



**BigBattery**  
Own Your Power

# APEX-6.5K & APEX-10K

SKU: INV034 & INV035



## KEY FEATURES

- All-in-One Off-Grid Power Solution: Combines inverter, solar charger, and battery charger for seamless solar/battery/generator operation.
- High-Performance Dual MPPTs: Up to 10kW (APEX-6.5K) & 11kW (APEX-10K) PV input with wide 120–450 VDC MPPT range for flexible solar array design.
- Split-Phase 120/240V Output: Powers both standard household and heavy-duty 240V appliances, ideal for U.S. homes and cabins.
- Scalable Power: Parallel up to six units.
- Smart Energy Management: Time-of-use scheduling and intelligent charge/discharge modes to optimize battery lifespan and energy savings.
- Reliable & Connected: Pure sine wave output, built-in protections, and Wi-Fi/RS485/CAN communication for remote monitoring and control.

## ABOUT APEX

The **APEX-6.5K** and **APEX-10K** Hybrid Inverters, designed as an off-grid solar inverter with the hybrid versatility of an A/C input for grid connection/charging, generator input, or A/C solar inputs to intelligently manage energy from solar panels, batteries, and the grid to deliver seamless power. The APEX inverters are engineered for true energy independence, providing a split-phase 120/240V at 50/60 Hz with clean, pure sine-wave output, APEX pairs flawlessly with modern LiFePO<sub>4</sub> batteries and accepts both solar and generator inputs for seamless, all-day autonomy. A 40A (APEX-6.5K) & 64A (APEX-10K) pass-through keeps large appliances and critical loads humming, while wide operating temperatures and an indoor-ready enclosure for off-grid, reliable performance.

Installer-friendly bottom-entry wiring and smart protections round out a system that's rugged, efficient, and ready to power your cabin, homestead, or remote residences to deliver the ultimate source of energy independence.

## CONTACT US

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## FREQUENTLY ASKED QUESTIONS

### Can the inverter work on-grid and off-grid?

Yes. The APEX is a true hybrid inverter. It syncs with the utility for grid use and runs independently from solar + batteries during outages, switching automatically for uninterrupted power.

### What batteries are compatible with the APEX inverter?

The Apex series inverters support most lithium batteries and are designed to work best with BigBattery batteries such as NEXUS, ETHOS, and HUSKY 2. RS485 and CAN enable smart integration; without communication, they operate in voltage-controlled mode. Tip: use a CAN-enabled BigBattery pack for optimal protection and performance reporting.

### How much solar input can the APEX inverter handle?

The APEX inverter supports a wide PV input range of up to 600 VDC, with dual independent MPPT trackers to optimize energy harvest from multiple solar strings. This design allows flexible array configurations, ideal for installations with varying roof angles or mixed sunlight exposure. The high input voltage and dual MPPT architecture ensure maximum solar utilization and stable operation under changing conditions.

# APEX-6.5K & APEX 10K INVERTER SPECIFICATIONS



Model	APEX-6.5kW	APEX-10kW
Inverter output		
Rated Output Power	6,500W	10,000W
Surge Capacity (Peak Power)	13,000W	20,000W
Rated Output Voltage	120/240 Vac (single-phase/split-phase)	
Load capacity of Motors	4 HP	6 HP
Rated Frequency	50/60Hz	
Output Wave	Pure sine wave	
Switching Time	10ms(typical value)	
BATTERY		
Battery Type	Lithium-ion battery/lead-acid battery/user-defined battery	
Rated Battery Voltage	48V	
Voltage Range	40~60Vdc	
Max. Solar Charging Current	140A	200A
Max. Grid/Generator Charging Current	80A	120A
Max. Hybrid Charge Current	140A	200A
SOLAR INPUT		
No. Of MPPT	1+1	
Max. Input Power	5,000W + 5,000W	5,500W + 5,500W
Max. Input Current	18A + 18A	22A + 22A
Max. Open Circuit Voltage	550Vdc+550Vdc	
MPPT Voltage Range	125~450Vdc	
GRID/GENERATOR INPUT		
Input Voltage Range	65~140Vac	
Input Frequency Range	50/60Hz	
Bypass Overload Current	40A	63A
A/C Inputs	2 Inputs - Grid & Generator	1 Input - Grid or Generator
THD (V)	<5%	
EFFICIENCY		
Max. Efficiency	99.9%	
MPPT Tracking Efficiency	93%	92%
Parallel Capacity	Up to 6 Units (3 or more units in parallel can form a three-phase output)	
GENERAL DATA		
Dimension	25.51 x 16.14 x 5.51 Inches	28.46 x 17.64 x 5.91 Inches
Weight	48 lbs	62 lbs
Protection Degree	IP20 Indoor Only	
Temperature	14 - 131°F, > 113 °F Derate	
External Module (Optional)	Wi-Fi/GPRS	
Certificate	UL1741/RoHs/EN61000-6-1/EC61000-6-3/FCC Part15 ClassB/IEC62109-1/IEC62109-2	
Noise	<60dB	
Cooling Method	Intelligent fan	
Warranty	5 years	
Communication	RS485/CAN/USB/Dry Contact	
Integrated Circuit Breaker	Utility/Load/Battery/PV	
OVERLOAD PROTECTION		
APEX-10kW	After overload protection is enabled, the inverter output will be restored after 3 min, and after 5 times of overload, the output will be off until the inverter is restarted. (102% < load < 110%): An error will be reported, and the output will be turned off after 5 min. (110% < load < 125%): An error will be reported, and the output will be turned off after 10s. Load > 125%: An error will be reported, and the output will be turned off after 5s.	
APEX-6.5kW	Has PV input current limiting protection, PV input over-voltage, PV night reverse current protection, AC input overvoltage protection, AC input under-voltage protection, Battery over-voltage protection, Battery under-voltage Protection, Battery over-current protection, AC output short-circuit protection, Heat sink over-temperature protection, Inverter over-load protection.	