

# Gem PC Express Reader Technical Specifications

## Smart-card interface

- support ISO7816 Class A, B and C (5V, 3V, 1.8V)
- support all ISO7816 TA1 parameters (up to 344 Kbps)
- reads from and writes to all ISO 7816-1,2,3,4 microprocessor cards, T=0 and T=1.  
Memory cards support using "Memory Card API for GemCore Twin Pro"
- Short circuit detection
- smart card connector is 8 friction contacts - ISO location, guarantee for 100,000 insertion cycles - EMV level 1 mechanically compliant.
- embossed smart cards are supported.

## Host Interface

- PCMCIA Express Card/54
- Power supply thru Express Card port
- Rating 3.3V 1A primary supply voltage
- Plug and Play
- USB full speed 12Mbps

## Power Consumption

- Power Consumption Suspend mode: 1mA
- Typical operating : 55mA
- Maximum Operating: 200mA

## Dimensions

- 75 x 54 x 5 mm, Express Card 54 module size

## Weight

- 23 grams

## Operating/storage Temperature

- Operating : +0°C / +55°C
- Storage : -20°C / +65°C

## APIs

- Microsoft PC/SC environment with associated drivers

## Electro-magnetic standards

- Europe: 89/336/CEE guide line
- EN 55022: 1994 Class B
- EN 50082-1: 1994
- EN 50081-1: 1992
- EN 61000-4-2: 1995
- EN 61000-4-3: 1997
- EN 61000-4-4: 1995
- Comply with EMC directive 89/336/EEC
- USA: FCC part 15 Class B

## Security levels

- Europe: EN60950
- IEC950: 1991, Am,3: 1995
- USA: UL1950 third edition, dated July 28, 1995
- Canada: CSA950
- Comply with low voltage directive 73/23/EEC
- VCCI, C-Tick, BSMI

## Standards/certifications

- ISO/IEC 7816-1,2,3,4: IC Cards with contacts
- EMVCo 4.0 terminal level 1 for Gemcore Twin Pro IFM
- Microsoft Windows Hardware Quality Labs (WHQL), Windows Logo Program WLP 2.0
- USB 2.0 Full speed
- CCID - Chip Card Interface Device
- ROHS compliant
- WEEE marking

## Operating systems supported

- Windows 2000, XP, Server 2003,
- Windows XP 64 bits editions
- Windows Vista 32 & 64 bits
- Linux Redhat WS3.0, WS4.0, Suse Professional 9.2, DEBIAN "Sarge"

## OEM

- custom stickers for branding

## Packaging

- each reader is packed in a crystal plastic box  
90(L)x62(W)x10(H)mm. Overall weight is 45 grams.

**Tx**Systems  
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