

## Smart Card Reader (#32320)

Today, smart cards are used in a wide variety of applications from healthcare to personal finance. They are ever-increasing in popularity due to their convenience and security. Generally, smart cards are about the size of a credit card with an embedded IC for storing data.

The Smart Card Reader from Parallax Inc. provides a low-cost solution for reading and writing data to contact memory-based smart cards and is compatible with both the BASIC Stamp and Propeller microcontrollers. Four mounting holes are provided for installation in your application and a card detect switch allows for easy detection of smart card insertion.

### Features

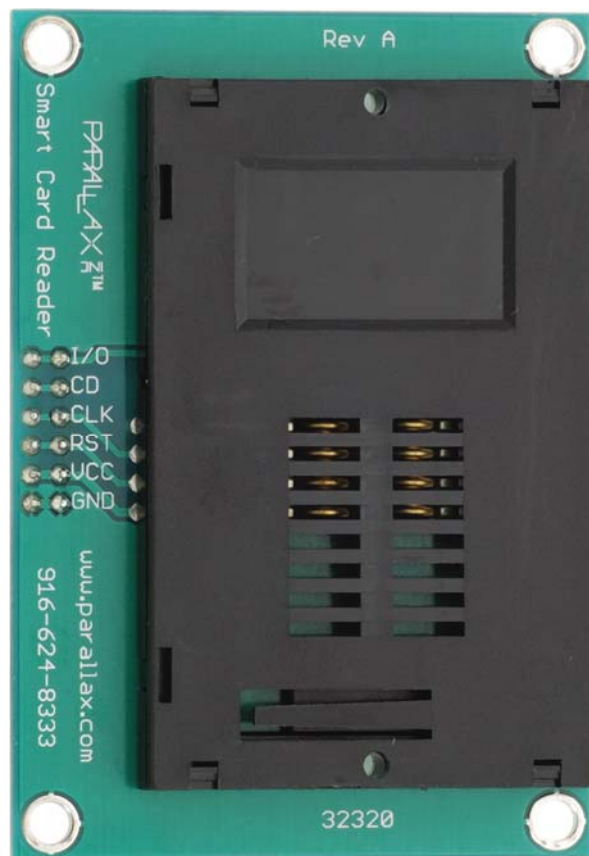
- Low-cost solution for reading and writing data to standard smart cards
- Mounting holes included for use in applications
- Compatible with most memory-based smart cards (not compatible with microprocessor-based smart cards)
- Card detect switch allows detection of smart card insertion
- Dual-row SIP header for breadboard stability
- Easy interface to both the BASIC Stamp and Propeller microcontrollers

### Key Specifications

- Power Requirements: 2.7 - 5.5 VDC
- Communication: Dependent on protocol of smart card used
- Operating temperature: 32 to 158 °F (0 to 70 °C)
- Dimensions: 2.95 x 2.05 in (7.5 x 5.2 cm)

### Application Ideas

- Security systems
- Data storage
- Tracking systems
- Identity authentication



## How it Works

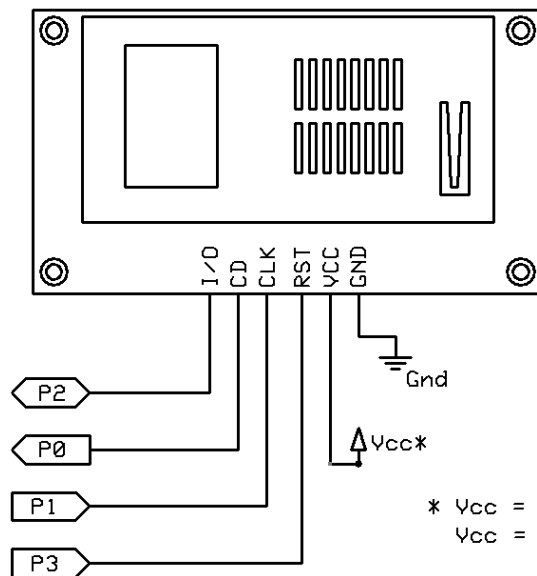
The pins of the IC embedded in the smart card are accessed through the gold contact pads on the top of the card. The Smart Card Reader makes this connection through eight contacts inside of the reader module (card should be inserted with the gold pads down). Once connected, the pins of the smart card broken out into breadboard friendly 0.1" spacing.

## Pin Definitions and Ratings

Pin	Name	Type	Function
1	I/O	I/O	Bidirectional data I/O
2	CD	O	Detects whether card is inserted
3	CLK	I	Synchronous clock input
4	RST	I	Reset
5	VCC	P	Supply voltage
6	GND	G	Ground

Pin Type: P = Power, G = Ground, I = Input, O = Output

## Connection Diagram



## Connection and Testing

Connecting the Smart Card Reader to the microcontroller pins shown above ensures that you can use the BASIC Stamp and Propeller example programs for each smart card offered by Parallax. Links to the latest documentation and example programs for these smart cards can be found on the Smart Card Reader product page. Go to [www.parallax.com](http://www.parallax.com) and search 32320.