

# LOW NOISE ISOLATED DESIGNS FOR SAFETY CRITICAL APPLICATIONS

*Reinforced Isolated Power Converters*



## Advantages of Integrated Isolated Power

Integrated isolated power pioneered by Analog Devices' *isoPower*® chip-scale transformer technology changed isolation system design. This technology removed the complexity of building and certifying separate isolated supplies, reduced board size, and eliminated the need to use multiple discrete components for optimized designs.

## Meet EMI Targets the First Time with Simplified Design

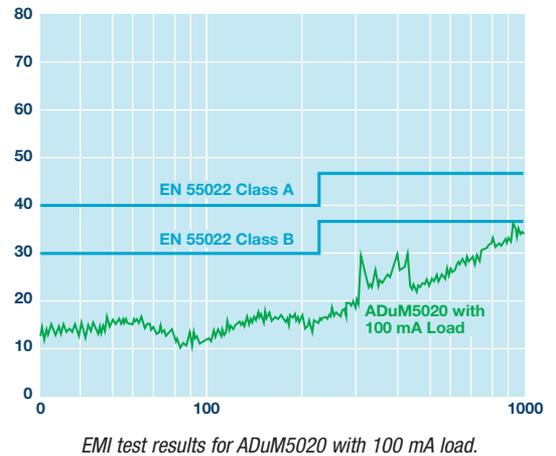
Low component-level emissions eliminate the need for costly EMI mitigation techniques and simplify the application certification process.

### New Family Highlights

The next generation family of 500 mW, isolated dc-to-dc power converters builds upon Analog Devices' pioneering expertise with *iCoupler*® and *isoPower* technology to support a variety of design goals.

- ↓ **Low radiated emissions (EMI)**—Below EN 55022/CISPR 22 Class B
- ✦ **Smallest package size**—8-lead
- ↑ **High temperature operation**—Up to 125°C

		Output Power (mW)		Isolation Rating (kV rms)	
		300	500	3	5
	ADuM5020 16-lead SOIC_W	•	•	•	•
	ADuM6020 16-lead SOIC_IC	•	•	•	•
	ADuM5028 8-lead SOIC_IC	•	•	•	•
	ADuM6028 8-lead SOIC_IC	•	•	•	•



- ▶ **Regulatory compliance**—Meet CISPR 22 Class B standards
- ▶ **Reduced complexity**—No stitching capacitance needed
- ▶ **Faster time-to-market**—Reduced PCB design and test time
- ▶ **Smaller application size**—Up to 70% PCB space savings
- ▶ **Lower material cost**—Up to 30% on a 2-layer PCB

## Achieve Complex Isolated Design Goals with Confidence

Analog Devices has the most established digital isolated power solutions in the industry, enabling you to meet your complex isolated design goals with confidence and streamline your application's certification process within deadlines and budget.

### Proven Integration

10+ years history of installed customer implementations and the pioneer of chip-scale transformer technology with *iCoupler* solutions and integrated isolated power *isoPower* solutions.

**isoPower**<sup>®</sup>

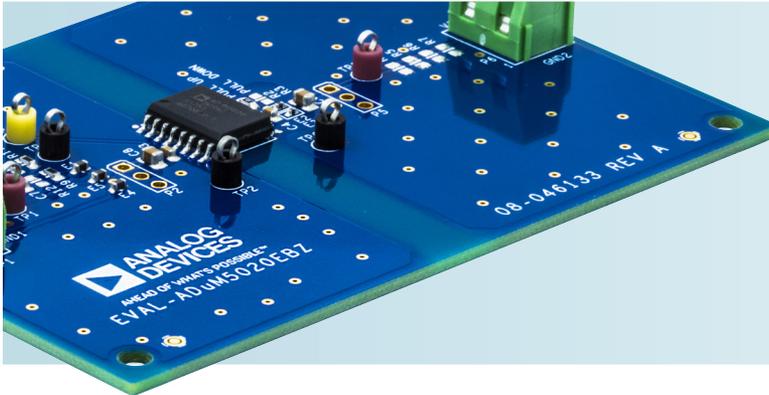
### Optimal Designs

Build with fewer design rounds, reduced learning curve, and reduced component count and material costs.



### Simplified Certification

Our new family of digital isolation products has been tested and approved by various regulatory agencies—including UL, CSA, VDE, TÜV, and CQC.



The ADuM5020 and ADuM5028 2-layer evaluation boards meet CISPR 22 Class B without stitching capacitance.

Samples and evaluation boards are available at [analog.com/isoPower](http://analog.com/isoPower)

## Application Overview

The next generation of *isoPower* devices feature low radiated emissions, the smallest package size, and high temperature operation, meeting the needs of safety-critical applications with strict leakage requirements, and compact and dense designs.

### Automotive

#### Battery Monitoring and Inverters

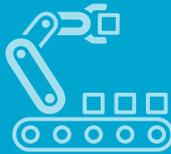
Weight and size savings, high temperature operation, and strict EMI limits.



### Industrial Automation

#### Programmable Logic Controllers (PLCs)

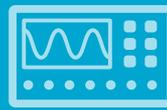
High density and more channels that fit into the same form factor.



### Instrumentation

#### Precision Measurement

Reduced footprint, and low noise for instrumentation accuracy.



### Medical Equipment

#### Vital Signs Monitoring

Patient safety from high voltages, strict EMI limits, and product density.



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