The State of Cybersecurity

Smart Cards & Chip Technology

What to Know About the New Credit and Debit Cards

Computer Chips on Your Credit and Debit Cards

If you use credit and debit cards, you might begin to see something different about them in the weeks and months ahead. The difference is in a small, square area on the card (about 1 cm each way) that contains an embedded **computer chip.** The new cards are called "smart cards," and employ microchip technology (the cards go by many names, *see sidebar*). They promise to make your in-person credit and debit card transactions safer than ever before.

■ Safety and security the driving forces

Financial institutions have invested heavily in recent years in the technology and infrastructure aimed at making your accounts safe from criminal hacking and data theft.

Enter the "smart card" with microchip technology, which adds a new layer of security to your card transactions.

With chip technology, each transaction is approved using a unique encrypted authentication code, making it far more difficult for unauthorized users to copy or access your personal information. That unique one-time transaction information also prevents a thief from making any additional purchases with stolen card data.

■ How will my transactions change?

As a "smart card" user, you won't see many changes in how you make everyday purchases. In the short term, card issuers will include both the microprocessor chip and the magnetic stripe technologies on newly issued credit and debit cards.

With magnetic stripe technology, a quick swipe is used to read the data. With smart cards, the chip is "read" when the card is dipped into the terminal.

■ Smart card protection

It is important to remember that "smart cards" safety measures work only for *in-person or card-present* transactions at properly equipped retail point of sale terminals and ATM machines.

Online retail transactions using your "smart card" do not offer the same safety and security because the technology only works if a machine can physically read the chip on your credit or debit card.

WHAT IS THE CARD CALLED?

The technology goes by many names at present, so watch for any of the following as the cards become more prevalent:

- **Smart card**
- **Chip card**
- **Smart-chip card**
- **Chip-enabled smart card**
- **Chip-and-choice card** (PIN or signature)
- **EMV** (stands for Europay, MasterCard, Visa) **smart card**
- **EMV card**

CreditCards.com

4321 5678 8765 4321
VALID FROM 01/11 VALID TO 01/16
B A MEMBER

987

Smart Chip
Expiry Date
Card Number
Security Hologram
Member Name

Magnetic Strip
CCV/CVC/CVS/CVV

Member Signature

■ Personal security remains important

As always, you should take care to exercise personal security measures in the care and use of your credit and debit cards:

- If your card requires a PIN (personal identification number) **do not share it with anybody,** and do not write it on your card; use strong passwords.

- When making online purchases with your card, **make certain it is a trusted – and secure – site.**

- **Check your statements regularly.** If you notice any suspicious activity on your account, notify your financial institution or card issuer immediately by calling the number on the back of your card.

- **Check your credit report**—you are entitled to one free credit report annually from each of the three major credit bureaus. Go to www.annualcreditreport.com

- **Smart Card Alliance**
  www.SmartCardAlliance.org
- **Federal Reserve Board**
  www.FederalReserve.gov
- **Federal Trade Commission**
  www.FTC.gov
- **ATM Industry Association**
  www.ATMIA.com
- **CreditCards.com**
- **Electronic Funds Transfer Association**