



LA4000 series is design with 4GHz timing analysis and 400 MHz state analysis which is an ideal choice for logic analysis in High-Speed Data Transmission, Communication Protocol Analysis, and Handling Complex Signal Structures.

The LA4136B is a versatile tool, offering comprehensive support of 136 channels. It addresses various applications; from analyzing signal structures to decoding and debugging communication protocol buses which is suitable for tasks involving ADC and FPGA chip development and debugging.

Supports stacking measurements with various oscilloscopes through MCX and BNC cables, facilitating seamless connections with oscilloscopes from other brands such as Keysight, R&S, Tektronix, Acute TravelScope, and more.

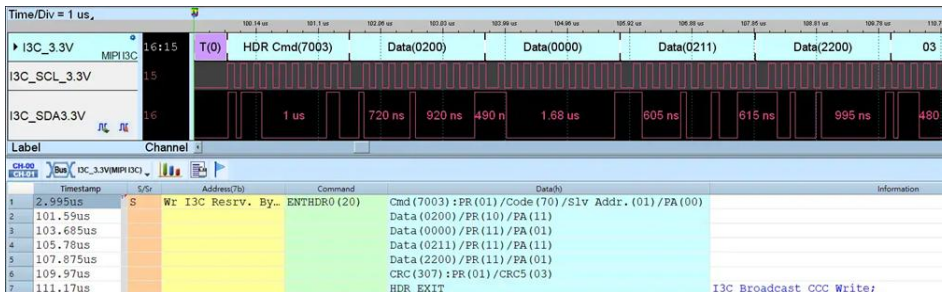
**SOFTWARE:**

▪ **Logic Analyzer Mode:**

- ✓ Capture digital waveforms and support bus decodes. Able to stack with a DSO to form as an MSO
- ✓ Provides multiple storage modes, users could select to have long time recording or precision acquisition



✓ **Logic Analyzer Mode Waveform Capture Example (MIPI I3C):**



▪ **Protocol Analyzer Mode:**

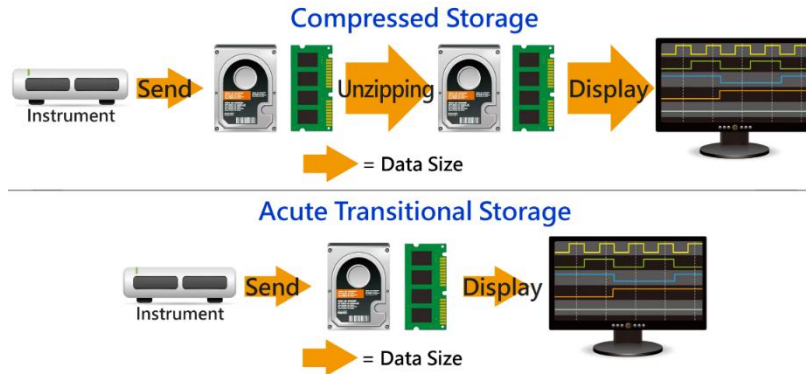
- ✓ Recording and Monitoring:

During hardware decoding, may log protocol data for very long time if without waveforms. Application timing: Preliminary protocol debug.

Protocol Analyzer	Protocol Logger	Protocol Monitor
Show real-time protocol data. Application timing: massive protocol data with some idles in between	Like data logger, save massive data into SSD hard drive. Application timing: massive protocol data	Like dash cameras, record protocol data by the device's memory only. Application timing: trigger event only happens in very long time.

✓ Long Time Record: Transitional Storage VS Compressed Storage

For signal capture and analysis, usually require to record the signal for a long time. If data is stored in a compressed manner, it may cause the software to lag or stop functioning due to insufficient PC memory when the data is decompressing after it is sent to the computer. For smooth software operation and long-term recording without any missing data, ACUTE's analyzer adopts the method of transitional storage rather than compression. After data returns to the PC software, it does not need to perform decompression and the decoded results can be displayed upon completion of the analysis.



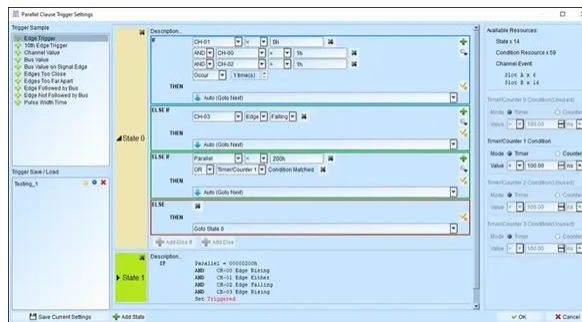
✓ Protocol Analyzer Mode Example (MIPI I3C):

Timestamp (h:m:s.ms.us.na) [ms]	S/R	Address(h) [M]	CCC (h)	Data (h)	Stop	Error	Information
1	18:00:11.224.894.445	0	0h				*** Capture Started
2	18:00:11.224.894.445	0	0h				
3	18:00:11.225.035.868	41.40	Sc	2	Wz	ENOXFER (92)	18* P I3C_SDR_Direct_Message
4	18:00:11.225.258.860	222.9	Sc	7E	Wz	ENOXFER (12)	18* P TEL I3C_SDR_Broadcast_Message
5	18:00:11.225.300.260	41.40	Sc	6	Wz	ENOXFER (92)	18* P I3C_SDR_Direct_Message
6	18:00:11.225.341.460	241.2	Sc	7E	Wz	ENOXFER (92)	18* P I3C_SDR_Direct_Message
7	18:00:11.225.582.860	41.40	Sc	2	Wz	ENOXFER (92)	18* P I3C_SDR_Direct_Message
8	18:00:11.225.805.860	223.0	Sc	7E	Wz	ENOXFER (12)	18* P TEL I3C_SDR_Broadcast_Message
9	18:00:11.225.847.255	41.39	Sc	6	Wz	ENOXFER (92)	18* P I3C_SDR_Direct_Message
10	18:00:11.226.088.455	241.2	Sc	7E	Wz	ENOXFER (92)	18* P I3C_SDR_Direct_Message
11	18:00:11.226.129.855	41.40	Sc	2	Wz	ENOXFER (92)	18* P I3C_SDR_Direct_Message
12	18:00:11.226.352.855	223.0	Sc	7E	Wz	ENOXFER (12)	18* P TEL I3C_SDR_Broadcast_Message
13	18:00:11.226.394.250	41.39	Sc	6	Wz	ENOXFER (92)	18* P I3C_SDR_Direct_Message
14	18:00:11.226.635.450	241.2	Sc	7E	Wz	ENOXFER (92)	18* P I3C_SDR_Direct_Message
15	18:00:11.226.676.850	41.40	Sc	2	Wz	ENOXFER (92)	18* P I3C_SDR_Direct_Message
16	18:00:11.226.899.850	223.0	Sc	7E	Wz	ENOXFER (12)	18* P TEL I3C_SDR_Broadcast_Message
17	18:00:11.226.941.250	41.40	Sc	6	Wz	ENOXFER (92)	18* P I3C_SDR_Direct_Message
18	18:00:11.227.182.445	241.1	Sc	7E	Wz	ENOXFER (92)	18* P I3C_SDR_Direct_Message
19	18:00:11.227.223.845	41.40	Sc	2	Wz	ENOXFER (92)	18* P I3C_SDR_Direct_Message
20	18:00:11.227.446.845	223.0	Sc	7E	Wz	ENOXFER (12)	18* P TEL I3C_SDR_Broadcast_Message
21	18:00:11.227.488.245	41.40	Sc	6	Wz	ENOXFER (92)	18* P I3C_SDR_Direct_Message
22	18:00:11.227.729.440	241.1	Sc	7E	Wz	ENOXFER (92)	18* P I3C_SDR_Direct_Message
23	18:00:11.227.770.840	41.40	Sc	2	Wz	ENOXFER (92)	18* P I3C_SDR_Direct_Message

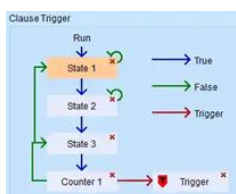
■ Other Features:

✓ Parallel Clause Triggers

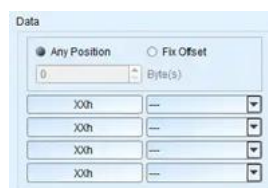
16-States parallel IF Clause settings for 128/64 channel value compare combined with AND/OR logic condition and 4 Timer/Counter conditions.



✓ Flow chart bus triggers

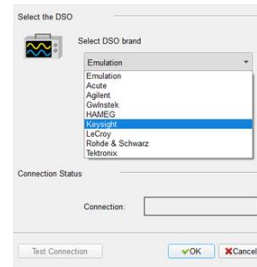
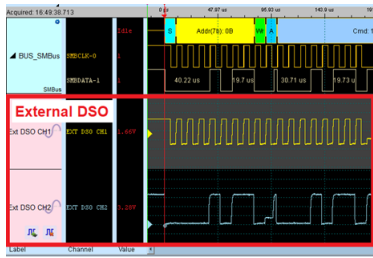


Power trigger for serial bus, 8-states flow chart setting with Counter/Timer



Detail parameters for each state

- ✓ Stack with ACUTE or other vendors' Digital Storage Oscilloscope (DSO) to form a Mixed Signal Oscilloscope (MSO)



- ✓ Add Notes & Pictures in Waveform

