



**PRINCETON  
POWER SYSTEMS**  
Clean Power Made Simple™

## Battery Integrated Grid-Interactive Inverter (BIGI)

The BIGI-250 is a 250kW multi-port inverter that offers high efficiency, proven reliability, and flexibility. The highly configurable BIGI-250 has three independent ports, designed to combine batteries with PV.

### Efficient

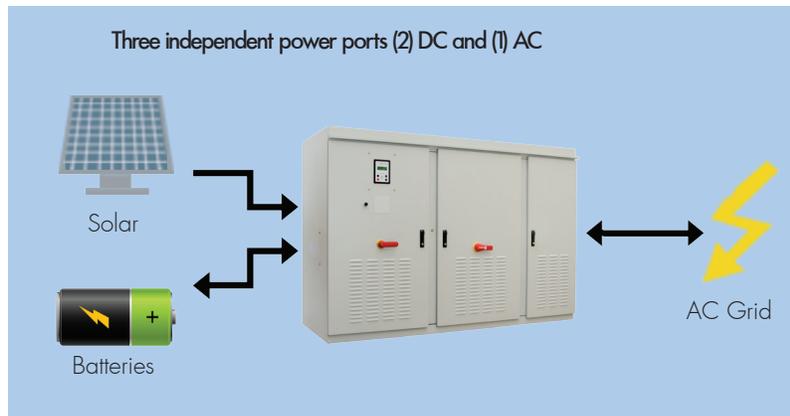
With 95.3% DC-AC peak efficiency, the BIGI has built-in MPPT for solar arrays and a high round-trip efficiency for battery charging.

### Advanced Functions

Independent real and reactive power controls allow the inverter to be used for frequency regulation, VAR compensation, demand response, peak shaving, and other advanced grid support functions. Microgrid capabilities allow the inverter to form or join a microgrid.

### Flexible

Configurable for various applications including DC-coupled microgrids and solar-plus-storage.



### Features

- Microgrid "off-grid" and back-up power capable
- Web-based remote performance monitoring, control, fault clearing, firmware upgrade
- Ethernet Compatible and Web UI access
- Built-in AC and DC Battery disconnect
- DC-coupled battery charging

### ABOUT PRINCETON POWER SYSTEMS

Princeton Power Systems, based in New Jersey and founded in 2001, designs and manufactures state-of-the-art technology solutions for energy management, microgrid operations and electric vehicle charging. The company is a global leader working with customers and partners across North America, Europe, Africa and the Caribbean. It manufactures UL and CE-certified power electronics that are used in advanced battery operations and alternative energy, with built-in smart functions for ancillary services. The company solves power issues to allow continued growth of distributed renewable energy by providing energy storage solutions that are proven to work, even in harsh environments. Princeton Power Systems builds integrated systems and designs, commissions and operates microgrids for leading organizations, including Fortune 500 automakers and industrials, and non-profit organizations. The company proudly manufactures its products in the USA. More information about Princeton Power Systems is available at [www.princetonpower.com](http://www.princetonpower.com).

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# Battery Integrated Converter (BIGI-250)

## BIGI-250

Power Terminals	2 DC   1 AC
Power-stage Technology	High Frequency PWM
Size (inches)	90.5 W x 41 D x 70 H

## DC PORT SPECIFICATIONS - BATTERY

DC Voltage (Full Power)	415-600 VDC
DC Voltage (Full Range & Dark Start)	250-600 VDC
Max Power	265 kW
DC Current Max	640 A
DC Voltage Ripple	<1%

## DC PORT SPECIFICATIONS - PV

PV MPPT (Full Power)	415- 600 VDC
PV MPPT (Operating Range)	250- 580 VDC
PV Max Open Circuit Voltage	600 VDC
PV Array Configuration	Monopole negative grounded (w/transformer)
DC Voltage Ripple	<1%
DC Disconnect	Yes

## AC PORT SPECIFICATIONS

AC Line Voltage	480 VAC +10%, -12%, 3-phase, 3/4 wire
AC Line Frequency	60 Hz nominal 59.3- 60.5 Hz range (per UL requirement)
Continuous AC Current	325A RMS
Continuous AC Power	250 kVA
Power Factor	0 to 1 leading and lagging (adjustable)
Current Harmonics	IEEE 1547 Compliant, <5% THD
Isolation Transformer	Required (external)
AC Manual Breaker/Disconnect	Yes (Door Mounted)
Off-grid Control Features	Grid-forming Voltage Source
Microgrid Compatibilities	Autonomous Power Sharing without Centralized Control, Parallel Generation Compatible, Synchronized Start
On-grid/Off-grid Auto-transfer time	160 ms/300ms to Grid

## ENVIRONMENTAL SPECIFICATIONS

Temperature Operating	0 to 30°C
Storage	-20 to 60°C
Humidity	5-95% (non-condensing)
Cooling	Forced-air
Rated Max Elevation	3,300 Feet
Enclosure	NEMA 1 (Indoor)

## USER INTERFACE FEATURES

Front-Panel Interface	Industrial LCD Keypad
Accessibility	Web-based Ethernet Interface
Remote Accessibility	via Web interface
Communication	MODBUS Over RS485 or RS232

## EFFICIENCY

Peak Efficiency (DC-AC)	95.3%
CEC Efficiency (DC-AC)	94.5%
Energy-saving Features	Automatic internal subsystems power-down, Night time transformer auto-disconnect