Isolated Power Conversion

Broad portfolio of robust, safe, integrated solutions.

Industrial motion control requires sensing and feedback of several variables, such as motor winding current or voltage.

Isolated gate drivers, isolated sigma-delta ADCs, isolated power, and isolated amplifiers from ADI enable the next generation of robust and reliable intelligent motion systems that deliver higher efficiency and productivity.

Our Solutions Enable

- Higher Efficiency
- Compact Solutions
- Higher Energy Density
- SiC and GaN Compatibility

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### Isolated Gate Drivers

Analogue Devices small form factor isolated gate drivers are designed to enable higher switching speeds and to meet system size constraints. These isolated gate drivers leverage ADI's proven iCoupler® technology.

The high pulse fidelity architecture enables higher efficiency levels. ADI's isolated gate drivers are particularly suited to drive new generation SiC and GaN, providing industry's fastest short-circuit protection (SCP) response time and short propagation delay.

Isolated Gate Drivers

- **ADuM4135** Single-/dual-supply high voltage isolated IGBT gate driver with Miller clamp
- **ADuM4122** Single gate, adjustable slew rate, isolated gate driver
- **MAX22700/MAX22701/MAX22702** Family of high CMTI, isolated gate drivers
- **ADuM4190** Isolated, half-bridge gate driver with adjustable dead time and dual input
- **ADuM4221** Isolated, half-bridge gate driver with adjustable dead time and dual input

### Isolated ADCs

High performance sigma-delta modulators from Analog Devices enable highly reliable accurate motor control and increase efficiency by reducing the shunt size requirements. Low offset and gain drift reduce torque ripple delivering superior motion control performance.

High CMTI ratings enable use with SiC and GaN devices and a small package size solution with an integrated LDO regulator enables compact system design.

- **AD7401A** 16-bit, isolated sigma-delta modulator
- **ADuM7701/ADuM7702/ADuM7703/ADuM7704** Family of 16-bit, isolated sigma-delta modulators

### Isolated Power

Analogue Devices isoPower® technology utilizes proprietary iCoupler chip scale transformers to integrate isolated DC-to-DC controllers with data isolation into a single package.

This enables designers to implement robust, reliable and high energy density drives that can be integrated with the motor itself.

Our solutions enable isolated power transfer with fast design cycle time.

- **ADuM6028** Low emission isolated DC-to-DC converter
- **ADuM421A** Quad-channel isolators with integrated DC-to-DC converter

### Isolated Flyback Controller

Our flyback controllers feature proprietary iCoupler and no-opto flyback technology that provide robust galvanic isolation and enable a compact motion control solution by integrating the voltage feedback loop and reducing the external component count.

- **LT8300/LT8301/LT8302/LT8304** Family of isolated flyback controllers
- **MAX17690** No-opto isolated flyback controller
- **ADP1071-1/ADP1071-2** Isolated synchronous flyback controllers with integrated iCoupler

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**Isolated Amplifiers**

Our isolated amplifiers deliver more reliable performance over life and temperature against traditional optocoupler-based solutions, enabling robust current and voltage sensing for both AC and DC applications.

Low thermal drift and the ease of implementation simplify your motion control design.

- **ADuM380** 2.5 kV rms isolated amplifier
- **ADuM480** High stability isolated amplifier