



# Powering eMobility Today For the World Tomorrow

eLeapPower is a North American electric vehicle technology provider delivering innovative solutions to help drive global adoption of EVs.

Our award-winning technologies have been recognized internationally by groups such as Bill Gates' Breakthrough Energy Ventures and the US National Renewable Energy Laboratory (NREL).

Our first customer is Chery Automotive, incorporating our Integrated Inverter into an existing line of their best-selling fully electric vehicles. This eliminates the on-board charger

from their EVs while providing additional capabilities to Chery's customers.

eLeapPower also has new wireless charging technologies to enable operational advantages and cost-saving for fleet and autonomous vehicle operators.

# The eLeapPower Advantage

## Standard

400V Inverter & 6.6kW  
On-board Charger

- ✗ Fast AC Charging
- ✗ High Efficiency 800V Powertrain
- ✗ Ultra-fast DC Charging (Above 80kW)
- ✗ Built-in Compatibility with 400V DC Fast Charging Network
- ✗ Built-in DC Microgrid Compatibility
- ✗ Vehicle-to-vehicle and vehicle-to-grid charging

## State of the Art

800V Inverter & 19.2kW  
On-board Charger

- ✓ Fast AC Charging
- ✓ High Efficiency 800V Powertrain
- ✓ Ultra-fast DC Charging (Above 80kW)
- ✗ Built-in Compatibility with 400V DC Fast Charging Network
- ✗ Built-in DC Microgrid Compatibility
- ✗ Vehicle-to-vehicle and vehicle-to-grid charging

## eLeapPower

Integrated Inverter

- ✓ Fast AC Charging
- ✓ High Efficiency 800V Powertrain
- ✓ Ultra-fast DC Charging (Above 80kW)
- ✓ Built-in Compatibility with 400V DC Fast Charging Network
- ✓ Built-in DC Microgrid Compatibility
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# How eLeapPower Technology Works



## AC Charging Capability

The operation of eLeapPower's Integrated Inverter in AC charging is analogous to that of traditional power factor correction topologies used in on-board chargers.

In place of additional semiconductors, eLeapPower's Integrated Inverter utilizes its existing switches, and the two conversion stages are operated symmetrically to eliminate leakage current and ensure safe operation.



**Lower Costs  
Through  
Eliminating the  
On-board Charger**



## Universal DC Connection

The two symmetrical Integrated Inverter stages in conjunction with the motor inductance act as a DC/DC converter, allowing eLeapPower's Integrated Inverter to control the DC voltage that is seen by the connected energy source.

This allows the system to be charged by a wide input voltage range at high charging speeds compared to the traditional utilization of an external DC/DC converter.



**Future-looking  
With  
Back-compatibility**



## Advanced Inverter Control

eLeapPower's Integrated Inverter has the capability to operate with single or dual inverter stages using a dynamically controlled duty ratio.

In this way, two differing energy sources can be balanced, and improved performance can be achieved especially in urban driving scenarios.

This mechanism is similar to cylinder deactivation techniques implemented in combustion engines.



**Optimized  
Vehicle  
Performance**



# Integrated Inverter

Patented topology integrating bi-directional on-board charging and DC/DC conversion functions into a single integrated inverter

800V powertrain with built-in 400V DC fast charging capability at maximum charging speeds



Bi-directional charging allows vehicles to be used as mobile power sources for other vehicles, homes, or the grid



Integration of charging and power conversion functions reduces the total system cost



Charge directly from renewable-powered DC microgrids

# Wireless Charger



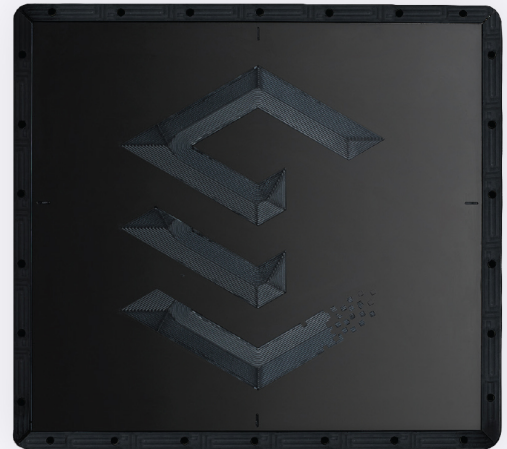
Highly efficient and safe wireless power transfer technology



Enabling the next generation of autonomous transportation, commercial vehicle charging solutions, and consumer convenience



Can be combined with eLeapPower's Integrated Inverter providing further advantages



# eLeapPower

## Let's Connect.

Interested in learning more about eLeapPower and its mobility solutions?

We want to hear from you.

✉ [info@eleappower.com](mailto:info@eleappower.com)

🌐 [eleappower.com](http://eleappower.com)

