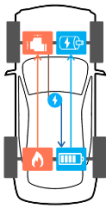
THE DIFFERENT TYPES OF ELECTRIC VEHICLES

Electric Vehicles, or **EVs**, are all over the news.
With demand on the rise due to environmental concerns, we have seen many more EVs in the news and on the road.

BUT DID YOU KNOW?

An EV is in reality, an umbrella term. Despite what many may think, EVs can still have a traditional combustion engine as well as a battery-powered motor, and can even generate electricity without necessarily plugging into a charge point.

Take a look at the different types of EVs and all the different components they utilize to operate properly on the road!

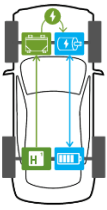


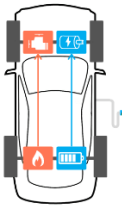
HEV
Hybrid Electric Vehicle

- Utilizes traditional internal combustion engine (ICE) with electric propulsion, meaning that the ICE charges the batteries to power the electric motor
- Still requires fuel to operate, though it has a higher fuel economy than ICE vehicles
- Less carbon emissions than ICE vehicles
- Heavier weight because of the components involved

FCEV
Fuel Cell Electric Vehicle

- Fuel cells combine hydrogen and oxygen to produce electricity, which runs the motor.
- The battery captures braking energy, conserving extra power to smooth out power from the fuel cell.
- Emissions are simply water vapor and warm air.
- Vehicles can be expensive and difficult to refuel due to the lack of fueling stations.



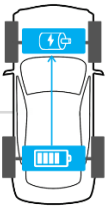


PHEV
Plug-in Hybrid Electric Vehicle

- As its name suggests, PHEVs can be charged for power, and runs mostly on the electric motor.
- Still utilizes fuel to power the ICE, but the engine is considered backup
- Prices can be higher than other vehicles
- Less fuel consumption, less carbon emissions
- Heavier weight due to components involved

BEV
Battery Electric Vehicle

- No ICE, powered by electricity only. The vehicle plugs into a charge point to recharge the battery.
- No emissions, and low maintenance
- Charging can take time, and range anxiety can limit driving distance.
- Prices can be higher than conventional ICE vehicles, but more affordable models are launching as demand rises.



SECURE IT FIRST

No matter what your vehicle is fueled by, without proper protocols in place, systems can be more vulnerable to cyberattacks. EVs are no exception! Particularly for BEVs, communication (between the vehicle and charge point as well as its servers) could pass along sensitive information.

Credit card / Payment information

Personal Identification Information (PII)

Vehicle data

Ensure that your charge point operator and mobility operator's systems are in compliance with ISO-15118 standards for V2G (Vehicle-to-Grid) communication.

This will ensure that both the vehicle and charger's certificates are verified and safely delivered, making your EV ride a secure one.

SECURE FIRST, THEN RIDE

AutoCrypt V2G secures the electric vehicle and its supply equipment (EVSE) during the Plug&Charge process, providing secure communication and certificate management.

For more information about electric vehicles, V2G, and automotive cybersecurity, visit www.autocrypt.io