Off-Grid Microinverter with or without Batteries to Run AC Loads

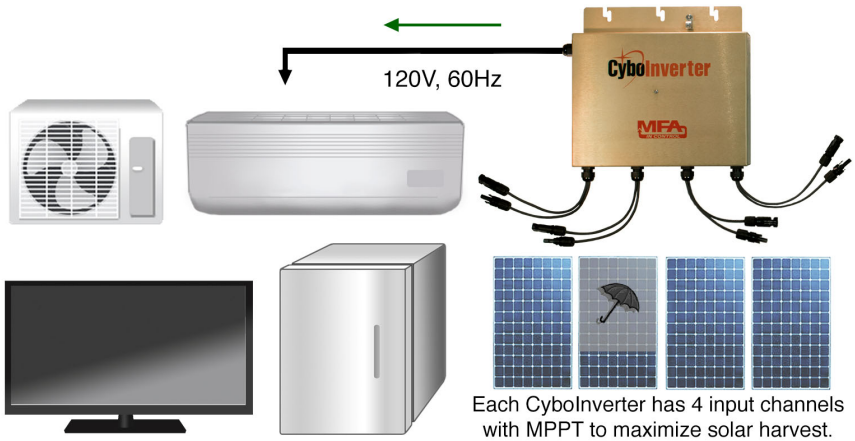
CyboInverter

- **Pure Sinewave AC Output**
- **For Lights, Fans, TV, PC, Battery Chargers, Refrigerators, Food Processors, Small Appliances, etc.**
- **Total of 4 DC Input Channels**
- **MPPT for Each Solar Panel**
- **Over Discharge Protection for 48V Lead-Acid Batteries**
- **Solar or Battery Auto-Detection**
- **High Efficiency and Long Life**

An off-grid CyboInverter can work in harsh environments. It has 4 input channels to connect to solar panels with MPPT for each panel to maximize solar production. All input channels can connect to solar panels or batteries with plug-and-play installation. Each 48V battery can connect to 1, 2, 3, or 4 channels in parallel. The system can produce up to 1250W, 120V, 60Hz AC to power AC loads, ideal for a mobile micro-grid.

Key Benefits: When there is sufficient solar power to run the loads, the CyboInverters will not pull power from the battery. This ensures a much longer battery life.

Q: What is your special offer?
A: We enable you to run AC loads with solar panels only. No battery is required.
Q: Really, no batteries? How?
A: Off-Grid CyboInverters can take power from solar panels directly.
Q: That is great. If needed, can I add batteries to run loads at night?
A: Yes, You may use a 48V battery to connect to 2 input channels of the CyboInverter.



Each CyboInverter has 4 input channels with MPPT to maximize solar harvest.

Part No: CIM-1200N, Standalone Off-Grid CyboInverter N Model.

Made in U.S.A.

Technical Data of CIM-1200N (Rev 6.6 – Jan 2024)

DC Input (per Channel)	60/66 Cell Panel	72 Cell Panel*	Battery**
Supported Input Power	250W – 400W	300W – 450W	48V, 50-300AH
Operating Input DC Voltage Range	18V – 60V	18V – 60V	47V – 60V
Peak Power Performance Range	30V – 60V	30V – 60V	48V – 60V
Maximum Input DC Voltage / Current	60V / 11.5A	60V / 11.5A	60V / 11.5A
Maximum Input Power	330W	330W	330W
Minimum Starting Voltage	20V	20V	47V
Compatible Batteries	48V Lead-Acid Deep-Cycle AGM or Lithium-Ion Pack		
AC Output	Data		
Rated Output Power / Peak Output Power	960W / 1250W		
Startup Surge Power for 12 Seconds	1500W (Max Surge DC Power = 400W per Channel)		
Nominal Output Current (RMS)	8A (RMS – Root Mean Square)		
Nominal Output Voltage / Range	120V (108V – 132V, Single-Phase)		
Nominal Frequency / Range	60Hz (59.5Hz – 60.5Hz)		
Power Factor	>0.95		
Efficiency	Data		
Peak Efficiency / MPPT Tracking	96% (99%)		
Mechanical Data	SI	U.S.	
Ambient Temperature Range	-40°C to +65°C	-40°F to +149°F	
Internal Operating Temperature Range	-40°C to +88°C	-40°F to +190°F	
Dimensions w/o mounting bracket (L x H x W)	32cm x 24cm x 5.8cm	12.5” x 9.5” x 2.3”	
Weight	6.5 kg	14.25 lbs	
Cooling / Enclosure	Natural Convection, No Fan / Potted		
DC Wire / AC Wire	1-2 Feet DC Wires / 4 Feet AC Wires (THHN), Copper		
Features and Compliance	Data		
Safety and EMC Compliance	UL1741 and IEEE1547 (E113426), FCC Part 15 Class A		
Rapid Shutdown	Complies with NEC 2014/2017 690.12.		
DC Ground Fault Detector Interrupter (GFDI)	Built-In		
Standard Warranty	3 Years (Extended Warranty Available)		
Enclosure Environmental Rating / Safety	Outdoor – NEMA 6 / Transformer Isolated Circuits		
Built-in Battery Over Discharge Protection	Low Voltage Disconnect (LVD) on Battery Channels.		

*Do not use 72-cell solar panels in areas where temperature can get below -10 degrees F (-23 degrees C).
** Use a Solar Charge Controller with solar panels to charge the battery. CyboInverters do not charge batteries.