Acute

LA4000 logic analyzer



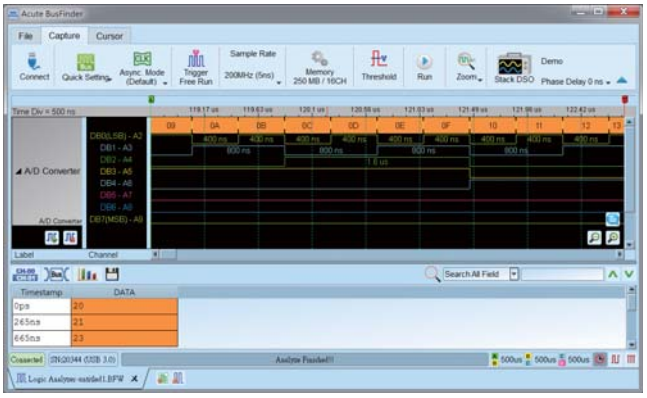
270 x 175 x 55 (mm³)

- PC-based
- 68 / 136 / 272* channels
- USB 3.0 interface, 12V power adaptor
- 4GHz Timing Analysis / 400MHz State Analysis
- 32Gb Memory
- Active Probes (4GHz x1, 2.4GHz x2/x4)
- Logic, State and Protocol triggers
- Stackable with a DSO to form an MSO
- Protocol Decode : 10BASE-T1S[1], CAN 2.0B/CAN FD, DP_Aux[1], eMMC 4.5, I²C, MIPI I3C 1.2, SD 3.0, SPI, SVID[2], SWD, UART (RS232), USB1.1, USB PD 3... (100+)
- Protocol Trigger I : 10BASE-T1S[1], I²C, MIPI I3C 1.2, SPI, UART (RS232), USB PD 3, ...
- Protocol Trigger II : eMMC 4.5, eSPI, NAND Flash, SD3.0, Serial Flash, SVID[3], ...
- Protocol Analyzer I : 10BASE-T1S[1], CAN 2.0B/CAN FD, I²C, MIPI I3C 1.2, SPI, USB PD 3, ...
- Protocol Analyzer II : DALI, eSPI, MDIO, PMBus, Profibus, PWM, SVID[3], ...

Model	Channel	Protocol Trigger	Protocol Analyzer
LA4068E	68	I	I
LA4136E	136	I	I
LA4068B	68	I, II	I, II
LA4136B	136	I, II	I, II

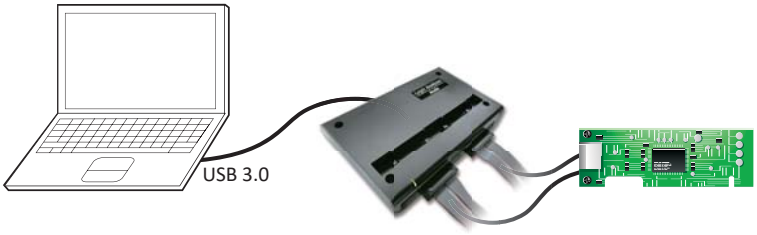
*Cascade any two LA4136E or LA4136B units to expand channels.

Software Window



System Requirements

- USB 3.0 port
- Win 7, Win 8, Win 10, Win 11
- PC RAM 16GB (recommended) or 8GB at least



Acute®
PC-based T&M Instruments
Acute Technology Inc.
Tel: +886-2-2999-3275 E-mail: service@acute.com.tw http://www.acute.com.tw

LA4000 series

Model		LA4068E	LA4136E	LA4068B	LA4136B
Power	Power Source	12V Power adapter			
	Static Power Consumption	18W	30W	18W	30W
	Max Power Consumption	45W	75W	45W	75W
Hardware Interface		USB 3.0			
Timing Analysis (Asynchronous, Max. Sample Rate)		4 GHz			
State Clock Rate (Synchronous, External Clock)		400 MHz			
Storage		Conventional Timing, Transitional Timing			
Channels (Data / Clock)		64 / 4	128 / 8	64 / 4	128 / 8
Total Sample Memory		32Gb			
Available channels vs. Memory per channel	Timing Analysis	Available channels (Conventional / Transitional Timing) - Memory per channel			
	4GHz	(16 / 16) - 2Gb			
	2.4 / 2GHz	(32 / 32) - 1Gb			
	1GHz	(64 / 64) - 500Mb			
	500 / 250 / 200MHz	(64 / 64) - 500Mb	(128 / 128) - 250Mb	(64 / 64) - 500Mb	(128 / 128) - 250Mb
Trigger	Resolution	250 ps			
	Channels	64	128	64	128
	Pre / Post Trigger	Yes			
	Pass Count	Yes (1 ~ 1000000 times)			
	Event Types	Channel, Pattern, Single / Multi Level, Parallel Clause, Width, Time-out, External			
	Protocol Triggers I	10BASE-T1S[1], BiSS-C, CAN2.0B/CAN FD, DP_Aux[1], HID over I2C, I2C, I2S, LIN2.2, MIPI I3C 1.2, SENT, SPI, UART (RS232), USB PD 3			
	Protocol Triggers II	---		DALI, eMMC 4.5, eSPI, HyperBus, LPC, MDIO, MII, Mini/Micro LED, MIPI RFFE 3, MIPI SPMI 2, Modbus, NAND Flash, PMBus, Profibus, RGMII, RMII, SD 3.0 (SDIO 2.0), SENT, Serial Flash (SPI NAND, OSPI), SMBus, SVI2, SVID[3], USB1.1	
	Trig-In / Out (for Stack)	TTL 3.3V			
	Ref. Clock Input	10MHz, Vpp=3.3 to 5V			
Threshold	Range	±15V			
	Resolution	10mV			
	Accuracy	± 100mV + 5%* Vth			
Input Voltage	Non-destructive (Max.)	±40V			
	Sensitivity	~300mV			
Impedance		~ 55KΩ || <2pF to 1Vdc			
Temperature	Operating / Storage	5℃~45℃ (41℉~113℉)/-10℃~65℃ (14℉~149℉)			
Channel to channel skew		250 ps			
Protocol Analyzer/ Protocol Logger / Protocol Monitor	I	10BASE-T1S[1], BiSS-C, CAN2.0B/CAN FD, DP_Aux[1], HID over I2C, I2C, I2S, LIN2.2, MIPI I3C 1.2, SPI, UART (RS232), USB PD 3			
	II	---		DALI, eSPI, MDIO, MII, MIPI RFFE 3, MIPI SPMI 2, Modbus, PMBus, Profibus, RGMII, RMII, SMBus, SVID[3], USB1.1	
Software Features	Languages	English / Traditional Chinese / Simplified Chinese			
	Protocol Decode	1-Wire, 3-Wire, 7-Segment, 8b10b decoding, 10BASE-T1S[1], A/D Mux Flash, AccMeter, ADC, APML, AVSBus, BiSS-C, BSS, BSD, BT1120, CAN 2.0B/FD, CEC, Closed Caption, CODEC_SSI, DALI, DMX512, DP_Aux[1], EDID, eSPI, FlexRay, HD Audio, HDLC, HDQ, HID over I2C, HID over SPI, HTSensor, HyperBus, I2C, I2C(EEPROM), I2S, I80, IDE, IOLink, IrDA, ISELED Digital RGB, ITU-R BT.656 (CCIR656), J1850, JTAG, JVC IR, LCD1602, LED_CTRL, LIN 2.2, Line Decoding, Line Encoding, LPC, LPT, LTPI, M-Bus, Math, MCTP over I2C/I3C/SMBus[4], MDDI, MDIO, MHL-CBUS, Microchip SWI, MICROWIRE, MII / RMII / RGMII / GMII, Mini/Micro LED, MIPI CSI LP, MIPI DSI LP, MIPI I3C 1.2, MIPI RFFE 3, MIPI SoundWire 1.2, MIPI SPMI 2, MMC/eMMC 4.5, Modbus, M-PESTI, NAND Flash, NEC IR, OA3p(PMD), OATC6 over SPI, OpenLDI, PCM, PDM, PECI 3.0, PMBus, Profibus, PS/2, PWM, QEI, QI, QSPI, RGB Interface, RC-5, RC-6, RT_SWI, SD 3.0 (SDIO 2.0), SDQ, SDR SDRAM, SENT, Serial Flash (OSPI), Serialized IRQ, Serial PSRAM, SGPIO, Smart Card (ISO7816), SMBus (SBS SPD), SMI, S/PDIF, SPI, SPI NAND, SSI, ST7669, SVI2, SVID[2], SWD, SWIM, SWP, TDM, UART (RS232), UFCS, ULPI, UNI/O, USB 1.1, USB4/TBT3 SB Channel, USB PD 3, Wiegand,...			
	Line Decoding	Biphase Mark, Differential-Manchester, Manchester (Thomas, IEEE802.3), Miller, Modified Miller, NRZI, ...			
	Line Encoding	AMI (Standard, B8ZS, HDB3), Biphase Mark, CMI, Differential-Manchester, Manchester (Thomas, IEEE802.4), MLT-3, Miller, Modified Miller, NRZI, Pseudoternary, ...			
Cascade	Max. channels expand	---	256Ch (1Master & 1Slaves)	---	256Ch (1Master & 1Slaves)
	Trigger source	---	Main device only	---	Main device only
	Skew between Master & Slave	---	±5ns @ 200 MS/s ±4ns @ 250 MS/s	---	±5ns @ 200 MS/s ±4ns @ 250 MS/s
Dimension	L x W x H (mm³)	270 x 175 x 55 (mm³)			
Weight	Device / Accessories	800g / 1850g			
LA-Pod 2/ LA4G-POD/ Flying lead cable		2 / 1 / 10	4 / 1 /18	2 / 1 / 10	4 / 1 /18
Grippers		100	180	100	180
Stack cable		---	2	---	2
Stack cylinder		---	4	---	4

[1] Optional 10BASE-T1S / DP_Aux adapter needed.

[2] Upon request ONLY by users who have signed CNDA with Intel, SVID decode supported by all LA4000 models.

[3] Upon request ONLY by users who have signed CNDA with Intel, SVID trigger & PA supported by LA4068B/LA4136B ONLY.

[4] MCTP over I2C/I3C/SMBus decode supports analysis of Ethernet / MCTP Control / NC-SI / PLDM packets.

© 2026 All right reserved. Acute Technology Inc. Acute and Acute logo is a registered trademark of Acute Technology Inc.

LA4068B/LA4136B can be additionally equipped with the following options.

NAND Flash Option

weight : 450g

Use 32Gb RAM as the buffer to stream all NAND Flash data into the SSD/ HDD to record all data flow from the Low-Speed Mode to the High-Speed Mode. It supports both x8 and x16 configurations for Data(I/O) pins and offers both logic analyzer and protocol analyzer modes. Additionally, it is compatible with multiple brands and allows for custom data settings.



LA08-tip*1/LA09-tip*2
NAND-tip*1



LA20p*3 NAND16p*1



Gripper*40

LA4000 series can be additionally equipped with the following options.

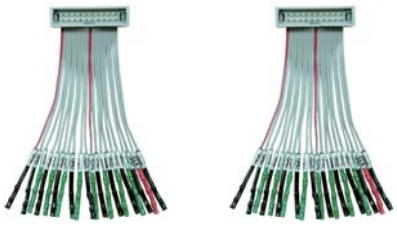
LVDS Option

weight : 450g

LVDS Probe can be applied to logic signal and low voltage differential signal (LVDS) measureme.



LA08-tip*1/LA09-tip*2
LVDS-tip*1



LA20p*3 LVDS20p*1



Gripper*40

Tip specification

Model		LA4K/LA4G	LA08/09	NAND	LVDS
Number of Channels		8 / 8+1 (Data+CLK)	8 / 8+1 (Data+CLK)	4+2 (Data+Analog)	8-Diff.
Threshold of Data	Range	±15V	-0.5V ~ +4.8V		---
	Resolution	10mV	21mV		---
	Accuracy	±100mV + 5% *Vth			---
Input Voltage of Data	Max. (Non-destructive)	±40V DC+ AC peak	±15V DC+AC peak		-0.5V~+4.6V DC+AC peak
	Operation	±15V	-1V ~ 8V		0V ~ 3.3V
	Sensitivity	~300mV			~100mV
Impedance of Data		~ 55KΩ || <2pF to 1Vdc	1MΩ || 5pF		75K Ω || 3pF
Input Voltage of Analog	Max. (Non-destructive)	---		-0.5V ~ +8V DC+AC peak	---
	Operation	---		0V ~ 4V	---
	Resolution	---		~1mV	---
	Sampling Rate	---		1M	---
Impedance of analog		---		1MΩ || 100pF	---

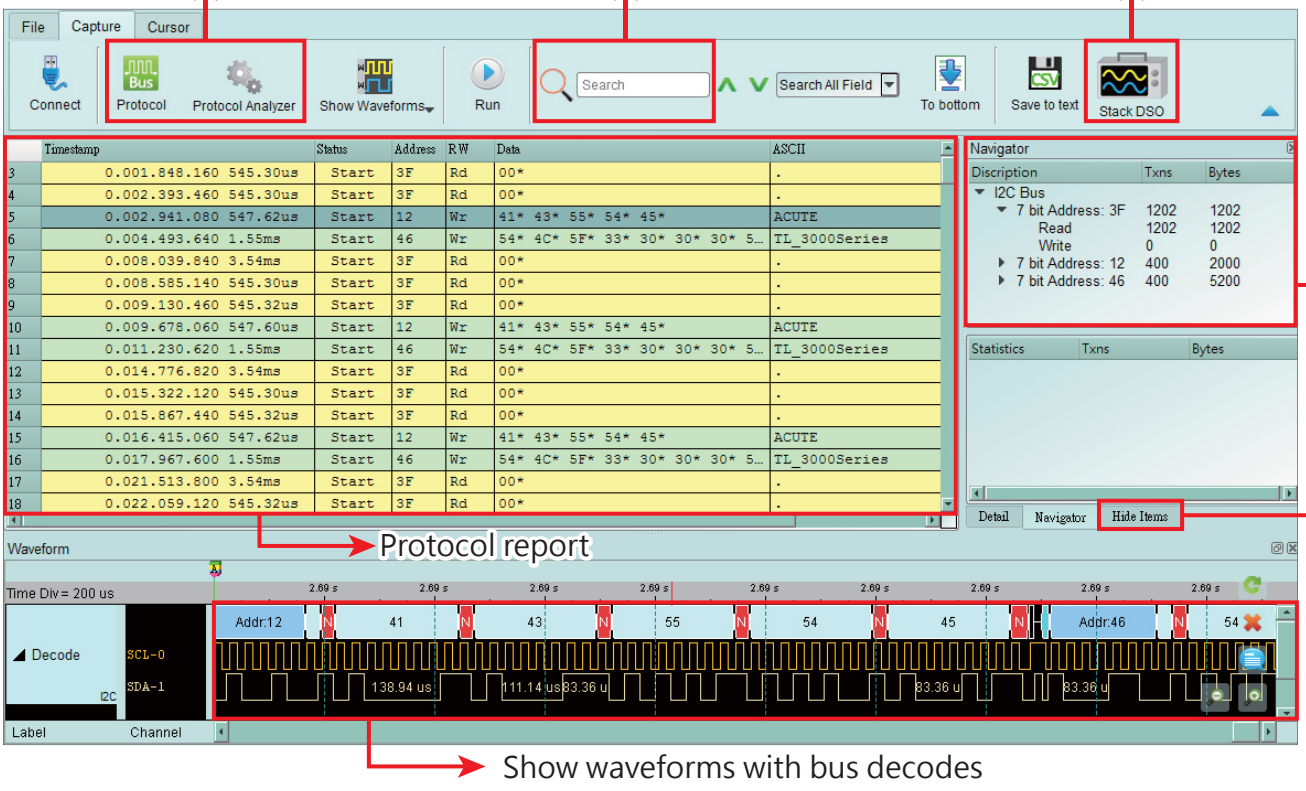
Protocol Analyzer:

It is hardware decoding and streaming protocol data into SSD hard drive for a long time without waveforms.

Support multiple protocols with different operating modes

Real-time data search

Stack with a DSO as an MSO in logic analyzer mode



Real-time data statistics

Hide items for easy view

Protocol report

Show waveforms with bus decodes



Protocol Analyzer

Show real-time protocol data

Application timing: view real-time protocol data if many idles in between



Protocol Logger

Like data logger, save massive data into SSD hard drive

Application timing: save massive protocol data if not many idles in between



Protocol Monitor

Like dash cameras, record protocol data by the device's memory only

Application timing: trigger event only happens in very long time

Standard Equipment List for LA4000 Series:



LA4068E/ B Device



LA-POD 2*2



LA4G-POD*1



Flying lead cable*10



USB 3.0 (1.8M)*1

BNC to MCX*1



Gripper*100

Power Adapter*1



LA4136E/ B Device



LA-POD 2*4



LA4G-POD*1



Flying lead cable*18



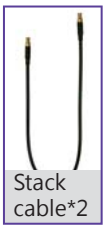
USB 3.0 (1.8M)*1

BNC to MCX*1



Gripper*180

Power Adapter*1



Stack cable*2

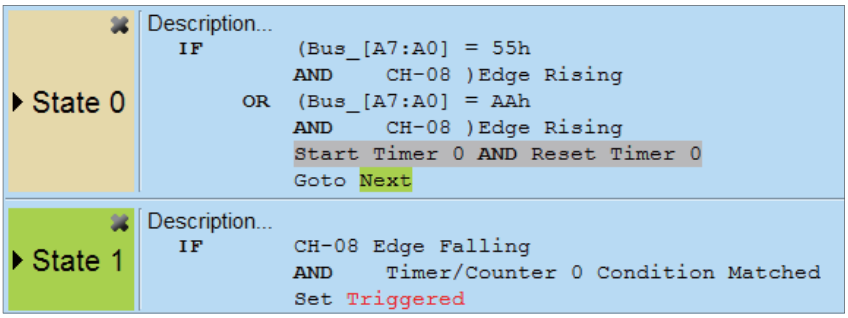


Stack cylinder*4

Logic Analyzer:

Capture digital waveforms and support bus decodes. Able to stack with a DSO to form as an MSO.

Parallel Clause triggers (Logic) :



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

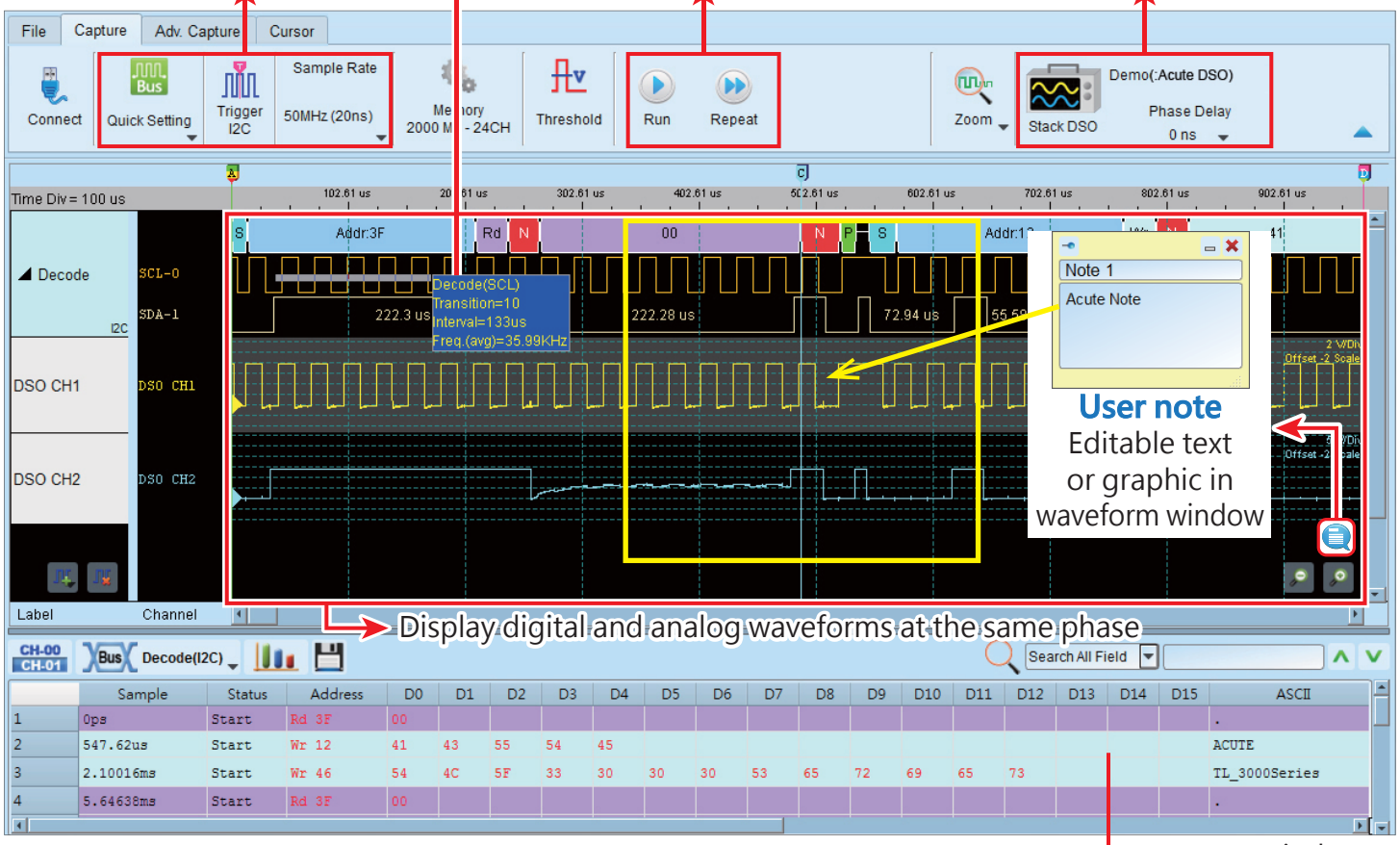
Quick View

Right-click and drag on the clock waveform to see the frequency and the number of transitions

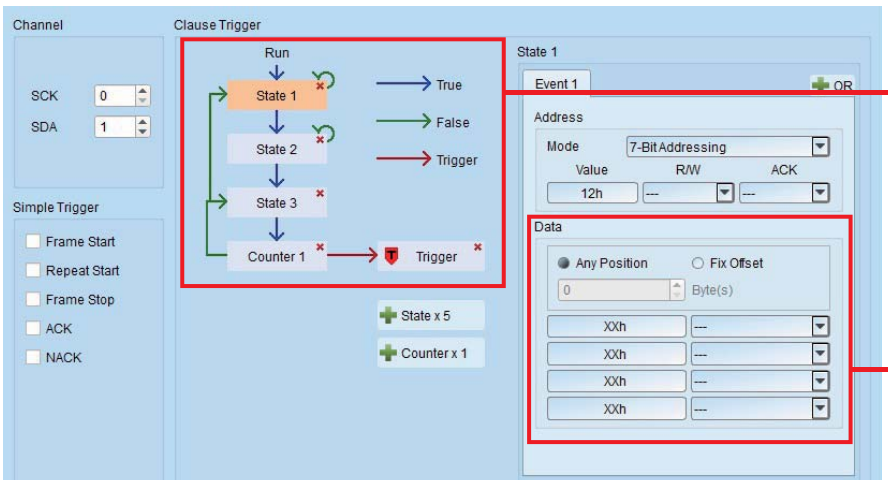
Clear setting

Single or repetitive captures

Fast DSO stack setting



Flow chart bus triggers (Protocol) :

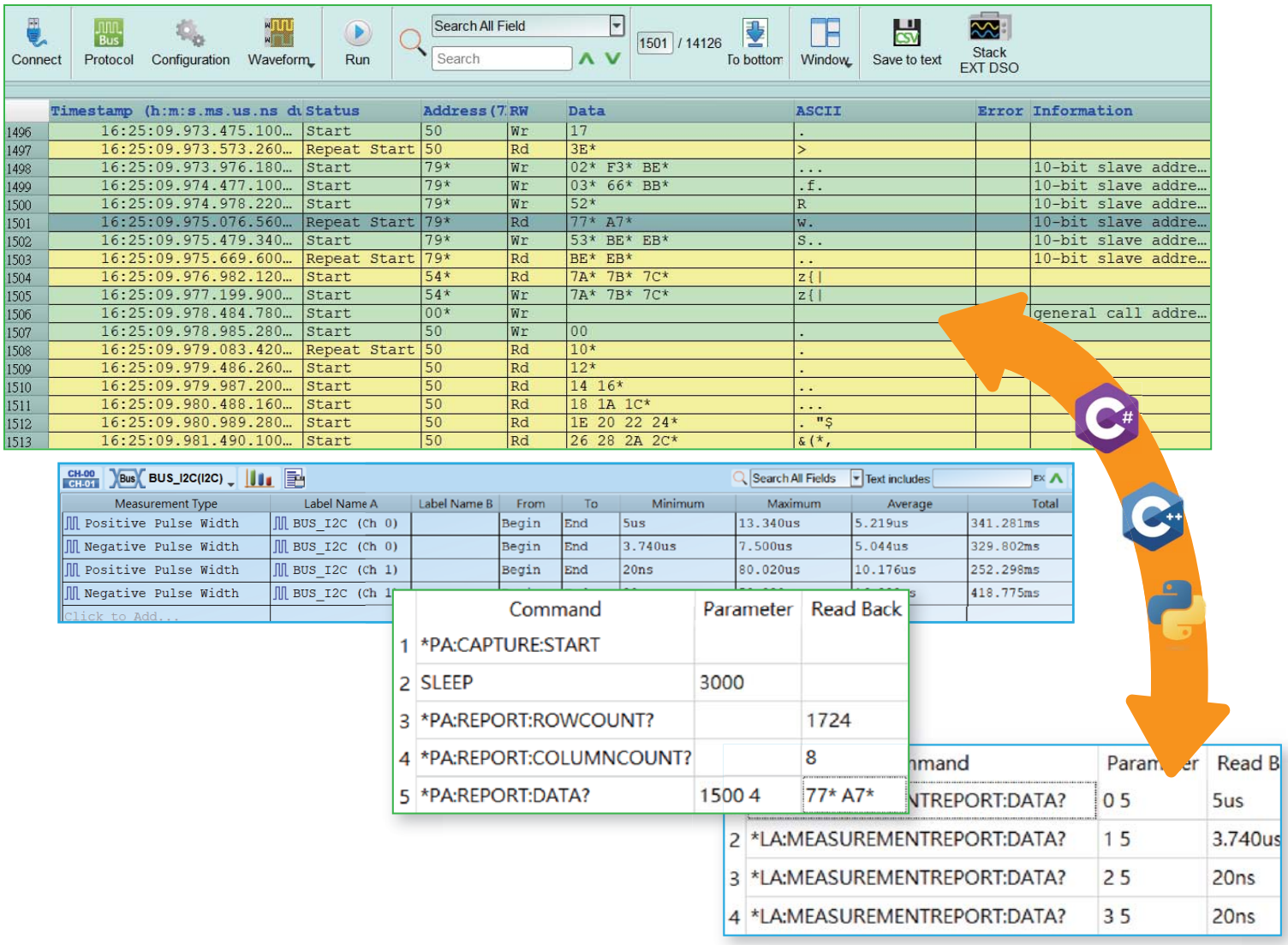


Power trigger for serial bus, 8-states flow chart setting with Counter/Timer

Detail parameters for each states

Automation & SDK

Acute LAVISA provides an interface where users can operate the software for capturing, stopping, or dynamically reading the current software's measurement and decoding analysis data (such as I2C, eSPI, SPI, QSPI,...) through self-written programs using textual commands.



Remote Control

AqLAVISA can be further integrated with gRPC or TCP/IP connections, allowing remote software to conduct data analysis.

