

## NEWS RELEASE

# Maxim's Himalaya uSLIC Solution, the Industry's Smallest Power Modules, Revolutionizes Design for Highly Space-Constrained Applications

*4V to 42V wide-input DC-DC power modules deliver 2.25x smaller solution size, high efficiency, and simplified design*

San Jose, CA—March 21, 2018—Designers working on space-constrained applications can now dramatically reduce solution size and increase efficiency with the family of micro system-level IC ("uSLIC") modules from Maxim Integrated Products, Inc. (NASDAQ: MXIM).

These **MAXM17532** and **MAXM15462** ultra-small (2.6mm x 3.0mm x 1.5mm), integrated DC-DC power modules are part of Maxim's extensive portfolio of Himalaya power solutions that enable industrial, healthcare, communications, and consumer markets. With these modules, customers get the full benefits of industry-best switching regulators with the size and simplicity of a linear regulator (LDO).

- [Details about Himalaya uSLIC power modules, including a video and white paper](#) ›
- [Details about MAXM17532](#) ›
- [Details about MAXM15462](#) ›
- [Hi-res image](#) ›
- [Block diagram](#) ›

With dramatic advances in sensing, connectivity, and cloud computing, miniaturization is the next frontier that enables emerging trends such as artificial intelligence and machine learning. Next-generation system designs from industrial internet of things (IIoT) sensors, defense electronics, and network infrastructure equipment to medical and consumer devices need to collect, synthesize, and act upon data. This new intelligence requires more power in ever-reducing space without impacting thermal budget, making conventional solutions unviable and complicated. To fit into small enclosures that are deployed in harsh mechanical, electrical, and thermal environments means designers need shock and vibration tolerance, EMI compliance, increased energy efficiency, high temperature operation, and small size—a multidimensional challenge.

Maxim's uSLIC™ power modules shrink the solution size of the power supply by 2.25x with an ultra-small package size. This is achieved by integrating a synchronous wide-input Himalaya buck regulator with built-in FETs, compensation, and other functions with an integrated inductor. The combination of these components enables the designer to use the modules in small space-constrained systems while complying with mechanical and EMI standards. In addition, engineers simplify designs as they no longer need to deal with conventional bulky, power hungry regulators. Instead, they can integrate the ready-made power module into almost the same space of a tiny LDO. In such a small size, designers can achieve high efficiency and lower noise with increased stability. The uSLIC DC-DC buck regulator modules, which operate over a wide input range as low as 4V to as high as 42V, support multiple applications across nominal input

voltages of 5V, 12V, 24V, and 36V with reliable headroom for today's demanding applications. They operate over the -40°C to +125°C temperature range.

### Key Advantages

- **Smallest Solution Size:** 2.25x smaller solution size compared to competing solutions; available in a compact, 10-pin 2.6mm x 3.0mm x 1.5mm uSLIC package
- **High Efficiency:** Peak efficiency of 90% and higher in smallest form factor (less than 15mm<sup>2</sup> solution size); superior thermal performance
- **Simplified Design:** Fully synchronous buck regulator with built-in compensation; integrated inductor for ease of design and faster time to market
- **Rugged:** Compliant to CISPR 22 (EN 55022) Class B EMC emission standards, as well as JESD22-B103/B104/B111 drop, shock, and vibration standards

### Commentary

- "With the industrial market adding more intelligence into sensors to improve factory throughput and profitability, new demands are placed on energy efficiency and small size. Maxim's Himalaya uSLIC power modules deliver an impressively small solution size and highly reduced design effort, as well as high efficiency and integrated functions," said Alexander Bohli, senior engineer at SICK AG. "Without Maxim's high-voltage uSLIC modules, we cannot offer our new tiny sensors in such small housings."
- "These compact uSLIC modules completely transform power supply design for our customers," said Anil Telikepalli, Executive Director of Business Management at Maxim Integrated. "We built upon our Himalaya regulator family to bring to market another innovation with a ready-made power supply in a micro-sized system level package."

Available at [Farnell element14](#)/[element14](#)/[Newark element14](#)

- [EE-Sim® simulation models are available](#) ›

Maxim will continue to add products within its Himalaya uSLIC portfolio.

### 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](#) ›

Tiny Size. Giant Performance.  
*MAXM17532 and MAXM15462 Himalaya uSLIC™ Power Modules*

