Advanced Card Systems Ltd.
Card & Reader Technologies


# APG8201

## PINhandy + USB OTP Generator

A Product Presentation




www.acs.com.hk

# Presentation Rundown

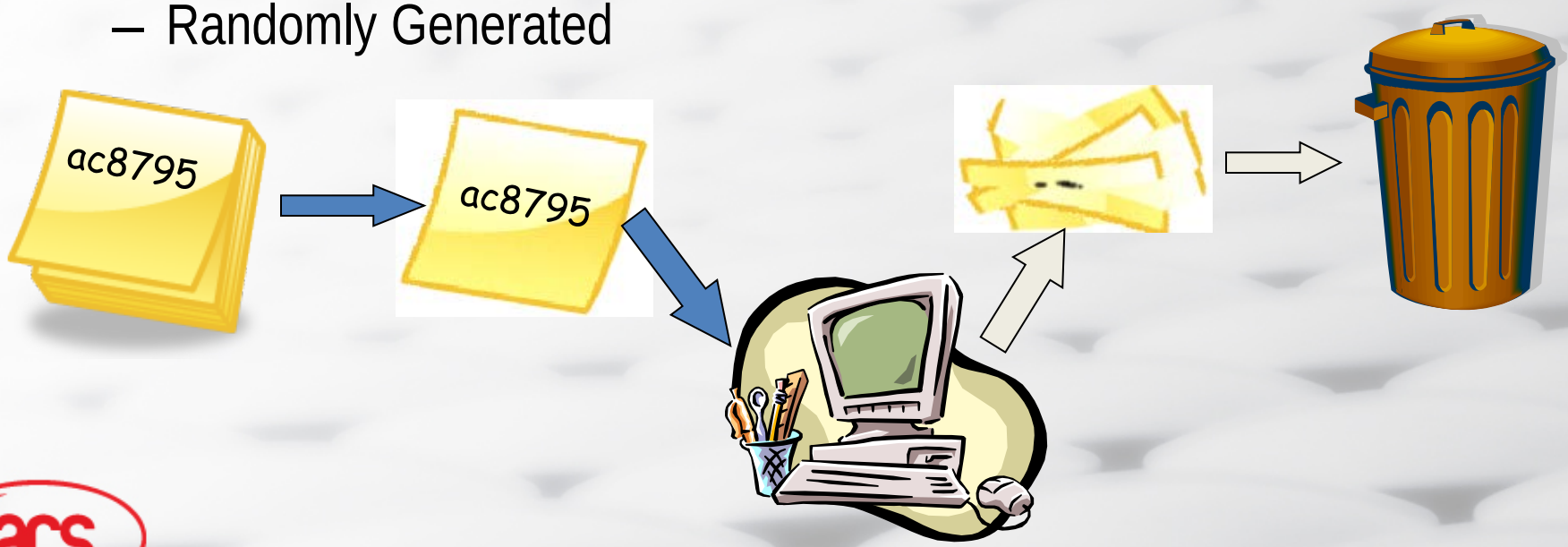
- Introduction
- Product Overview
- Product Features
- Product Value
- Product Applications
- Question and Answer

# Introduction

- As technology becomes more and more sophisticated, fraud-related incidents in the banking sector also become more prevalent.
- These occurrences generate billions of dollars worth of losses and bring distress among credit and debit cardholders. Because of these, certain security measures and systems are created.
- In this regard, the APG8201 PINhandy + USB OTP generator is a reliable tool that can be utilized to fight these occurrences.

# Introduction: One Time Password

- One Time Passwords are password that can be used only ONCE
- Types of OTPs:
  - Predefined from a list
  - Randomly Generated



# Introduction: One Time Password

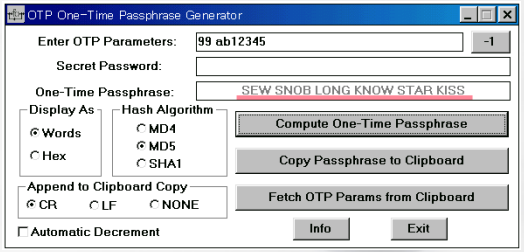
- More secure since its almost impossible to hack or phish.
- No need to remember multiple passwords for different systems.
- Dynamic passwords: Unique Password for Each Person

| PIN | VS | OTP |
|---|---|---|
| Static Password | | Dynamic Password |
| Memorization of multiple passwords | | Little Memorization or no Memorization at all |
| Set of passwords is personalized | | Two people will never have the same set of passwords |

# Introduction: OTP Devices

- Devices or applications that can generate one-time passwords
- Can be classified into Mathematical algorithm type, time-synchronized type and challenge type
- More secure than using traditional printed OTP list

OTP scratch card

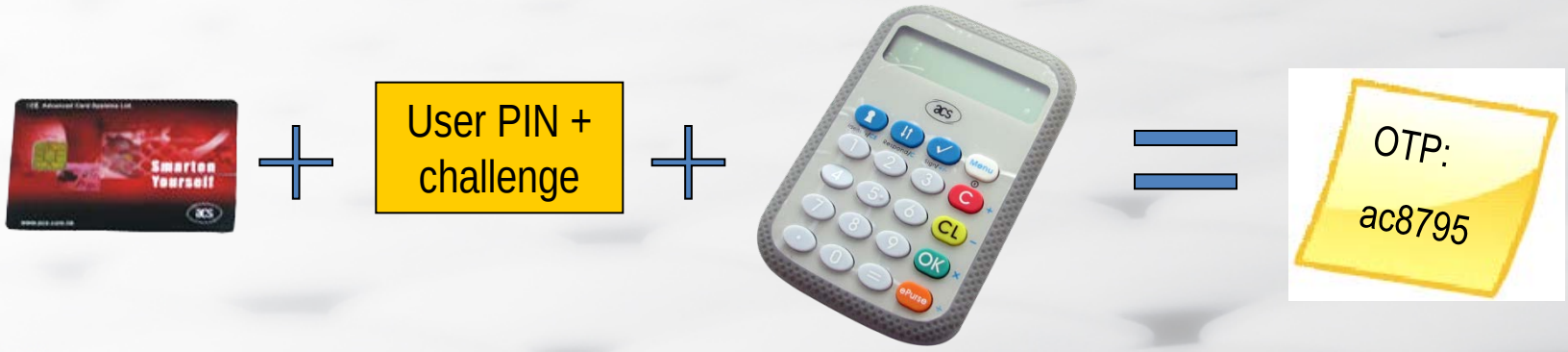



OTP applications


OTP devices

# Product Overview

- Supports Challenge-response and Transaction Data Signing Modes
- Requires the presence of smart card, PIN and challenge code prior the generation of OTP



# Product Overview

- PC Linked Mode
- Standalone Mode
- USB 2.0 Full Speed
- Supports PC/SC 2.01 Secure PIN Entry
- Handheld Device with Compact and Portable Design

# Product Overview


Card Slot
*(contact type connector)*
*(min 100K insertion cycles)*

LCD *(2 x 16 chars)**

Large area for logo

CAP Authentication modes (L-R)
1. OTP
2. Challenge-response
3. Signature
4. TDS

20 Numeric Keys
*(R: Reserved for Future Use)*

Value-added
Calculator + E-purse
Function

*Graphical LCD for showing Logo
Multiple Languages: Simplified Chinese, Traditional Chinese, French, English

# Product Overview

2 x CR2032 batteries
(5 years life expectancy)

Buzzer

Reset Button

USB port
(for APG8201only)

# Product Features


Standalone Mode or USB Connected Mode

Size:
95mm x 60mm x 11mm

Other Features:
Graphical LCD (128x24 Pixels)
Keypad with 20 Silicon Keys
Monotone Buzzer
Calculator Function

Contact Card Support:
ISO 7816 (Class A)
MCU Cards (T=0, T=1)

Smart Card Interface:
PC/SC
Secure PIN Entry (SPE)
CCID in USB Connected Mode

Supported Languages:
English
French
Traditional Chinese
Simplified Chinese

# Product Features

EMV Level 1 Certified

ISO 7816 Support

PCSC Compliant

Mastercard CAP

Mastercard PLA/AA4C

VISA DPA

UK APACS

APG8201

CCID Compliant

OS Support:

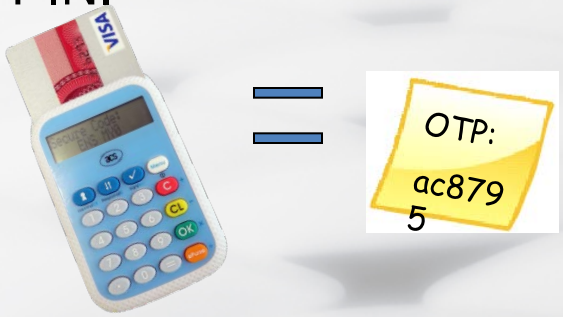
1. Win 98
2. Win ME
3. Win 2000
4. Win XP
5. Win 7
6. Win Vista
7. Win Server 2003
8. Win Server 2008
9. Win Server 2008 R2

CE and FCC Compliant

RoHS Compliant

# Product Value

- It is specially designed to safeguard users from the emerging fraud attacks like Card-not-Present (CNP) fraud and emerging Man-in-the-Middle attacks.
- Key generated will be based on the smart card to be used with the device
- It provides proof that a card is present during an OTP process.
- The PIN is securely entered on the device rather than the vulnerable PC or workstation, hence eliminating the possibility of a Virus/Trojan getting hold of the PIN.



# Application Overview

Windows Logon

Corporate Security

Online Gaming


eCommerce/eBanking

Loyalty System

Home Banking

# Application Overview


**STANDALONE MODE**

**Usage: Dynamic Password Generator**

Standard Supported:
MasterCard Chip Authentication Program (CAP)
MasterCard Advanced Authentication for Chip (AA4C)
VISA Dynamic Password Generation (DPA)

# e-Banking: Identify Mode

User browses the Online webpage of the online-banking, and try to logon, which username.


Insert the card
Choose Identify Mode
Input the PIN

OTP Token Generated:
4356 7869

Input Details Indicated in the Website (i.e. Card Number)
Input OTP generated in the website

Information Verified By the CAP/AA4C Backend Server

Once verified by the backend server the website will permit the transaction to continue

User can access his/her information online

# e-Commerce: Challenge-Respond Mode

User browses the Online webpage to purchase goods/services

Merchant Website provides a challenge ( i.e. random/hashed number)


Insert the card
Choose Mode 2
Input the PIN
Input Challenge

OTP Token Generated:
4356 7869

Input Details Indicated in the Website (i.e. Card Number)
Input OTP generated

Information Verified By the CAP/AA4C Backend Server

Once verified by the backend server the website will permit the transaction to continue

User is able to purchase goods and services

# e-Banking: Sign Mode

User chooses to perform Fund Transfer

The e-Banking Website asks the user to sign the transaction to continue


Insert the card
Choose Mode 3
Input the PIN
Input Challenge
Enter Transaction Amount

OTP Token Generated:
4356 7869

Input Details Indicated in the Website
Input OTP generated

Information Verified By the CAP/AA4C Backend Server

Once verified by the backend server the website will permit the transaction to continue

User has successfully performed fund transfer

# e-Banking: Transaction Data Signing

User chooses to perform Fund Transfer (large sums of money involved)

The e-Banking Website asks the user to verify the account number and sign the transaction to continue


Insert the card
Choose Mode 4
Input the PIN
Input Challenge
Input Account Number
Enter Transaction Amount

OTP Token Generated:
4356 7869

Input Details Indicated in the Website
Input OTP generated

Information Verified By the CAP/AA4C Backend Server

Once verified by the backend server the website will permit the transaction to continue

User has successfully performed fund transfer

# Application Overview


**PC LINKED MODE**

**Usage: USB Pinpad Reader for Contact Cards**

Standard Supported:
PC/SC Part 10: Secure Pin Entry
CCID
EMV Level 1

# PC-Linked Application

User browses an online website for any transaction


Attach Contact Card Reader to terminal


Insert the Contact Card
Input PIN in keypad

Once user authentication is verified, the website will allow the transaction to continue

User transaction successful

# Thank You!!!


*More information on:*

***http://acs.com.hk/index.php?pid=product&prod_sections=0&id=APG8201***

***http://www.apg8201.com***