



PT. YOUNG DINAMIS INDONESIA



Achieve More at the Next Level



SDS6104A

**Digital Storage
Oscilloscope**



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Models and Key Specifications

Model	SDS6104A
Bandwidth	1 GHz
Sampling rate (Max.)	5 GSa/s (10 GSa/s ESR) @ each channel
Analog channels	4 + EXT
Memory depth (Max.)	500 Mpts/ch(single-channel), 250 Mpts/ch (dual-channel) , 125 Mpts/ch (3 or 4 channels)
Waveform capture rate (Max.)	Normal mode: 170,000 wfm/s; Sequence mode: 750,000 wfm/s
Vertical resolution	8-bit, up to 16-bit in Hi-Res mode
Trigger type	Edge, Slope, Pulse width, Window, Runt, Interval, Dropout, Pattern, Video, Qualified, Nth edge, Setup/hold, Delay, Serial
Serial trigger and decode	Standard: I2C, SPI, UART, CAN, LIN Optional: CAN FD, FlexRay, I2S, MIL-STD-1553B, SENT, Manchester (decode only)
Measurement	50+ parameters, statistics, histogram, trend, and track supported
Math	4 traces 8 Mpts FFT, +, -, x, ÷, ∫dt, d/dt, √, Identity, Negation, Absolute, Sign, ex, 10x, ln, lg, Interpolation, MaxHold, MinHold. Supports formula editor
Data analysis	Search, Navigate, History, Mask Test, Digital Voltmeter, Counter, Waveform Histogram, Bode plot and Power Analysis, Eye/ Jitter Analysis
Digital channel (optional)	16-channel; maximum sample rate up to 1 GSa/s; record length up to 50 Mpts
Waveform generator (optional)	Single-channel external USB isolated waveform generator, frequency up to 25 MHz, 125 MSa/s sample rate, 16 kpts waveform memory
I/O	USB 3.0 Host x2, USB 2.0 Host x2, USB 2.0 Device, LAN, micro SD card, HDMI, External trigger, Auxiliary output (TRIG OUT, PASS/FAIL)
Probe (Standard)	SP3150A, 500 MHz, 1 probe supplied for each channel
Display	12.1 TFT-LCD with capacitive touch screen (1280*800)

Ordering Information

Model	Description
SDS6204A	2 GHz, 10 GSa/s, 4-CH, 500 Mpts/ch memory depth, 12.1" capacitive touch screen
SDS6104A	1 GHz, 5 GSa/s, 4-CH, 500 Mpts/ch memory depth, 12.1" capacitive touch screen
SDS6054A	500 MHz, 5 GSa/s, 4-CH, 500 Mpts/ch memory depth, 12.1" capacitive touch screen

Standard Accessories		Quantity
USB cable		1
Quick start		1
Passive probe (SP3150A)		1/channel
Certificate of calibration		1
Wireless mouse		1
Power cord		1
Optional Accessories	Part No.	
Waveform generator (software)	SDS6000Pro-FG	
25 MHz isolated USB function/arbitrary waveform generator	SAG1021I	
16 digital channels (software)	SDS6000Pro-16LA	
16-channel logic probe	SPL2016	
Power Analysis (software)	SDS6000Pro-PA	
Power Analysis deskew fixture	DF2001A	
Eye Diagram/Jitter Analysis (software)	SDS6000Pro-EJ	
I2S trigger & decode (software)	SDS6000Pro-I2S	
MIL-STD-1553B trigger & decode (software)	SDS6000Pro-1553B	
FlexRay trigger & decode (software)	SDS6000Pro-FlexRay	
CAN FD trigger & decode (software)	SDS6000Pro-CANFD	
SENT trigger & decode (software)	SDS6000Pro-SENT	
Manchester decode (software)	SDS6000Pro-Manch	
500 MHz to 1 GHz bandwidth upgrade (software)	SDS6000-4BW10	
1 GHz to 2 GHz bandwidth upgrade (software)	SDS6000-4BW20	
STB3 demo signal source	STB3	
High-speed active probe	SAP1000, SAP2500	
High voltage probe	HPB4010	
High-speed differential probe	SAP2500D	
High voltage differential probe	DPB1300/DPB4080/DPB5150/ DPB5150A/DPB5700/DPB5700A	
Current probe	CPL5100/CP4020/CP4050/CP4070/CP4070A/CP5030/CP5030A/CP5150/CP5500	
Rack Mount Kit	SDS6000-RMK	
Bag	BAG-S2	

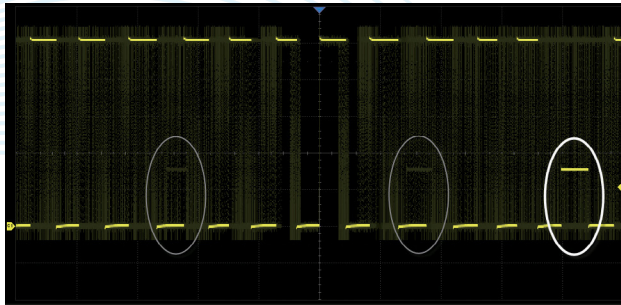
Features and Benefits

- 4 analog channels, up to 2 GHz bandwidth with 5 GSa/s (10 GSa/s ESR) sample rate at each channel
- Low background noise, supports 0.5 mV/div to 10 V/div vertical scales
- SPO technology
 - Waveform capture rates up to 170,000 wfm/s (normal mode), and 750,000 wfm/s (sequence mode)
 - Supports 256-level intensity grading and color temperature display modes
 - 500 Mpts Record length in total for all 4 channels
 - Digital trigger system
- Intelligent trigger: Edge, Slope, Pulse, Window, Runt, Interval, Dropout, Pattern, Qualified, Nth edge, Setup/hold, Delay and Video (HDTV supported Zone Trigger simplifies advanced triggering)
- Serial bus triggering and decoder, supports protocols I2C, SPI, UART, CAN, LIN, CAN FD, FlexRay, I2S, MIL-STD-1553B, SENT and Manchester
- Segmented acquisition (Sequence) mode, dividing the maximum record length into multiple segments (up to 80,000), according to trigger conditions set by the user, with a very small dead time between segments to capture the qualifying event
- History waveform record (History) function, the maximum recorded waveform length is 80,000 frames
- Automatic measurements on 50+ parameters, supports statistics with histogram, track, trend, Gating measurement, and measurements on Math, History and Ref
- 4 Math traces (8 Mpts FFT, addition, subtraction, multiplication, division, integration, differential, square root, etc.), supports formula editor
- Abundant data analysis functions such as Search, Navigate, Digital Voltmeter, Counter, Waveform Histogram, Bode plot, Power Analysis and Eye/Jitter Analysis
- High Speed hardware-based Average, Hi-Res; High Speed hardware-based Mask Test function, with Mask Editor tool for creating user-defined masks
- 16 digital channels (optional)
- 25 MHz function / arbitrary waveform generator, built-in multiple predefined waveforms
- Large 12.1" TFT-LCD display with 1280 * 800 resolution; Capacitive touch screen supports multi-touch gestures
- Interfaces include: USB Hosts, USB Device (USBTMC), LAN(VXI-11/Telnet/Socket), micro SD card, Pass/Fail, Trigger Out, HDMI
- Built-in web server supports remote control over the LAN port using a web browser. Supports SCPI remote control commands. Supports external mouse and keyboard



Excellent User Interface and User Experience

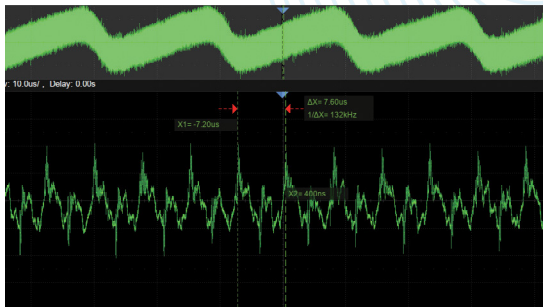
- 12.1" display with 1280*800 resolution
- Capacitive touch screen, supporting multi-touch gestures, can move or scale the waveform traces quickly by finger-touch movements, which greatly improves the operation efficiency
- Built-in WebServer supports remote control on a web page over LAN
- Supports external mouse and keyboard



• High Waveform Update Rate

With a waveform update rate of up to 170,000 wfm/s, the oscilloscope can easily capture unusual or low-probability events. In Sequence mode, the waveform capture rate can reach 750,000 wfm/s

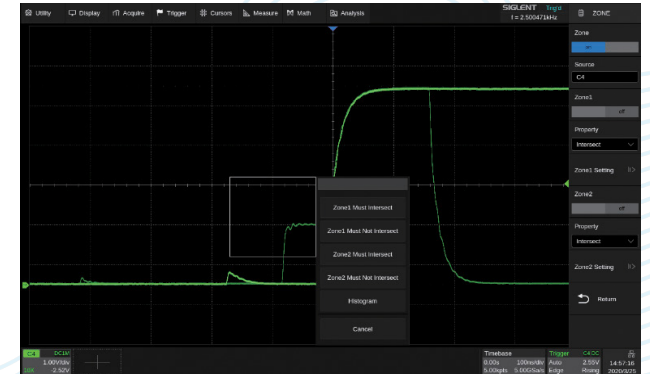
• Deep Record Length



Using hardware-based Zoom technique and record length of up to 500 Mpts, users can select a slower timebase without compromising the sample rate, and then quickly zoom in to focus on the area of interest

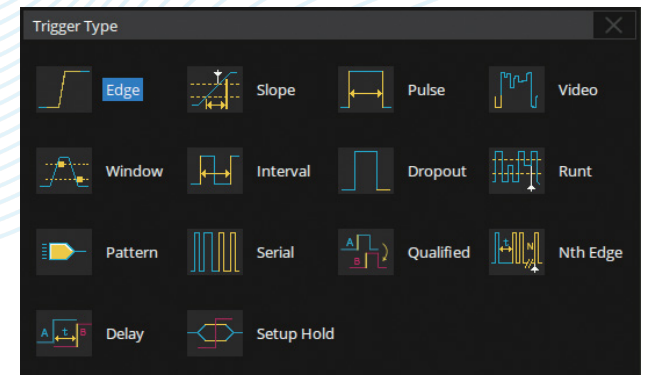
• Trigger Zone

Trigger Zone is available for advanced triggering

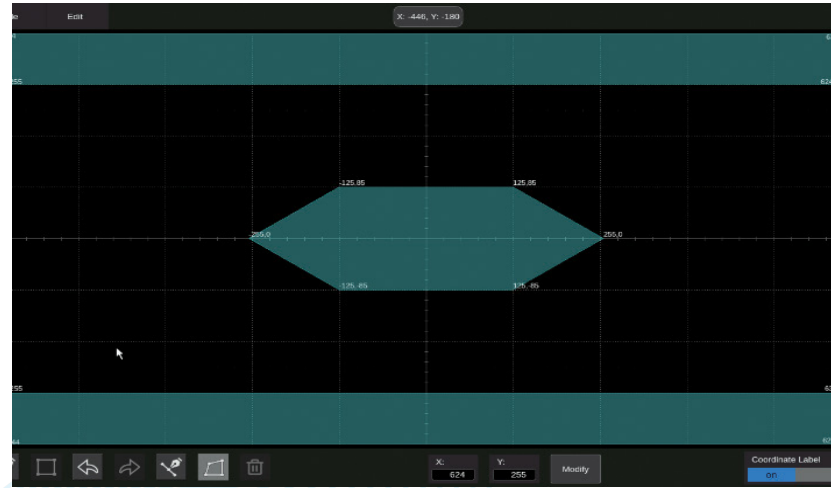
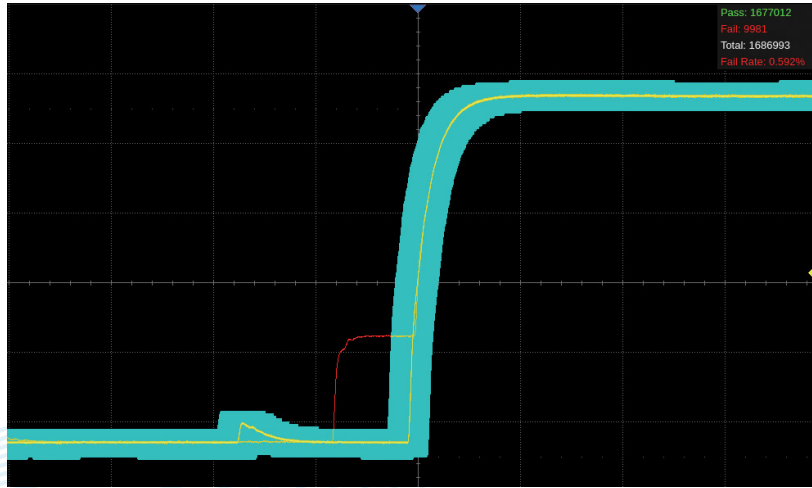


• Multiple Trigger Functions

Edge, Slope, Pulse, Video, Windows, Runt, Interval, Dropout, Pattern, Qualified, Nth edge, Setup/hold, Delay and serial trigger

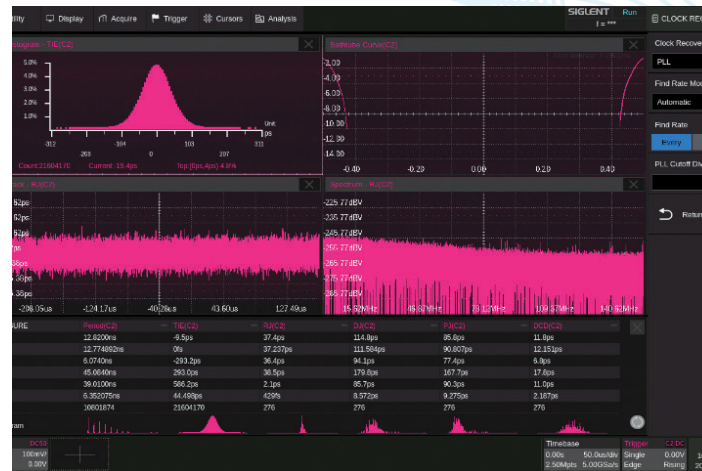
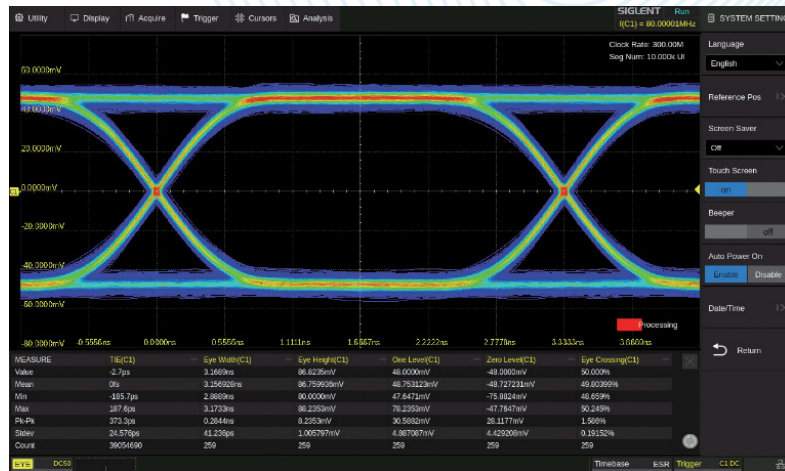


• Hardware-based High Speed Mask Test Function



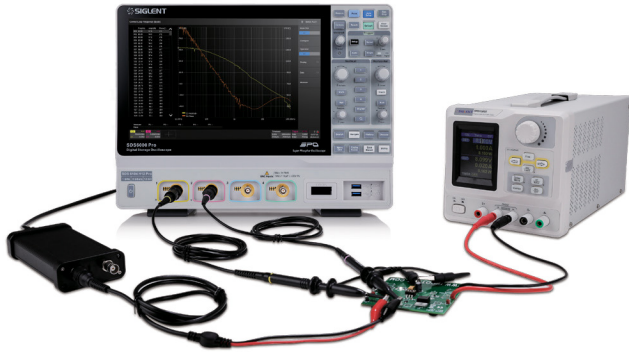
The oscilloscope utilizes a hardware-based Mask Test function, performing up to 18,000 Pass / Fail decisions each second. It is easy to generate user-defined test templates to provide trace mask comparisons, making it suitable for long-term signal monitoring or automated production line testing

• Eye/Jitter Analysis



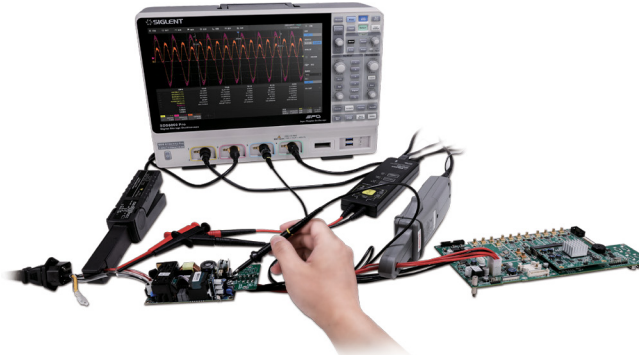
Supports eye diagram and jitter analysis/measurement. It can automatically extract the embedded reference clock from serial data and create the eye diagram. Measurement on multiple eye/jitter parameters is provided. Mask test on eye diagrams is supported

● **Bode Plot**



The oscilloscope can control the isolated USB AWG module or a stand alone SIGLENT SDG generator, to scan the amplitude and phase frequency response of the DUT, and display the data as a Bode Plot. This makes it possible to replace expensive network analyzers in some

● **Power Analysis (Optional)**



The Power Analysis option provides a full suite of power measurements and analysis, which greatly improve the measurement efficiency in switching power supplies and power devices design

● **Digital Channels / MSO (Optional)**



Four analog channels plus 16 digital channels enable users to acquire and trigger the waveforms then analyze the pattern, simultaneously with one instrument



● **Complete Connectivity**

USB Host 3.0 x2, USB Host 2.0 x2, USB Device 2.0 (USBTMC) x1, LAN (VXI-11/Telnet/Socket) x1, micro SD card x1, Auxiliary output (Pass/Fail, Trigger Out)x1 and HDMI x1

● **Serial Bus Decode**



Display the decoded characters through the events list. Bus protocol information can be quickly and intuitively displayed in tabular form. I2C, SPI, UART, CAN, LIN, CAN FD, FlexRay, I2S, MIL-STD-1553B, SENT, and

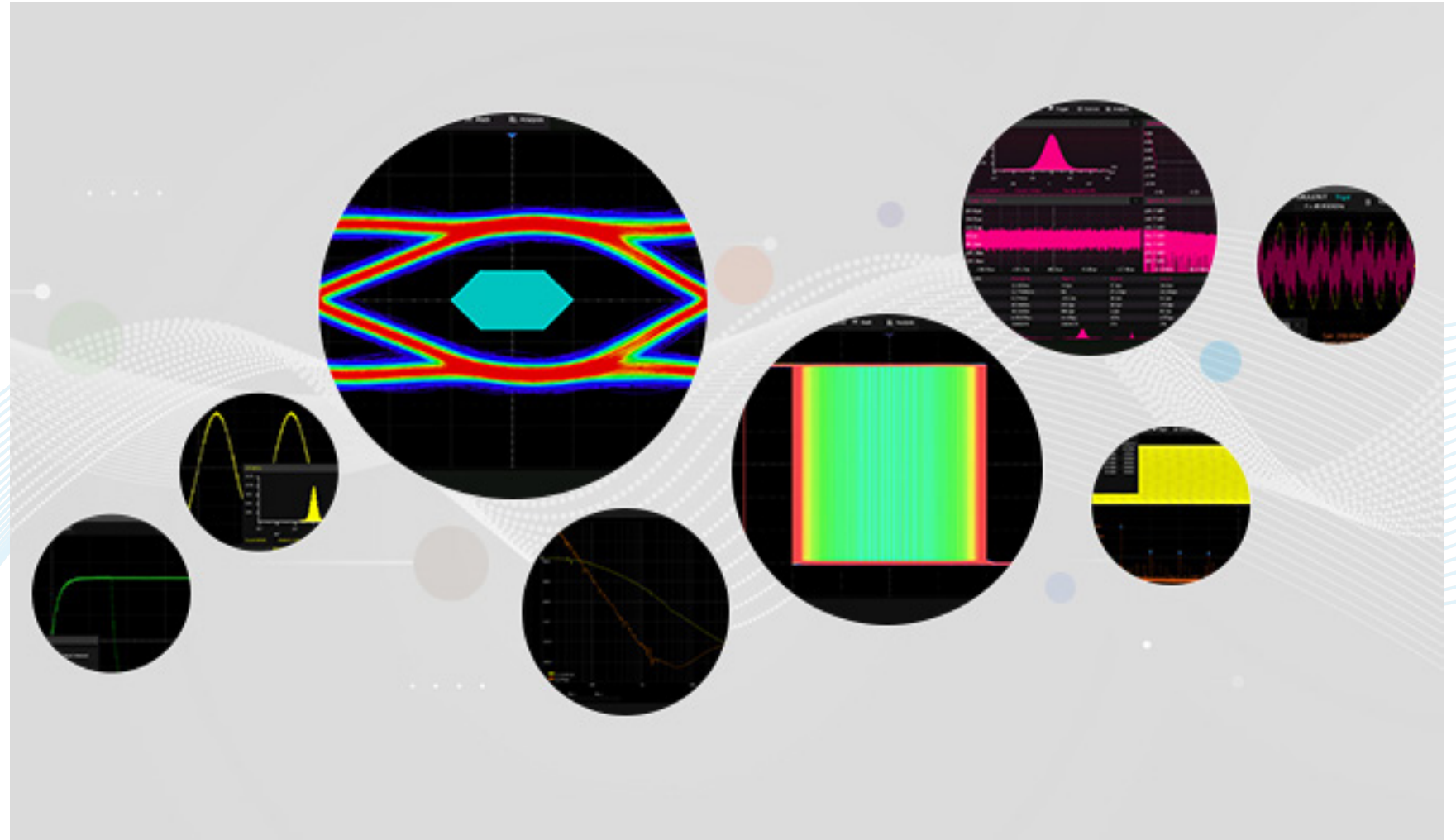
Achieve more with SDS6000A oscilloscope

SIGLENT SDS6000A oscilloscope comes with 2 GHz bandwidth model. To protect customer's investment, 500MHz model can be upgraded to 2 GHz after purchase. Provided with newly designed SAP2500 and SAP2500D active probes, eye diagram and jitter analysis are possible.

SDS6000A comes with even more memory depth. 500Mpts combined with the hardware based zoom function, you can view large and small-scale signal details simultaneously.

Sampling rate is up to 5GSa/s(10GSa/s ESR) per channel, even when you use all four channels at the same time. This fully improve the usability of four channels.

With the abundant analysis tools, SDS6000A is an ideal everyday R&D oscilloscope.



Modern form factor balances ease-of-use and desk space



SDS6000A is easy to move around the lab and occupy small desk space. The big 12.1 inch and high resolution touch screen provides intuitive control and clear information for faster debugging.

Save data on SDS6000A is also convenient. Just press Print button or take screenshot via remote web-server.

It is also easily customized, you can choose your favorite channel traces colors, default settings, menu styles, measurement formats and so on. The faster UI response of SDS6000A makes R&D work even more pleasing.

Newly designed active probes

SAP1000 active probe was released with SDS5000X oscilloscope. This time SDS6000A comes with two newly designed active probes. SAP2500 is single ended via SAP2500D is 2.5 GHz differential active probe. With the Eye diagram/ Jitter analysis functions, SDS6000A is more capable in high speed circuits design and signal integrity measurements.

