



# Alencon's dc-dc optimizer for energy storage

The Alencon SPOT family of DC-DC optimizers is a unique solution for combining solar+storage, repowering aged PV systems and building more cost-effective microgrids. ... Earlier this year, the Alencon SPOT 1500 was deployed in the largest of its kind to date DC-coupled solar+storage project with a major energy company in the Southeastern United ...

Energy Storage Solutions (E22) and Alencon Systems have partnered to offer a unique, turnkey DC-coupled solar-plus-storage solution. The integrated. Continue to Site . Solar Power World. ... Alencon's BOSS bi-directional DC-DC optimizer along with E22's solutions will be on display in Alencon Booth #2629 at SPI.

The Alencon BOSS - which stands for bi-directional optimizer for storage systems - is Alencon's bi-directional DC:DC converter solution. The BOSS is ideal for the bi-directional charge and discharge of battery energy storage in DC distribution systems such as solar and storage.

Here at Alencon, we've developed a novel approach to facilitating utility scale DC coupled solar plus storage deployments using our unique, galvanically isolated DC-DC optimizer, the SPOT. In our concept, by coupling solar and storage on the DC side, we can provide the system owner a number of benefits including: 1.

Why Alencon's Approach to DC-Coupling of Solar + Storage is So Unique. Alencon's patented SPOT-ES PV Harvesting system offers a completely unique solution to DC-coupling. Alencon's approach to the DC-coupling of Solar + Storage places a galvanically isolated, string level DC-DC optimizer between the PV array and the DC-bus connecting the ...

Figure 1: The Alencon BOSS is battery rack-level, galvanically isolated DC-DC optimizer that can serve as an integral part of your ESS augmentation strategy. The diagram above shows placement of the BOSS units relative to each battery rack in an ESS.

Alencon's Combined Universal Buck-Boost Electronics - the CUBE series - achieves its unrivaled power density of an DC:DC converter in its class by using a silicon-carbide based power train ...

The BOSS: Alencon's Battery Centric Topology for DC-Coupling Solar + Storage. Alencon Systems' Bi-Directional Optimizer for Storage Systems (BOSS) can be used to enable the deployment of storage in a PV array with inverters from many of today's leading PV inverter manufacturers. Such integration can be done either in new plants or retrofit into existing PV ...

The BOSS BOX - where BOX is an acronym for "Battery Optimized Container" - is a bi-directional DC:DC conversion platform made up of a configurable number of Alencon's 80 KW Bi-directional Optimizer for



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Storage Systems (BOSS) modules.

A unique DC-DC Optimizer to help medium and large Energy Storage Systems (ESS) INSTALLATION, OPERATION AND MAINTENANCE MANUAL FOR USE WITH THE BOSS 1000 AND 1500 PM003 Revision 12 Alencon Systems LLC 330 Warminster Rd., Suite 380 | Hatboro, PA 19040 | USA . BOSS - Installation, Operation and Maintenance Manual ...

DC-coupled battery energy storage systems (BESS for short) work as follows: The solar PV array generates electrical energy. ... Alencon DC-DC optimizers perform two types of voltage mapping: static and dynamic. Static voltage mapping equalizes the fundamental difference in the mean of the two voltage ranges: ...

As it becomes more economical to overbuild projects and add storage for the energy that would otherwise be clipped, the PV-centric approach, according to Alencon, "facilitates larger DC ratios ...

Mainly producing solar DC optimizers, solar Inverters, energy storage, and battery monitoring systems, Solaredge is committed to powering world people with clean and sustainable energy and creating renewable energy solutions. ...

The DC POWER OPTIMISER(TM) consists of a DC to DC bidirectional converter, Alencon's Bi-Directional Optimizer for Storage Systems - the BOSS(TM), connected to a battery, packaged in a single 2m (W) x 1m (D) x 2.3m (H) IP65 (NEMA 3/4X) containerized package. This container includes control and communication equipment, a battery management ...

Alencon Systems debut the latest generation of its DC to DC optimizer, the SPOT, at Solar Power International 2017, September 10 to 13 in Las Vegas. The newest version of Alencon's DC-DC optimizer, the SPOT X2, will be on display in Alencon Systems" booth #1115. The SPOT X2 includes a number of improved features from previous product ...

Alencon - SPOT - PV String and Array Level DC-DC Optimizers for Repowering, Solar + Storage and Microgrid Applications by Alencon Systems, LLC. Alencon's String Power Optimizers and Transmitters (SPOTs) are the most powerful DC-DC& nbs...

Alencon's Bi-Directional DC-DC Optimizer for Storage Systems, the BOSS, is a unique solution for incorporating Solar and Storage using either AC or DC Coupled topologies. The BOSS enables the granular control of charge and ...

The CUBE, which stands from Combined Universal Buck/Boost Power Electronics, is a compact, centralized, DC:DC optimizer. The CUBE is available to support both 1,000 and 1,500 V DC:DC applications and is available in two modalities -- the CUBE-PV for solar applications and the CUBE-ES for battery energy storage applications.



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When used in combination, Alencon's DC-DC optimizers, central inverters and plant monitoring software deliver the utility-scale PV plant topology of tomorrow today. Partner With Alencon No matter where in the arena of the alternative energy value chain you ...

Of the two methods of combining solar and battery energy storage, DC and AC coupling, the DC coupled approach holds unique promise for commercial and industrial (C& I) and distributed generation (DG) sized alternative energy projects - projects ranging in size from 500 KW and to 10 MW. ... This however is where Alencon's BOSS (bi-directional ...

Alencon's DC-DC Optimizer for Energy Storage, the SPOT-ES, is able to achieve these protections in a cost effective way as a result of the galvanic isolation built into the product by attaching an isolation transformer to each, individual PV string input.

The Alencon SPOT - which stands for String Power Optimizer and Transmitter - is a string level DC-DC optimizer which optimizes the power from four PV string inputs with voltages ranging from 600 to 1500 volts. The SPOT outputs power through two outputs at any range of voltage that is completely configurable from one deployment to the next. The ES suffix ...

Alencon Systems LLC will demonstrate its full line-up of SPOT dc-dc optimizers at SPI 2018 in Anaheim, CA September 25 - 27, 2018 in booth #3227. The SPOT family of products includes the SPOT 600, 1000 and 1500, all of which have been listed to UL1741 as well as CSA C22.2 and IEC 62109-1, for the Canadian and other overseas markets respectively.

Alencon Systems LLC introduced the Bi-Directional Optimizer for Storage Systems called the BOSS. The Alencon BOSS is a novel solution for both improving and bringing down the cost of dc-coupled solar + storage deployments while extending the useful life of the batteries and improving battery rack utilization. ... and it supports the integration ...

Alencon Systems LLC is pleased to announce the launch of the CUBE - its newest line-up of high power, high voltage DC:DC converters for alternative energy applications. The CUBE - which stands for Combined Universal Buck/Boost Power Electronics - is a highly compact, centralized DC:DC optimizer. The CUBE is available to support both 1000 and 1500 volt DC:DC applications.

Solar + Storage is hot. Really hot. Like the market is going to double six times in the next 15 years hot, according to Bloomberg New Energy Finance. While that projected growth is amazing, the amount of collocated Solar and Storage on the grid is ...

Hatboro, PA and Madrid, Spain - Energy Storage Solutions (E22), a leading global battery storage integrator and manufacturer, and Alencon Systems, the leading U.S. manufacturer of galvanically isolated DC-DC



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converters and optimizers, have partnered to offer a unique, turnkey DC-coupled Solar + Storage solution.

Alencon Systems will unveil its newest product -- the BOSS, or Bi-Directional Optimizer for Storage Systems -- at the Energy Storage Association's Annual Conference and ...

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