



RFID CASE STUDY: Cephalon

In collaboration with



Improving Patient Safety with RFID-enabled Packaging and Logistics

Evaluating Company

Cephalon, Inc. is an international biopharmaceutical company dedicated to the discovery, development and marketing of innovative products in four core therapeutic areas: central nervous system, pain, oncology and addiction. The company currently markets six proprietary products in the United States: PROVIGIL® (modafinil) Tablets [C-IV], FENTORA™ (fentanyl buccal tablet) [C-II], ACTIQ® (oral transmucosal fentanyl citrate) [C-II], GABITRIL® (tiagabine hydrochloride), TRISENOX® (arsenic trioxide) injection, and VIVITROL® (naltrexone for extended-release injectable suspension).

Pilot Program History

Cephalon began evaluating RFID technology in 2004. The initial phase of the pilot program, which captured the movements of placebo product and prototype packaging in a distribution center, was completed in December 2005. Phase 2 of the pilot program, completed in July 2006, consisted of shipping tagged product to an RFID-enabled wholesaler. Cephalon is currently implementing phase 3 of the pilot program which tests RFID-tagged cases and pallets in a manufacturing environment.

Pilot Goals

1. Compare results of RFID Gen 1 tag readability and placement tests with similar tests using Gen 2 technology.
2. Evaluate the performance (sensitivity and receptivity) of the Impinj UHF Gen 2 Speedway™ reader.

Testing Facility Description

Testing was conducted at ADT's RFID active warehouse test facility in Boca Raton, Florida, which is an officially accredited EPCglobal Performance Test Center. The facility models Cephalon's production environment with dock door portal and conveyor configurations, RFID tagged pallets and cases and metal content packaging.

Challenges and Desired Outcomes

Significantly improved packaging line throughput and tag read reliability over RFID Gen 1 implementation with pallets and cases of pharmaceutical product with inner product packaging constructed of densely packed metallic blister material (typically difficult packaging material for RFID systems).



A technician at ADT's EPCglobal-accredited RFID Performance Test Center in Boca Raton, Florida, makes the final connections on an Impinj UHF Gen 2 Speedway™ reader.

FULL PALLET TEST RESULTS:

RFID Technology	Portal Hardware Configuration	Product Tested	Range	Portal Speed	Result
Gen 1	- 1 Gen 1 Reader*, 4 antennas - Gen 1 tags	FENTORA (tablets)**	11.56 feet (case label placement test)	7 mph	- Case tag detection rate: 9.77% - Number of pallet positions detecting 100%: 1
Gen 2	- 2 Impinj Speedway readers, 4 antennas - Gen 2 tags	FENTORA (tablets)	19.94 feet (case label placement test)	7 mph	- Case tag detection rate: 93.17%*** - Number of pallet positions detecting 100%: 6

* Running more than one reader in a Gen 1 portal configuration was not practical due to synchronization issues.

** Packaging changes made between prototype and final FENTORA packaging could have helped or hindered Gen 2 test.

*** First step in a continuous improvement program to reach 100% read rates.

“The tremendous improvement in read rates when comparing Gen 2 to Gen 1 is nothing short of phenomenal. The benefits associated with implementing Gen 2 technologies are evident.”

Randy Bradway
Vice President
Commercial Operations
Cephalon Inc.

FOR MORE INFORMATION ABOUT THE COMPANIES INVOLVED IN THIS CASE STUDY, PLEASE VISIT:

WWW.ADT.COM

WWW.CEPHALON.COM



Impinj, Inc. 701 N. 34th Street, Suite 300 Seattle, WA 98103 www.impinj.com
rfid_info@impinj.com Tel: 206.517.5300 Fax: 206.517.5262