DUAL INTERFACE:
A CPI experience

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We Support Our Customers Globally

Colorado
Secure
200+ Employees

Nevada
Non-Secure
400 Employees

Indiana
Secure
100 Employees

Minnesota
Secure
150 Employees

Colchester
Non-Secure
90 Employees

Toronto
Secure
150 Employees

Liverpool
Non-Secure
110 Employees
Colorado Overview

• Located in Littleton
  – Manufactures secure cards (financial, RFID, smartcard-chip & DI, ID)
  – Produces 20mm+ cards per month
  – Certified by Visa, MasterCard, Discover and American Express
  – Manufactured more then 100,000,000 contactless chip cards.
  – Developed SPS solution for PIV cards in 2006. FIPS 201 certified.
  – Actively producing dual interface EMV cards for financial banks.
CPI Card Group - DI history

1997 CPI Card Group - Motorola

- Dual interface based product with conductive epoxy paste
- Poor yield
- Low throughput
- High quality out of our facility
- 6 months in the field card failure due to oxidation and shrinkage of the epoxy paste.
- Motorola users disappointed in technology performance in field.
Technology for Dual-Interface Cards

- Dual Interface solutions use an antenna module and a passive antenna Ebooster® located in the card body.
- Technology based on a specific electromagnetic coupling between both elements.

⇒ No more physical connection between module/antenna
Technology for Dual-Interface Cards

SPS’ solution (Patented) for Dual Interface card is made of:

- Antenna Ebooster® laminated inside the card
- A micromodule with the ISO contacts and a small antenna on the opposite side
Technology for Dual-Interface Cards

As SPS’ technology does NOT use physical connection, the Dual Interface cards are extremely robust. It is the unique solution that can guarantee an absolutely secure and reliable Dual Interface Card.
Technology for Dual-Interface Cards

Manufacturing Process

SPS’ Solution
The same as standard process for contact Card

- SPS dual interface module
- Antenna Ebooster® manufacturing
- Card milling
- Embedding
- Test

Customer

The embedding process is a standard process used to embed contact modules

- High throughput
- High Yield

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Technology for Dual-Interface Cards

Variant: Hybrid Platform

Card which contains 2 chips: contact + contactless

Standard Manufacturing Technology:
Contactless chip integrated in a Prelam.
Yield loss of contactless chip for:
✓ Prelam lamination
✓ Card printing and lamination
✓ Contact module embedding

With SunHybrid technology
✓ 2 chips assembled in the same module (contact + contactless)
✓ Embedding of good modules in good cards only
✓ Flexible process: Manufacturing of Hybrid card / Dual Interface Card as a contact card.
✓ No specific requirement on silicon specification, for polycarbonate lamination (temperature and pressure)
Technology for Dual-Interface Cards

Banking:
✓ Mastercard (Paypass) & Visa (Paywave) certified
✓ Unique solution of the market compliant with 5 lines embossing (ID 1 antenna)

Suitable with Major Reliability Standards: Mil std 883 (Method 1008.2), IEC 600-68-2-3, IEC 600-68-2-1, EMV CQM V1.9D, ISO 10373, ISO 7816, ISO 14443

Main Markets: ID, Banking, Transport

Flexible solution
✓ compliant with a large range of chips & OS
✓ suitable to a wide range of materials: PVC, PC, PET, PET/PVC, PETG, Teslin™
Dual Interface

Market Expectations

- Canadian EMV migration-2010
  - 50mm + cards.
  - Banks issuing contact and contactless-DI.
- ID Market-PIV, National ID’s
- Forecast for dual interface-globally
  - 2011-15mm to 20mm North America.
  - 2012-15mm to 20mm North America. 30mm+ globally
  - 2013-Increase by 15% over 2012.
- CPI expects to gain same market share we currently have in present financial market.
Dual Interface

Challenges for Dual Interface Market

– Cost
– Reliability of dual interface in field
– Trust
– Bank benefits: PayPass/PayWave
  convenient, speed, ease-Education
– Market/Business opportunity
  NFC mobile deployment
– Card manufacturing global capacity
How can we help you?

Thank you.

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