

Technology Overview

Award-Winning RF Harvesting Technology Enables High Function RFID

Powercast has developed and productized patented technology for *efficiently* converting common RFID reader signals into electrical power, which can then be used to power electronic devices. The Company's Powerharvester® receivers can generate power purely from a standard RFID reader. When used in conjunction with a standard RFID chip, Powercast can provide *High Function RFID*: Sensor Tags, Visual Tags, etc. Powercast's solutions are currently capable of delivering power from microwatts (uW) up to almost half a watt (W). Products are available in chip format or as fully developed RFID tags.











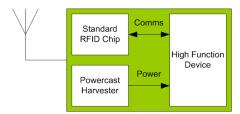
How It Works

An RFID reader generates an electromagnetic signal via an antenna. An RFID tag's receiving antenna captures a portion of that signal. Powercast's highly specialized and efficient RF to DC converter (50-75% conversion efficiency), then transforms the signal into usable energy that can then be used to power connected devices such as sensors or a display. A standard RFID chip provides identification ability and a low cost wireless communication link for data to and from the reader.

Applications

- Bi-stable display tags (Image Retention)
 - Retail Pricing
 - Package Tracking
 - Logistics
- Sensor tags
 - Industrial process monitoring
 - Cold-chain monitoring
 - Body worn devices

High-Function Powercaster Device Transmitter Identification Sensors Biometric Processing Biometrics Cards Bi-stable displays Battery charging · Low-power radio: • I FDs ePaper • Audio Signs / Labels RFID Reader



Typical High Function RFID Tag Block Diagram

Distribution

The Powercast chipset, modules, and development tools are distributed by: Arrow Electronics, Future Electronics, Mouser Electronics, and Tokyo Electron Device.

Intellectual Property Portfolio

Powercast's products are protected by a growing and strong worldwide IP portfolio. The company's IP portfolio includes 41 patents worldwide (21 in the US) and 29 pending patents covering many aspects of RF wireless power including Powercast's highly efficient Powerharvester receiver and Powerspot® Transmitter. Powerharvester and Powercaster are registered trademarks of Powercast Corporation.

Key Benefits

- Lifetime devices NO BATTERIES!
- Green technology
- Power over distance (up to tens of meters)
- Eliminate wiring & battery replacement (material & labor)
- Sealed, reliable, connector-free devices
- · Enables high temperature operation



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