



Schneider Electric (maker of Square D) moves Xantrex into the future with the 600Vdc charge controller and other new offerings...

195 Maximum V OC

865-1032

Xantrex XW - solar charge controller XWMPPT80-600 - 24...48V DC



MidNite  
continues its  
evolution  
with the  
30Amp  
“Kid”



Batteries are now one of the most innovative areas of technology used in the PV field

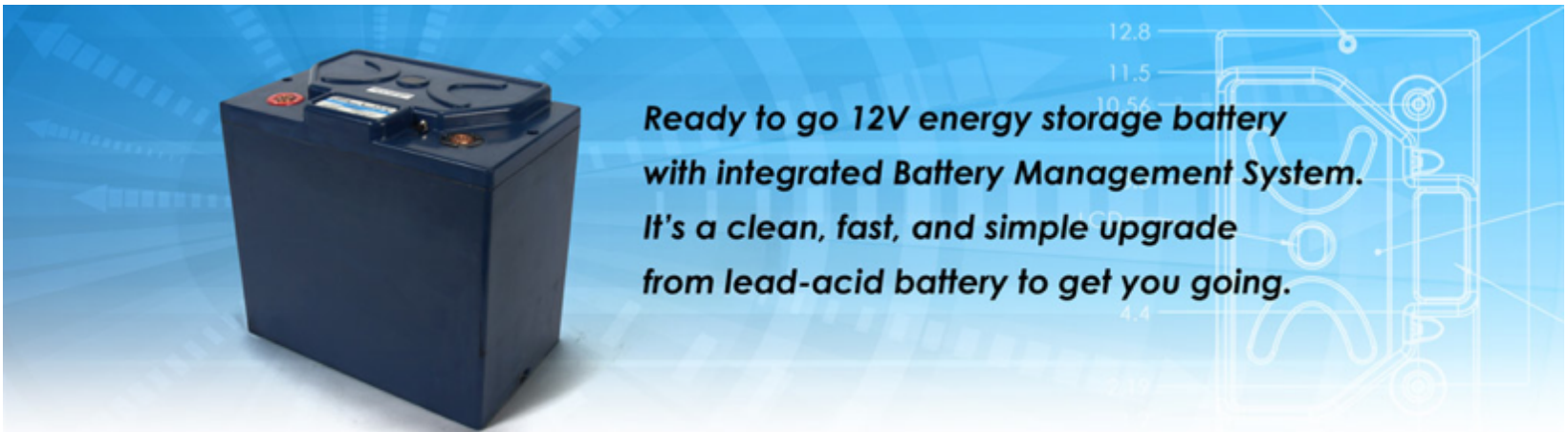
Flooded Deep-Cycle Lead-Acid (FLA) batteries have dominated the storage area of PV's for its entire history

The field is ripe for development and the big opportunity with electric vehicles is materializing into what will become many cost competitive alternatives to FLA batteries

# FLUX Power claims to compete with Lead-Acid today...

FLUX Power FLX160AH  
LiFePo4 Battery 12V 160Ah  
Battery with Integrated BMS

Price: \$1,536.00



## Stone-edge-farm-microgrid-project

Fourteen 25 kWh Aquion M-Line Battery Modules providing approximately 350 kWh of energy storage capacity, connected to a 32 kW solar array using Ideal Power's 30 kW multi-port power conversion system.

The Ideal Power multi-port system architecture enables the direct DC-level connection of solar PV and energy storage in one compact, highly efficient, transformerless package, eliminating the complexities and redundancies of older, AC-coupled systems. Aquion's battery technology is a unique saltwater chemistry made from abundant, nontoxic materials. The batteries are designed for daily deep cycling in long duration (4+ hour charge/discharge) applications, making them ideal for solar installations.



Chapter 11 as of March 2017



DC –coupled design,  
LiOn Battery with  
Schneider BOS



“You can get easily to 60-70% of the cost [of a Sonnen system] through TOU arbitrage over the lifetime,” he said, “and then if you add tax credits and all, you can achieve a breakeven, even if you are on net metering and time of use in those markets.”

s o n n e n





## EaglePicher Crossroads Facility

System Size: 1MW/2MWh

Components: Four (4) 45 ft. ISO Containers consisting of several GTIB-100 Inverters, multiple advanced Lead-Acid and/or Lithium-Ion batteries, PPS Site Controller, PV, Wind Renewable Energy Resource, and EaglePicher Power Pyramid Controller.

Loads: EaglePicher Crossroads Facility Installation Date: February 2012

Location: Joplin, MO

The system charges at low-cost energy times, such as overnight, and discharges selected battery banks at peak times to reduce power demand, and to manage local loads. The system can operate as a microgrid when disconnected from the utility service.





stem

data  
analytics  
power

Stem creates innovative solutions that are changing the way energy is distributed and consumed. Stem combines powerful learning software and advanced energy storage, simultaneously helping businesses better manage energy costs while creating a more efficient electrical grid.

1.3 MW of intelligent energy storage from California-based firm, Stem, will be deployed at Park Place to reduce energy bills and strengthen the Southern California grid



Micro Inverters are a still a significant player in the grid-intertie market and the manufacturers are responding with more offerings –

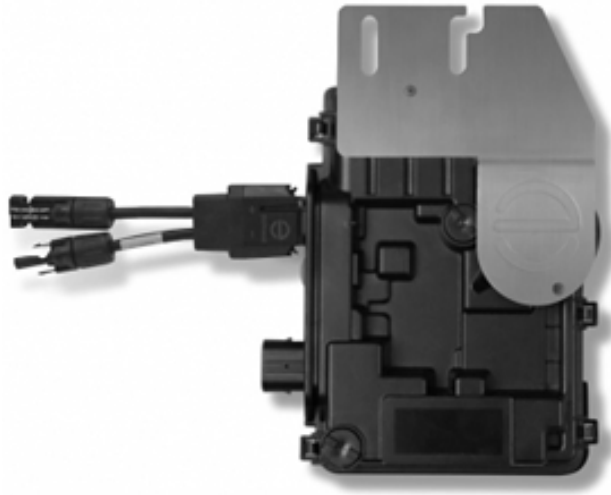
Enphase, the first leader in the revived Micro-inverter world, is finding competition from:

SMA

Power One

Micro inverters are ideal for roofs with multiple orientations, starter systems and where shading is unavoidable.

# Enphase – IQ6+ - Compatible with Enphase Storage system

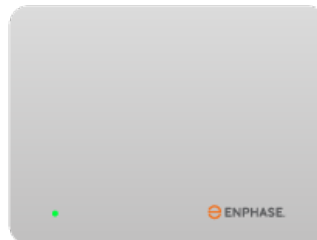
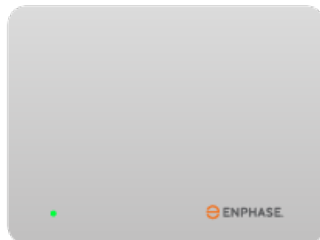


## NEW IQ 6+ Micro™

Sixth-generation microinverter achieves the highest efficiency for module-level power electronics and reduced cost per watt.

**AVAILABLE  
Q1 2017**

Learn more ▶



Power One:



Aurora Micro

Aurora Micro  
The Aurora 250  
and 310 Watt  
micro-inverter.  
96.5% CEC  
efficient

String Inverters: Long the inverter of the residential  
and small commercial market

Innovators include:

SMA

Fronius

Kaco

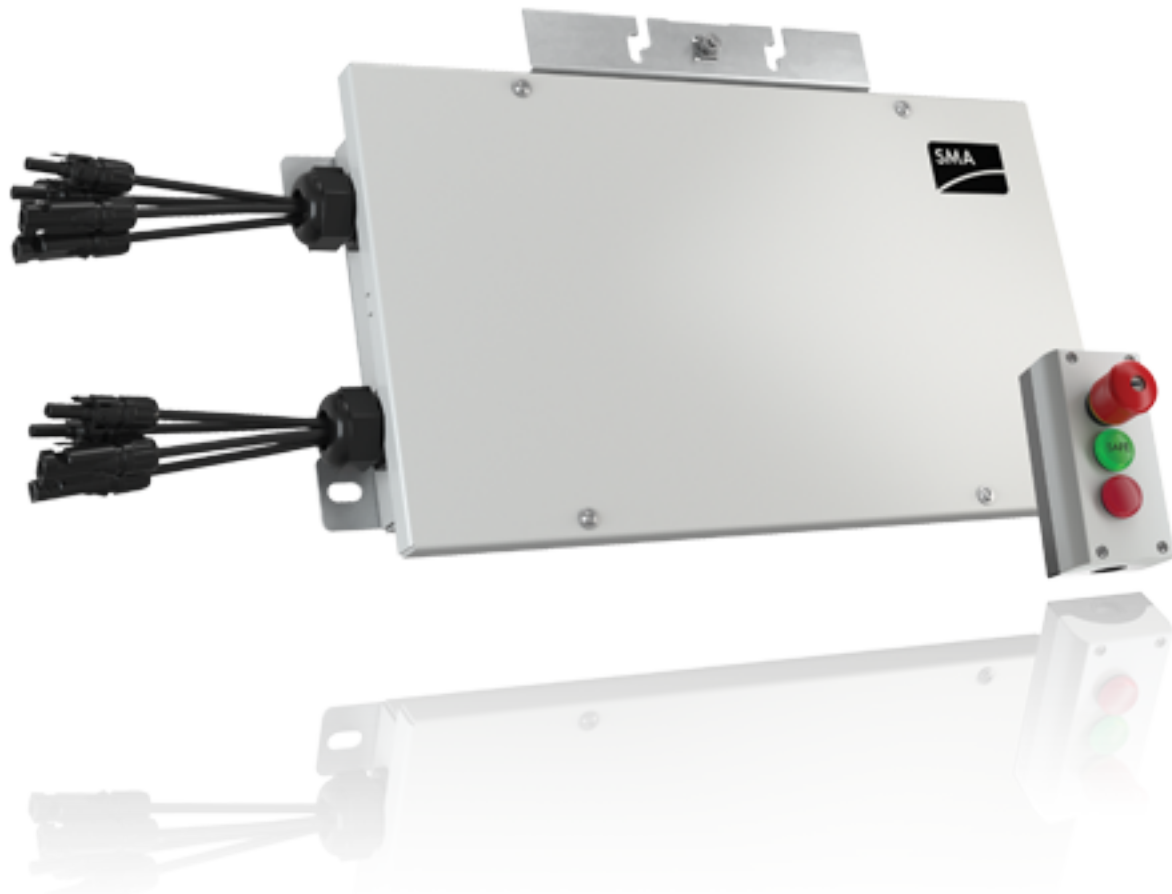
SolarEdge

REFUSol

# SMA + Tigo

Industry's only Secure Power Supply Secure Power Supply provides daytime power in case of a grid outage. This unique feature offers up to 1,500 W of opportunity power





RAPID SHUTDOWN  
SYSTEMCOST-  
EFFECTIVE SYSTEM  
COMPLIANCE

Number of DC inputs	4 strings, 2 in parallel per channel
Number of DC inputs	20 A DC
DC operating current per channel	36 A DC



Featuring ten models ranging from 10 kW to 24 kW, the transformerless Fronius Symo is the ideal compact three-phase inverter for all commercial applications. The high system voltage and wide input range ensure maximum flexibility in system design. With low roof loading, NEMA 4X and 1000 V DC rating, the Fronius Symo can be mounted in many different ways, including flat on a roof or on a pole.



# blueplanet Ultraverter System



AC system

Easy plant design and installation

Highest up-time

Intelligent power balancing

mitigates loss from shading or soiling

Low voltage operation

Self-healing system

Compliant with NEC 690.12 rapid shutdown requirements

Wi-Fi as standard data logger interface

Standard 25 year warranty for blueplanet ultraverter 250

SolarEdge – uses module based power optimizers sending uniform MPPT high voltage to the inverter in a small window – This is the required inverter for using Tesla Powerwall..



# Battery solution system in Japan – From our Friends at Kyocera

