



# **Aircharge Technology Frequently Asked Questions**

## High power wireless charging (greater 5 Watt)

- Some wireless charging products claim to be 10W Qi or 15W Qi. You may see marketing for such products saying things like “Twice as fast as 5W Qi”, “3 times faster than 5W Qi” etc. These marketing claims are not really true. Whilst you can certify product up 15W under the Qi standard and these products can supply up to 15W of power from a Qi certified device, there are no devices that can receive 10W or 15W of power just using the Qi spec.
- Some handset manufacturers have introduced their own higher power proprietary extension. Samsung, Apple and Huawei are examples of these. These handsets can receive more power from chargers that have special software (in most cases legally only the ones that the brands manufacture themselves). They also tend to use an intelligent power source that also include proprietary protocols (e.g. Qualcomm Quick Charge). Beware that most chargers on the market that claim this have not licenced these solutions from the manufacturers and have no legal cover (see proprietary extensions/indemnity below). The true effect of this “fast charging” is minimal and typically equates to less than 5% additional battery gain in an hour period.
- Beware of many solutions that claim to deliver 20W 30W, 40W – these solutions are not Qi certified. There are no wireless charging devices that can accept this much power, the device (e.g. mobile phone) always dictates how much power is delivered, it isn't possible to “force” more power into it from the charger.

## Proprietary extensions/indemnification

- Aircharge is working hard on the release of its next generation wireless charging range which will include higher power Qi and proprietary extensions. Unlike many other manufacturers, Aircharge is working directly with leading chipset manufacturers and end device manufacturers to do this **safely** and with the correct level of **licensing and legal indemnity**. As the leading provider of wireless charging solutions for public venues, it is imperative that this level of conformity and protection is available to Aircharge customers and venues which deploy Aircharge solutions. Risks of deploying solutions that don't have this level of protection include safety risks and legal action relating to use of copied/unlicensed software.

## Through surface vs. Sub-Surface vs. On surface

Aircharge understands that there isn't a one-size-fits-all for all customers. It has solutions which support through surface, sub-surface and on-surface deployments. There are benefits and drawbacks of using one solution over another which should be explained to the customer:

### **Through Surface**

- The most commonly used solution in public venues
- Simple to prepare and install
- Visible and intuitive
- Solutions for anti-slip and movement of devices during charging
- Many different finishes and styles
- You may get the comment “we don't want to drill holes in our furniture”. The typical reply to this is that it's only a hole until it has an Aircharge unit installed which then becomes an integral part of the furniture. It would only ever be a hole again if you were to remove the charger, but with Apple, Samsung, Google, the automotive industry etc. all embracing Qi technology there is no longer the fear that the technology will become obsolete. All new solutions will be backwards compatible with older ones. There are instances where materials can't be drilled or customer demand alternative solutions and in this case the on-surface solutions can be pitched.

## Through surface vs. Sub-Surface vs. On surface

### **Sub-Surface**

- Designers often like the idea of placing wireless charging under the surface. Whilst this is an option that Aircharge offers there are several things to consider when using this approach:
  - The Aircharge branding guidelines for the surface must be followed.  
Wireless charging is still an emerging market. For public venues in particular, if the solutions can't be seen easily and made obvious as to what they are, they will not get used and therefore won't add value.
  - Mobile phones tend to have a highly polished back which slides across a surface easily. It's easy for a phone to be accidentally knocked off charge or if the user has their phone on vibrate mode messages and alerts can gradually move the phone off charge resulting in a poor experience.
  - Sub-surface designs still require the correct containment and routing for cabling
  - Aircharge sub-surface solutions specify a maximum of 4mm of surface material on top of the charger and are provided with a custom designed mechanism that supports the structure and integrity of the material it is used with.

## Through surface vs. Sub-Surface vs. On surface

### **Sub-Surface**

- There are currently no Qi certified sub-surface chargers in the Qi registry that have a Z height distance greater than 7mm to 10mm. This means all sub-surface solutions will require some routing at manufacture in order to position, affix and contain the sub-surface chargers.
- You may see solutions which claim to charge through thick surfaces and can be fixed underneath. Some may have some sort of repeater on top of the surface then to provide power to a phone/device. To date, none of these are Qi certified. These solutions tend to be highly inefficient and require a lot of power in to provide smaller amounts out, making them expensive to run. They also typically need to be tuned to a specific range of thickness, so a solution which can pass through 20mm of material may not work if used with a 10mm thick surface etc.

## Through surface vs. Sub-Surface vs. On surface

### **On-Surface**

- Some customers have furniture which is unable to be drilled for a through surface or sub-surface solution. In this case Aircharge has a range of on-surface solutions that can be used. The drawback in a public venue is that to retain the aesthetics and keep cabling tidy these often need to be placed at the end or back of a table, in a position that does not create the best user experience.



**Thomas Ketterer**

Aircharge Partner

Deutschland – Österreich – Schweiz

M DE: 0171 81 68 114

T DE: 09154 911 80 25

T AT: 0720 512 638

T CH: 0325 113 864

W: [www.air-charge.de](http://www.air-charge.de)

E: [thomas@air-charge.de](mailto:thomas@air-charge.de)

Skype: TK-Work