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## Alpha & Omega Semiconductor Introduces Synchronous Buck Regulator Family

*EZBuck™ Technology enables up to 50% lower MOSFET on-resistance for higher efficiency than competing solutions*

**Sunnyvale, CA, January 3, 2008** – Alpha & Omega Semiconductor, Inc. (AOS) introduces a family of synchronous EZBuck™ DC-DC step-down converters. The 2A (AOZ1020), 3A (AOZ1021 and AOZ1022), and 4A (AOZ1024) products are designed for conversions from 4.5V to 16V input voltages. The new products are ideal for networking, computing, consumer and industrial markets for powering low voltage rails in cable and DSL modems, set-top boxes, portable navigation devices, portable DVD players, DVD recorders, LCD TVs, industrial control systems, servers, graphics cards, ultramobile PCs as well as high-end desktops.

“With current requirements for processors in consumer applications rising while voltage requirements are decreasing, synchronous buck converters are the solution of choice for many designers. AOS’ EZBuck family lowers bill of material cost by integrating all the silicon needed for a synchronous step-down converter into a single SO-8 or DFN package,” said Ralph Monteiro, Director of Power IC Marketing at AOS.

“As ‘green’ systems become more popular, designers are replacing inefficient linear regulators with switching regulators that save power and produce less heat. EZBuck offers designers of such systems with an efficient solution that is easy to implement due to AOS’ unique combination of Trench MOSFET, Power IC and packaging expertise,” added Monteiro.

### Technical Highlights

The AOZ1020, AOZ1021, AOZ1022 and AOZ1024 provide efficient step-down converter solutions for low duty cycle applications. The parts operate at 500kHz switching frequency reducing the size of the output filter components. The AOZ1020 and AOZ1021 are rated at 2A and 3A, respectively, and are available in an SO-8 package. The AOZ1022 and AOZ1024 are rated at 3A and 4A, respectively, and are available in the DFN5x4-8L package. The DFN package has improved thermal performance allowing operation in higher ambient temperature conditions.

The new devices are current-mode PWM step-down regulators with an integrated high side PMOS and low side NMOS switch. The high-side PMOS not only simplifies gate driver circuitry, but also allows for 100% duty cycle operation allowing a wide 0.8V to 15V range of output voltages. AOS’ proprietary Trench MOSFET technology enables  $R_{DS(ON)}$  as low as 100mOhm on the high side and 20mOhm on the low side, thus reducing power losses.

The devices feature a TTL compatible enable input and also have a fixed internal soft start time of 4ms. The devices are protected with features such as input under-voltage lockout, cycle-by-cycle current limit and thermal shutdown.

AOZ1020 and AOZ1022 also offer an open drain power good indicator (PGOOD). The PGOOD function is required by many processor core voltages and also can be used to simplify sequencing requirements and enable more reliable system operation.

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## Pricing and Specifications

The AOZ102x family is available immediately in production quantities. The table below shows brief specifications and pricing.

### EZBuck™ Switching Regulators - Synchronous

Part Number	Min V <sub>IN</sub> (V)	Max V <sub>IN</sub> (V)	Max I <sub>OUT</sub> (A)	Min V <sub>OUT</sub> (V)	Max V <sub>OUT</sub> (V)	Operating Freq. (kHz)	PGOOD	Package	1K Price (USD)
<b>AOZ1020AI</b>	4.5	16	2	0.8	15	500	Yes	SO-8	0.82
<b>AOZ1021AI</b>	4.5	16	3	0.8	15	500	No	SO-8	0.85
<b>AOZ1022DI</b>	4.5	16	3	0.8	15	500	Yes	DFN5x4	0.92
<b>AOZ1024DI</b>	4.5	16	4	0.8	15	500	No	DFN5x4	0.95

## About AOS

Alpha & Omega Semiconductor, Inc. is a fabless semiconductor company that develops leading-edge analog power management solutions. AOS offers a wide portfolio of power MOSFET, Power IC and Transient Voltage Suppressor products that incorporate advances in device design, silicon and packaging technologies. AOS's products meet the ever-increasing performance and power efficiency requirements in high volume consumer applications such as portable and desktop computers, digital cameras, cell phones and LCD panels. AOS has offices and sales representatives worldwide including the Americas, Europe and Asia Pacific. For more information, please visit [www.aosmd.com](http://www.aosmd.com).