



# APG8201

## PINHandy



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Card & Reader Technologies

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# Product Overview



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## APG8201 PINHandy



PC-Linked



Standalone

**PINhandy** is a handheld smart card device featuring a keypad and an LCD screen. It provides the unique advantage of having two modes – PC-linked and Standalone.

For PC-linked mode, it operates as **USB Smart Card Reader with PINpad**. It has Secure PIN Entry (SPE) support to protect every PIN code from security attacks wherein the card PIN can never be disclosed to a personal computer.

For standalone mode, it operates as **Dynamic Password Generator**. Verifying both the card and PIN code, APG8201 generates a one-time password that can only be used once for each online transaction.



# Product Features



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# Product Features



## USB Host Interface

USB Full Speed (12 Mbps)  
Protocol: USB CCID

## Built-in Peripherals

Dot Matrix LCD  
16 characters x 2 lines  
Keypad: 14 keys



## Standalone Mode

Dynamic Password Generator  
Power Source: 2 x CR2032 Batteries

## Card Type Support

Full-sized Cards  
ISO 7816 Class A  
MCU with T=0 and T=1 protocol

## EMV Card Support

MasterCard CAP/DPA  
Visa DPA



## Smart Card Interface

PC/SC  
CCID  
Secure PIN Entry (SPE)

## Certifications/Compliance

MasterCard® CAP  
MasterCard® AA4C/PLA  
Visa® DPA  
EN 60950, EMV™ Level 1,  
PC/SC 2.01 Part 10 (SPE),  
CE , FCC, RoHS 2, REACH,  
Microsoft® WHQL

## Operating System Support

Windows®, Linux®, Mac OS®,  
Android™\*

## Other Features

Firmware Upgradeable  
Built-in Calculator

## Supported Languages

English  
French  
Traditional Chinese  
Simplified Chinese



# Product Value



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## Cost-effective

*A powerful and durable reader which is also price competitive.*

## Portability

*A device that you can easily carry around anytime, anywhere. One of the smallest PINpad readers in the market.*

## Flexible

*May be used either as a USB smart card reader or a one time password generator.*

## e-Banking Safety and Confidence

*Compliant with major computing, banking, and safety standards.*





# Product Application

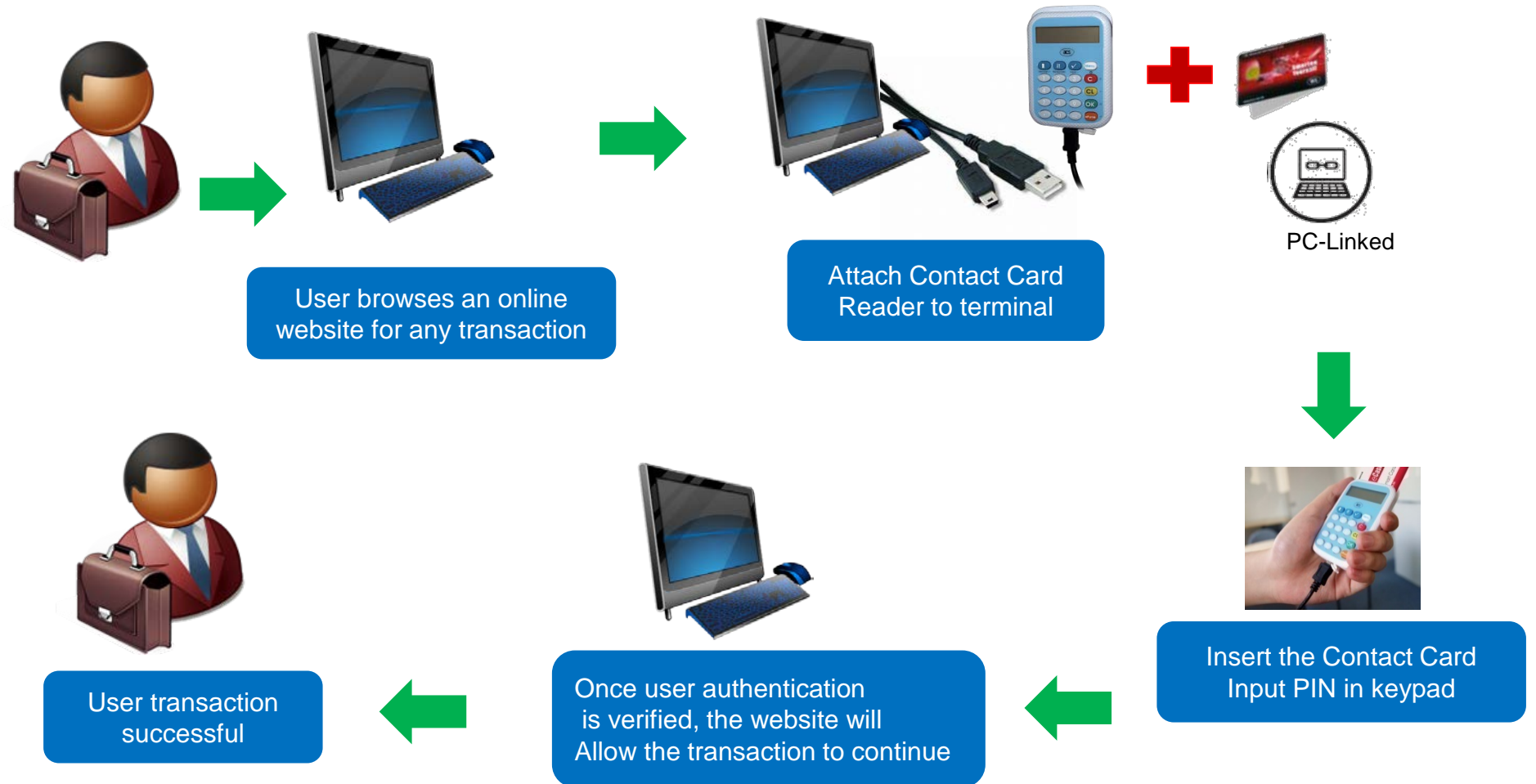


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# Product Application



# Sample Application: PC-linked





# Product Application



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# Application Modes (CAP/PLA Standard)

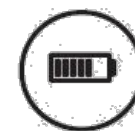


Identify Mode

Challenge Response

Sign Mode

Transaction Data Signing



Standalone



## Mode 1: Identify

- Enter PIN
- Display CAP Token and ATC

## Mode 2: Challenge Response

- Enter Challenge, PIN
- Display CAP Token and ATC

## Mode 3: Sign

- Enter Challenge, PIN, Transaction Amount
- Display CAP Token and ATC
- Used for Signature Transaction

## Mode 4: TDS (Transaction Data Signing)

- Enter PIN, Transaction Data Elements (e.g. Account Number)
- Display CAP Token and ATC

## Mode 5: e-Purse

- Depends on the Issuer



Standalone



Mobile Banking and Payment



Remote Authentication

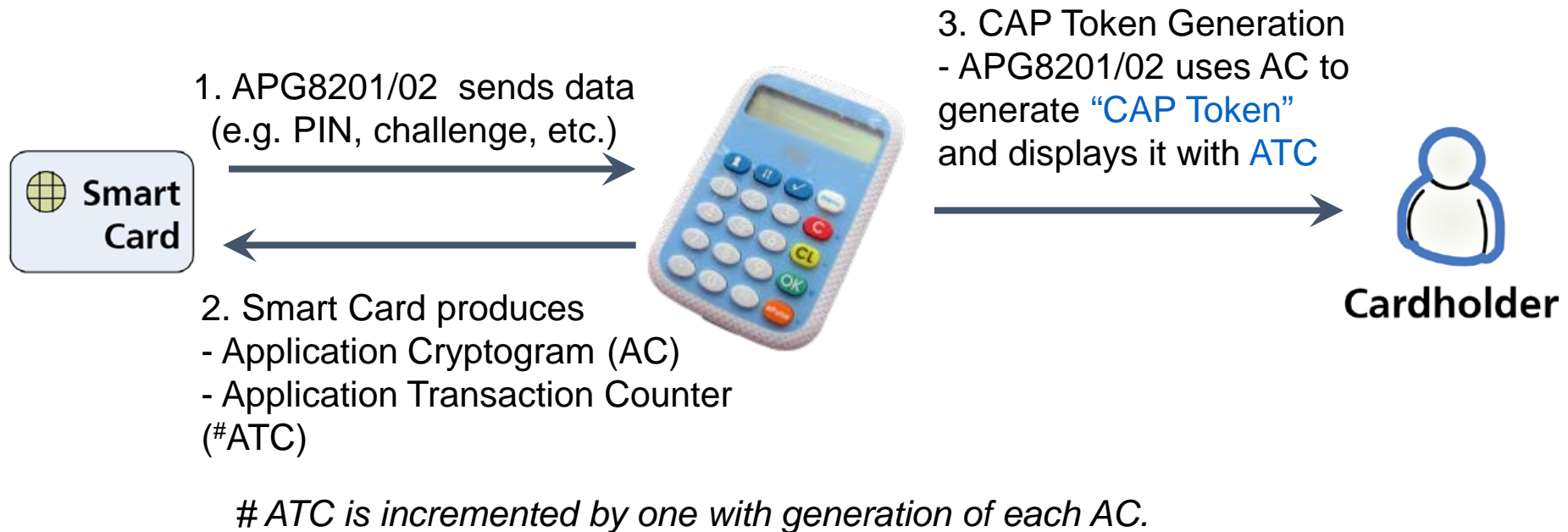


Access Control

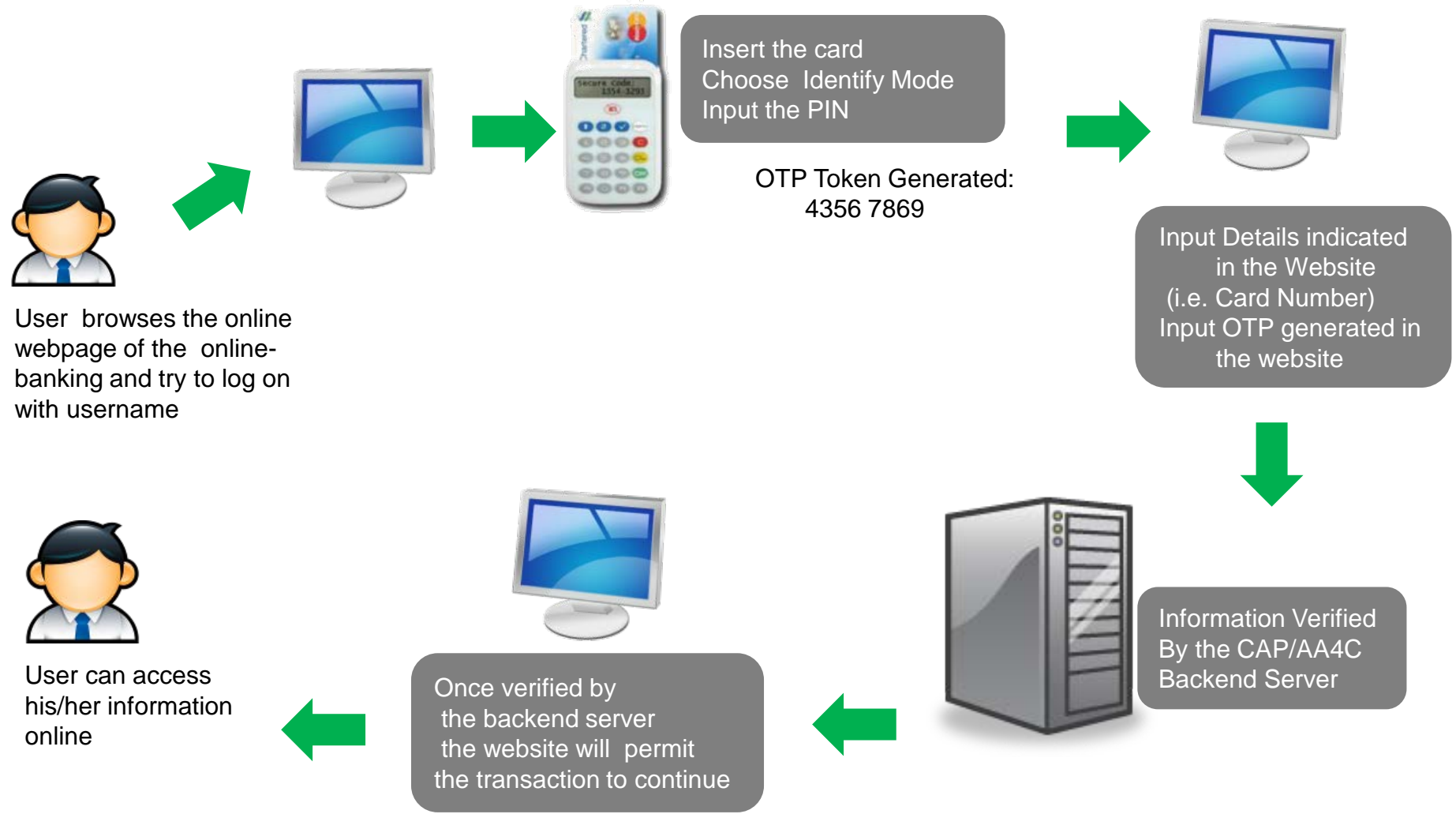


Digital Signature

What happens between the APG8201/02 and smart card?



# e-Banking: Identify Mode



User browses the online webpage of the online-banking and try to log on with username

Insert the card  
Choose Identify Mode  
Input the PIN

OTP Token Generated:  
4356 7869

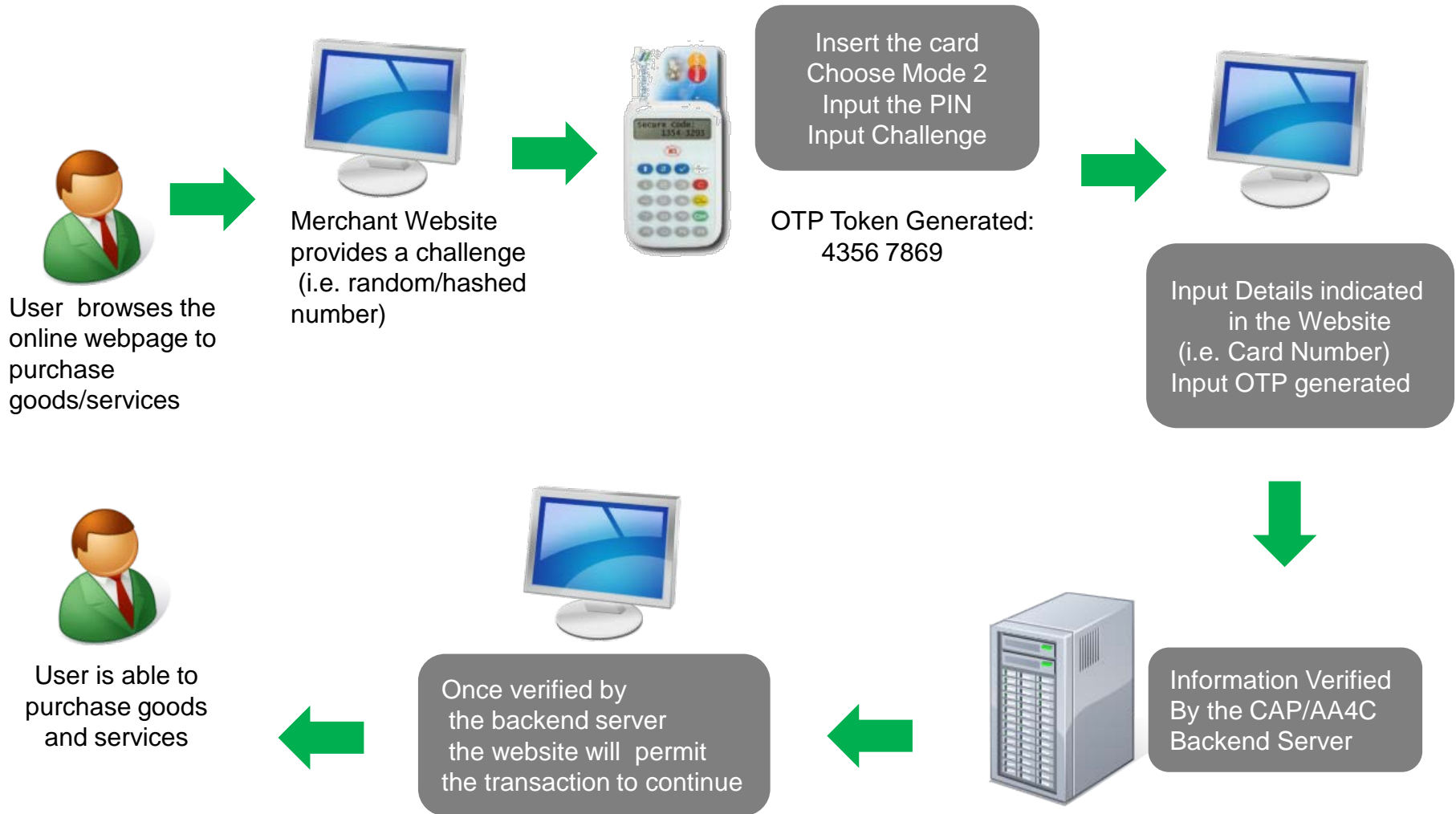
Input Details indicated in the Website (i.e. Card Number)  
Input OTP generated in the website

Information Verified By the CAP/AA4C Backend Server

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

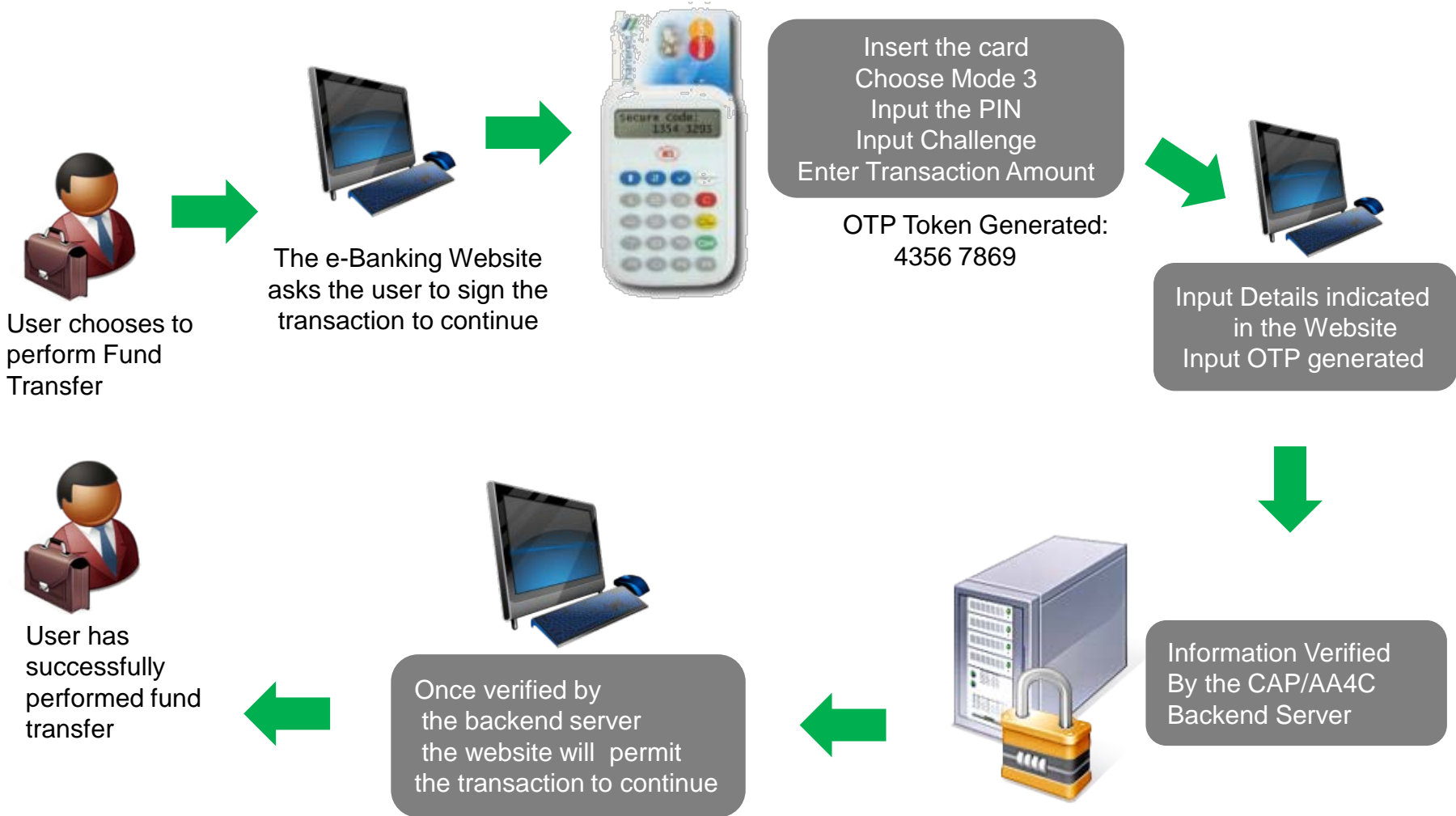
User can access his/her information online

# e-Commerce: Challenge-Response Mode

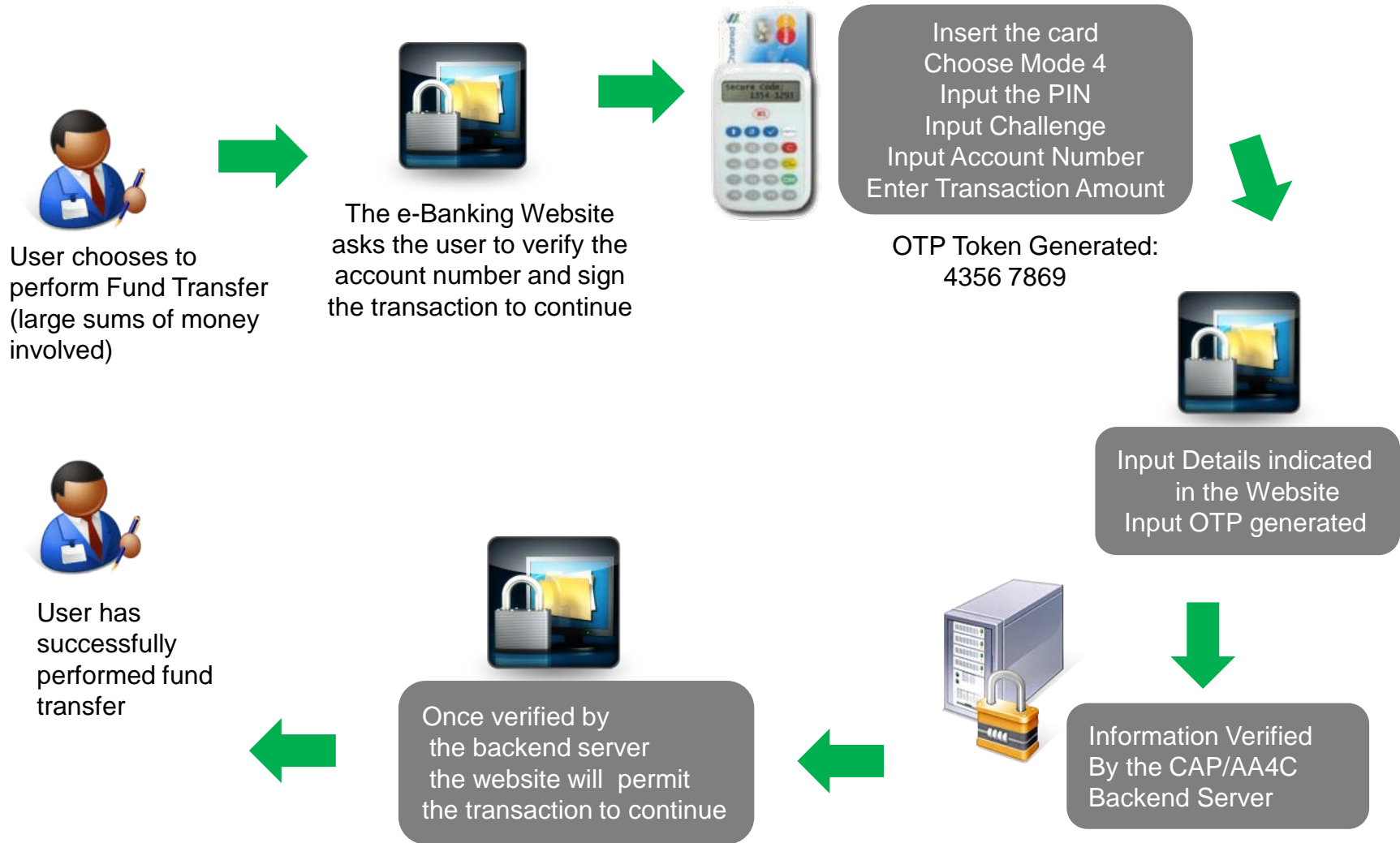




# e-Banking: Sign Mode



# e-Banking : Transaction Data Signing





# Thank You!

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<http://www.facebook.com/AdvancedCardSystems>



<http://gplus.to/advancedcardsystems>



<http://www.youtube.com/user/AdvancedCardSystems>



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