

ADI iCoupler®

WDW

Enhanced Protection with the Latest *i*Coupler[®] 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 *i*Coupler digital isolators further extend ADI's leadership position for trusted safety.

Certified Safety

3.75x Lower Prop Delay

1.7x Faster Data

2.3x Improved EMI

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4x Better CMTI

s M

> 3.3 Billion Trusted Isolators Shipped

Smalles

4x Lower

Power

Size



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 guality and comprehensive engineering resources. Our fully-certified components and solutions create trust and instill peace of mind for customers.

Sample Applications



and unharmed, even in the harshest

environments

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 *i*Coupler 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 I/O 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 *i*Coupler digital isolators greatly outperform competitor solutions, keeping data transmissions intact in harsh environments, especially where high energy RF interference is unavoidable.

Radiated Immunity (GTEM)



Note: GTEM equipment limit is 70 V/m

grade safety.





ANALOG DEVICES ADI iCoupler®

Innovative ADI iCoupler Digital Isolation Solution Recommendations

Digital Isolators

AHEAD OF WHAT'S POSSIBLE

Part Number	Number of Channels	Isolation	Reverse Direction Options				Max Data		Output				
		Rating					Rate	Def	Default		Package	Pin Compatible	
		(kV rms)	0	1	2	3	(Mbps)	Н	L	Z			
ADuM110N	1	3	•				150	•	•		А	ADUM110	00, ADUM3100
ADuM210N	1	5	•				150	•	•		А		
ADuM12x	2	3	•	•			150	•	•		А		0, ADUM1280, UM7240
ADuM22x	2	5	•	•			150	•	•		B, D	ADUM220	00, ADUM2280
ADuM13x	3	3 to 3.75	•	•			150	•	•	•	C, D	ADUM130	00, ADUM3300
ADuM23x	3	5	٠	٠			150	•	•	•	D, E		
ADuM14x	4	3 to 3.75	•	•	•		150	•	•	•	C, D, F	ADUM140	00, ADUM3400
ADuM24x	4	5	•	•	•		150	•	•	•	D, E	ADUM240	00, ADUM4400
ADuM15x	5	3	٠	٠	٠		150	•	•		С		
ADuM25x	5	5	•	•	•		150	•	•		E		
ADuM16x	6	3	•	•	•	•	150	•	•		С		
ADuM26x	6	5	•	•	•	•	150	•	•		E		
A													0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
A: 8-lead SOIC_N 4.0 mm creepa		B: 8-lead SOIC_IC 8.3 mm creepage				d SOIC_ n creepa	-	D: 16-lead SOIC_W 7.8 mm creepage			E: 16-lead SOIC_IC 8.3 mm creepage		F: 16-lead QSOP 3.2 mm creepaç

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 *i*Coupler 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/*i*CouplerSafety. 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

Circuits from the Lab reference designs are built and tested by ADI engineers with comprehensive documentation and factory-tested evaluation hardware.

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To get started

Via Phone

Contact your local Arrow representative at North America +1 855 326 4757 Europe, Middle East, & Africa +44 20 3936 5486 Asia-Pacific +86 400 920 0628 Or visit us at arrow.com

Five Years Out

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