



Advanced Card Systems Ltd.
Card & Reader Technologies



ACOS 10

PBOC 2.0 ED/EP Card

A Product Presentation



Rundown

1. Product Overview
2. Product Features
3. Comparison Charts
4. Product Applications
5. Q & A

A red globe with a grid pattern is positioned in the top right corner of the slide. It is partially cut off by the edge of the frame. The globe is set against a white background with a subtle pattern of white, rounded rectangular shapes.

Product Overview

The ACS logo consists of the lowercase letters 'acs' in a bold, red, sans-serif font, enclosed within a red oval border.

acs

Product Overview

ACOS10 Series

PBOC 2.0 ED/EP Card

Contact interface
[32 KB EEPROM Size]



Module



Full-Sized card



SIM-Sized card

Contactless interface
[8 KB EEPROM Size]



Full-Sized card

Combi interface
[8 KB EEPROM Size]



Full-Sized card



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Product Features

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Product Features of ACOS10

Contact Interface

- Large EEPROM Size: 32 KB
- ISO 7816 Parts 1-4 Compliant
- T=0 Protocol
- Configurable ATR
- Fast and configurable communication speed up to 115 Kbps

Combi Interface


- Supports both contact and contactless interface by the same chip
- 8 KB EEPROM memory
- ISO 7816 Parts 1-3 compliant
- ISO 14443 Parts 1- 4 & ISO 14443-A Compliant
- Protocol T=CL (for Contactless Interface)
- Data transfer rate supports up to 848 Kbps

Contact Interface

- 8 KB EEPROM memory
- ISO 14443 Parts 1- 4 & ISO 14443-A compliant
- Protocol T=CL
- Data transfer rate supports up to 848 Kbps

Common Features

- National Standard – PBOC 2.0 e-Deposit and e-Purse certified
- DES/3DES/Secure Messaging/MAC
- FIPS 140-2-compliant hardware based random number generator
- Anti-tearing function support
- Mutual Authentication with Session Key Generation

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Comparison Charts

Comparison Chart

Category		ACOS10	ACOS10 Combi*
Product Code		ACOS10-B	ACOS10-G
Communication Speed			
Contact	9,600 BPS - 223,200 BPS	✓	✓
Contactless	106,000 BPS - 848,000 BPS		✓
EEPROM Size			
User Memory		32 KB	8 KB
Protocol			
Contact	T = 0	✓	✓
Contactless	T = CL		✓

*ACOS10 Contactless card has the same contactless features of ACOS10 Combi card.

Comparison Chart

Category		ACOS10	ACOS10 Combi*
ISO Standards			
Contact	ISO 7816 – 1/2/3/4	✓	✓
Contactless	ISO 14443-1/2/3/4	✓	✓
	ISO 14443 Type A	✓	✓
PBOC 2.0 e-Deposit/e-Purse		✓	✓
File Systems			
Transparent (Binary File)		✓	✓
Linear Fixed Record		✓	✓
Linear Variable		✓	✓
Cyclic		✓	✓
Security/Cryptographic Capabilities			
DES/3DES		✓	✓
Secure Messaging		✓	✓
Mutual Authentication		✓	✓
FIPS 140-2-compliant hardware based random number generator		✓	✓

*ACOS10 Contactless card has the same contactless features of ACOS10 Combi card.



Comparison Chart

Category	ACOS10	ACOS10 Combi*
EEPROM Endurance		
100,000 write/erase cycles	✓	
500,000 write/erase cycles		✓
Applications		
e-Government and e-Healthcare (e.g., Identification, Healthcare ID, Social Security ID, etc.)	Identification, Healthcare ID, Social Security ID	Identification, Healthcare ID, Social Security ID
Logical and Physical Access Control (e.g., Enterprise Security, Corporate ID, Time and Attendance, etc.)	Corporate ID, Campus ID, Network Security, Insurance Card	Corporate ID, Campus ID, Network Security, Insurance Card
Loyalty and Retail (e.g., Cashless retail payment, Customer loyalty, etc.)	e-Payment, Customer Loyalty, Petrol Card, Toll Card	e-Payment, Customer Loyalty, Petrol Card, Toll Card

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Product Applications

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In what areas can we apply ACOS10?



Banking Card



City All-in-1 Card



Transportation Card



Insurance Card



Highway card



Campus Card



Petrol Card



Micropayment

How to Use ACOS10 - Overview

Sample Scenario: Campus Card Application

School issues ID card to Students



Information stored

e.g.:

1. Student Number
2. Student Name
3. Address
4. Gender
5. Section



Insert **ACOS10** to log in to a computer using **ACR38 PocketMate**

School Services



Computer Laboratory

Students can securely access the school's intranet



Library

Students use the card to check out books at the library

How to Use ACOS10 - Overview

Sample Scenario: e-Deposit Application

Bank issues card to Customers



Information stored

e.g.:

1. Cardholder's Name
2. Account Number
3. Address
4. e-Deposit Amount

Consumer uses the card in a self-service petrol station



Tap ACOS10 to a contactless card reader (e.g., ACR1283L)

Consumer drives to the highway and presents card at the toll booth



Tap ACOS10 to a contactless card reader (e.g., ACR1283L)

At home, consumer checks the balance of the card via the internet



Tap ACOS10 to a contactless card reader (e.g., ACR1251)



Thank You!



For more information, visit:

<http://www.acs.com.hk/en/products/112/acos10-pboc2.0-edep-payment-card/>

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