Enhanced Protection with the Latest iCoupler® Digital Isolation

In an increasingly electrified world, ADI combines innovative technology and application level insight to ensure the best digital protection for sophisticated and sensitive electronic systems. Our latest iCoupler digital isolators further extend ADI's leadership position for trusted safety.

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With ubiquitous connectivity and digitization, it’s more important than ever to protect people, assets, and data from high voltages and hazardous environments — ADI iCoupler digital isolators make this possible. ADI is the expert where electrical meets electronics across the complex world of modern factory automation, electric mobility, and advanced medical equipment.

Not only is ADI the world leader, but we’ve pioneered advances in digital isolation for 20 years. Our deep domain and system-level design expertise are paired with our innovative iCoupler portfolio of best-in-class digital isolation technologies and solutions. ADI iCoupler technology enables unparalleled performance, reliability, and data integrity.

Seamless Integration for Ease of Use: Simplifies system design with the industry’s broadest portfolio for faster time-to-market and lower overall system cost.

Industry’s Highest-Speed and Highest-Voltage Isolation: Enables high-resolution imaging systems and high-bandwidth links between processors, for protected system solutions, when data and resolution are critical.

Ensures Data Integrity: Data remains complete - intact and on time in the harshest operating environments. This simplifies the challenge of meeting both the operational priorities and regulatory requirements - doing so in the shortest time and at the lowest cost.

Quality and Reliability for Trusted Safety: ADI is the leading innovator for digital isolation, providing best-in-class quality and comprehensive engineering resources. Our fully-certified components and solutions create trust and instill peace of mind for customers.

Sample Applications

- **Vehicle Electrification**: Fully-certified components and solutions offer trusted automotive-grade safety.
- **Industrial Automation**: Ensure accurate communication data reaches its destination complete and unharmed, even in the harshest environments.
- **Vital Signs Monitoring**: Reinforced isolation and high noise immunity for protected system solutions when safety from electric shock must be guaranteed for patients while trusted data enabling precise diagnosis is realized.

**ADI iCoupler OOK Signaling for a Better Digital Isolator:**

ADI iCoupler digital isolation technology leads the world in delivering safety and data integrity through easy-to-use certified solutions. It’s what is under the hood that makes the difference when isolated solutions need the highest surge, noise immunity and working voltage coupled with design flexibility for low voltage (V) and low propagation delays. By combining high-speed CMOS and monolithic air core transformer technology and a unique, patented differential On-Off Keying (OOK) architecture, ADI’s digital isolators offer performance with broad market appeal.

**Superior Radiated Immunity Performance:**

Electric fields generated from motors or cellphones can affect device operation. Measured to IEC standards using a GTEM (Gigahertz Transverse Electromagnetic cell), the latest generation of iCoupler digital isolators greatly outperform competitor solutions, keeping data transmissions intact in harsh environments, especially where high energy RF interference is unavoidable.

**Note:** GTEM equipment limit is 70 V/m
Innovative ADI iCoupler Digital Isolation Solution Recommendations

## Digital Isolators

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Number of Channels</th>
<th>Isolation Rating (kV rms)</th>
<th>Reverse Direction Options</th>
<th>Max Data Rate (Mbps)</th>
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Automotive qualified models available. Please contact your local sales for more information.

For a full listing and more information, visit analog.com/iCoupler

### Safety Certifications

The iCoupler family of digital isolation products has been tested and approved by various regulatory agencies, including UL, CSA, VDE, TUV, CQC, and now, for intrinsic safety, ATEX and IECEx. For a full listing and downloadable PDF, visit analog.com/iCouplerSafety. Analog Devices’ isolator µModule platforms are certified by safety houses including UL, CSA, and IEC.

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### Circuits from the Lab Reference Designs

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