

# ACS-500

## 500 KW AC-COUPLED STORAGE SYSTEM

Yaskawa Solectria Solar is building on its XGI™ 1500 inverter platform to provide the ACS-500, our new robust and reliable Utility-Scale AC-Coupled Storage System.

The ACS-500 is a factory-integrated and tested, scalable, 500kW building-block that enables AC-coupled storage at any capacity.

### KEY FEATURES

- **Three Solectria XGI 1500-166-B** grid-tied, utility-scale battery inverters operating in parallel, with a combined rating of 498 kWac.
- **DCB-1500-500 DC Combiner**, with overcurrent protection for the battery subsystem and three XGI battery inverters.
- **ACC-1500-500 AC Combiner**, with overcurrent protection for the AC output of the three XGI 1500-166-B battery inverters.
- **ACS-500-PMC Plant Master Controller**, provides communication and control interface for the system.
- **All components pre-installed on a robust rack**, pre-wired, pre-tested, and ready to drop-ship to the site.
- Compatible with storage technologies with voltage output 900-1450 Vdc.

### ACS-500 AC-COUPLED STORAGE ADVANTAGES

- Flexibility to implement storage at any capacity and independently of PV generation, to achieve overall system goals
- Enhanced energy efficiency with just a single power conversion stage
- Convenient for retrofit applications wherever on-grid energy storage provides a benefit
- **Use Cases:** Time-of use arbitrage, scheduled dispatch, demand charge management, behind-the-meter economic optimization with energy arbitrage and peak shaving, power factor correction, frequency and voltage support

### SYSTEM DESCRIPTION

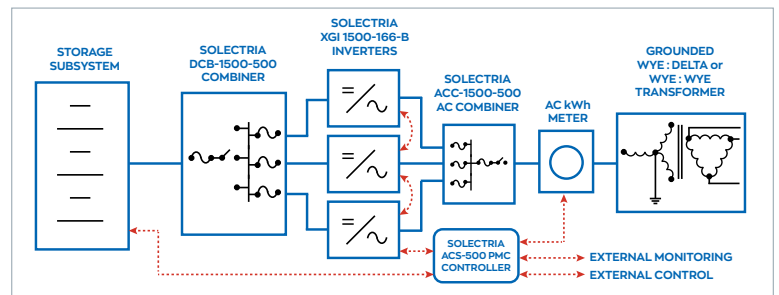
The ACS-500 System includes:

- Solectria XGI 1500 utility-scale string inverters with switching synchronization, operating in parallel from the DC bus.
- Solectria DCB-1500-500 Combiner with overcurrent protection for the storage interface and output to the XGI 1500 inverters. The Combiner serves as the overall DC bus in the system.
- Solectria ACC-1500-500 Combiner with overcurrent protection for the inverters, bussed output and a master disconnect.
- Solectria ACS-500-PMC Controller to enable scheduling of charge/discharge and operating mode to maximize the economics of the system.



### XGI 1500-166-B BATTERY INVERTER

- XGI 1500 battery inverter, rated at 166kW / 166 kVA
- Bi-directional power flow to charge batteries from the grid, and discharge into the grid
- 99% peak efficiency
- 1500 Vdc; 600 Vac 3-Ph
- Designed exclusively for use with battery systems
- CA Rule 21 & HI 14H, UL 1741SA
- Made in the USA with global components
- Buy American Act (BAA) compliant



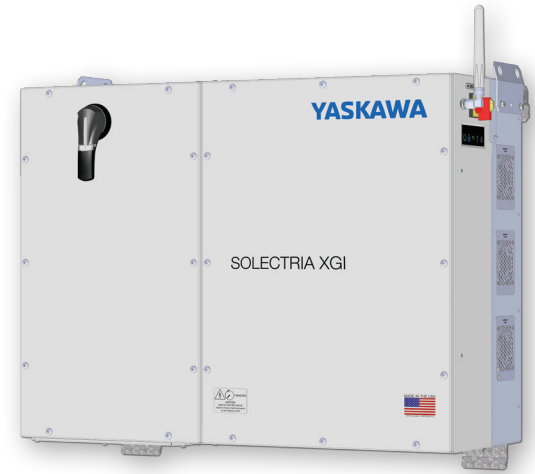
Contact [sales@solectria.com](mailto:sales@solectria.com) for assistance with compatible storage systems

# ACS-500 AC COUPLED STORAGE SYSTEM

## TECHNICAL DATA

### SPECIFICATIONS

SOLECTRIA XGI Battery Inverters	3 x XGI 1500-166-B
Absolute Maximum Input Voltage	1500 Vdc
Max Power Voltage Range (MPPT)	860 - 1250 Vdc
Operating Voltage Range	860 - 1450 Vdc
Max Operating Input Current	444.9 A
Max Rectified Battery-Charging Current	600 A
Nominal Output Voltage	600 Vac
Continuous Real / Apparent Power Output	166 kW / 166 kVA
Maximum AC Output Current	480 A
CEC Avg / Peak Efficiency	99.0%
Certifications	CA Rule 21 & HI 14H, UL 1741SA
Standard Warranty	5 Years
For more information, please visit <a href="http://www.solectria.com">www.solectria.com</a>	



DC Combiner	DCB-1500-500 1500 V DC Combiner
Absolute Maximum Input Voltage	1500 Vdc
Battery Subsystem Overcurrent Protection	750 A Fuse
Battery Subsystem Disconnect Switch	750 A, 2 pole
XGI 1500 Inverter Overcurrent Protection	3 Positions, 250 A fuse
Warranty	5 Years
For more information, please visit <a href="http://www.solectria.com">www.solectria.com</a>	

AC Combiner	ACC-1500-500 AC Combiner
Rated Voltage	600 Vac
Overcurrent protection for XGI 1500 output	200 A
Main Overcurrent protection (after bussing of XGI 1500 outputs)	600 A
For more information, please visit <a href="http://www.solectria.com">www.solectria.com</a>	

Plant Master Controller	ACC-1500-PMC Plant Master Controller
Grid Integration Capabilities	DNP3, Multi-speak, IEEE-2030.5, IEC-61850, OpenADR
Battery, Meter and Sensor Integration Capabilities	Modbus TCP/RTU, CAN bus, BACnet, analog/digital signals
Operational Capabilities	Cloud-based access, data and event logs visualization, archival, reporting, and exporting
Autonomous Operation Capabilities	Local network, all metrics acquired and stored locally
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