

Maxim Integrated's Essential Analog Temperature Sensor ICs Deliver Precision Measurement to Enable Robust Protection for Goods and Equipment

MAX31889 delivers the highest accuracy temperature monitoring of cold-chain assets; MAX31825 reduces complexity of using multiple temperature sensors for consumer and factory automation

SAN JOSE, Calif.—Sept. 2, 2020—Designers of highly reliable cold-chain pharma and other temperature-sensing applications can achieve high accuracy and robust system operation with two new industry-leading Essential Analog ICs from Maxim Integrated Products, Inc. (NASDAQ: MXIM). The **MAX31889** digital temperature sensor features an unmatched combination of accuracy and power consumption, replacing expensive resistance temperature detectors (RTDs) in precise temperature-sensitive applications. The **MAX31825** digital temperature sensor enables up to 64 devices per bus, all parasitically powered by the 1-Wire® bus, to drastically reduce wiring complexity.

- [Information about Maxim Integrated's portfolio of Essential Analog products >](#)
- [Order MAX31889 or learn more >](#)
- [Order MAX31825 or learn more >](#)
- [A hi-res image >](#)

MAX31889: Accuracy, low power and design simplicity are essential objectives for designers of pharmaceutical cold chains, medical monitors and industrial automation applications. Variances as little as 2-degrees Celsius can adversely impact products and processes by limiting the producer's ability to deliver quality products, thereby impairing the bottom line. The MAX31889 ensures the industry's highest accuracy at the lowest power consumption, providing robust protection of customer assets. Delivering precision measurement of ± 0.25 -degree Celsius accuracy across a wide temperature range, the MAX31889 measures cold-chain pharma product temperatures at a fraction of the cost of RTDs and at 35 percent the power consumed by competitive solutions. The MAX31889 comes in a 6-pin μ DFN package.

MAX31825: Sensitive processes and applications often require connecting multiple devices in a space-constrained system to measure temperature and protect processes, assets and equipment from unacceptable variation. Competitive solutions offer the ability to connect up to eight devices and require an additional wire for power. The MAX31825 reduces design and

wiring complexity by allowing up to 64 devices, all connected to the same parasitically powered 1-Wire bus, with the precision of ± 1 -degree Celsius accuracy. Each device has a unique code which can be optionally programmed with a location address, simplifying system design. The 1-Wire versatility improves system robustness by delivering an 8x reduction in necessary wiring compared to competitive two- or three-wire solutions. The MAX31825, which comes in a 6-bump WLP, also supports longer battery life and extends operational uptime with a low standby current of 2.5 μ A, ideal for consumer devices and factory automation.

Commentary

- “These Essential Analog products by Maxim Integrated enable manufacturers to make their operations and supply chains more reliable, helping to ensure quality to their customers and savings to their bottom line,” said Colin Barnden, principal analyst, Semicast Research.
- “These temperature sensor ICs epitomize the values of precision measurement and robust protection from Maxim Integrated’s Essential Analog portfolio. Our customers can measure temperature with precision, and thereby protect their assets from potential damage by heat or cold,” said David Andeen, executive director for the Core Products Group at Maxim Integrated.

Availability and Pricing

- The MAX31889 is available at Maxim Integrated’s website for \$1.65 (1000-up, FOB USA); also available from authorized distributors
- The MAX31825 is available at Maxim Integrated’s website for \$1.55 (1000-up, FOB USA); also available from authorized distributors
- The [MAX31889EVSYS#](#) evaluation kit is available for \$56
- The [MAX31825EVSYS1#](#) evaluation kit is available for \$56

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 >](#)

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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 >](#)