

CAN TRANSCEIVER

## Enhanced fault detection and operation range

Maxim Integrated introduced two transceivers from the Essential Analog series. MAX33012E improves CAN reliability through integrated fault detection and reporting; MAX33072E expands EIA-485 networks with common mode range.



Connectivity integrated circuits (Source: Maxim Integrated)

Designers requiring longer uptime for industrial automation applications can accelerate troubleshooting and communicate across larger networks with the MAX33012E CAN transceiver and the MAX33072E EIA-485 half-duplex transceiver. These devices are designed to increase industrial system uptime for factory-floor networks. The MAX33012E features fault detection and reporting, while the MAX33072E provides the ability to connect a range of disparate nodes, enabling the connection of nodes with ground differences, explained the company.

Reliable connectivity is essential to optimizing operation and improving system uptime in manufacturing for many critical industrial applications, such as asset management systems and communication fieldbus modules.

Overvoltage, overcurrent, and transmission error faults in CAN will shut down production and idle expensive machinery. To overcome this challenge, the MAX33012E features fault detection on data lines CANH and CANL for overvoltage, overcurrent, and transmission failure, as well as fault code reporting. The product's detection and reporting enable troubleshooting of these faults so vital links can be re-established.

Competitive CAN solutions do not feature fault detection and reporting together, leaving system operators to troubleshoot issues without knowledge of the fault's origin or specific details. The MAX33012E gets CAN networks back online faster via the industry's only detection, reporting, and ranking of overvoltage, overcurrent and transmission errors. The product provides  $\pm 45$ -kV of electrostatic discharge (ESD) fault protection, which is 1.8x higher than the closest competitor to make network data transmissions more resistant to ESD.

"Automated manufacturing centers are made to run all day, every day to maximize productivity and boost return-on-investment," said Colin Barnden, principal analyst at Semicast Research. "The ability to solve problems quickly and get production rolling again after equipment goes down is a highly desirable feature for any production environment."

"Improving uptime in industrial communications is a high priority for industrial system designers," said David Andeen, executive director for the Core Products Group at Maxim Integrated. "Any time equipment is shut down to look for faults, manufacturers potentially lose revenue. But finding faults more quickly can reduce repair intervals, and these new transceivers help reduce the time that machines sit idle."

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