

Galvanic-isolated and suitable for CAN FD

Analog Devices has extended its iCoupler family of galvanic-isolated CAN transceivers. The ADM3055E complies with ISO 11898-2:2016 and features symmetry values allowing bit rates up to 12 Mbit/s.

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Block diagram of the ADM3055E transceiver with on-chip isolation (Photo: Analog Devices)

Addressing the need for speed, functionality, isolation, and performance in industrial and building automation, energy systems, and military/aerospace networks, Analog Devices has announced an extension to its CAN FD capable transceiver product line. The ADM3055E transceiver not only meets, but exceeds the industry standard of 5 Mbit/s, offering 12-Mbit/s performance. The reinforced ADM3055E also features a low-radiated emissions DC/DC converter as well as enhanced robustness.

With this transceiver, designers can realize increased data rates and longer cable lengths due to low loop delays (150 ns) and extended common-mode range. An integrated isolated DC/DC converter eliminates the need to provide a separate power source for the isolated bus side. This combination of level of integration, ease of obtaining emissions and ESD certifications, and the availability of integrated, isolated power allows designers to minimize development costs, PC-board footprint, and overall solution size, stated the supplier. Versions with lower isolation ratings will be available soon.

The transceiver complies with EN 55022/CISPR 22 Class B emissions standards on a two-layer PCB and IEC 61000-4-2 Level 4 ESD rating (± 8 -kV contact / ± 15 -kV air). Other features include ± 40 -V bus-fault protection on CAN pins, ± 25 -V common-mode range, and 5-V logic-side supply voltage with isolated-side options for 1,8-V, 2,5-V, 3,3-V, and 5,0-V supplies.

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