

SD/eMMC Analyzer SGDK330B

SolidGear
www.solidgear.co.jp

SD Ver3.00
SDIO Ver3.00
eMMC Ver5.1



SGDK330B is protocol analyzer to let engineer be able to capture and analyze bus state and performance of SD, SDIO and eMMC.

Feature

SGDK330B supports up-to-date media in the market.

SGDK330B provides simple and straightforward user interface to operate.

Application software on Windows PC is very easy to use, and downloadable to see Log file.

SGDK330B is ideal analyzer for anyone developing SD/SDIO/eMMC Host products.

Supported media

[SD card ver3.00]

- SDSC up to 2GB
- SDHC up to 32GB
- SDXC up to 2TB
- SDR12/SDR25/SDR50/DDR50/SDR104

[SDIO card ver3.00]

- 1bit/4bit/8bit
- UHS-I (208MHz)
- 2KB block length / interrupt

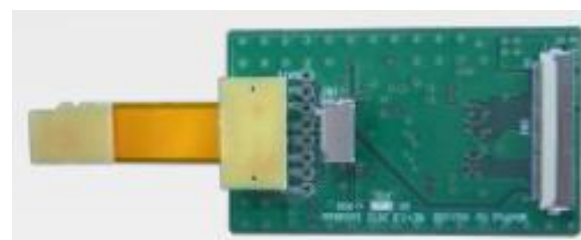
[eMMC ver5.1]

- 1bit/4bit/8bit
- HS200/HS400
- Boot operation

Mini POD



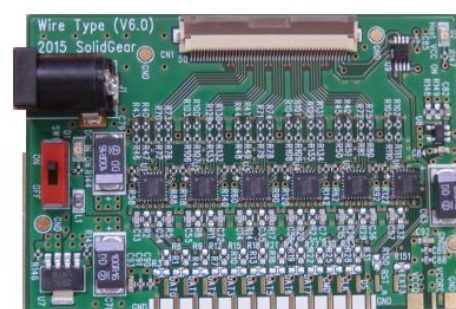
Mini POD for SD card



Mini POD for microSD card



Mini POD for eMMC socket type (HS200)



Mini POD for eMMC wire type (HS200/400)

Sample Log

298 us	CMD18(READ...	ARG:000077D0 CRC:5B	SC:8 IO=1.8V	SD :211.2MHZ	Nrc:25
000 us	R1	RSP:1200000900D3 [47:0]	-	SD :-	Ncr:11
391 us	Read	E5440036 00330000 00...	WaitTime:3...	SD :4bit	Nac:Over...
006 us	Read	E5480044 00420045 00...	WaitTime:1us	SD :4bit	Nac:251
006 us	Read	E5444245 4E437E31 30...	WaitTime:1us	SD :4bit	Nac:249
006 us	Read	E5480044 00420045 00...	WaitTime:1us	SD :4bit	Nac:238
006 us	Read	E5444245 4E437E31 30...	WaitTime:1us	SD :4bit	Nac:248
006 us	Read	E5320032 00410000 00...	WaitTime:1us	SD :4bit	Nac:259
006 us	Read	00000000 00000000 00...	WaitTime:1us	SD :4bit	Nac:251
006 us	Read	00000000 00000000 00...	WaitTime:1us	SD :4bit	Nac:236
043 us	CMD12(STOP...	ARG:00000000 CRC:30	SC:8 fromC...	SD :198.0MHZ	Nrc:Over...
000 us	R1b	RSP:0C00000B007F [47:0]	-	SD :-	Ncr:7

[SD Card UHS-I 208MHz]

000 us	int assert	-	-	SD :-	-
039 us	CMD53(IO_R...	ARG:21000020 CRC:0F	- Read FN2 Adr=08...	SD :211.2MHZ	Nrc:7924
000 us	int negate	-	-	SD :-	-
000 us	R5	RSP:35000010005B [47:0]	Data:00	SD :-	Ncr:4
000 us	Read	00000000 00000000 00...	WaitTime:0us	SD :4bit	Nac:10
000 us	int assert	-	-	SD :-	-
034 us	CMD52(IO_R...	ARG:00000A00 CRC:26	- Read FN0 Adr=00005	SD :211.2MHZ	Nrc:6884
000 us	R5	RSP:340000100213 [47:0]	Data:02	SD :-	Ncr:4
031 us	CMD53(IO_R...	ARG:15A04004 CRC:5E	- Read FN1 Adr=0D...	SD :211.2MHZ	Nrc:6149
000 us	int negate	-	-	SD :-	-
000 us	R5	RSP:35000010005B [47:0]	Data:00	SD :-	Ncr:4
000 us	Read	40004000 00040000 40...	WaitTime:0us	SD :4bit	Nac:23

[SDIO UHS-I 208MHz]

444 us	CMD18(READ...	ARG:0000CA88 CRC:09	SC:8	MMC:198.0MHZ	Nrc:19
000 us	R1	RSP:1200000900D3 [47:0]	-	MMC:-	Ncr:5
079 us	Read	88CA0000 62BBF967 35...	WaitTime:79us	MMC:8bit, DDR	Nac:15865
001 us	Read	89CA0000 62BBF967 35...	WaitTime:0us	MMC:8bit, DDR	Nac:8
001 us	Read	8ACA0000 62BBF967 35...	WaitTime:0us	MMC:8bit, DDR	Nac:8
001 us	Read	8BCA0000 62BBF967 35...	WaitTime:0us	MMC:8bit, DDR	Nac:8
002 us	Read	8CCA0000 62BBF967 35...	WaitTime:1us	MMC:8bit, DDR	Nac:287
001 us	Read	8DCA0000 62BBF967 35...	WaitTime:0us	MMC:8bit, DDR	Nac:8
001 us	Read	8ECA0000 62BBF967 35...	WaitTime:0us	MMC:8bit, DDR	Nac:8
001 us	Read	8FCA0000 62BBF967 35...	WaitTime:0us	MMC:8bit, DDR	Nac:8
001 us	CMD12(STOP...	ARG:0000FFFF CRC:55	SC:8 fromC...	MMC:198.0MHZ	Nrc:18318
000 us	R1b	RSP:0C00000B007F [47:0]	-	MMC:-	Ncr:5

[eMMC HS400]

Reference Specifications

SD Memory Card Physical Layer Specification Version 3.00

SDIO Specification Version 3.00

Embedded Multi-Media Card (eMMC) Electrical Standard (5.1)

SGDK330B Set

Main BOX

Main POD (SGDK330B, Log trace memory:1GB)

Mini PODs (SD, microSD, eMMC/SDIO wire type and Socket type)

5V output AC Adaptor (100-240V)

POD cable, USB cable

Application software for Windows PC (CD-ROM)

Recommended Control PC

Windows XP/Vista/7/8 (32bit/64bit)

Intel Pentium4 2GHz and more

2GB RAM

USB 2.00 Port

For further information



SolidGear Corporation

ShinYokohama Kaneko Bldg 8F
2-3-9 ShinYokohama, Kohoku-ku, Yokohama,
222-0033 Japan
Info@solidgear.co.jp
Tel:+81-45-470-4511