

# MiniSmart™

Intelligent Smart Card Reader



## Smart and Rugged

The MiniSmart is the smallest reader proven to deliver reliable performance for more than 1,000,000 card cycles. The reader's chassis is molded from a glass-filled engineering plastic, supports landing-style smart card contacts & card seated sensor. Moreover, the MiniSmart chassis discourages jamming due to debris particles entering through the slot. MiniSmart is small enough to adapt to a wide variety of space-limited applications, and has the advantage of being EMV 2000 level 1 approved.

## Simplify Integration of Smart Cards

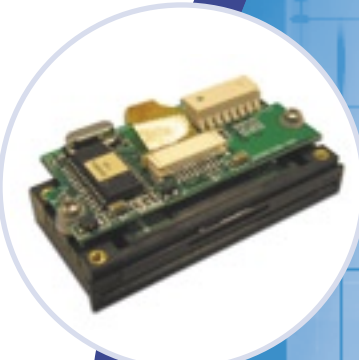
The MiniSmart Partial Insert Reader operates with both memory & microprocessor type Smart Cards (ICC's), conforming to ISO 7816 standards. MiniSmart communicates with ICC's through a low-force landing-style connector with gold-plated contacts that "land" and have a small "wiping" action to ensure dependable connections. The host & card interfaces are provided with GemCore™ technology from Gemplus. The Host interface is serial USB, RS232, or CMOS-UART. Protocols can be USB-CCID, Block Commands, or PC/SC depending on interface type.

## Configurable for Any Application

Mounting is accomplished with threaded inserts in the reader chassis. MiniSmart can be used with no bezel or there are two molded bezels available, standard or flush mount. Both bezels provide secure mounting for MiniSmart chassis, and an optional card slot "gate" is available to protect the reader from dust, debris, and casual vandalism.

## Features and Benefits

- Smallest size – fits anywhere a smart card is needed
- Designed tough – 1,000,000+ operations on all components
- Simplifies integration of Smart Cards into Applications
- Operates with ISO 7816 microprocessor or memory cards
- EMV™ level 1, Type Approval RoHS compliant
- Manages the card interface link & communications
- Smart Card transfer rates – 9600 to 115200 bps
- Serial host interface link – USB-CCID, PC/SC, RS232, or CMOS-UART
- Reader power – 3V to 5V, Card power – 3.0V, or 5.0V
- Landing Smart Card contacts and card seated switch
- Bezels available with gates – standard or flush mount options



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# MiniSmart Specifications MIN85-XX-100(a)

## Electrical

Power Requirement:	2.85 VDC to 5.4 VDC, 12mA Max. w/no ICC
Power Down:	100 $\mu$ A max in power down mode w/no ICC
Host Interfaces (Physical Layer):	Serial async, RS232 or CMOS, 1.2K to 115K baud USB-CCID Full Speed
Host Interfaces (Protocol layer):	RS232/CMOS – Command Blocks or PC/SC USB-CCID supporting PC/SC
ICC Interfaces (Compliance):	ISO/IEC 7816-1, 2, 3, & 4 and EMV 2000 Level 1
ICC Types:	Number of cards = 1, Asynchronous, T=0 & T=1 Synchronous (memory) cards (contact factory)
ICC Transmission:	9.6 Kbps to 115 Kbps speeds
ICC Voltage:	Card power supply selections: 3 V or 5 V
ICC Short Circuit:	Current limited protection

## Environmental

Operating Temperature:	32 $^{\circ}$ F to 158 $^{\circ}$ F (0 $^{\circ}$ C to 70 $^{\circ}$ C)
Storage Temperature:	-40 $^{\circ}$ F to 185 $^{\circ}$ F (-40 $^{\circ}$ C to 85 $^{\circ}$ C)
Humidity:	Maximum 90% non-condensing, dry storage

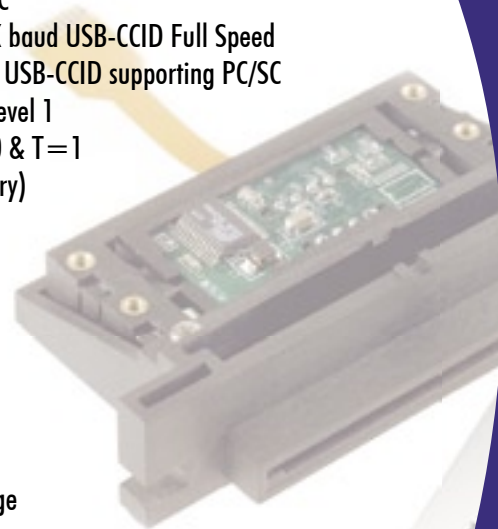
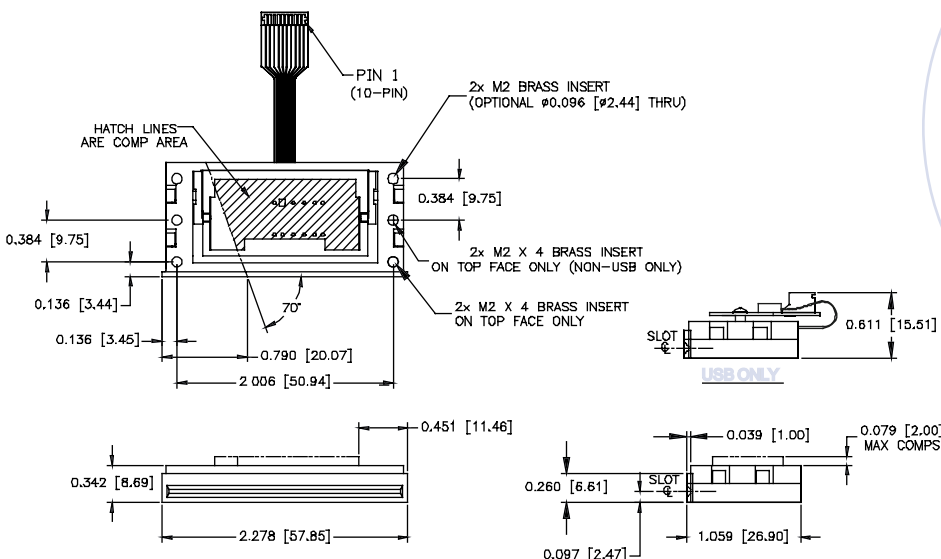
## Reliability

Operating Life:	1,000,000 cycles minimum*
MTBF:	300,000 Hours*
ESD Immunity:	4 KV, human body model, ICC contacts
Approvals:	ISO7816 & EMV level 1, RoHS
Warranty:	One year, parts and labor

\* All wear reliability and MTBF are based on operation in a benign environment.

## Mechanical

Media Thickness:	0.03 Nominal (0.025 min.; 0.035 inches max.)
Card Seated Switch:	ICC fully seated sensor
Footprint:	



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