

INDIVIDUAL

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SPIMaid

SPI Bus Analyzer

Technical data

The passive version

- SPI Bus Analyzer
- 16 Chip Select Inputs, low or high active
- word length 8-64 Bit
- MSB or LSB first
- SPI CLK rising or falling
- SPI CLK up to 16MHz
- unlimited number of messages can be recorded
- USB 2.0 interface
- decoding of data down to a single bit
- conditional decoding
- trigger Input (start of recording)
- trigger Output
- time stamp (500 nsec resolution)

The active version additionally to the a.m. features

- Data transmitting on the MOSI line, simultaneously recording of data on the MISO line
- message composer to create Sequences of messages, including the timing
- singular and cyclic communications
- simple macro language



Botschaft	Absolute Zeit [µs]	Relative Zeit [µs]	Offset	Eingang	ASIC	MOSI	MISO	Befehl MOSI	Antwort MISO
0	0,00	0,00	0	2	SensorA	8000	A200	ReadB...	CntA0
1	12,00	12,00	0	2	SensorB	4000	C389	ReadA...	CntB89
2	49,00	49,00	0	2	SensorA	C000	A201	ReadA...	CntB1
3	61,00	61,00	0	2	SensorB	4000	C389	ReadA...	CntB89
4	97,00	97,00	0	2	SensorA	8000	A202	ReadB...	CntA0
5	110,00	110,00	0	2	SensorB	4000	C389	ReadA...	CntB89
6	146,00	146,00	0	2	SensorA	C000	A203	ReadA...	CntB1
7	158,00	158,00	0	2	SensorB	4000	C389	ReadA...	CntB89
8	195,00	195,00	0	2	SensorA	8000	A204	ReadB...	CntA0
9	207,00	207,00	0	2	SensorB	4000	C389	ReadA...	CntB89
10	243,00	243,00	0	2	SensorA	C000	A205	ReadA...	CntB1
11	256,00	256,00	0	2	SensorB	4000	C389	ReadA...	CntB89
12	292,00	292,00	0	2	SensorA	8000	A206	ReadB...	CntA0
13	304,00	304,00	0	2	SensorB	4000	C389	ReadA...	CntB89
14	341,00	341,00	0	2	SensorA	C000	A207	ReadA...	CntB1
15	353,00	353,00	0	2	SensorB	4000	C389	ReadA...	CntB89

Name	15	14	13	12	11	10	09	08	07	06	05	04	03	02	01	00
ReadA	MISO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MOSI	X	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CntB	MISO															
ReadB	MISO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MOSI	X	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CntA	MISO															

The SPIMaid is a universal and powerful tool that records and analyzes data transmitted on a SPI bus.

The SPIMaid is capable to record serialized data stream on the MISO and MOSI line of the bus under investigation, saving each message with its associated chip select line and time stamp.

The SPIMaid software displays the recorded data on your PC, showing the MISO, MOSI, time stamp and chip select raw values in an Excel type grid view.

The software decodes the recorded data based on an instruction-set. An instruction-set can specify the meaning of each bit or group of bits of the message.

For each message, an absolute time stamp, a relative time stamp, the chip select line (or an ASIC name), and the decoded MISO and MOSI data as text or number are shown for each message.

The user defined color scheme to structure the data.

A rich feature set of search and filter functions are provided. They assist the user in analyzing of the data stream and searching of special events.

A graphical view of the recorded data is also available.

The SPIMaid bus analyzer is available in two versions:

The **passive version** is a pure passive bus monitor including the features described above.

This version is designed for engineers to verify the flow of software and to record microcontroller ASIC communication in an embedded system.

The **active version** has the ability to send data on the MOSI line to establish the communication with an ASIC.

With the integrated message sequence composer the user can define sequences of messages that are sent to the ASIC.

While sending stimulating the ASIC, the SPIMaid can record and analyze the ASICs response on the MISO line as described above.

This version was developed especially for the verification of ASICs

For more information please visit our site:

<http://www.inovaflex.net/>

