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Alpha and Omega Semiconductor Introduces Application-Specific EZBuck™ Regulator to Power Intel Tiger Lake Platform

AOZ2264VQI and AOZ2369VQI with Adjustable Output Voltage using 2-bit VID Provides Highest Power Density Solution for Intel Tiger Lake CPU VCCIN_AUX Rails

SUNNYVALE, Calif., Feb. 23, 2021, [Alpha and Omega Semiconductor Limited](#) (AOS) (Nasdaq: AOSL), a designer, developer, and global supplier of a broad range of power semiconductors, power ICs, and digital power products, today introduced a new family of application-specific EZBuck™ regulators. The [AOZ2264VQI](#) and [AOZ2369VQI](#) are offered in a QFN 4 x 4 and QFN 5 x 5 package, respectively, and offer the industry's most compact footprint to support VCCIN_AUX rails in Intel Tiger Lake platforms used in notebook and desktop computing systems.

Intel's Tiger Lake platform consists of two rails; one rail powers the core and graphics processors, and the other, known as VCCIN_AUX, powers the auxiliary processor. The auxiliary processor supports add-on features in personal computing systems such as audio, video, connectivity, and other functions that enhance user experience. Feature-rich personal computing systems require a VCC_AUX rail with high currents. Typical competitor power implementations require either a controller with external discrete power FETs or a dual-phase converter. These solutions require more board space than AOS highly integrated solution that includes all the power silicon in a single QFN 4 x 4 package for 16A and QFN 5 x 5 package for 30A.

Technical Highlights

The AOZ2264VQI and AOZ2369VQI converters include features specifically designed to meet the specifications of the Intel Tiger Lake Platform. The 2-bit VID pins allow the VCCIN_AUX power rail to adjust with voltage for 0V, 1.1V, 1.65V, and 1.8V depending on multiple systems operating modes. Both devices have also passed all the validation requirements included in the Intel Tiger Lake Platform Component List (PCL). This test puts the regulator through stringent tests to ensure compliance with Intel specifications. AOS's proprietary COT architecture provides ultra-fast load transient response performance and enables stable and low voltage ripple operation with small-sized ceramic capacitors, further reducing solution size and cost.

Key Features

- Wide input voltage range: 4V to 28V
- High Current Capability 16A: AOZ2264VQI, 30A: AOZ2369VQI
- Supports Intel Tiger Lake Platform 2 bits VID
- Low RDS(ON) internal NFETs
- AOZ2369VQI features a 5mOhm HS FET and a 1mOhm LS FET
- Constant On-Time with input feed-forward
- Ripple Reduction at light load

- Ceramic capacitor stable
- Fixed soft start
- Power Good output
- Integrated bootstrap diode
- Cycle-by-cycle current limit
- Short-circuit protection
- Overvoltage protection
- Thermal shutdown
- Thermally enhanced 4 x 4 QFN package for AOZ2264VQI and 5 x 5QFN for AOZ2369VQI

“The two current capabilities offered by the AOZ2264VQI and the AOZ2369VQI offer designers a scalable solution to support Intel Tiger Lake’s multiple platform SKUs such as UP3, UP4, and H-Line. In state-of-the-art laptops, the system board has shrunk considerably to make way for system fans for thermal management or larger batteries to improve battery life. Form factors for personal computers are always shrinking. Utilizing AOS’s EZBuck regulator platform technology enables AOS to solve the system designer’s problem of ever-shrinking PCB real estate,” said Wayne Lee, Power IC Marketing at AOS.

Pricing and Availability

The AOZ2264VQI is immediately available in production quantities with a lead-time of 12 weeks. The unit price for 1,000 pieces is \$1.129 for the AOZ2264VQI and \$1.69 for the AOZ2369VQI.

About AOS

Alpha and Omega Semiconductor Limited, or [AOS](http://www.aosmd.com), is a designer, developer, and global supplier of a broad range of power semiconductors, including a wide portfolio of [Power MOSFET](#), [IGBT](#), [IPM](#), [Power IC](#), and Digital Power products. AOS has developed extensive intellectual property and technical knowledge that encompasses the latest advancements in the power semiconductor industry, which enables us to introduce innovative products to address the increasingly complex power requirements of advanced electronics. AOS differentiates itself by integrating its Discrete and IC semiconductor process technology, product design, and advanced packaging know-how to develop high-performance power management solutions AOS’s portfolio of products targets high-volume applications, including portable computers, flat-panel TVs, LED lighting, smartphones, battery packs, consumer and industrial motor controls, automotive electronics, and power supplies for TVs, computers, servers, and telecommunications equipment. For more information, please visit www.aosmd.com.

Forward-Looking Statements

This press release contains forward-looking statements that are based on current expectations, estimates, forecasts, and projections of future performance based on management’s judgment, beliefs, current trends, and anticipated product performance. These forward-looking statements include, without limitation, references to the efficiency and capability of new products and the potential to expand into new markets. Forward-looking statements involve risks and uncertainties that may cause actual results to differ materially from those contained in the forward-looking statements. These factors include, but are not limited to, the actual product performance in volume production, the quality and reliability of the product, our ability to achieve design wins, the general business and economic conditions, the state of the semiconductor industry, and other risks as described in the Company’s

annual report and other filings with the U.S. Securities and Exchange Commission. Although the Company believes that the expectations reflected in the forward-looking statements are reasonable, it cannot guarantee future results, level of activity, performance, or achievements. You should not place undue reliance on these forward-looking statements. All information provided in this press release is as of today's date unless otherwise stated, and AOS undertakes no duty to update such information, except as required under applicable law.

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