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Spring Forward

Daylight Saving Time begins Sunday, March 12. Set your clocks forward an hour.

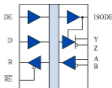


IL3022E Low-Cost RS-422 Transceiver

The IL3022E is a cost-effective galvanically isolated, high-speed, full-duplex bus transceiver.

The new device uses NVE's patented IsoLoop spintronic Giant Magnetoresistance (GMR) technology. A unique ceramic/polymer composite barrier provides excellent isolation and virtually unlimited barrier life, and the True 8^{mm} wide-body package provides true 8 mm creepage in accordance with ISO60601. Features include:

- 4 Mbps data rate
- Full duplex
- 600 VRMS working voltage per VDE V 0884-10
- 2500 VRMS isolation voltage
- 44000 year barrier life
- Low EMC footprint
- Thermal shutdown protection
- 0.3" True 8^{mm} mm 16-pin SOIC package



IL3022

There are now nine members of NVE's isolated digital transceiver family in various packages, including the unique QSOP and narrow-body packages, the industry's smallest isolated transceivers:

Part Number	Bus	Data Rate (Mbps)	Isolation Rating	Packages
NEW IL3022	RS-422	4	2.5 kV	SOIC-16
IL3085	RS-485	4	2.5 kV	QSOP-16; 0.15" SOIC-16; 0.3" SOIC-16
IL3522	RS-422	40	2.5 kV; 6 kV	0.3" SOIC-16
IL3585	RS-485	40	2.5 kV; 6 kV	0.15" SOIC-16; 0.3" SOIC-16
IL3685	RS-485/ PROFIBUS	40	2.5 kV; 6 kV	0.15" SOIC-16; 0.3" SOIC-16

All nine part types are in stock and available for immediate delivery.

Buy Online
\$9.95 shipping

Upcoming Exhibitions



embedded world
Exhibition & Conference
... it's a smarter world

Isolator distributor HY LINE Power Components is exhibiting at the **Embedded World** exhibition,

March 14 to 16 in Nuremberg, Germany in Hall 1 / Stand 170. [IsoLoop Isolated Bus Transceivers](#) are popular for embedded applications.

Pi Day Applications



In honor of **Pi Day**, 3/14, we're focussing on applications that make good use of pi this month.

Ampere's Law

Ampere's law can be used to calculate the magnetic field for a sensor used as a current sensor over a circuit board trace. The law typically simplifies to:

This new video demonstrates Ampere's law using a unique bipolar analog magnetic sensor. We even use a current-mode power supply that outputs \pm pi amps for easy figuring.

JavaScript Angle Calculation for AAT Angle Sensors

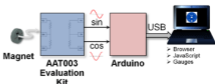
This equation calculates the angle, in degrees, indicated by an AAT sensor's two outputs:

```

//Read AAT sensor outputs
sin = involtReceivedPin[1]; cos = involtReceivedPin[0];
angle = Math.atan2(sin-512, cos-512)*180/3.1416; //Calculate angle
    
```

Since the arctangent is a ratio calculation, the formula cancels power supply variations. And unlike the one-variable arctan function, the two-variable "atan2" provides a full 360-degree angle range.

This new [video](#) shows the complete, simple AAT graphical user interface:



You can [e-mail](#) us for the JavaScript code, and you can order AAT angle sensor [Evaluation Kits](#) from our online store.