

# ECOUPLED™ EXPLAINED

## What is eCoupled technology?

eCoupled technology is an intelligent wireless power technology developed by Fulton Innovation. It allows eCoupled-enabled power sources and devices to communicate and transmit power over a short range without wires.

## How does it work?

eCoupled technology works based on the principle of resonant magnetic induction. Magnetic induction means that electricity travels via magnetic fields instead of conductive material. Wireless power has been used however inefficiently in one form or another since the days of Nicola Tesla in the late nineteenth and early twentieth centuries.

Most electronics today use a power cord to transport power to the device's electronic circuits. From there, a transformer uses magnetic induction to form an inductive link that transfers power between the internal circuits. eCoupled technology simply replaces the conductive power cord with another inductive link.

Just like a transformer, eCoupled technology uses coils to transmit energy. One coil in the eCoupled power supply generates a magnetic field at a frequency that will resonate with a second coil in an eCoupled-enabled device. This resonant magnetic field causes electricity to be generated in a device with the second coil. One eCoupled-enabled power supply can power several compatible devices.

What is the value?

eCoupled technology is valuable because wireless power is a tremendous step forward in power supply/transfer for any industry and any application. In addition to the convenience of no more power cords, it will help make electronics more reliable, safer and more energy efficient.

## How is eCoupled special?

eCoupled is different from other wireless power technologies in several ways.

First of all, it's intelligent. eCoupled has a proprietary circuit design that makes sure power is supplied at the right time, and to the right devices. This also makes the device safe. If there is no eCoupled-enabled device present, no power is supplied. If there is an interfering object present, the power source shuts off automatically. If there is an eCoupled-enabled device present, but it is already fully charged or turned off, the same holds true—the power source shuts off. Its resonant magnetic field means that there is very little interference with mobile phones and other wireless devices. Additionally, eCoupled technology can transmit power at up to 98 percent efficiency—which is better than many AC adaptors.

As you can imagine, this also makes eCoupled technology safe. So safe, in fact, that it has been validated by standards organizations in 36 countries for safety, electromagnetic compatibility (noise) and other international performance criteria.

Finally, eCoupled technology is adaptable. It can power multiple devices at different levels and transmit data at up to 1.1 Mbps. It can supply power to devices from milliwatts to kilowatts (that's the difference between a cell phone and a frying pan).

## How was it developed?

eCoupled technology was originally developed as a safe way to deliver power to the eSpring™ water filtration system. As the technology was adapted to solve the challenge with the eSpring system, the team soon realized the true potential of wireless power. At that point, the technology was developed further, a strong IP portfolio was established and the team at Fulton Innovation began to look for partners who were interested in bringing the technology to market.

## When will I see it for sale?

It already is! eCoupled technology has been part of the Amway eSpring water filtration system for over seven years. Other partner companies, such as Energizer and Leggett & Platt, have announced product launches beginning in 2009.