

Do it yourself...



Now you can program
smart cards yourself



BasicCard®
Smart Card Operating System

BasicCard® Smart Card Operating System



If you don't know how to program microprocessor smart cards...

You haven't tried the BasicCard® OS for smart cards.

BasicCard® is the first smart card programmable in BASIC. It is easy to use, open to anyone, requires no special training, and competitively priced. Using the BasicCard®, anyone can program their own smart cards – and this takes only a few hours of your time.

Consider some of the benefits of using the BasicCard® OS for smart cards...

Ease of Use

With the BasicCard® Development Kit, any programmer proficient in BASIC will be programming smart cards in one day, even without prior smart card experience.

Great Pricing

A BasicCard® with 2 kByte E²Prom will cost US\$ 3.45 each in small quantities.

Time to Market

No other smart card is faster to market. While others are working with outdated emulators and worrying about E²Prom, you will be demonstrating real products to your newest customers.

Small Orders

Many smart card projects start small. So even if your customer's first order is only about 50 or 100 BasicCard®, you can count on us to fill it without problems.

You're In Control

No more worries that your supplier might become your toughest competitor. With the BasicCard®, you're in control – there are no proprietary „black-boxes.“ You programmed it yourself, it's your application, your customer, and with BasicCard® you're in control.

Flexibility

BasicCard® offers virtually limitless opportunities. You can use it for: E-Purse, Identification Card, Medical Card, Internet Security, Drivers License, Network Access, Software Key, Access Control, Gift and Loyalty programs - you decide.

Security

For many smart card applications security is the main concern, & with BasicCard® you offer the best. Of course we support standards like DES, 3DES and AES, but now for unsurpassed security, you have the option of our 1024-bit RSA or 167-bit Elliptic Curve Cryptography.

How it Works

The BasicCard® Toolkit includes everything you need to get started. Install the software and card reader and you are ready to start.

Follow our examples or write your own application. When you are done, use the BasicCard® compiler to convert your application to P-Code and load it to the E²Prom of your BasicCard®. You have just programmed your first BasicCard®. It is that simple!

BasicCard®-Toolkit

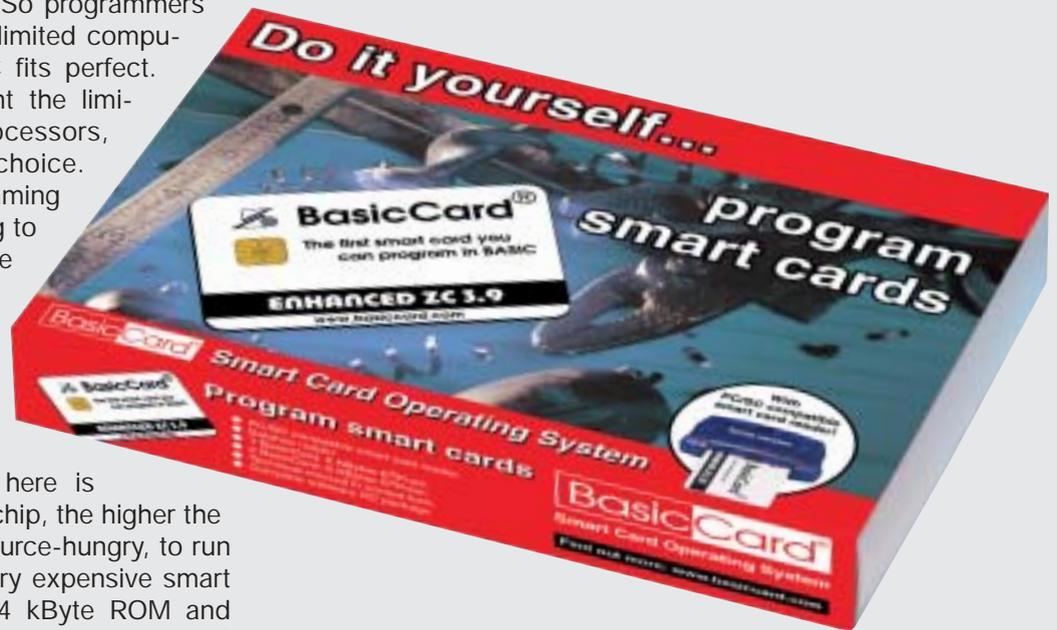
This package includes all the software you'll need to start programming yourself. You will also get a PC/SC compatible smart card reader/writer CyberMouse, a small balance reader, an Enhanced BasicCard® ZC3.7 (2 kByte E²Prom), and two Enhanced BasicCard® ZC3.9 (8 kByte E²Prom). The tools run under Microsoft® Windows®. The Windows® software package contains a fully functional symbolic double debugger to step through the source code from the BasicCard® and the PC simultaneously. The BasicCard® Toolkit also includes an API for 32 bit Windows® either as API for programming using C/C++ or as OCX for programming using Microsoft® Visual Basic®.

Do it yourself

Why is BASIC the Smart Choice?

BASIC was originally developed when computers had no resources. That is exactly the same problem what we have today with smart cards. So programmers needed a language suited to the limited computing resources - and here BASIC fits perfect. When you also take into account the limitations of smart card microprocessors, BASIC becomes the smart choice. Sure, there are fancier programming languages, but when you are trying to program a smart card, anything else is just show business.

In the end, the most important difference between a BasicCard® and a Java® or MultOS® card is not the programming language - it's the price. And the formula here is simple: the bigger the smart card chip, the higher the price. Java® and MultOS® are resource-hungry, to run a simple application they need very expensive smart card chips (i.e. 1 kByte RAM, 64 kByte ROM and 32 kByte E²Prom). Using the Enhanced BasicCard® (256 bytes RAM, 17 kByte ROM and 8 kByte E²Prom) costs 1/3 as much.



The BasicCard® Development Kit includes:

- 1 x CyberMouse® - PC/SC smart card reader/writer - serial version
- 1 x Balance Reader
- 1 x Documentation on CD-ROM
- 1 x Technical manual in printed form
- 1 x Enhanced BasicCard® ZC3.7 (2 kByte E²Prom)
- 2 x Enhanced BasicCard® ZC 3.9 (8 kByte E²Prom)
- 1 x Developer Software Package for Windows® include:

The BasicCard® MultiDebugger software support package consists of:

- ZCPDE, the Professional Development Environment;
- ZCMDTERM and ZCMDCARD, debuggers for Terminal programs and BasicCard® programs;
- ZCMBASIC, the compiler for the ZC-Basic language;
- ZCMSIM, for low-level simulation of Terminal and BasicCard® programs;
- BCLOAD, for downloading P-Code into the BasicCard®;
- KEYGEN, a program that generates random keys for use in encryption;
- BCKEYS, for downloading cryptographic keys into the BasicCard®.

Hardware for BasicCard®



Serial PC/SC-compatible smart card reader/writer

PC/SC standard was developed to ensure compatibility between smart cards, smart card readers/writers and computers produced by different manufacturers.

This new technology integrating smart cards and PC's was based on the current ISO 7816 standard and supports business-specific applications such as EMV (Europay, Mastercard, Visa) and GSM (Global Standard for Mobile Communication).

This new technology allows application developers to take advantage of the smart cards portability and hardware-based security, both critical factors for the development of secure applications.



Balance reader

New about this balance reader is, that it can be controlled via an ISO 7816 compatible command.

Smart cards, such as MultOS®, JavaCard® or the BasicCard® are capable of learning new „ISO 7816 commands“. This simplifies the adaptation of a balance reader to one of the smart cards mentioned above. Thus expensive adaptations or special programming of the balance reader are not necessary.

The balance reader is equipped with a 10 character display. It can show data from a smart card, such as sums of money, loyalty points or a PIN.

When you want to use the balance reader with the BasicCard®, this will take 10 min. of your time to program this small device.



POS - Point of Sale Terminal for BasicCard® Developers

With the BasicCard® you can program your application in a few days. Creating your POS application with a standard terminal requires months of development time.

To make this development as easy as possible we have developed a compatible version of our BasicCard® VM for this POS terminal. Now you can program this POS terminal in BASIC. This will save your time and your money.

Developing a POS terminal application in BASIC is as easy as creating a PC terminal application.

For creating a POS application you use the BASIC compiler contained in the BasicCard® development kit. This means you can use your existing source code.

The BasicCard® POS is a standalone device which can be operated by battery or power supply. It includes a printer unit, a numeric keypad, two full size and one SIM card slots, a modem and a RS232 port. The BasicCard® POS can be extended with an optional PinPad device.