

**DG MATRIX**  
Clean Secure Reliable Power

## Dynamic Power Sharing: Optimize **Performance** and **Capacity**

The demand for efficient and reliable charging infrastructure continues to escalate, and we are increasingly seeing larger stations with more chargers and more ports. As quantity of chargers and power needs continue to scale, dynamic power sharing technology allows sites to maximize the use of their total power capacity without over-allocating on infrastructure.

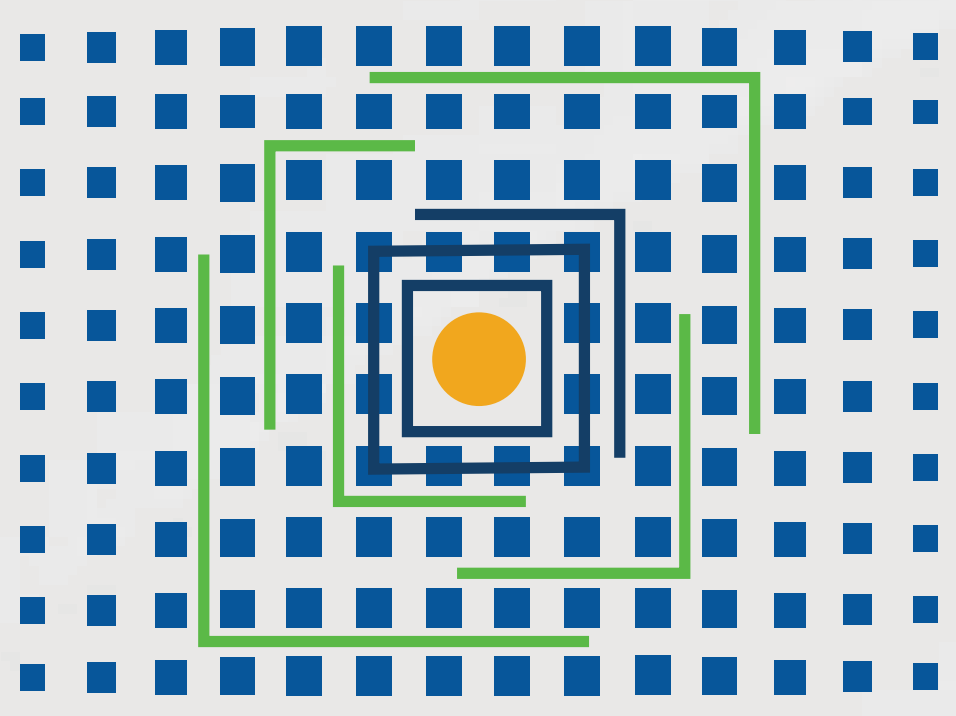
In this article, we discuss the advantages of dynamic power sharing in EV chargers, highlighting how this innovative technology maximizes efficiency, optimizes charging resources, and enhances the user experience.

### **What is power sharing in the context of EV chargers?**

Dynamic power sharing is a technology feature that enables EV chargers to intelligently distribute power among multiple charging ports based on real-time demand and available capacity. Unlike traditional charging models where power allocation is fixed, dynamic power sharing allows chargers to adapt and optimize resource utilization. This dynamic allocation of power ensures that each charging session is efficient, convenient, and seamlessly integrated with the electric grid.







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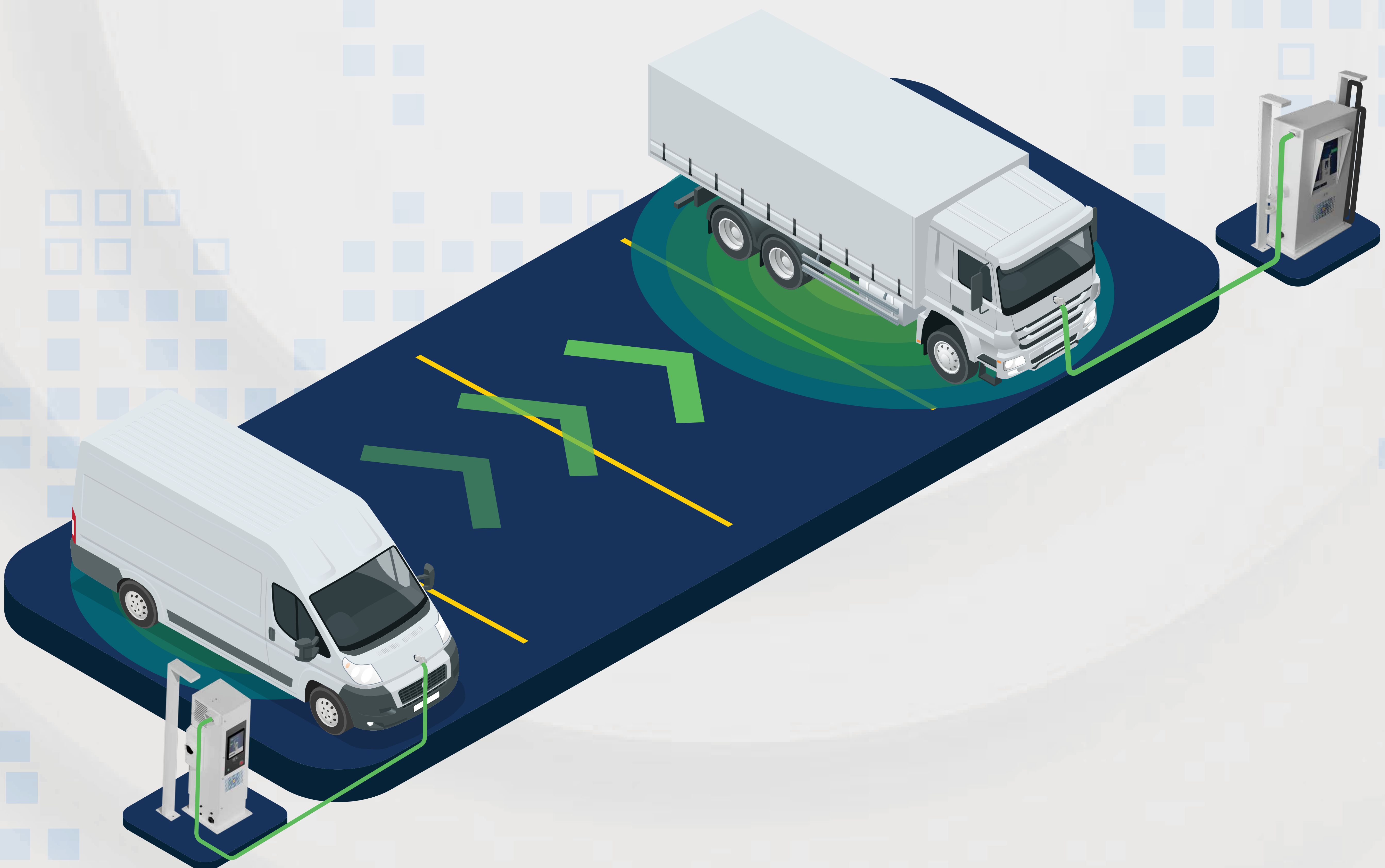
## **Efficient Resource Utilization: Optimizing Charging Resources**

Currently, most chargers are built in fixed power increments based on the number of power modules in the unit. This restricts charging levels to a pre-set amount. Power sharing, however, effectively unlocks the total capacity available by flexibly allocating power from other modules to the dispenser or charging cable that needs power.

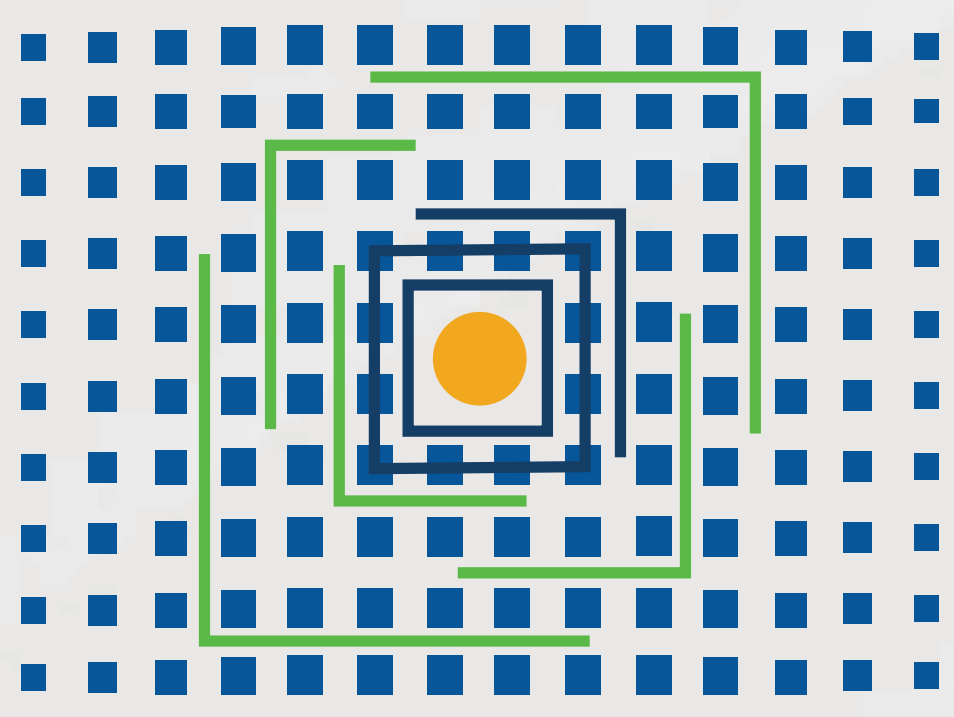
For example, if a driver plugs in to a 200-kW charger with two cables that does not have power sharing between ports, they may be limited to a 100-kW charging session. If the unit can share power between the ports, however, the driver will unlock the full 200-kW capacity of the charger, charging twice as fast!

## **Scalability and Flexibility: Adapting to Changing Needs**

Dynamic power sharing enables charging infrastructure to scale seamlessly with growing demand and evolving requirements. Whether adding new charging ports or upgrading existing infrastructure, the flexibility of dynamic power sharing ensures that charger operators can adapt to changing needs and accommodate future growth without significant investment or disruption.







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## **Grid Integration: Balancing Demand and Grid Stability**

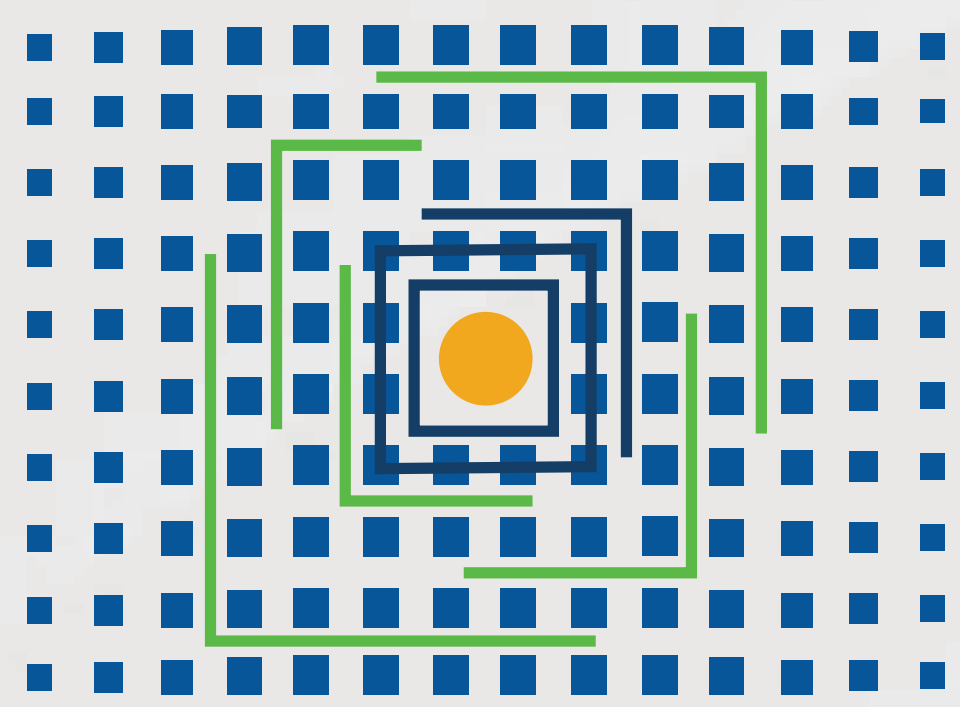
By adjusting power distribution based on grid conditions and electricity prices, dynamic power sharing plays a crucial role in grid integration and stability. Chargers equipped with dynamic power sharing capabilities can help balance demand, mitigate grid congestion, and support the integration of renewable energy sources, ultimately contributing to a more resilient and sustainable energy system.



## **Enhanced Charging Experience: Seamless and Convenient Charging**

One of the key benefits of dynamic power sharing is its ability to deliver a seamless and convenient charging experience for EV drivers. With dynamic allocation of power, drivers can plug in their vehicles without worrying about availability or wait times, streamlining the charging process and maximizing user satisfaction.





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## **The DG Matrix Difference: Flexible and Efficient**

The DG Matrix 200-kW power module presents a step-change in the way power is delivered. Rather than allocate power in fixed increments, DG Matrix has the flexibility to actively manage power output down to very small increments. This means that we can direct power from any port (or multiple ports) to any other port in any ratio or amount.

Take the example of a DG Matrix 200-kW multi-port charger connected to solar and batteries with two charging ports. A car drives up to each port, and one car requests 120 kW while another requests 80 kW. Using dynamic power sharing, the charger can determine the solar energy input and request the right amount of power from the batteries to deliver each car the charging it needs.

## **Conclusion**

As EVs continue to rise in number and variety, flexible charging solutions that can solve the charging needs of both today and the future are critical. Being able to dynamically share power between charging ports allows the flexibility to serve each vehicle exactly what it needs when it needs it. When you're thinking about implementing charging infrastructure, consider how power sharing might be an important feature for you.