

Power Integrations and Ideal Power Collaborate on Efficient, Always-On Solid State Circuit Breakers for 800 VDC AI Data Centers

Collaboration addresses protection, control, and power conversion challenges in emerging 800 VDC AI Infrastructure

SAN JOSE, Calif.--(BUSINESS WIRE)-- **Power Integrations** (NASDAQ: POWI), the leader in high-voltage integrated circuits for energy-efficient power conversion, and **Ideal Power Inc.** (NASDAQ: IPWR), developer and provider of its innovative and widely patented B-TRAN® bidirectional semiconductor power switch, today announced a collaboration to deliver a solid-state circuit breaker (SSCB) solution providing fast, efficient, always-on protection that scales with the 800 VDC transition in AI data centers.

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The companies will collaborate on a new architecture combining Power Integrations' 1700 V InnoMux-2 power conversion ICs with Ideal Power's B-TRAN® switches to deliver a self-powered, intelligent, ultra-fast SSCB. They have also demonstrated a working prototype and are working on a reference design.

Rising voltages and rack power levels in AI data centers create a need for innovative approaches to circuit protection. Mechanical circuit breakers are too slow to protect sensitive rack equipment, while existing electronic breakers introduce losses, reducing system efficiency. Further, electronic breakers must be powered from the 800 V bus. In the next generation intelligent SSCB architecture, the InnoMux-2 IC converts 800 V into isolated power for gate-drive, control electronics, sensing, and auxiliary circuitry. Ideal Power's B-TRAN® switch uses that intelligence to protect the 800 V power path to the AI computing load. The InnoMux-2 IC features 1700 V PowiGaN technology, which can operate from an 800 VDC bus with significant margin. The IC provides multiple independently regulated outputs instead of a conventional architecture with one isolated PSU followed by multiple DC-DC converters. The result is a highly efficient, self-powered protection solution that eliminates the need for an external auxiliary supply while enabling ultra-fast fault isolation.

"As AI data centers move toward 800 VDC power architectures, the industry must address new challenges in power conversion, control, and protection at the system level," said **Chris Jacobs**, senior vice president of marketing and product strategy at **Power Integrations**. "By combining **Power Integrations'** 1700 V InnoMux-2 IC with **Ideal Power's** innovative bidirectional solid-state circuit protection, we are helping enable intelligent 800 VDC power architectures that improve efficiency, resiliency, and scalability in next-generation AI data centers."

"High efficiency, ultra-fast fault interruption is essential for enabling the migration to 800 VDC AI data centers and energy infrastructure. Traditional protection methods are proving to be inadequate. Mechanical breakers are too slow, while previous semiconductor-based breakers have historically been disqualified by high power loss," said **David Somo**, CEO of **Ideal Power**. "Power Integrations offers a unique combination of 1700 V GaN capability, multiple independently regulated outputs, high integration, and a compact solution footprint that is well suited to our 800 VDC solid-state circuit breaker architecture, which must meet demanding power efficiency requirements and strict mechanical constraints."

Resources

For further information on **Power Integrations**, please visit the [resource page](#) on the web site.

About Power Integrations

Power Integrations, Inc. is a leading innovator in semiconductor technologies for high-voltage power conversion. The company's products are key building blocks in the clean-power ecosystem, enabling the generation of renewable energy as well as the efficient transmission, conversion and consumption of power in applications ranging from milliwatts to megawatts in applications such as AI data centers, EVs and high-voltage direct current infrastructure. For more information, please visit www.power.com.

About Ideal Power Inc.

Ideal Power (Nasdaq: IPWR) is the developer and provider of its innovative and widely patented B-TRAN® bidirectional semiconductor power switch. B-TRAN® offers compelling advantages over conventional technologies and addresses the demanding standards of today's solid-state circuit protection and intelligent power delivery systems. It features very low conduction losses that deliver improved power efficiency, thereby reducing energy consumption and providing cost savings. The unique bidirectional capability of B-TRAN® simplifies the design, control, and diagnostics of solid-state power solutions while enabling smaller, lower cost systems. B-TRAN® delivers compelling advantages for a broad spectrum of applications including solid-state circuit breakers, static transfer switches, battery disconnect units, and EV contactors that are widely used in data centers, industrial power systems, energy grid and storage systems, and electric vehicles and charging infrastructure. For more information, visit the Company's website at www.IdealPower.com, on [LinkedIn](#), on [Twitter](#), and on [Facebook](#).

Forward-Looking Statements

Certain statements included in this press release that are not historical facts are forward-looking statements within the meaning of the federal securities laws, including the safe harbor provisions under the United States Private Securities Litigation Reform Act of 1995. Forward-looking statements generally relate to future events or the Company's future financial or operating performance and are sometimes accompanied by words such as "believe," "continue," "project," "expect," "anticipate," "estimate," "intend," "strategy," "future," "opportunity," "predict," "plan," "may," "should," "will," "would," "potential," "seem," "seek," "outlook," and similar expressions that concern the Company's expectations, strategy, priorities, plans, or intentions, predict or indicate future events or trends, or that are not statements of historical matters. Forward-looking statements are predictions, projections, and other statements about future events that are based on current expectations and assumptions and, as a result, are subject to risks and uncertainties. Forward-looking statements in this press release include, without limitation, statements about the collaboration between Power Integrations and Ideal Power, the market need for the new architecture resulting from the collaboration, and the benefits to customers of this new architecture, among others. These statements are based on various assumptions, whether or not identified in this press release. These forward-looking statements are provided for illustrative purposes only and are not intended to serve as and must not be relied on by an investor as a guarantee, an assurance, a prediction, or a definitive statement of fact or probability. Actual events and circumstances are very difficult or impossible to predict and will differ from the assumptions. Many actual events and circumstances are beyond the control of the Company. The Company's expectations and beliefs regarding these matters may not materialize, and actual results in future periods are subject to risk and uncertainties that could cause actual results to differ materially from the forward-looking statements in this press release, including but not limited to: (i) the risks that the collaboration may not be able to address protection, control, and power conversion to the extent or in the time frame anticipated, or at all; (ii) the risks that the collaboration may not

deliver a solid-state circuit breaker (SSCB) solution that provides, fast, efficient, nor always-on protection that scales with the 800 VDC transition in AI data centers to the extent or in the time frame anticipated, or at all; (iii) the risks that the collaboration may not result in a new architecture combining Power Integrations' 1700 V InnoMux-2 power conversion ICs with Ideal Power's B-TRAN® switch to deliver a self-powered, intelligent, ultra-fast SSCB to the extent or in the time frame anticipated, or at all; (iv) the risks that existing solutions, such as mechanical circuit breakers and electronic breakers, may improve their performance such that they can adequately protect sensitive rack equipment with sufficiently increased efficiency; (v) the risks that electronic circuit breakers may not need to be powered from the 800 V bus to the extent anticipated, or at all; (vi) the risks that the highly efficient, self-powered protection solution may not eliminate the need for an external auxiliary supply while enabling ultra-fast fault isolation to the extent or in the time frame anticipated, or at all; (vii) the risks that AI data centers may not move toward 800 VDC power architectures nor create new challenges in power conversion, control, and protection at the system level to the extent or in the time frame anticipated, or at all; (viii) the risks that the combination of Power Integrations' 1700 V InnoMux-2 IC with Ideal Power's innovative bidirectional solid-state circuit protection may not help in enabling intelligent 800 VDC power architectures that improve efficiency, resiliency, and scalability in next generation AI data centers to the extent or in the time frame anticipated, or at all; (ix) the risk that high efficiency, ultra-fast fault interruption may not be essential for enabling the migration to 800 VDC AI data centers and energy efficiency to the extent or in the time frame anticipated, or at all; (x) the risks that Power Integrations unique combination of 1700 V GaN capability, multiple independently regulated outputs, high integration, and a compact solution footprint may not meet the demanding power efficiency requirements nor strict mechanical constraints to the extent nor time frame anticipated, or at all; (xi) the Company's ability to forecast its performance; (xii) changes in trade policies, in particular the escalation and imposition of new and higher tariffs, which could reduce demand for end products that incorporate the Company's integrated circuits and/or place pressure on the Company's prices as the Company's customers seek to offset the impact of increased tariffs on their own products; (xiii) the Company's ability to supply products and its ability to conduct other aspects of its business, such as competing for new design wins; (xiv) changes in global economic and geopolitical conditions, including such factors as inflation, armed conflicts, and trade negotiations, which may impact the level of demand for the Company's products; (xv) potential changes and shifts in customer demand away from end products that utilize the Company's integrated circuits to end products that do not incorporate the Company's products; (xvi) the effects of competition, which may cause the Company's revenue to decrease or cause the Company to decrease its selling prices for its products; (xvii) unforeseen costs and expenses; unfavorable fluctuations in component costs or operating expenses resulting from changes in commodity prices and/or exchange rates; and (xviii) product development delays and defects and market acceptance of the new products. These risks and uncertainties may be amplified by current or future global conflicts and current and potential trade restrictions, trade tensions, and tariffs, all of which continue to cause economic uncertainty. You should carefully consider the foregoing factors and the other risks and uncertainties described in the "Risk Factors" section of the Company's most recent Annual Report on Form 10-K and subsequent Quarterly Reports on Form 10-Q that the Company filed with the U.S. Securities and Exchange Commission, or the SEC, and other documents filed by us or that will be filed by us from time to time with the SEC. These filings identify and address other important risks and uncertainties that could cause actual events and results to differ materially from those contained in the forward-looking statements. Forward-looking statements in this press release are based only on information currently available to the Company and speak only as of the date they are made.

Investors are cautioned not to put undue reliance on forward-looking statements, and the Company disclaims any obligation and does not intend to update or revise these forward-looking statements, whether as a result of new information, future events, or otherwise, except as required by law. The Company gives no assurance that the Company will achieve any of its expectations.

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Source: Power Integrations