

## Maxim Integrated's Essential Analog Transceivers Deliver Reliable Connectivity and Industry's Highest Uptime for Industrial Networks Via Enhanced Fault Detection and Operation Range

*MAX33012E improves CAN reliability through integrated fault detection and reporting;  
MAX33072E expands RS-485 networks with industry's highest common mode range*

SAN JOSE, Calif.—Sept. 16, 2020—Designers requiring longer uptime for industrial automation applications can accelerate troubleshooting and communicate across larger networks with the **MAX33012E** controller area network (CAN) bus transceiver and the **MAX33072E** RS-485 half-duplex transceiver from Maxim Integrated Products, Inc. (NASDAQ: MXIM). These devices are designed to increase industrial system uptime for factory-floor networks. The MAX33012E features the industry's most advanced fault detection and reporting, while the MAX33072E provides the ability to connect the broadest range of disparate nodes, increasing reliability by enabling the connection of nodes with large ground differences.

- [Information about Maxim Integrated's portfolio of Essential Analog solutions related to Reliable Connectivity >](#)
- [Order MAX33012E or learn more >](#)
- [Order MAX33072E or learn more >](#)
- [Hi-res image >](#)

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.

**MAX33012E:** 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 MAX33012E's detection and reporting enable the fastest troubleshooting of these faults so vital links can be immediately re-established.

**MAX33072E:** Modern industrial and manufacturing systems require high common mode voltage tolerance to communicate between disparate systems. The common mode range (CMR) of the MAX33072E is 1.6x greater than that of the closest competitor (receiver only). With the

ability to connect the broadest range of disparate nodes, it expands communication network size to allow more machines to operate across larger areas, with simple and reliable links. The MAX33072E CMR of  $\pm 40V$  enables industrial systems to connect and communicate in environments of greater electrical noise, up to where a difference of either  $-40V$  or  $+40V$  between two nodes is present.

### Key Advantages

- **Increased Uptime:** 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.
- **Maximum ESD Protection:** MAX33012E provides  $\pm 45kV$  of electrostatic discharge (ESD) fault protection, which is 1.8x higher than the closest competitor to make network data transmissions more resistant to ESD.
- **Highest CMR:** MAX33072E CMR is integrated into the driver and receiver for bidirectional communications.

### Commentary

- "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."

### Availability and Pricing

- The MAX33012EASA+ is available at Maxim Integrated's website for \$2.29 (1000-up, FOB USA); also available from authorized distributors

- The MAX33072EASA+ is available at Maxim Integrated's website for \$2.04 (1000-up, FOB USA); also available from authorized distributors
- The [MAX33012ESHLD#](#) evaluation kit is available for \$99
- The [MAX33072ESHLD#](#) evaluation kit is available for \$99

#### Maxim Integrated's Essential Analog Products

Maxim Integrated's Essential Analog portfolio of high-performance, single-function analog ICs lead the industry in providing the core analog functions of efficient power, precision measurement, reliable connectivity and robust protection. These low-power, accurate, high performance Essential Analog integrated circuits deliver innovative products that propel next-generation wearable, wireless and advanced applications. In addition, a new Essential Analog mobile app makes it fast and easy to research analog ICs, order parts, get product news and much more. [More information >](#)

#### About Maxim Integrated

Maxim Integrated develops innovative analog and mixed-signal products and technologies to make systems smaller and smarter, with enhanced security and increased energy efficiency. We are empowering design innovation for our automotive, industrial, healthcare, mobile consumer and cloud data center customers to deliver industry-leading solutions that help change the world. [Learn more >](#)