Drivers

The global Near Field Communications (NFC) market is growing rapidly. In fact, in 2013 alone, 275 million NFC-equipped handsets shipped worldwide*. Championed by mobile phone handset manufacturers, the integration of NFC into phones allows for many new, exciting applications. NFC technology is being integrated in security access and control systems, used for peer-to-peer file sharing applications, transit transportation payment systems, point of sale terminals, and now extensively used to pair consumer devices to a smart phone.

NFC Applications

A key aspect of designing an NFC-enabled device is to understand its use case. Systems can use both active (powered) and passive (non-powered) tags that are read by a central “reader” – the primary device tasked with scanning the tagged products. They are capable of transmitting and recording energy over a distance of a few meters! This transmission distance is problematic when the information is sensitive, such as personal account information, and must be kept short for security purposes. NFC standards define the intended link budget between the two NFC designed antennas as being able to communicate up to a distance of 4” (100mm).

Challenges

One of the major challenges of integrating NFC into a product’s system is having confidence the antenna will meet the requirements of the NFC standard required. As an antenna supplier, it is critical to understand these standards. When integrating an antenna, size, shape, and material selection is critical to the design-in process. Pulse offers experience in understanding these requirements and testing to the standards to ensure compliance.
Catalog Offering

In an effort to meet the growing demands for catalog NFC antenna solutions, Pulse is proud to announce the launch of four new antenna solutions. The W3579 and W7013 are ferrite-backed flex antennas designed for tight-quarter placement integration, for lower volume programs. These 35x50mm and 25x30mm respectively antennas are commonly used for mobile phones and portable equipment. Both antennas are readily available for sampling.

The W7001 is an NFC stamp antenna designed for cost considerations. It consists of a flexible, conformable PCB with adhesive for quick, easy mounting. If needed, a specific connector and wire/cable assembly may be added as required by the individual integration. Target applications should focus on contact and non-contact short distances (10-35mm), such as pairing and sharing applications in which the antenna is not located next to a metal surface which can affect this antennas performance.

The W7002 is an NFC wire loop antenna optimized on a plastic carrier. The carrier is designed to fit around a display or keypad. The design can also accommodate a specific connector and wire/cable assembly as required by the individual integration. Target applications should focus on non-contact mid range distances (30-100mm) such as security access applications.

If you are looking to partner with an antenna supplier to make your products compliant with NFC standards, from ISO 14443B specifications to NFC-Forum Type 4 Tag compliance, let Pulse be your first choice!

* Source: IHS