Advanced Card Systems Ltd.

acs

ACR80 PIN-pad Reader

TECHNICAL SPECIFICATIONS

Version 1.4 **11-2005**

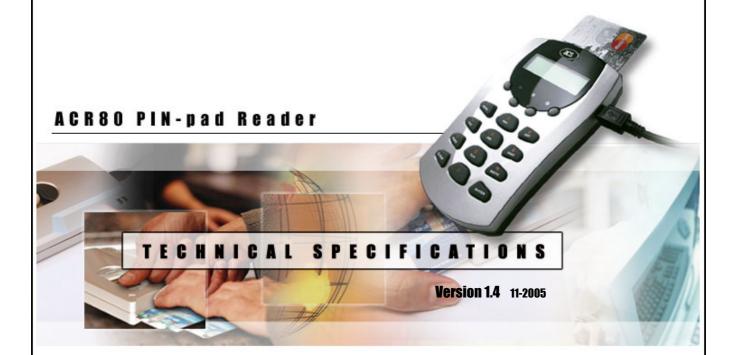## ACR80 PIN-pad reader

1.0 Introduction

The ACR80 is a secure PIN-pad smart card reader featuring a 4 by 20 line character dot-matrix LCD display and up to 122 x 32 pixel graphic image display. It includes a 16 key keypad with 4 function keys, 2 smart card slots, and up to 6 SAM card slots depending on customer's preference.

The device supports T=0 and T=1 cards. It is an ideal solution for supporting 3DES-based encryption for server and reader authentication.

ACR80 is a PC based smart card interface device (IFD), small in size but packed with capabilities. There is also a roadmap ahead to turn it into an even more sophisticated device such as fingerprint biometrics.

ACR80 is ideal for application such as home-banking and electronic commerce applications whereby a simple PC based smart card does not meet your security requirements – such as PIN entry and confirmation of transaction details before signing. ACR80 is also ideal for health card application.
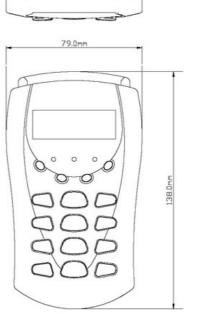
2.0 Features

- Two ISO7816-1/2/3 compatible smart card interfaces
- Up to six ISO7816-1/2/3 compatible security application modules (SAM) card interfaces (2 and 6 SAM slots are available (Default 2 SAM slots)
- Supports MCU-based cards with T=0 and/or T=1 protocol
- Supports SLE 4418/28/32/42 memory cards (others on request)
- EMV level 1 approved (Slot 1)
- RS-232 (serial) interface and USB
- ANSI x 9.52 (DES/3DES encryption)
- ANSI x 9.24 DUKPT
- Short circuit protection on all slots
- Fully documented API (Application Programming Interface) for easy application development
- 122x32 dots LCD full graphic display with LED backlight
- Adjustable LCD contrast
- Internal display buffer allows free graphic modification with only one time drawing
- 16-key keypad with extremely high durability
- Tamper sensing switch
- Buzzer with software switching control
- Real time clock
- Optional magnetic stripe reader
- 32 Kbyte EEPROM

3.0 Typical applications

- E-commerce
- Health care project – medical identification
- Online-payment device
- Credit card processing for POS
- Membership program
- Loyalty and promotion

4.0 Technical Specification

Power supply
Supply voltage .... 5V DC
Supply current .... < 100mA (without card)

Serial Communication Interface
Type.. RS-232C, four lines: RxD, TxD, CTS, GND
Power source.. From PS/2 connector
Speed .... 9600 – 19200 bps

Universal Serial Bus Interface
Type.. USB v1.1
Power source.. USB bus powered
Speed .... 1.5 Mbps

Smart Card Interface
Standard .... ISO 7816 1/2/3, T=0 and T=1
Supply current .... max. 55mA/card
Short circuit protection .... +5V / GND on all pins
MCU card CLK frequency...................... 3 MHz
Card connector .... landing type and sliding type
Card insertion cycles .... min. 200,000 (landing), 100,000 (sliding)

Case
Dimensions.. 138mm (L) x 79mm (W) x 24.7mm (H)
Upper casing color................................ Silver

Operating Conditions
Temperature .... 0 - 50° C
Humidity... 40% - 80%

Standard/Certifications
EMV Level 1, ISO7816-1/2/3, CE, FCC

OS
Windows 98SE, ME, 2K, NT (for RS-232 only), XP

OEM
OEM-Logo possible, customer-specific colors, casing, and card connector