

ABB and IO to deliver world's first direct current-powered data center module

New module is 10 – 20% more energy efficient than traditional alternating current technology

Zurich, Switzerland, Nov. 2, 2011 – ABB, the leading power and automation technology group, and IO, the leading provider of next-generation modular data center technology and services, have agreed to partner in the development of a new data center module based on direct current (DC) power to meet increasing demand for DC data centers. Together, they will deliver the world's first DC-powered data center module, which will be completed by the end of the year.

The rapid growth of data storage, combined with global networking, has resulted in a massive increase in data center capacity worldwide. Data centers typically consume 15 times more energy per square foot than a typical office building and, in some cases, may be 100 times more energy intensive – running 24 hours a day, 7 days a week. These facilities require significant amounts of electricity and any improvement in efficiency can provide significant cost savings while lessening CO₂ emissions.

DC-powered technology is being increasingly adopted for electrical distribution in data centers as it reduces power conversion losses and is 10 to 20 percent more energy efficient than traditional alternating current (AC) technology. DC-powered systems also reduce complexity and require less space – decreasing equipment, installation and maintenance costs.

“ABB has a long heritage in DC-powered technologies since pioneering high-voltage direct current (HVDC) transmission in the 1950s,” said Tarak Mehta, head of ABB's Low Voltage Products division. “We are pursuing the development of DC power in many contemporary applications such as electric vehicle charging, renewable energy, energy storage and data centers where substantial economic and environmental benefits can be realized.”

The project underlines ABB's goal to expand DC-power applications. ABB recently announced it will design and install an advanced DC-power distribution system for green.ch, one of the top information and communications technology (ITC) service providers in Switzerland. In May 2011, ABB gained a controlling interest in Validus DC Systems, a leading provider of DC power infrastructure equipment.

Modular data centers use standardized configurations that are packaged together and portable, and can be manufactured and deployed more rapidly than traditional data center build-outs. This new module expands IO's modular products to include a DC-power option supplied by ABB. Similar to IO's AC-power distribution network (PDN), the new DC-powered module is manufactured by IO using the IO Anywhere standards-based hardware and software architecture. The AC- and DC-powered modules are managed and optimized by IO OS[®], the first data center operating system.

“The data center has always been DC powered; every device in the data center uses DC power inside,” said George D. Slessman, CEO of IO. “By leveraging the intelligent control of IO OS and IO's modular data center platform, we can now deliver the entire data center from the source on DC power, while providing flexibility to deliver AC power where and when needed.”

IO designs, engineers and delivers data center infrastructure for the world's largest enterprises, governments and service providers. IO (www.io.com) is a privately held company headquartered in Phoenix, Arizona.

Press Release



ABB (www.abb.com) is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 130,000 people.

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