WIRELESS POWER CHARGING TECHNOLOGIES

Using the inductive power standard, **SunBest International** can embed wireless charging electronics in your custom battery pack to work with off-the-shelf wireless charging pads that already exists. We also have in-house engineering resources to help you develop a custom charging pad specific for your end product.

How Does Wireless Charging Work?

The overall system comprises of a charger pad and the battery. Each part has planar coils that are used to transfer energy from the charging pad to the battery. The electrical energy is modulated so the charging pad and battery can communicate with each other. This allows the charging pad to verify that a valid battery is in place before it transmits full power to the battery.

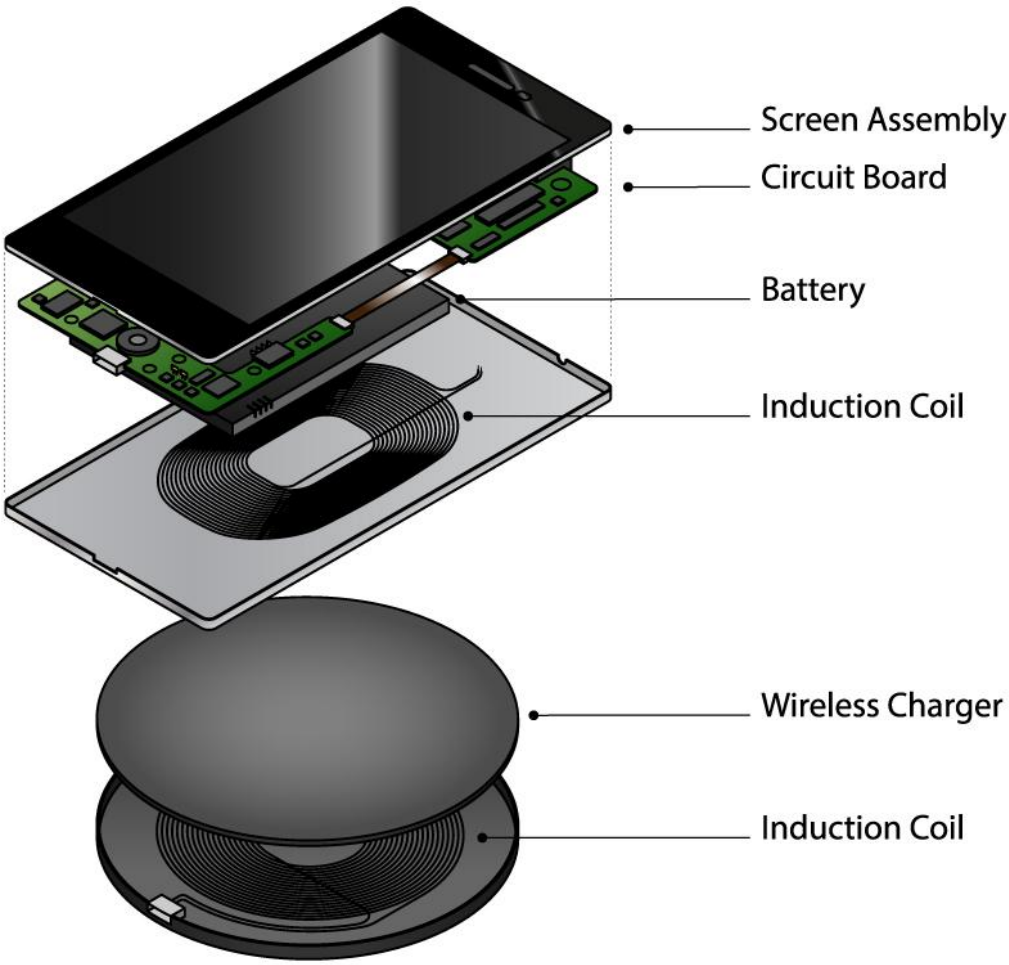

Diagram Depicting How Wireless Charging Works

This communication continues throughout the entire charging process to confirm the battery is still in place. This reduces the amount of EMI emissions from the charging pad when it is not being used.

Advantages of Wireless Charging

- Wireless charging is convenient when electrical contacts are not acceptable and the battery is embedded in the product or when the product cannot be reached. Wireless charging is commonly used in medical devices and food products where electrical shock or bacteria levels must be kept to a minimum and no electrical contacts are allowed.
- Wiring charging can also reduce the amount of cables and power adapters you need to have custom manufactured for your device or application.
- Wireless charging can be sized to deliver 5W or 10W of energy to the battery. It can be a good solution to charge your battery. It can also charge you battery at a fast rate depending on the size of the battery pack.
- In most applications the distance between the two coils is typically 5mm. It is possible to extend that range to at least 35mm.

Cost Factors of Wireless Power Charging Technologies

The costs associated with wireless power charging technologies have come down due to its increased popularity in the portable device market. However, it should still be used only when there is a real need for it to be used in your application.

Hardwired connector type charging solutions are still much more cost competitive and can deliver much faster charge times and more energy.