

LOW NOISE ISOLATED CAN FD TRANSCEIVERS FOR HIGHER DATA RATES AND LOW LOOP DELAYS



Isolated high speed CAN FD transceivers provide complete isolation between a CAN protocol controller and the physical two-wire CAN bus network. Fully isolate high bandwidth CAN networks over longer distances while delivering EMC performance and reducing design complexity and project risk.

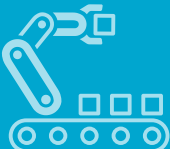



Integrated CAN FD Solution

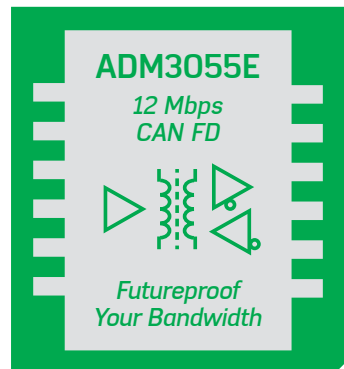
ADI's new **ADM3055E** family of isolated CAN FD transceivers with integrated power bring improved bandwidth, low loop delays, higher noise immunity, improved EMC and ESD, higher working voltages, surge performance, and wider temperature range. Designers can isolate communications without the development cost, size, and reliability constraints found with traditional isolation products.

The CAN FD Trend



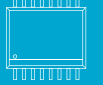

The new realities of converging technologies, sensing and connectivity, along with the requirements for increased performance and product compatibility, push a CAN's communication bandwidth to its limit. CAN FD extends the classical CAN standard and permits significantly higher data rates and additional bytes of data with each frame, enabling easy upgrades of existing systems.

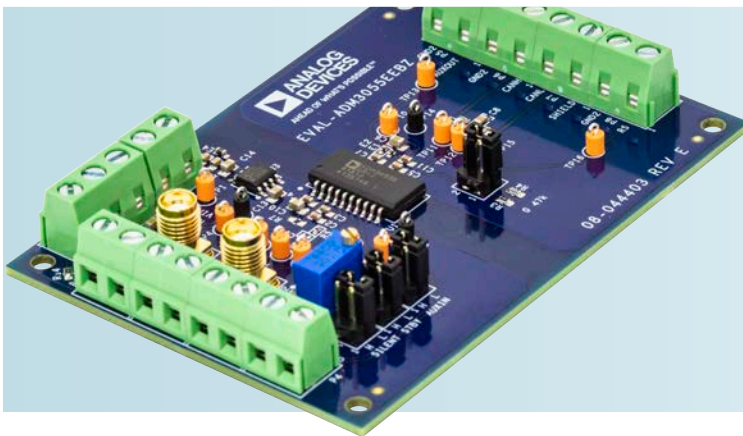
Applications Overview

| | | | |
|---|--|--|--|
| <p>Industrial Automation</p> <p><i>Motor control PLC</i></p>  | <p>Building Controls</p> <p><i>Plant HVAC Refrigeration</i></p>  | <p>Energy</p> <p><i>Storage Renewables Charging Battery formation/test</i></p>  | <p>Military/Aerospace</p> <p><i>Extended temperature EP Mission critical Harsh environments</i></p>  |
|---|--|--|--|



iCoupler®

| | New Additions | | | LTM2889 |
|--------------------------------|---|---|---|---|
| | ADM3055E 20-lead SOIC_IC | ADM3056E 16-lead SOIC_IC | ADM3050E 16-lead SOIC_W | |
| CAN FD Family Product Features |  |  |  |  |
| Isolation Rating (kV) | 5 | 5.7 | 5.7 | 2.5 |
| Isolated Power | Yes | No | No | Yes |
| Creepage/Clearance (mm) | 8.3 | 8.3 | 7.8 | 9.5 |
| Fault Protection (V) | 40 | 40 | 40 | 60 |
| Temperature | -40°C to +105°C | -40°C to +125°C | -40°C to +125°C | -40°C to +125°C |
| Features | Aux iso channel Dominant timeout Standby mode Silent mode Slope control | Aux iso channel Dominant timeout Standby mode Silent mode Slope control | Pin-to-pin with popular socket Dominant timeout | 0.75 W aux power Dominant timeout Standby mode Slope control |



The ADM3055E family of CAN FD transceivers meets EN 55032 Class B without stitching capacitance on elegant 2-layer evaluation boards.

Samples and evaluation boards are available at analog.com/iCoupler

iCoupler®

New CAN FD Family: ADM3055E, ADM3056E, and ADM3050E

| | | | |
|--|---|--|--|
| <p>Built-In ESD Protection Reduce layout area</p> | <p>Auxiliary Isolated Channel For switchable termination or a field reconfigurable network</p> | <p>Common-Mode Range ±25 V for large ground differentials</p> | <p>Slope Control Mode Reduce radiated emissions</p> |
| <p>Integrated Isolated DC-to-DC Converter</p> | <p>Built-In Bus Fault Protection ±40 V</p> | <p>Low Loop Delays Max 150 ns for flexibility in design</p> | <p>Low Radiated Emissions Pass EN 55032 Class B with margin</p> |
| <p>Reduced Component Count High Integration</p> | | <p>CAN FD ISO 11898-2:2106 Compliant</p> | <p>High ESD Protection Levels IEC 61000-4-2, ±8 kV Contact ±15 kV Air</p> |
| <p>Longer Cables and Improved Timing Margins</p> | | <p>Simplified EMI Certification</p> | |

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