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Feature

Supported Models:

BF6264B	BF7264B	BF7264B+	BF7264 Pro
●	●	●	●

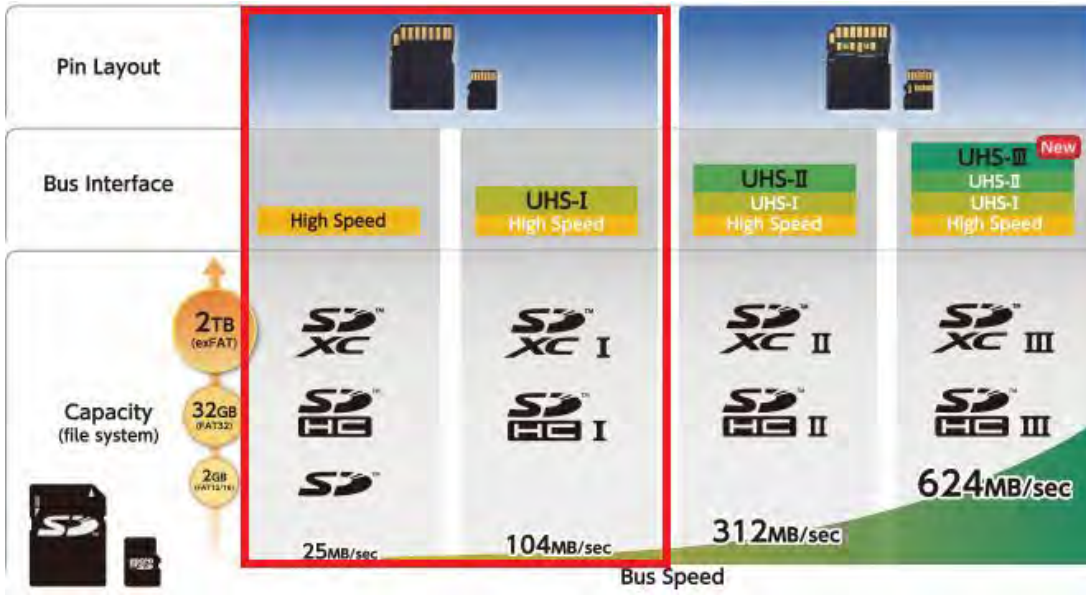
BF7264B/B+/Pro has two USB holes at the front.

Specifications:

1. BF7264B/B+/Pro, 32Gb RAM, SD 4.0 / SD 3.0 probe



2. Supports SD 3.0 SDR104 / SD6.0 Legacy mode SDR104, DDR200/ SDIO 3.0



3. Can display SD 3.0 protocol packet data in tabular form, including command parsing

Timestamp (h:m:s.ms.us.ns.dsr)	Event	Data	Information	Error message	Bus	Clock	CMD Duratic	Data Durati
17:35:59.687.190.429 606.5	ACMD06 SET_BUS_WIDTH	46 00 00 00 02 CB			232.451 K	Nrcr: 94	202.196us	
17:35:59.687.444.247 253.8	Resp6 R1	06 00 00 09 20 B9				Nrcr: 11	202.196us	
17:35:59.688.052.950 408.7	CMD16 SET_BLOCKLEN	50 00 00 02 00 15			232.446 K	Nrcr: 94	202.196us	
17:35:59.688.306.790 253.0	Resp16 R1	10 00 00 09 00 0B				Nrcr: 11	202.196us	
17:35:59.688.554.350 647.5	CHD55 APP_CMD	77 AA AA 00 00 2B			14.8622 M	Nrcr: 6618	3.15968us	
17:35:59.688.950.316 3.96us	Resp55 R1	37 90 00 09 20 32				Nrcr: 11	3.15968us	
17:35:59.689.247.424 289.1	ACMD51 SEND_SCR	73 00 00 00 00 C7			14.8622 M	Nrcr: 4249	3.15968us	
17:35:59.689.251.350 3.96us	Resp51 R1	33 00 00 05 20 51				Nrcr: 12	3.15968us	
17:35:59.689.390.756 147.4	Read, 16 bytes	02 35 04 03 00 00 90 00...	SC=1 WaitTime:144.046us		4bit	Nrcr: 2147		2.22311us
17:35:59.690.344.700 945.9	CMD06 SWITCH_FUNC	46 00 FF FF F3 E3			14.8622 M	Nrcr: 16	3.15968us	
17:35:59.690.348.937 4.23us	Resp6 R1	06 00 00 09 00 DD				Nrcr: 15066		9.74902us
17:35:59.691.364.272 1.01ms	Read, 64 bytes	00 64 00 01 80 01 80 0F...	SC=1 WaitTime:1.01210ms		4bit	Nrcr: 15066		9.74902us
17:35:59.692.145.894 781.6	CMD06 SWITCH_FUNC	46 00 FF FF F3 3B			14.8622 M	Nrcr: 15	3.15968us	
17:35:59.692.150.127 4.23us	Resp6 R1	06 00 00 09 00 DD				Nrcr: 15	3.15968us	
17:35:59.692.190.052 47.92..	Read, 64 bytes	00 FA 80 01 80 01 80 0F...	SC=1 WaitTime:44.7655us		4bit	Nrcr: 666		9.74902us
17:35:59.692.396.862 698.8	CMD06 SWITCH_FUNC	46 80 FF FF F3 0D			14.8622 M	Nrcr: 15	3.15635us	
17:35:59.692.901.099 4.23us	Resp6 R1	06 00 00 09 00 DD				Nrcr: 15	3.15968us	
17:35:59.692.932.735 1.03ms	Read, 64 bytes	00 C3 00 01 80 01 80 0F...	SC=1 WaitTime:1.02840ms		4bit	Nrcr: 27175		9.74902us
17:35:59.695.628.059 885.3	CMD06 SWITCH_FUNC	46 80 FF 3F FF 5F			14.8622 M	Nrcr: 33	3.15668us	
17:35:59.695.633.460 5.37us	Resp6 R1	06 00 00 09 00 DD				Nrcr: 33	3.15968us	
17:35:59.695.917.396 283.9..	Read, 64 bytes	00 FA 80 01 80 01 80 0F...	SC=1 WaitTime:1280.769us		4bit	Nrcr: 4179		9.74902us
17:35:59.696.604.911 687.5	CMD06 SWITCH_FUNC	46 80 FF 3F FF A5			14.8622 M	Nrcr: 33	3.15668us	
17:35:59.696.610.291 5.37us	Resp6 R1	06 00 00 09 00 DD				Nrcr: 33	3.15968us	
17:35:59.696.917.340 307.0..	Read, 64 bytes	00 FA 80 01 80 01 80 0F...	SC=1 WaitTime:303.89us		4bit	Nrcr: 4523		9.75236us
17:35:59.701.189.844 4.24ms	CMD13 SEND STATUS	4D AA AA 00 00 43			204.276 M	Nrcr: 33	229.977ms	
17:35:59.701.160.339 309.9..	Resp13 R1	0D 00 00 09 00 3F				Nrcr: 33	226.644ms	
17:35:59.701.831.008 670.6	CMD13 SEND STATUS	4D AA AA 00 00 43			204.276 M	Nrcr: Over	229.977ms	
17:35:59.701.831.399 389.9..	Resp13 R1	0D 00 00 09 00 3F				Nrcr: 32	229.977ms	
17:35:59.702.396.852 565.4..	CMD13 SEND STATUS	4D AA AA 00 00 43			204.276 M	Nrcr: Over	229.977ms	
17:35:59.702.397.245 393.2	Resp13 R1	0D 00 00 09 00 3F				Nrcr: 33	229.977ms	
17:35:59.702.963.360 566.1..	CMD13 SEND STATUS	4D AA AA 00 00 43			204.276 M	Nrcr: Over	226.644ms	
17:35:59.702.963.759 389.9..	Resp13 R1	0D 00 00 09 00 3F				Nrcr: 33	229.977ms	
17:35:59.703.830.462 564.7..	CMD13 SEND STATUS	4D AA AA 00 00 43			204.276 M	Nrcr: Over	229.977ms	
17:35:59.703.830.852 389.9..	Resp13 R1	0D 00 00 09 00 3F				Nrcr: 32	229.977ms	
17:35:59.704.099.232 567.3..	CMD13 SEND STATUS	4D AA AA 00 00 43			204.276 M	Nrcr: Over	229.977ms	
17:35:59.704.099.423 389.9..	Resp13 R1	0D 00 00 09 00 3F				Nrcr: 32	229.977ms	
17:35:59.704.666.581 567.9..	CMD13 SEND STATUS	4D AA AA 00 00 43			204.276 M	Nrcr: Over	229.977ms	
17:35:59.704.666.975 393.2..	Resp13 R1	0D 00 00 09 00 3F				Nrcr: 33	229.977ms	
17:35:59.705.235.615 568.6..	CMD13 SEND STATUS	4D AA AA 00 00 43			204.276 M	Nrcr: Over	229.977ms	
17:35:59.705.236.009 393.2..	Resp13 R1	0D 00 00 09 00 3F				Nrcr: 33	229.977ms	

- Use 32Gb RAM as the buffer to stream all SD 3.0 data into the SSD HD in order to record all data flow from Low Power Mode to High Speed Mode.
- “Data Filter” filters unwanted data to save memory.
- “Search” searches specific data.
- “CRC Packet” displays and counts CRC
- SD 3.0 command statistics include numbers of packets, individual command, different data length, and errors

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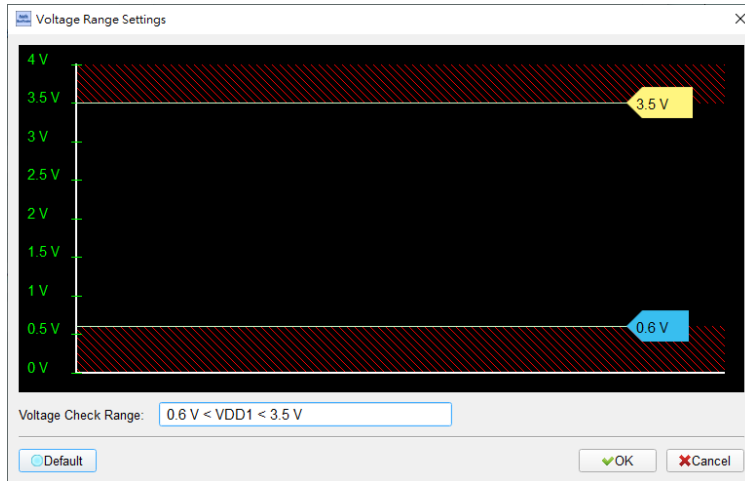
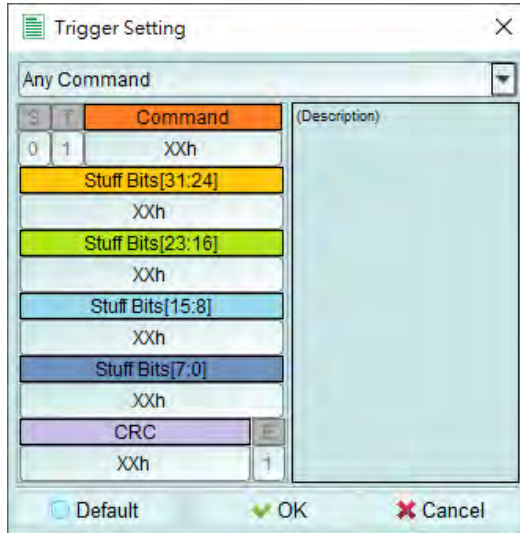
Navigator			Statistics		
Discription	Txns	Bytes	Txns	Bytes	
CMD	489		CMD00	8	
ACMD	84		CMD08	8	
DATA	16533	8397134	CMD55	84	
Write SC of CMD24	0	0	CMD11	3	
Write SC of CMD25	2	8212	CMD02	5	
Read SC of CMD17	5	2560	CMD03	5	
Read SC of CMD18	58	8391632	CMD09	5	
ERROR	28		CMD07	5	
			CMD13	119	
			CMD16	5	
			CMD06	17	
			CMD17	5	
			CMD18	58	
			CMD12	60	
			CMD36	1	
			CMD45	2	
			CMD39	1	
			CMD19	96	
			CMD25	2	

9. SD 3.0 command trigger

- Trigger parameters include commands and data in order to cover all kinds of packets.
- Command or 16 byte Data.
- CRC7, CRC16, End Bit Error.
- CRC Status timeout, CRC Status pattern.
- VCC drop, VCCQ2 drop.
- The Trigger-Out port is to trigger a DSO to capture waveforms

Trigger on

<input type="checkbox"/> CMD / Resp. / Data	<input type="checkbox"/> End bit error
<input checked="" type="radio"/> CMD/RESP <input type="radio"/> Data <input type="text" value=""/>	<input type="checkbox"/> CRC7 error
	<input type="checkbox"/> CRC16 error
<input type="checkbox"/> VDD Drop	<input type="checkbox"/> CRC status <input type="text" value="Positive"/>
	<input type="checkbox"/> CRC status timeout
	<input type="text" value="1"/> <input type="text" value="ns"/>



10. Report area

Statistics list: Quickly categorize and track the location of data with statistical functions

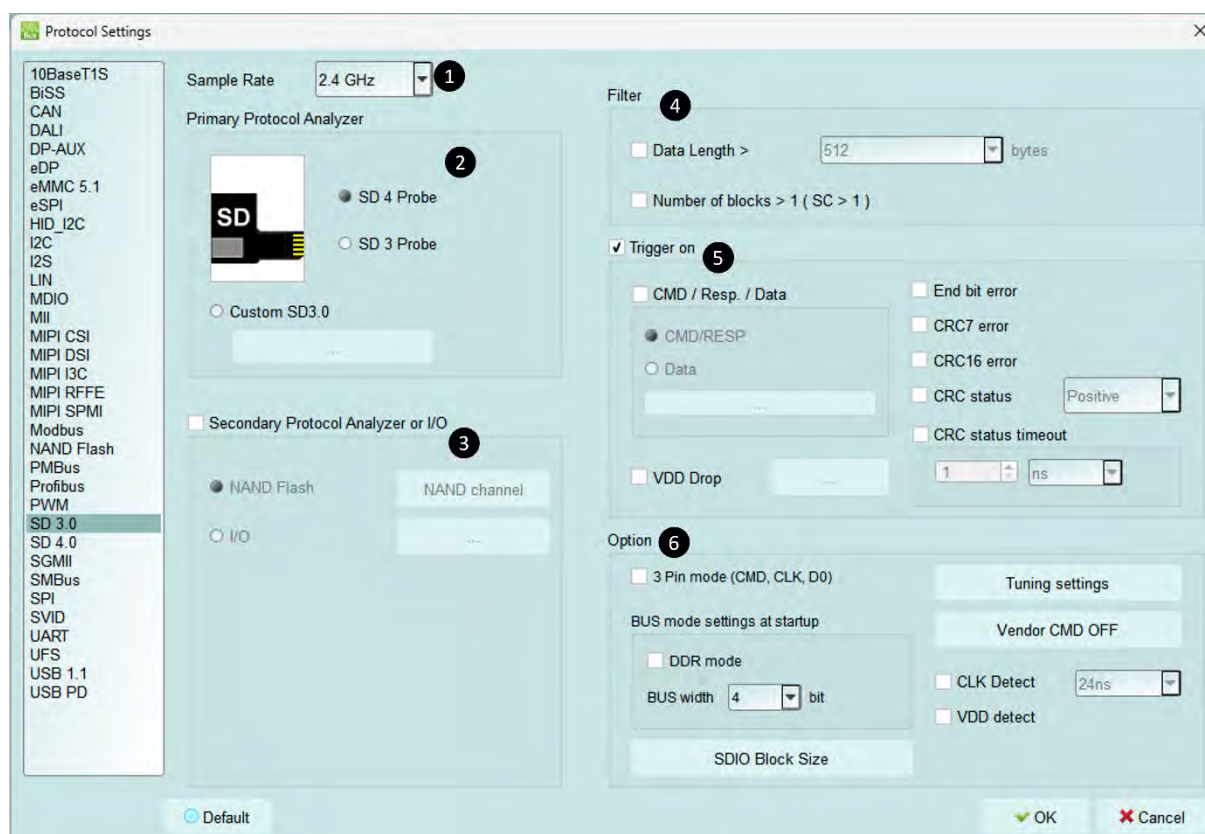
Timeamp (h:m:s.ms.us.nu.nbr)	Event	Data	Information	Error message	Bus	Clock	CMD Duration	Data Durat
17:35:59.687.190.425.606.5	ACMD06 SET_BUS_WIDTH	46 00 00 00 02 CB			232.451 K	Ncr: 94	202.156us	
17:35:59.687.444.247.283.8	Resp6 R1	08 00 00 09 20 E9			232.446 K	Ncr: 11	202.196us	
17:35:59.688.052.920.600.7	CHD16 SET_BLOCKLEN	50 00 00 02 00 15			232.446 K	Ncr: 94	202.156us	
17:35:59.688.306.798.253.8	Resp6 R1	10 00 00 09 00 CB			232.446 K	Ncr: 11	202.196us	
17:35:59.688.954.350.647.3	CHD59 APP_CMD	77 AA AA 00 00 2B			14.8622 M	Ncr: 4418	3.15968us	
17:35:59.688.958.316.3.960u	Resp55 R1	37 00 00 09 20 33			14.8622 M	Ncr: 11	3.15968us	
17:35:59.689.247.424.289.1	ACMD51 SEND_SCR	73 00 00 00 00 C7			14.8622 M	Ncr: 4249	3.15968us	
17:35:59.689.251.390.5.960u	Keep51 R1	33 00 00 09 20 91			14.8622 M	Ncr: 12	3.15968us	
17:35:59.689.398.795.147.4	Read, 16 bytes	02 35 34 03 00 00 00 00...	SC=1 WaitTime:144.246us		4bit	Nacr: 2147		2.22311us
17:35:59.690.344.700.945.9	CHD06 SWITCH_FUNC	46 00 FF FF FF E3			14.8622 M	Ncr: 13	3.15968us	
17:35:59.690.348.937.4.23us	Resp6 R1	06 00 00 09 00 DD			14.8622 M	Ncr: 16	3.15968us	
17:35:59.690.422.410.283.8	Read, 64 bytes	00 04 00 00 00 00 00 00...	SC=1 WaitTime:144.246us		4bit	Nacr: 10064		9.74902us
17:35:59.692.145.894.781.6	CHD06 SWITCH_FUNC	46 00 FF FF FF E3			14.8622 M	Ncr: 13	3.15968us	
17:35:59.692.150.127.4.23us	Resp6 R1	06 00 00 09 00 DD			14.8622 M	Ncr: 15	3.15968us	
17:35:59.692.198.052.47.92	Read, 64 bytes	00 FA 80 01 80 01 80 0F...	SC=1 WaitTime:144.765us		4bit	Nacr: 444		9.74902us
17:35:59.692.896.862.696.8	CHD06 SWITCH_FUNC	46 00 FF FF FF E3			14.8622 M	Ncr: 13	3.15968us	
17:35:59.692.901.055.4.23us	Resp6 R1	06 00 00 09 00 DD			14.8622 M	Ncr: 15	3.15968us	
17:35:59.694.192.730.1.832ms	Read, 64 bytes	00 08 80 01 80 01 80 0F...	SC=1 WaitTime:1.02849ms		4bit	Nacr: 27175		9.74902us
17:35:59.695.628.089.895.3	CHD06 SWITCH_FUNC	46 00 FF 3F FF 9F			14.8622 M	Ncr: 33	3.15968us	
17:35:59.695.633.468.5.37us	Resp6 R1	06 00 00 09 00 DD			14.8622 M	Ncr: 33	3.15968us	
17:35:59.695.917.396.283.9	Read, 64 bytes	00 10 80 01 80 01 80 0F...	SC=1 WaitTime:250.769us		4bit	Nacr: 4179		9.74902us
17:35:59.696.604.911.697.5	CHD06 SWITCH_FUNC	46 00 FF 3F FF A9			14.8622 M	Ncr: 33	3.15968us	
17:35:59.696.610.251.5.37us	Resp6 R1	06 00 00 09 00 DD			14.8622 M	Ncr: 33	3.15968us	
17:35:59.696.917.340.307.0	Read, 64 bytes	00 FA 80 01 80 01 80 0F...	SC=1 WaitTime:303.89us		4bit	Nacr: 4523		9.75236us
17:35:59.701.109.949.4.24ms	CHD13 SEND_STATUS	4D AA AA 00 00 43			204.276 M	Ncr: Over		229.977ms
17:35:59.701.160.335.385.5	Resp13 R1	0D 00 00 05 00 3F			204.276 M	Ncr: 33	226.644ms	
17:35:59.701.331.008.670.6	CHD13 SEND_STATUS	4D AA AA 00 00 43			204.276 M	Ncr: Over		229.977ms
17:35:59.701.351.358.305.9	Resp13 R1	0D 00 00 05 00 3F			204.276 M	Ncr: 32	229.977ms	

Navigation	Trans	Bytes
ACMD	84	0
DATA	16533	8397134
Write SC of CMD24	0	0
Write SC of CMD25	2	8212
Read SC of CMD17	5	2560
Read SC of CMD18	58	8391632
ERROR	28	

Statistics	Trans	Bytes
CMD08	8	
CMD55	84	
CMD11	3	
CMD02	5	
CMD03	5	
CMD09	5	
CMD07	5	
CMD13	119	
CMD16	5	
CMD06	17	
CMD17	5	
CMD18	58	
CMD12	60	
CMD36	1	
CMD45	2	
CMD35	4	

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11. SD 3.0 settings



1. **Sample Rate:** Choose the sampling rate to use. To enable the Secondary Protocol Analyzer – NAND Flash option, the sampling rate must be set below 1GHz,
2. **Primary Protocol Analyzer:** Choose to use the probe type, and set the channel / trigger level,
3. **Secondary Protocol Analyzer or I/O:** An additional set of specified logic analysis can be opened to analyze the remaining available pins at the same time,
4. **Filter:** Each Data Frame can specify the size of the collection, and data larger than the set value will not be recorded
5. **Trigger on:** CMD, DATA, ERROR, Voltage, Timeout, CRC Status trigger conditions can be set
6. **Option:**
 - a. **3 Pin mode:** After connecting CLK, CMD, D0, the protocol flow and status agreement can be analyzed,
 - b. **Startup:** It needs to be set to the mode of the current acquisition, the mode of the test object is running, and has the Tuning function.
 - c. **Tuning setting:** Adjust channel phase.

- d. **Vendor CMD:** Can change the name of the command group by itself, with or without data,
- e. **CLK Detect:** Can detect whether CLK has action,
- f. **Two sets of voltage detection function**

FAQ

1. What SD version is supported?

A : Support SD3.0 SDR104, SD6.0 Legacy mode SDR104 / DDR200.

2. Will the signal quality be affected during measurement?

A: The measurement of the external instrument will inevitably have some load effect. We use the active probe to reduce the interference of the object to be measured and improve the signal quality.

3. Is Tx supported?

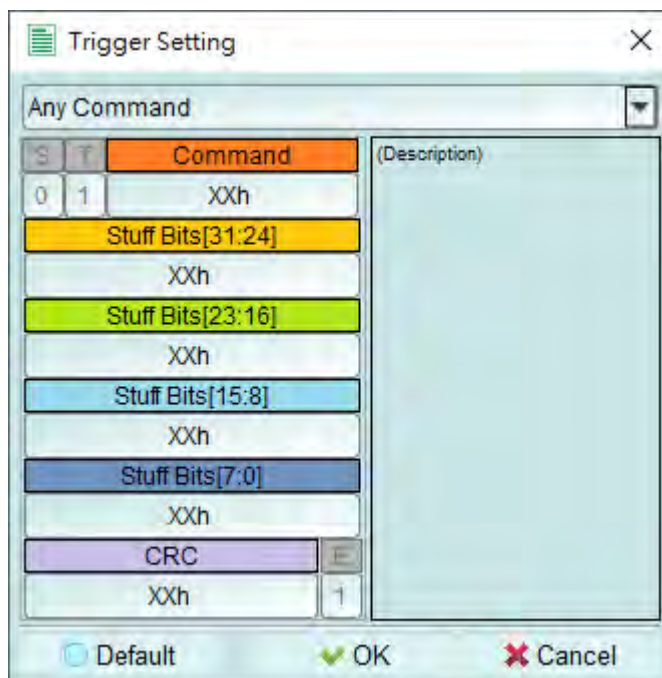
A: No

4. Precautions during measurement

Please make sure to connection according to the “Probe and test object connection” on page 9.

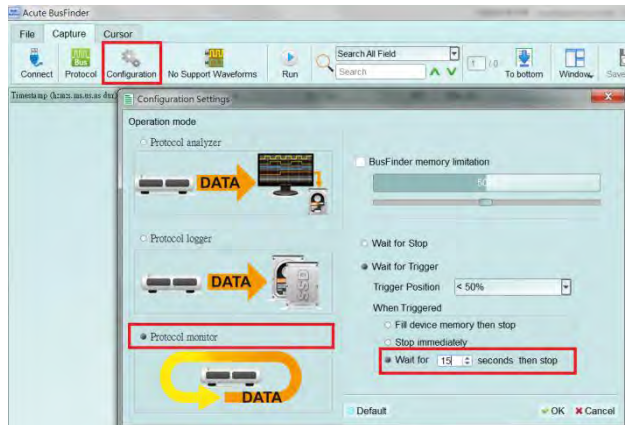
5. Can I specify an SD packet as the trigger point function?

A: You can specify specific SD packet or Error to trigger.



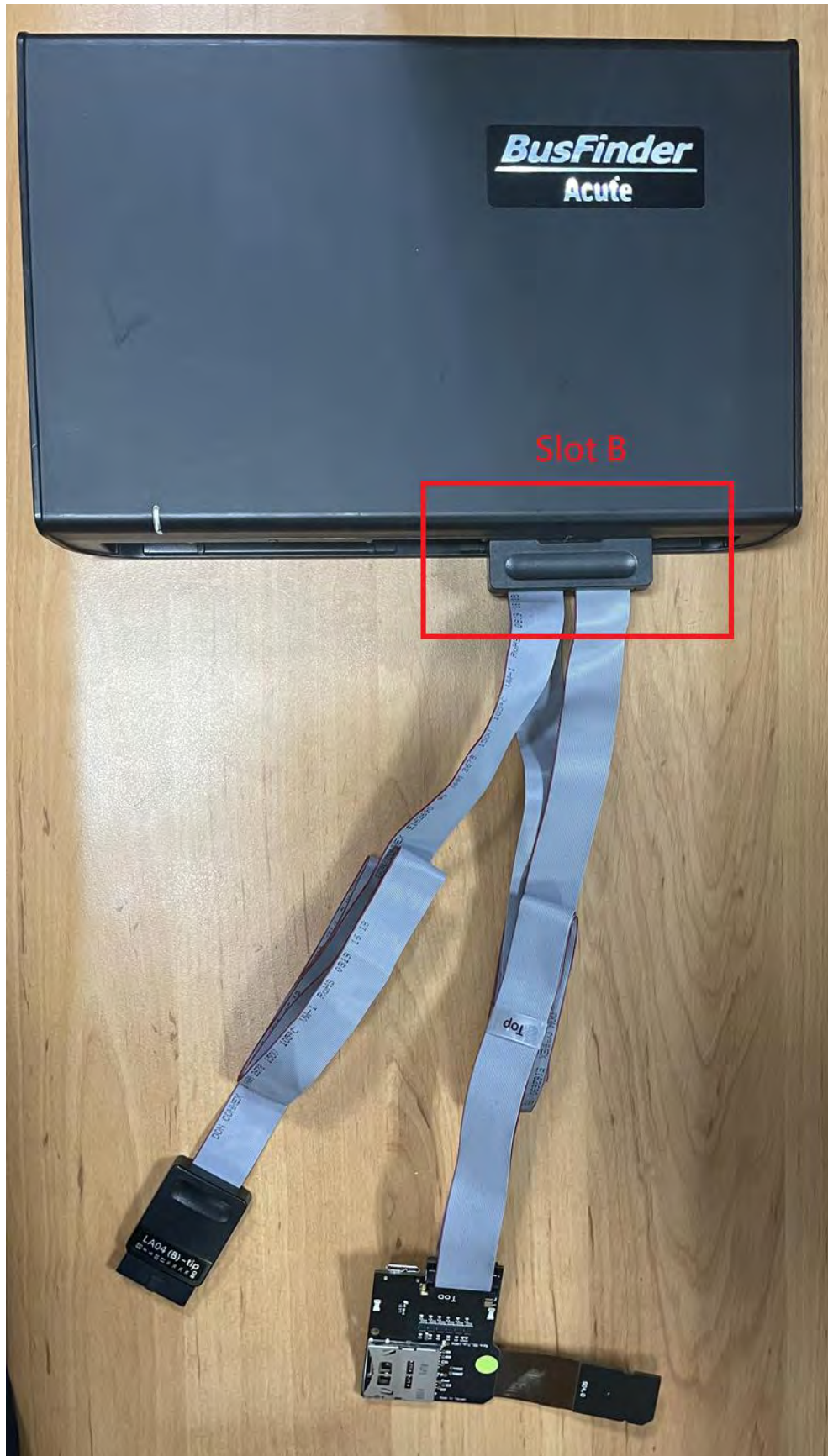
6. Is it possible to set an SD starting point, and specify how much time to capture Data?

A: You can set the starting condition to the trigger item and adjust to the data monitor mode in the working mode menu. And specify the length of acquisition time.

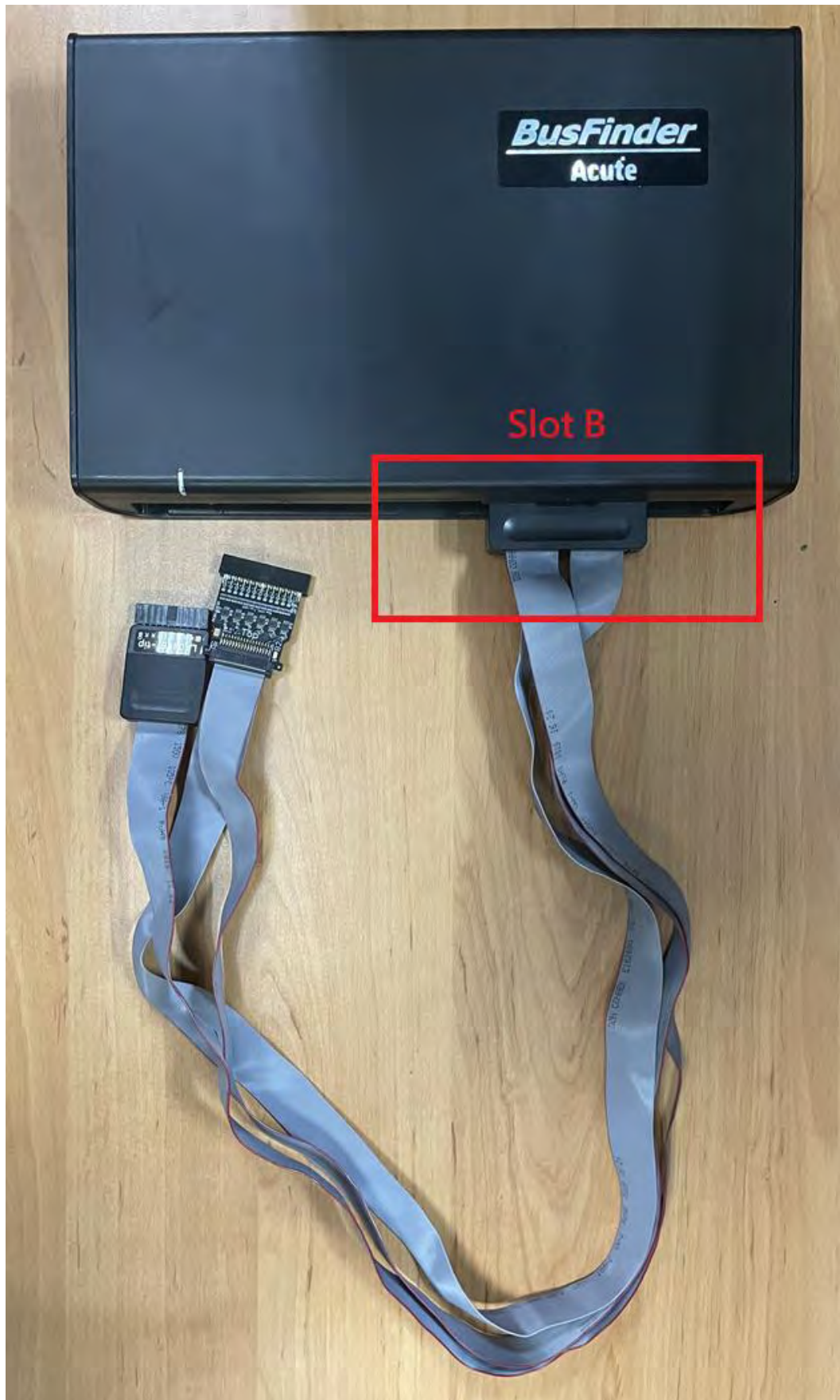


BusFinder and Probe connection

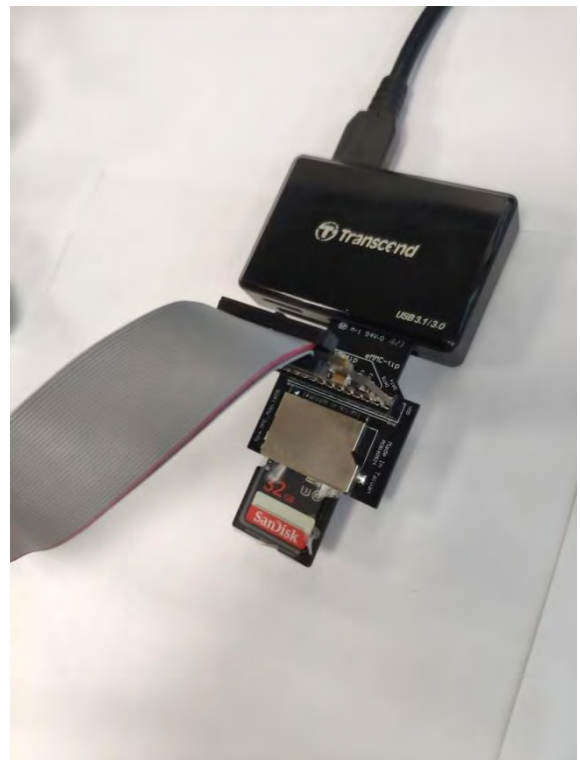
The BusFinder can only use Slot B as the probe connection slot.



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Probe and test object connection



SD4.0 adapter board test point:

When to use:

- a. When you need to use the oscilloscope to view the waveform at the same time
- b. When the flexible circuit of the transfer board can be checked whether it is normal, the electric meter can measure whether the golden finger of the front end is connected to the measuring point.

