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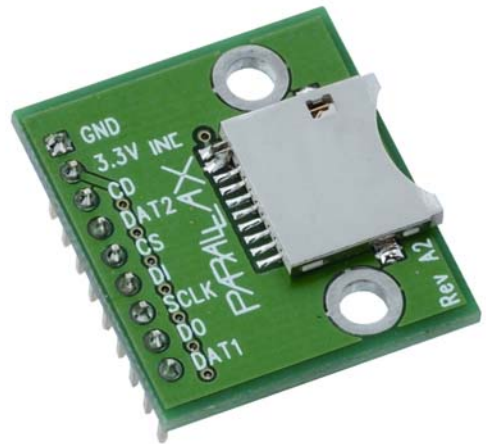
micro-SD Card Adapter (#32312)

The micro-SD Card Adapter allows you to easily connect a micro-SD Flash memory card to your Propeller chip or other microcontroller. This adapter contains the components required for an SPI interface between the host microcontroller and a micro-SD memory card. The adapter also includes a card detect switch which allows you to detect when a memory card is physically present in the socket. Mounting holes allow you to install the adapter in your application.

Features

- SPI support components already installed on the PCB
- Includes mounting holes for use in applications
- Card detect switch allows detection of memory card insertion
- SIP header makes breadboard use easy
- Supporting objects for the Propeller chip are available on the Propeller Object Exchange
- All I/O lines from the SD card are brought out to support SD Bus Mode if desired

Key Specifications

- Power requirements: 3.3 VDC; power consumption determined by micro-SD card used + 0.5 mA when card is inserted
- Communication: SPI (or SD Bus Mode)
- Operating temperature: 32 to 158 °F (0 to 70 °C)
- Dimensions: 1.11″ L x 1.00″ W x 0.47″ H
  (28.22 mm L x 25.40 mm W x 11.92 mm H)

Application Ideas

- Mass Storage addition for project
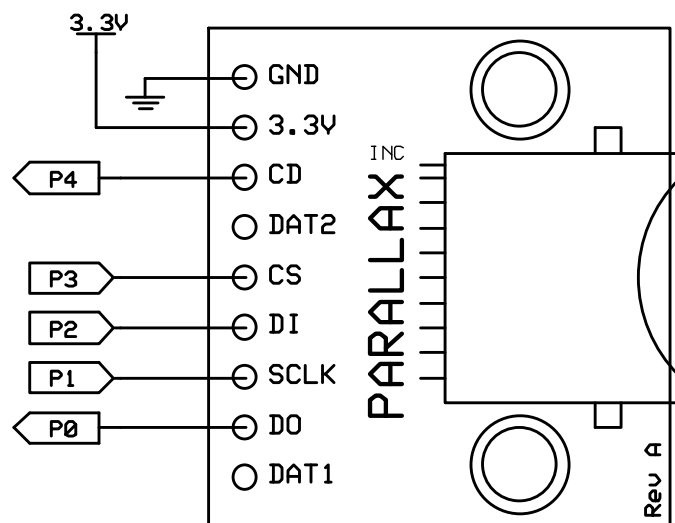- Datalogger
- Data portability

Quick-Start Circuit

Figure 1: Connection Diagram

Connecting and Testing

Connect the pins above to the specified I/O pins on your Propeller Demo Board (#32100), Propeller Education Kit (#32305 or #32306), Propeller Proto Board (#32212 or #32812), Professional Development Board (#32111), PropRPM Board (#32202) or any other Propeller system or microcontroller capable of accessing the micro-SD card. By using the I/O pins listed above you can use the FSRW object available on the Propeller Object Exchange to test access to FAT formatted micro-SD cards with this adapter.

Downloads and Resources

You can obtain the Propeller Tool software from the Downloads link at http://www.parallax.com/propeller
You can obtain additional objects by visiting the object exchange at http://obex.parallax.com

Pin Definitions and Ratings

Pin	Name	Function
1	GND	Ground: 0 V
2	3.3V	Supply Voltage: 3.3V
3	CD	Card Detect
4	DAT2	Data Bit 2 (Bus Mode)
5	CS / DAT3	Chip Select / Data Bit 3 (Bus Mode)
6	DI / CMD	Serial Data Input / CMD (Bus Mode)
7	SCLK	Synchronous Clock Input
8	DO / DAT0	Serial Data Output / Data Bit 0 (Bus Mode)
9	DAT1	Data Bit 1 (Bus Mode)

This adapter is designed to support SPI mode, however all I/O lines from the SD card are brought out to support SD Bus Mode if you should want to use that connection method instead.
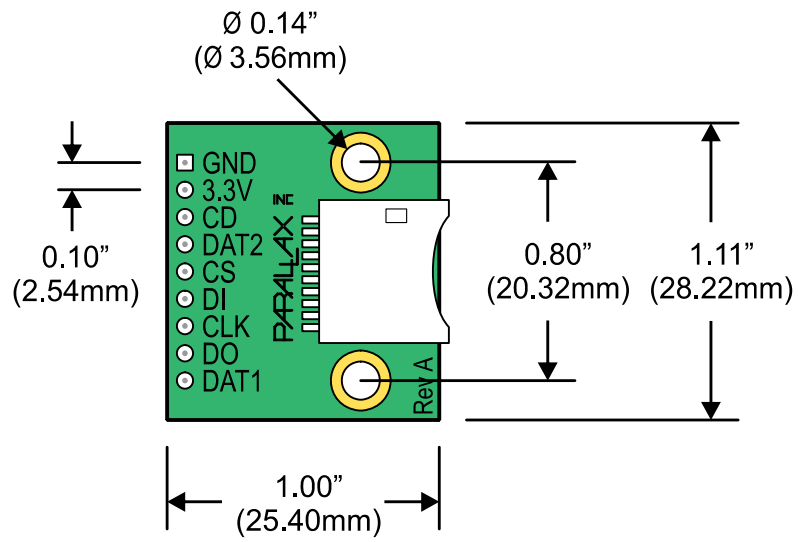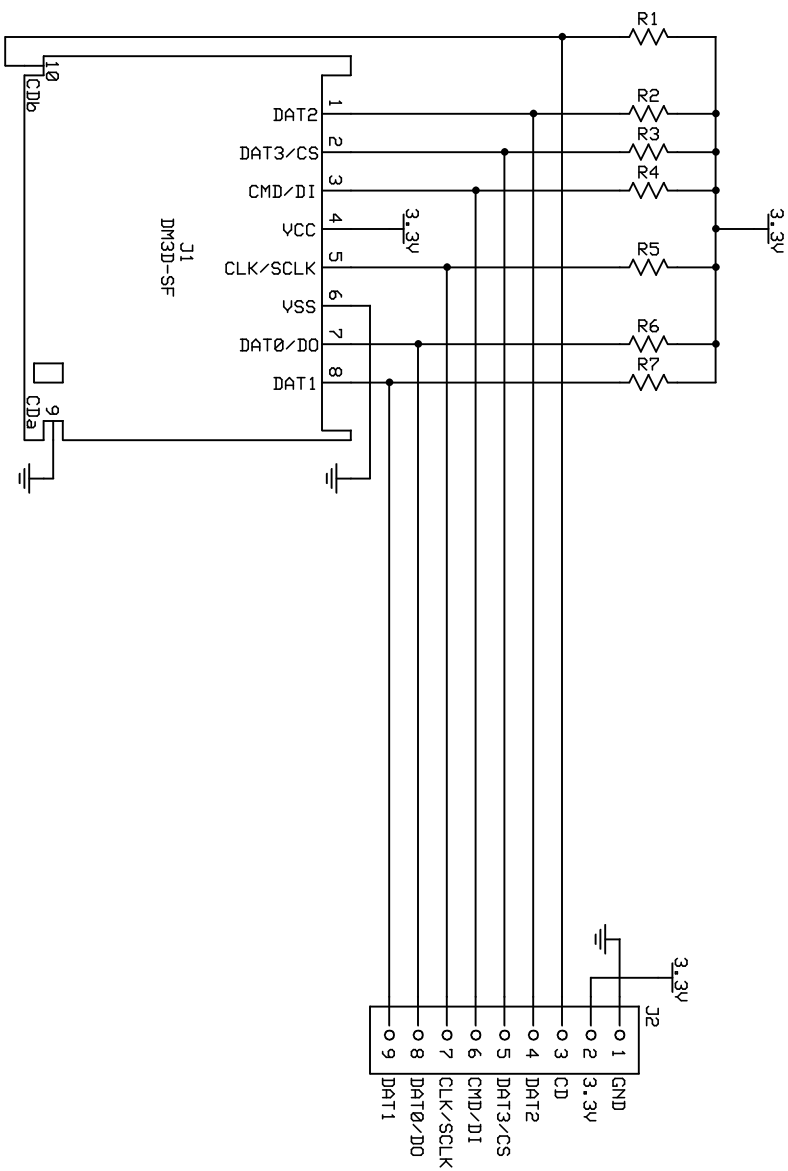
Module Dimensions

Figure 2: Module Dimensions

NOTES:
R1-R8 ARE 10K
CD IS LOW WHEN CARD IS PRESENT

J1
DM3D-SF

CDb
10

1 DAT2
2 DAT3/CS
3 CMD/DI
4 VCC
5 CLK/SCLK
6 VSS
7 DAT0/DO
8 DAT1

9 CDa

R1
R2
R3
R4
R5
R6
R7

3.3V
3.3V
3.3V

J2
1 GND
2 3.3V
3 CD
4 DAT2
5 DAT3/CS
6 CMD/DI
7 CLK/SCLK
8 DAT0/DO
9 DAT1

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