

How does eCoupled™ technology work?

eCoupled technology supplies power and communication wirelessly through an inductively-coupled power circuit that dynamically seeks resonance, allowing the primary supply circuit to adapt its operation to match the needs of the eCoupled-enabled devices it recognizes.

The technology overcomes the limitations of spatial rigidity, static loads and unacceptable power losses that previously restricted development efforts. It intelligently adapts to multiple loads—from milliwatts to kilowatts—and spatial configurations while maximizing energy transfer efficiencies.

What makes eCoupled technology unique?

Intelligence: eCoupled technology uses a proprietary protocol to communicate with the devices it powers. It authorizes instantaneous identification of eCoupled-enabled devices and utilizes two-way feedback on the operation and status of the powered devices to monitor performance and power needs. By using tightly coupled fields and actively maintaining a high level of control, eCoupled technology is able to realize high efficiencies, reduce energy losses and insure the highest safety levels.

Parasitic Metal Detection: eCoupled technology immediately recognizes when any inappropriate device or object (non-eCoupled-enabled device) comes within range of a power source and automatically shuts down, maintaining one of the safest operating environments in the industry. The technology also focuses power on the eCoupled-enabled devices within range.

Environmentally Preferred: eCoupled technology's intelligence makes it an environmentally preferred solution. Its intelligent communication protocols and design-friendly nature eliminates unnecessary cords and outdated power solutions, and reduces energy being wasted through inefficient chargers. It also enables product designers and manufacturers the ability to reduce their carbon footprint and reduce landfill waste.

Is eCoupled technology just a concept?

No. The engineers behind eCoupled technology have been developing and perfecting the technology for over eleven years. eCoupled technology has been in the marketplace for over eight years in Amway's eSpring™ Water Purifier with over 1.5 million systems sold in 38 countries to date.

How much power can eCoupled technology provide?

eCoupled technology can provide power to a wide range of devices—from milliwatts to kilowatts.

Once a device is fully charged, will the primary coil stop charging the device?

Yes, the primary power supply responds to the needs of the device, and if a given device is fully charged, eCoupled technology recognizes this state and discontinues power delivery.

What does eCoupled technology mean for consumers?

Consumers who have been frustrated by too many incompatible wires, cords and chargers can now look forward to the convenience of having a single universal solution for charging their devices wirelessly.

In what ways can manufacturers benefit from implementing eCoupled technology?

Manufacturers can benefit from increased product safety and performance, product differentiation, lower production costs and lower warranty costs. Consumer demand for the elimination of power cords and charging problems is immense.

What level of “future proofing” does the design of the primary coil offer? For example, will an existing primary coil be able to wirelessly charge handheld devices that become available two years from now provided they have a secondary coil?

Designs have been developed to incorporate standards and design flexibility that would allow the design to be very versatile over an extended period of time.

Does the primary coil offer a sleep mode where the unit draws minimal current until it senses a device that can be charged?

Yes. It draws a minimal current while searching for an eCoupled™-enabled device. When a device is recognized, it will analyze and supply power as needed.

What input voltage range (DC) will the primary coil accept?

DC rail voltages have been scaled from 3VDC to 340VDC.

Does Fulton Innovation plan to manufacture eCoupled-enabled devices or the supporting components?

Currently, Fulton Innovation is working with a number of supply chain partners that will be manufacturing components for our licensing partners.

How does the adaptive inductive power circuit handle simultaneous charging of multiple handheld devices with different charging requirements?

Fulton Innovation engineers have developed proprietary solutions designed to handle everything from simple to very complex charging challenges.

What is the maximum power that the primary coil can provide?

Presently, the technology is transferring over 1,400 watts at better than 98% efficiency. Further scaling is possible as applications evolve.

How will eCoupled technology affect the pricing of products?

eCoupled technology provides a low cost method to implement wireless power. Ultimate pricing will depend on specific features and benefits and will be determined by the manufacturers who license eCoupled technology.

Who is Fulton Innovation affiliated with?

Fulton Innovation is bringing eCoupled technology to market through partnerships with leading organizations in a wide range of industries. Fulton Innovation and a growing list of industry leaders, including Avid, Bosch, case-mate, Energizer, Leggett & Platt, Motorola, Texas Instruments, and the Wireless Power Consortium, are working together to commercialize portable consumer electronics solutions and create a global standard.

Is there a wireless power standard?

Fulton Innovation is a member of the Wireless Power Consortium, a global organization of industry-leading companies including Philips, Samsung, Motorola, Texas Instruments, Sanyo, Nokia, and more. In June 2010, the WPC created the Qi wireless power global standard for handheld devices such as cell phones, MP3 players, and digital cameras, requiring five watts of power or less. The standard opens the door for full interoperability between device manufacturers and OEMs worldwide - a vital step in driving widespread consumer adoption of wireless power. The standard includes elements of Fulton's eCoupled technology.

What devices and industries can benefit from the technology?

Any product that requires power can utilize eCoupled technology, from common consumer electronics devices such as cellular phones, digital music players and PDAs, to medical devices, power tools, office electronics and kitchen appliances.

Can eCoupled technology transfer data?

Fulton Innovation has integrated low-cost modulation into the circuit enabling the primary and eCoupled-enabled device to wirelessly transfer data at rates of up to 1.1 Mbps.

For a complete up-to-date list of frequently asked questions, please visit ecoupled.com.