ACOS10
PBOC 2.0 ED/EP Card

Advanced Card Systems Ltd.
Card & Reader Technologies

Outline

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   - Technical Specifications
2. Product Applications

Product Information

ACOS10 Series

PBOC 2.0 ED/EP Card

**Contact interface
[32 KB EEPROM Size]**

**Combi interface
[8 KB EEPROM Size]**

**Contactless interface
[8 KB EEPROM Size]**

The ACOS10 is also available in module and SIM-sized form factors. ACS also offers various customization options.

Key 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 223.2 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

Technical Specifications

	ACOS10 Contact	ACOS10 Combi	ACOS10 Contactless
Product Code	ACOS10-B	ACOS10-G1K	ACOS10-G1L
User EEPROM Memory			
User Memory	32 KB	8 KB	8 KB
Endurance (write/erase cycle)	100,000	500,000	500,000
Compliance to Standards			
Contact — ISO 7816 – 1/2/3	✓	✓	-----
Contact — ISO 7816 – 4	✓	✓	-----
Contactless — ISO 14443 - 1/2/3/4	-----	✓	✓
Contactless — Type A	-----	✓	✓
PBOC 2.0 e-Deposit/e-Purse	✓	✓	✓

Technical Specifications

	ACOS10 Contact	ACOS10 Combi	ACOS10 Contactless
Communication Speed and Protocol: Contact Interface			
Protocol	T=0	T=0	-----
Speed	223.2 kbps	223.2 kbps	-----
Communication Speed and Protocol: Contactless Interface			
Protocol	-----	T=CL	T=CL
Speed	-----	106 - 848 kbps	106 - 848 kbps
Operating Conditions			
Temperature	-25 °C to 85 °C	-25 °C to 85 °C	-25 °C to 85 °C

Technical Specifications

	ACOS10 Contact	ACOS10 Combi	ACOS10 Contactless
File System			
Transparent (Binary File)	✓	✓	✓
Linear Fixed Record	✓	✓	✓
Linear Variable	✓	✓	✓
Cyclic	✓	✓	✓
Cryptographic Capabilities			
DES/3DES	56/112 bits	56/112 bits	56/112 bits
MAC	-----	✓	✓
Secure Messaging	✓	✓	✓
Mutual Authentication	✓	✓	✓
Random Number Generator	✓	✓	✓

Product Applications

In what areas can we apply ACOS10?

City All-in-One Card

Transportation

Insurance Card

Banking Card

Micropayment

Highway / Toll Card

Campus Card

Petrol Card

ACOS10

Payment

PBOC2.0 EDEP Payment Card

Contact

How to Use ACOS10 - Overview

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

Bank issues card to Customers

Information stored

e.g.:

1. Cardholder's Name

2. Account Number

3. Address

4. e-Deposit Amount

Customer uses the card in a self-service petrol station

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

Customer drives to the highway and presents card at the toll booth
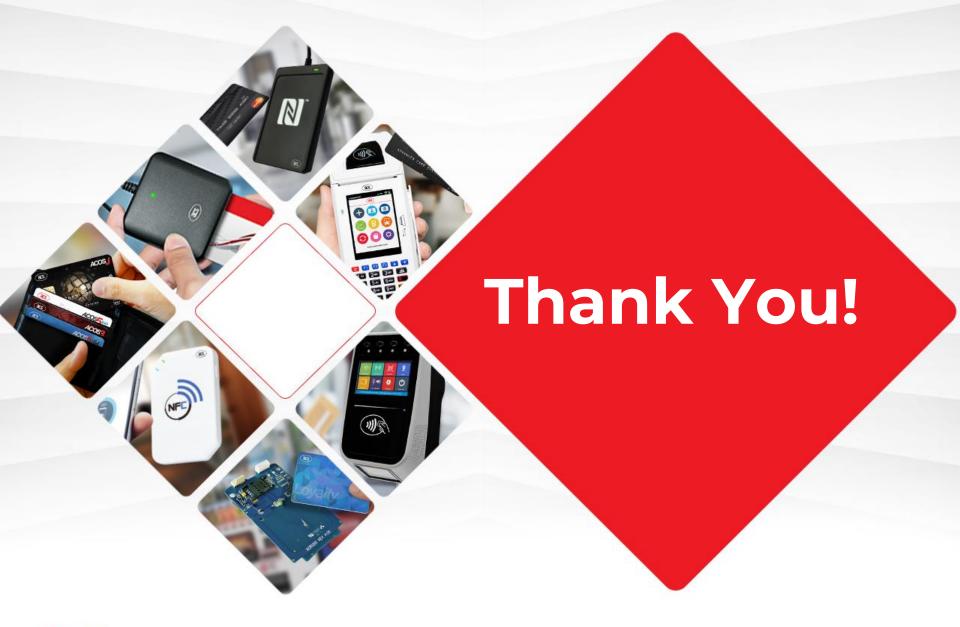
Tap ACOS10 to a contactless card reader (e.g., ACR1283L)

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

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

Thank You!

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