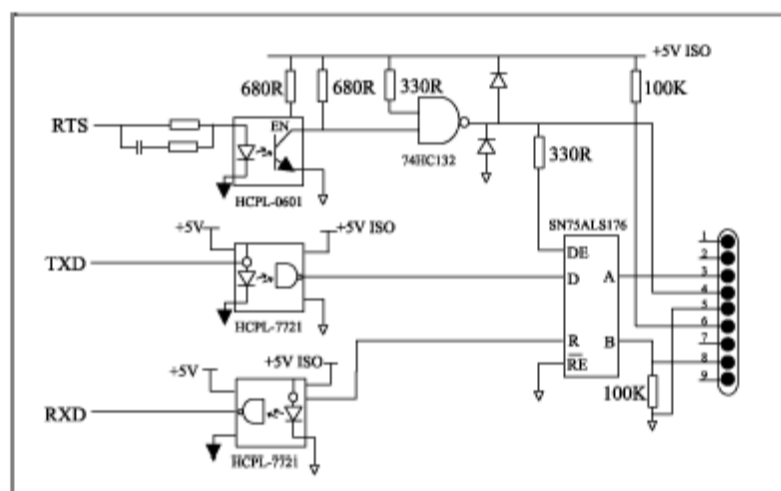
Labor-Saving Single-Chip Isolated Transceivers

By [Sandy Templeton](#)
Director, Isolator Product Development and Applications

Labor Day is the perfect time to highlight simplifying board layout to cut design and manufacturing labor.

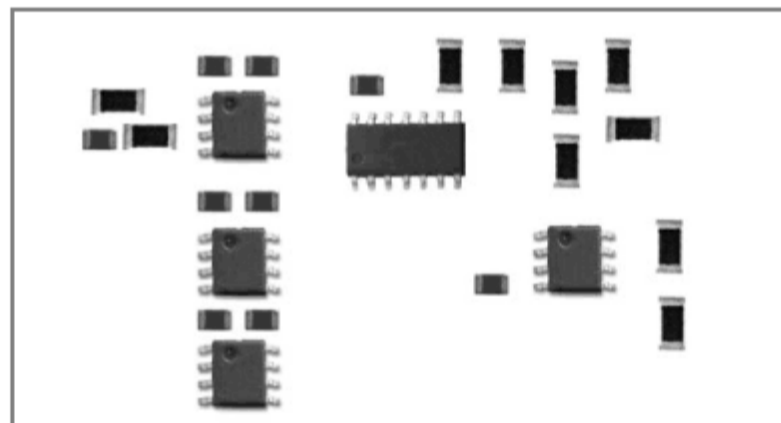
Isolating RS-485-type interfaces is often required for safety and can improve data reliability by eliminating ground loops and minimizing noise.

A conventional opto-isolated RS-485 circuit requires separate transceiver and isolator chips. A Schmitt trigger is also needed to condition slow slew rate opto-isolator edges before the transceiver.



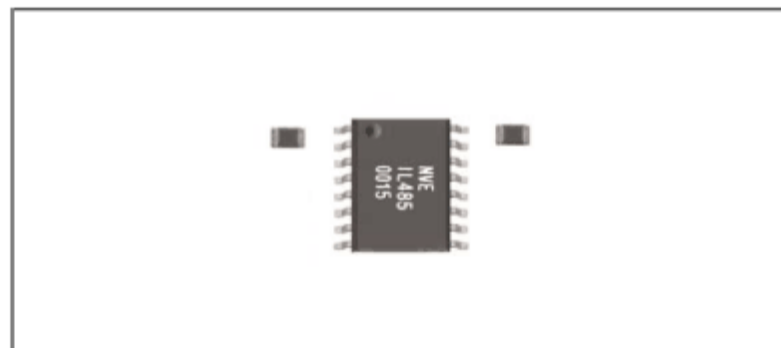
Conventionally-isolated RS-485 is design-labor intensive.

These and other design considerations mean a high component count board:



The conventional circuit has high assembly labor content.

Single-chip isolated RS-485 transceivers dramatically reduce chip count. As the layout below shows, all that is required are a isolated transceiver chip and two power supply decoupling capacitors:



Isolated RS-485 chip cuts design and manufacturing labor.

Although often unnecessary, bus termination resistors can be added to maximize speed and transmission length by reducing reflections. Fail-safe resistors can also be added to ensure a known bus state with no active transceivers.

For more tips on *making RS-485 systems work*, see [Application Bulletin No. 6 \(.pdf\)](#).

Isolated transceivers are available in a [variety of configurations](#), including RS-422, RS-485, RS-485W, and PROFIBUS, with various speeds, bus loads, and input types. Packages as small as 0.15"-wide SOICs are available.