

## Welcome!

And thank you for purchasing our AZ-Delivery SPI reader micro memory card module for the Atmega328p. On the following pages, we will take you through the first steps of the installation process on the Atmega328p. We wish you a lot of fun!



This data logger is suitable for FAT16/FAT32 formatted SD cards with up to 32GB and that can support 5V voltage supply.

## Wiring the module with an Atmega328p:



+5V is connected to 5V on the Atmega328p
GND is connected to GND
MOSI is connected to D11
MISO is connected to D12
SCK is connected to D13
CS is connected to D10

Red wire Black wire Orange wire Purple wire Yellow wire Green wire

After everything has been wired, then the Atmega328p can be supplied with electric power.

## "Programming" the SD card reader:

In order to use the SD card with the Atmega328p, it has to be firstly formatted as FAT16 or FAT32. For that, we recommend the SDFormatter program: https://www.sdcard.org/downloads/formatter\_4/

Neu	Strg+N			
Öffnen	Strg+O			
Letzte öffnen	•			
Sketchbook	•			
Beispiele		▲		
Schließen	Strg+W	Esplora	•	
Speichern	Strg+S	Ethernet	•	
Speichern unter	Strg+Umschalt+S	Firmata	•	
to and the second s	-	GSM	÷	
Seite einrichten	Strg+Umschalt+P	LiquidCrystal	•	
Drucken	Strg+P	Robot Control		
Voreinstellungen	Strg+Komma	Robot Motor	•	
		SD		CardInfo
Beenden	Strg+Q	Servo	1	Datalogger

Then we let the SD card information to be shown. To do this, we start:

Select under File > Examples > SD > CardInfo.

Since there are different SD cards shields, we still need to indicate our Pin in the code:

// change this to match your SD shield or module;

// Atmega328p Ethernet shield: pin 4

- // Adafruit SD shields and modules: pin 10
- // Sparkfun SD shield: pin 8
- // MKRZero SD: SDCARD\_SS\_PIN

const int chipSelect = 10;

Possibly, the baud rate can now still be adjusted.

```
Serial.println (57600);
```

Or the baud rate in the serial monitor needs to be adjusted (to 9600

Baud). Open the Serial Monitor in the Arduino-IDE software:

Tools > Serial Monitor

Werkzeuge Hilfe	
Automatische Formatierung Sketch archivieren Kodierung korrigieren & neu laden	Strg+T
Serieller Monitor	Strg+Umschalt+M
Serieller Plotter	Strg+Umschalt+L

If everything has been correctly completed, then the SD card will be recognized:

```
Initializing SD card...Wiring is correct and a card is present.
Card type: SDHC
Clusters: 122112
Blocks x Cluster: 64
Total Blocks: 7815168
Volume type is: FAT32
Volume size (Kb): 3907584
Volume size (Mb): 3816
Volume size (Gb): 3.73
Files found on the card (name, date and size in bytes):
```

Now we can also write data on the SD card. For that, there is the example DataLogger:

Neu	Strg+N			
Öffnen Letzte öffnen Sketchbook	Strg+O			
Beispiele	1	▲		
Schließen	Strg+W	Bridge	•	
Speichern	Strq+S	Esplora	•	
Speichern unter	Strg+Umschalt+S	Ethernet	<b>⇒</b>	
-		Firmata	•	
Seite einrichten	Strg+Umschalt+P	GSM	•	
Drucken	Strg+P	LiquidCrystal	•	
Voreinstellungen	Strg+Komma	Robot Control	•	
		Robot Motor	•	
Beenden	Strg+Q	SD	1	CardInfo
int sensor - analogPead (analog		Servo	1	

Here adjust again the shield:

const int chipSelect = 10;

And, if possible, also change the baud rate. After the upload, the values from the analogue input 0, 1 and 2 are written on the SD card in a file, named "datalog.txt".

## You did it! Your data logger writes test results on your µSD card!

Now it is time to learn and actualize your own projects.

For more hardware, our online store is always at your disposal:

https://az-delivery.de

Enjoy! Imprint

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