Advanced Card Systems Ltd.
Card & Reader Technologies

ACR83 PINeasy

Technical Specifications

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1.0. Introduction

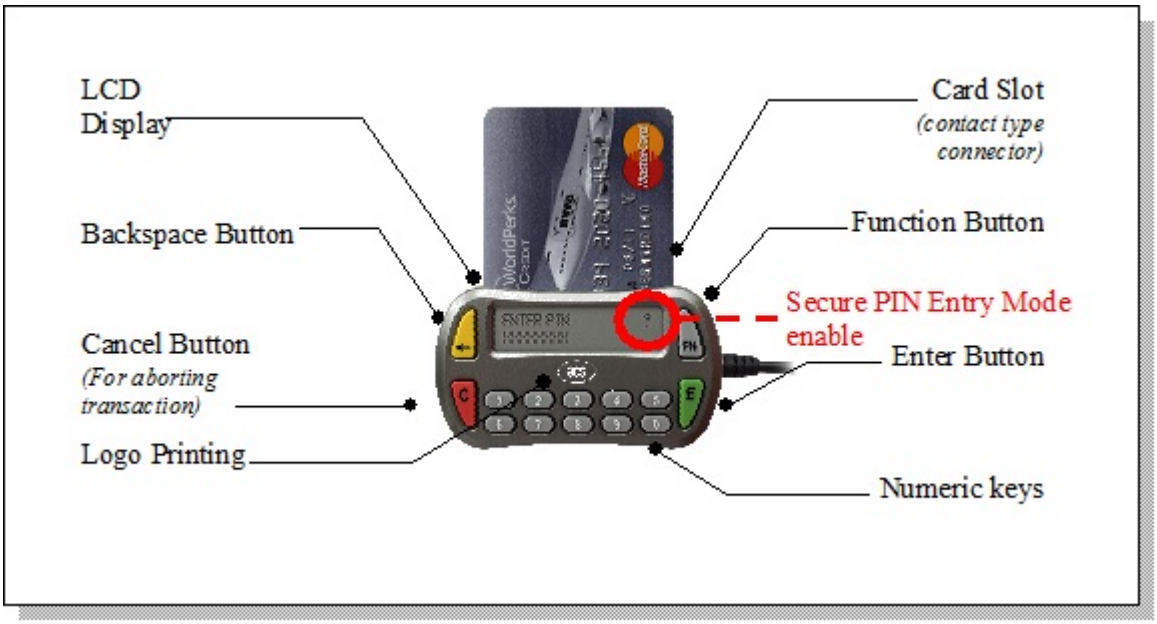
ACR83 PINeasy is a USB reader featuring a keypad and display, supporting Secure PIN Entry (SPE). The PIN (Personal Identification Number) is entered on its keypad securely and then authenticated within the device. Since the PIN is entered into the secure ACR83 PINeasy rather than the vulnerable PC or workstation, the possibility of a Virus/Trojan or USB Sniffer getting hold of the PIN is eliminated.

ACR83 PINeasy, which fits perfectly on the palm of your hand, is one of the smallest PIN-pad readers in the market. To authenticate yourself, all you have to do is to connect the reader to USB port of the PC, insert the smart card, follow the command on the LCD and enter your PIN.

Additionally, the ACR83 PINeasy is compliant with major computing, banking and safety standards such as Microsoft ® WHQL (Windows Hardware Quality Labs), PC/SC, EMVCo Terminal Level 1, CE and FCC, equipping ACR83 to be a device that you can trust in!

2.0. Features

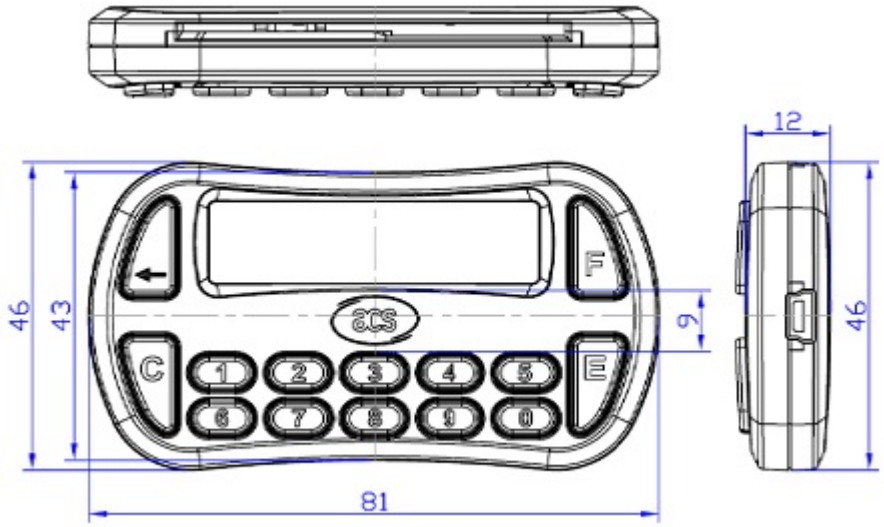
- Operate in Online Mode
- USB Full Speed (12 Mbps)
- Tactile keypad with silicon rubber keys (10 numeric plus 4 function keys)
- High-contrast, 16-character, 2-line LCD (character format: 5 x 8 dots
- Support Full-size Microprocessor Cards (T=0 or T=1 Protocols)
- Support ISO-7816 Class A, B and C (5V, 3V, 1.8V) Cards
- Support PPS (Protocol and Parameters Selection)
- Support Secure PIN Entry (SPE)
- Key symbol on LCD to recognize Secure PIN Entry mode
- Short Circuit Protection
- Light and portable weight: 65g (with USB cable)
- PC/SC Compliant
- Microsoft ® WHQL Certified Drivers
- CE and FCC Certified
- EMVCo Terminal Level 1 Certified
- CCID Compliant
- RoHS Compliant



3.0. Typical Applications

- Home Banking and Home Shopping
- Electronic Commerce
- Digital signature & Identification
- Online Gaming
- Computer/ Network access control

4.0. Technical Specifications



Power

Supply ..... +5V
Supply source ..... < 100mA (without smart card)

Universal Serial Bus Interface

Type ..... USB full speed, four lines: +5V, GND, D+ and D-
Power source ..... From USB
Speed ..... 12 Mbps

Smart Card Interface

Standard ..... ISO-7816 1/2/3, T=0 and T=1
Supply current ..... max. 50mA
Smart card voltage ..... 1.8V, 3V or 5V
Smart card read/ write speed ..... 1,743 – 250,000 bps
Short circuit protection ..... +5V / GND on all pins
CLK frequency ..... 4 MHz
Card connector ..... sliding contacts (8 contacts)
Card insertion cycles ..... min. 100,000

Human Interfaces

Keypad ..... 14 keys (10 numeric plus 4 function keys)
LCD Display ..... 2 rows x 16 characters, each character 5x8 dots

Physical Specifications

Dimensions ..... 81.00mm (L) x 46.00mm (W) x 12.0mm (H)
Color ..... Metallic Grey
Weight 65g

Operating Conditions

Temperature ..... 0 - 50° C
Humidity ..... 40% - 80%, non-condensing

Certifications/Compliance

EMV Level 1, PC/SC, CE, FCC, RoHS Compliant, USB Full Speed
Microsoft ® WHQL 2000, XP, Vista, 7

Device Driver Operating System Support

Windows ® 98, ME, 2000, Server 2003, XP, Server 2008, Server 2008 R2, Vista, 7

5.0. Software Development Kit Specifications

The ACR83 PINeasy Software Development Kit (ACR83 SDK) enables effective development of customized applications and systems by using smart cards, card readers, and PCs. It can serve as an ideal training and development tool for those who are interested in knowing smart card technologies. The SDK comes with sample codes written in different programming languages, namely, Delphi 7, Java, Visual Basic 6, Visual C++ 6, Visual C++ 2005 (x64), Visual C # 2005 and Visual Basic .Net 2005. These sample codes show the different capabilities of the ACR83 and showcase how to control the ACR83 Peripherals and how to communicate with any ISO-7816 cards.

Smart Card Reader	ACR83 PINeasy Smart Card Reader
Smart Cards	5 ACOS3 Microprocessor-based Smart Cards
SDK CD-ROM	Sample Codes • Borland Delphi 7 • Java • MS Visual Basic 6.0 • MS Visual Basic .NET • MS Visual C# .NET • MS Visual C++ 6.0 • MS Visual C++ 2005 (x64)
	Tools & Utilities • Card Tool • Quick View • ACR83 Tool
	User Manuals and Reference Materials • ACR83 SDK Manual • ACR83 SPE API • ACR83 CCID Protocol • ACR83 Technical Specifications • ACOS3 Reference Manual
SDK OS Support	Windows ® 2000, XP, Vista