

SIO2SD is a device that allows you to load games/applications into 8-bit Atari computers via SIO interface from SD/MMC cards.

#### Device abilities:

- Works with SD/MMC (FAT12,FAT16 and FAT32 formats - Warning !!! Software up to version 2007.04.01 had a bug in FAT12 code - FAT12 is typically used by Windows XP for 16MB cards)
- Handles ATR (rw), XFD (ro) and COM/XEX (ro) file types
- 16x2 LCD display allows to "walk" catalog tree and choose files to load
- Handles SIO with turbo (allows to set speed index from 1 to 16, default is 6 (69kb/s), up to version 2007.02.18 speed index was always 10 (51kb/s))
- All densities with 128B and 256B sectors, including 16MB disks
- Handles drives d1 to d8 (up to version 2007.02.08 only d1 to d4 drives were available)
- Can be configured using ATARI (it's possible to load configuration tool directly from MCU flash memory, so no SD card is needed)

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#### Connecting SIO cable:

connector in SIO2SD	ATARI SIO connector	Description
1 rot	10	+5V
2 Schirm	4	GND
3 gelb	7	COMMAND
4 weiß	3	DATA IN
5 grün	5	DATA OUT

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Software (2007.04.28 - FAT12 bug fixed):

fuse bits from version 2007.04.01: (H:0xC3 ; L:0xFF)

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#### Usage:

You have to format (FAT) SD card using computer, in root directory create ATARI folder. In this folder you can place folders and files. This is the start folder for SIO2SD. It's a good idea to use folders with up to about 100 files than one big folder with many, many files. On the first use of a new formatted card SIO2SD will create SIO2SD.CFG file in root directory, where configuration will be stored (files to disks mapping). To perform firmware upgrade, just put SIO2SD.BIN (28k version) into the root directory, then insert card with this file and press proper key combination. Note: the directory named ATARI must be present on the card or else SIO2SD won't recognize the card and won't perform the upgrade.

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## Keyboard:

On PCB there are five keys placed like this:



From software version 2007.02.04:

- K1: next atari drive (D1,D2,..)
- SHIFT+K1: previous atari drive (D1,D2,..)
- K2: next file/folder
- SHIFT+K2: previous file/folder
- K3: parent directory (cd ..)
- SHIFT+K3: firmware upgade
- K4: go to folder/map file to current atari drive
- SHIFT+k4: turn off current atari drive ("eject disk")

From the version 2007.04.01 device started with K4 pressed goes to setup mode. In this mode keys have meaning as follows:

- K1: next option
- SHIFT+K1: previous option
- K2: next option setting
- SHIFT+K2: previous option setting

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## Options:

- sio high speed
  - off
  - hindex from 1 to 16 (6 is the default setting)
- cfg tool load (when to override D1 to load configuration program)
  - never
  - startup+shift - only when SHIFT was pressed during startup (power on)
  - every startup
  - no card - only if SD card is not inserted (default setting)
- LED mode (meanig of LEDs)
  - SD read/write - first LED shows SD reads, second LED shows SD writes
  - SIO read/write - first LED shows SIO reads, second SIO writes
  - SD act/SIO act - first LED shows any SD activity, second any SIO activity

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If you have any questions write to: 'acid' in domain 'gucio.pl'.

### **Diode BAT85**

You must put diode (BAT85) at pin number 4 sio2sd - but it's not necessary if you use only sio2sd  
The diode is important only if you use Atari disk drive like 1050, California Access or sio2pc both  
with sio2sd.

The Best solution is to put diode inside SIO connector (on 3 pin Atari SIO).  
Cathode to SIO2SD and Anode to Atari SIO - Cathode is signed as black ring on diode!