

Digital Oscilloscope
Handheld Oscilloscope
Waveform Generator
RF Signal Generator
Spectrum Analyzer
Spectrum & Vector Network Analyzer
DC Power Supply
DC Electronic Load
Digital Multimeter
Probes & Accessories

# **Product Selection Guide**

The Best Value in Electronic Test & Measurement



### **Super Phosphor Oscilloscope**



### SDS5000X Series

SDS5104X / SDS5102X (1 GHz) SDS5054X / SDS5052X (500 MHz) SDS5034X / SDS5032X (350 MHz)

#### **Features and Benefits:**

- 1 GHz, 500 MHz, 350 MHz models with real-time sample rate up to 5 GSa/s
- · SPO technology
  - Waveform capture rates up to 110,000 wfm/s (normal mode), and 500,000 wfm/s (sequence mode)
  - Supports 256-level intensity grading and color temperature display modes
  - Record length up to 250 Mpts/ch, 500 Mpts 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).
   Trigger zone helps to simplify advanced triggering
- Serial bus triggering and decoder, supports protocols I2C, SPI, UART, CAN, LIN, CAN FD, FlexRay, I2S and MIL-STD-1553B
- Low background noise, supports 0.5 mV/div to 10 V/div voltage scales
- Segmented acquisition (Sequence) mode, dividing the maximum record length into multiple segments (up to 100,000), 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 100,000 frames
- Automatic measurement function on 50+ parameters, supports statistics with histogram,trend, Gating measurement, Math measurement, History measurement and Ref measurement
- Math function (2 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 and Power Analysis
- High Speed hardware-based Average, ERES (Enhanced Resolution)
- High Speed hardware-based Mask Test function, with Mask Editor tool for creating user-defined masks
- 16 digital channels (optional) with sample rate up to 1.25 GSa/s, record length up to 62.5 Mpts
- 25 MHz function / arbitrary waveform generator, built-in multiple predefined waveforms
- Large 10.1" TFT-LCD display with 1024 \* 600 resolution; Capacitive touch screen supports multi-touch gestures
- · Supports external mouse and keyboard
- 10 types of one-button shortcuts
- Multiple interfaces: USB Host, USB Device (USBTMC), LAN (VXI-11, telnet, socket, web), Pass/Fail, Trigger Out, 10 MHz In, 10 MHz Out, VGA output
- Built-in web server supports remote control by the LAN port using a web browser
- Supports SCPI remote control commands



### **SDS2000X Plus Series**

SDS2354X Plus (350 MHz) SDS2204X Plus (200 MHz) SDS2104X Plus / SDS2102X Plus (100 MHz)

- 350 MHz, 200 MHz, 100 MHz models with real-time sample rate up to 2 GSa/s.
   A 500 MHz bandwidth upgrade option is available for 350 MHz models.
- SPO technology
  - Waveform capture rates up to 120,000 wfm/s (normal mode) and 500,000 wfm/s (sequence mode)
  - Supports 256-level intensity grading and color temperature display modes
  - Record length up to 200 Mpts/ch, 400 Mpts in total for all 4 channels
  - Digital trigger system
- Intelligent trigger: Edge, Slope, Pulse, Window, Runt, Interval, Dropout, Pattern and Video (HDTV supported). Trigger zone helps to simplify advanced triggering
- Serial bus triggering and decoder, supports I2C, SPI, UART, CAN, LIN (Standard) and CAN FD, FlexRay, I2S, and MIL-STD-1553B (optional) protocols
- Low background noise, features 0.5 mV/div to 10 V/div voltage scales
- 10-bit mode provides higher resolution and lower noise
- Segmented acquisition (Sequence) mode, dividing the maximum record length into multiple segments (up to 90,000), 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 for up to 90,000 triggered waveforms (frames)
- Automatic measurement function on 50+ parameters, supports statistics with histogram and trend
- Two Math traces, support 2 Mpts FFT, +, -, x, ÷, d/dt, ∫dt, √, average, ERES, and formula editor
- Abundant data processing and analysis functions such as Search,
   Navigate, Mask Test, Bode plot, Power Analysis (optional) and Counter
- 16 digital channels (optional)
- Built-in 50 MHz waveform generator (optional)
- Large 10.1" TFT-LCD display with 1024x600 resolution; Capacitive touch screen supports multi-touch gestures
- Multiple interfaces: USB Host, USB Device (USBTMC), LAN(VXI-11/Telnet/ Socket), Pass/Fail, Trigger Out
- Built-in web server supports remote control by the LAN port using a web browser; Supports SCPI remote control commands

### **Super Phosphor Oscilloscope**



SDS2302X / SDS2304X (300 MHz) SDS2202X / SDS2204X (200 MHz) SDS2102X / SDS2104X (100 MHz) SDS2072X / SDS2074X (70 MHz)

#### **Features and Benefits:**

- 70 MHz, 100 MHz, 200 MHz, 300 MHz models
- · Real-time sampling rate up to 2 GSa/s
- New generation of SPO technology
  - Waveform capture rate up to 140,000 wfm/s (normal mode), and 500,000 wfm/s (sequence mode)
  - Supports 256-level intensity grading and color temperature display
  - Record length up to 140 Mpts
  - Digital trigger system
- Intelligent trigger: Edge, Slope, Pulse, Window, Runt, Interval, Dropout, Pattern and Video (HDTV supported)
- Serial bus triggering and decoder, supports protocols I<sup>2</sup>C, SPI, UART, RS232, CAN and LIN
- Low background noise, supports 1 mV/div to 10 V/div voltage scales
- 10 types of one-button shortcuts, including Auto Setup, Default, Cursors, Measure, Roll, History, Display/Persist, Clear Sweeps, Zoom and Print
- 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 segment to capture the qualifying
- History waveform record (History) function, the maximum recorded waveform length is 80,000 frames
- Automatic measurement function on 37 parameters, Supports statistics, Gating measurement, Math measurement, History measurement and Ref measurement
- Math function (FFT, addition, subtraction, multiplication, division, integration, differential, square root)
- High Speed hardware based Pass / Fail function
- 16 Digital channels (MSO), Maximum waveform capture rate up to 500 MSa/s, Record length up to 140 Mpts/CH
- 25 MHz function/arbitrary waveform generator, built-in 10 types of waveforms
- Large 8 inch TFT-LCD display with 800 \* 480 resolution
- Abundant interfaces: USB Host, USB Device (USBTMC), LAN (VXI-11), Pass / Fail, Trigger Out
- · Supports SCPI remote control commands
- Supports Multi-language display and embedded online help



### SDS2000X-E Series

SDS2352X-E (350 MHz) SDS2202X-E (200 MHz)

- Real-time sampling rate up to 2 GSa/s (1 GSa/s per channel, if both channels active)
- Intelligent trigger: Edge, Slope, Pulse Width, Window, Runt, Interval, Time out (Dropout), Pattern
- Serial bus triggering and decoding (standard), supports protocols IIC, SPI, UART, CAN, LIN
- Video trigger, supports HDTV
- $\bullet~$  Low background noise with voltage scales from 500  $\mu\text{V/div}$  to 10 V/div
- 10 types of one-button shortcuts, supports Auto Setup, Default, Cursors, Measure, Roll, History, Display/Persist, Clear Sweep, Zoom and Print
- Segmented acquisition (Sequence) mode, divides 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 segment to capture qualifying events
- History waveform record (history) function (maximum recorded waveform length is 80,000 frames)
- Automatic measurement function for 38 parameters as well as Measurement Statistics, Zoom, Gating, Math, History and Reference functions
- 1 Mpts FFT
- Math and measurement functions use all sampled data points in memory (up to 28 Mpts)
- Preset key can be customized for user settings or factory "defaults"
- Security Erase mode
- High Speed hardware based Pass / Fail function
- · Search and navigate
- Large 7 inch TFT -LCD display with 800 \* 480 resolution
- Multiple interface types: USB Host, USB Device (USB -TMC), LAN, Pass / Fail,
   Trigger Out
- Supports SCPI remote control commands
- VXI-11+SCPI, Telnet (port 5024) +SCPI and Socket (port 5025) +SCPI programming over LAN
- Supports web control and virtual instrument control panel for both PC and
   mobile terminals.
- Web control update rate of up-to 10 times/s provides nearly real-time update
- Supports Multi-language display and embedded online help

### **Super Phosphor Oscilloscope**



### SDS1000X-E Series

SDS1204X-E / SDS1202X-E (200 MHz) SDS1104X-E (100 MHz)

#### **Features and Benefits:**

- Two channel series have one 1 GSa/s ADC, four channel series have two 1 GSa/s ADCs. When all channels are enabled, each channel has a maximum sample rate of 500 MSa/s. When a single channel per ADC is active, it has sampling rate of 1 GSa/s
- The newest generation of SPO technology
  - Waveform capture rate up to 100,000 wfm/s (normal mode), and 400,000 wfm/s (sequence mode)
  - Supports 256-level intensity grading and color display modes
  - Record length up to 14 Mpts
  - Digital trigger system
- Intelligent trigger: Edge, Slope, Pulse Width, Window, Runt, Interval, Time out (Dropout), Pattern
- Serial bus triggering and decoding (Standard), supports protocols IIC, SPI, UART, RS232, CAN, LIN
- Segmented acquisition (Sequence) mode, divides 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 segment to capture the qualifying event.
- 1 Mpts FFT
- Math and measurement functions use all sampled data points (up to 14 Mpts)
- MSO, 16 digital channels (four channel series only, optional)
- Search and navigate (four channel series only)
- USB AWG module (four channel series only, optional)
- USB WIFI adapter (four channel series only, optional)
- Bode plot (four channel series only)



### SDS1000X / SDS1000X+ Series

SDS1202X / SDS1202X+ (200 MHz) SDS1102X+ (100 MHz)

- 100 MHz, 200 MHz bandwidth models
- Real-time sampling rate up to 1 GSa/s
- New generation of SPO technology
  - Waveform capture rate up to 60,000 wfm/s (normal mode),and 400,000 wfm/s (sequence mode)
  - Supports 256-level intensity grading and color temperature display
  - Record length up to 14 Mpts
  - Digital trigger system
- Intelligent trigger: Edge, Slope, Pulse Width, Window, Runt, Interval, Time out (Dropout), Pattern
- Serial bus triggering and decode, supports protocols IIC, SPI, UART, RS232, CAN. LIN
- Video trigger, supports HDTV
- Low background noise, supports 500  $\mu V$  / div to 10 V / div voltage scales
- 10 types of one-button shortcuts, supports Auto Setup, Default, Cursors, Measure, Roll, History, Display/Persist, Clear Sweep, Zoom and Print
- 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 segment to capture the qualifying event
- History waveform record (History) function, the maximum recorded waveform length is 80,000 frames
- Automatic measurement function on 37 parameters, supports Statistics, Gating measurement, Math measurement, History measurement and Ref measurement
- Math function (FFT, addition, subtraction, multiplication, division, integration, differential, square root)
- High Speed hardware based Pass/ Fail function
- 16 Digital channels (MSO), Maximum waveform capture rate up to 500 MSa/s, Record length up to 140 Mpts/CH (Option for SDS1000X+ models)
- 25 MHz DDS arbitrary waveform generator, built-in 10 kinds of waveforms (Standard for SDS1000X+ models)
- Large 8 inch TFT-LCD display with 800 \* 480 resolution
- Abundant interfaces: USB Host, USB Device (USB-TMC), LAN (VXI-11), Pass / Fail, Trigger Out
- Supports SCPI remote control commands
- Supports Multi-language display and embedded online help

### **Digital Storage Oscilloscope**



### SDS1000DL+ / SDS1000CML+ Series

SDS1152CML+ (150 MHz) SDS1102CML+ (100 MHz) SDS1072CML+ (70 MHz) SDS1052DL+ (50 MHz)

### **Features and Benefits**

- 50 MHz, 70 MHz, 100 MHz, 150 MHz bandwidth models
- Real-time sampling rate up to 1 GSa/s, Equivalent-time sampling rate up to 50 GSa/s
- Memory Depth up to 2 Mpts
- Trigger types: Edge, Pulse, Video, Slope, Alternate
- Waveform math functions:+, -, \*, /, FFT
- 6 digits frequency counter
- Supports Multi-language display and embedded online help
- Screensaver from 1 minute to 5 hours
- Digital filter and waveform recorder function
- 7 inch TFT-LCD display with 800 \* 480 resolution

### **Function/Arbitrary Waveform Generator**



### SDG6000X Series

SDG6052X (500 MHz) SDG6032X (350 MHz) SDG6022X (200 MHz)

#### **Features and Benefits**

- Innovative TrueArb and EasyPulse technology
- Dual-Channel, 500 MHz maximum bandwidth, 20 Vpp maximum output amplitude, high fidelity output with 80 dB dynamic range
- High-performance sampling system with 2.4 GSa/s sampling rate and 16-bit vertical resolution
- Multi-function signal generator, meeting requirements in wide range, Continuous Wave Generator, Pulse Generator, Function Arbitrary Waveform Generator, IQ Signal Generator (optional), Noise Generator, PRBS Generator
- Sweep and Burst function
- · Harmonics function
- Waveform Combining function
- Channel Coupling, Copy and Tracking function
- 196 built-in arbitrary waveforms
- High precision Frequency Counter
- Standard interfaces include: USB Host, USB Device (USBTMC), LAN (VXI-11, Socket, Telnet), GPIB (Optional)
- 4.3" touch screen display for easier operation



### **SDG800 Series**

SDG830 (30 MHz) SDG810 (10 MHz)

- Advanced DDS technology, 3.5 inch color TFT-LCD
- 125 MSa/s sampling rate,14 bit vertical resolution,16 Kpts max wave length
- 5 types of standard waveforms, built-in 46 types of arbitrary waveforms, sync signal output, 1 µHz frequency resolution
- Complete modulation functions: AM,DSB-AM, FM, PM, FSK, ASK, PWM, linear/ logarithmic sweep and burst
- Innovative EasyPulse technology, can output pulse of low jitter, quick rising/ falling edge
- $\bullet\,$  Support USB-TMC protocol and SCPI programming command control
- Arbitrary waveform edit software, provides lots of painting method, capable of edit complicate waveform quickly and precisely

### **Function/Arbitrary Waveform Generator**



### SDG2000X Series

SDG2122X (120 MHz) SDG2082X (80 MHz) SDG2042X (40 MHz)

#### **Features and Benefits**

- Dual-channel, 120 MHz maximum bandwidth, 20 Vpp maximum output amplitude, high fidelity output with 80 dB dynamic range
- High-performance sampling system with 1.2 GSa/s sampling rate and 16-bit vertical resolution. No detail in your waveforms will be lost
- Innovative TrueArb technology, based on a point-by-point architecture, supports any 8 pts~8 Mpts Arb waveform with a sampling rate in range of 1 μSa/s~75 MSa/s
- Innovative EasyPulse technology, capable of generating lower jitter Square or Pulse waveforms, brings a wide range and extremely high precision in pulse width and rise/fall time adjustments
- Sweep and Burst function; Harmonics mode supported
- 4.3" touch screen display for easier operation



### SDG1000X Series

SDG1062X (60 MHz) SDG1032X (30 MHz)

### **Features and Benefits**

- 150 MSa/s sampling rate, 14-bit vertical resolution, and 16 kpts waveform length
- Innovative TrueArb and EasyPulse technology
- Special circuit for Square wave function, can generate Square waves up to 60 MHz with jitter less than 300 ps+0.05 ppm of period
- Plenty of analog and digital modulation types: AM, DSB-AM, FM, PM, FSK, ASK, PSK and PWM, Sweep and Burst functions
- Waveform Combining function
- High precision Frequency Counter
- Standard interfaces: USB Host, USB Device (USBTMC), LAN (VXI-11)
- Optional interface: GPIB

### **Programmable Linear DC Power Supply**



### SPD1000X Series

SPD1168X (16 V/8 A) SPD1305X (30 V/5 A)

#### **Features and Benefits**

- Single path high-precision programmable voltage output
  - 16 V/8 A, total power up to 128 W
  - 30 V/5 A, total power up to 150 W
- Stable, reliable, Low ripple and noise:  $\leq$  350 uVrms/3 mVpp; < 2 mArms Fast transient response time: < 50  $\mu$ s
- 5 digit Voltage, 4 digit Current Display, Minimum Resolution: 1 mV/1 mA
- Supports front panel timing output functions
- 2.8 inch true color TFT- LCD 240 \*320 display
- 2 types of output modes: Two-wire output mode, 4-wire compensation output • mode, Maximum compensation voltage 1 V
- 100/120/220/230 V compatible design to meet the needs of different power grids
- Intelligent temperature-controlled fan reduces noise
- Clear graphical interface, with the waveform display function
- · Internal 5 groups of system parameter save/recall
- Includes PC software: Easypower, supports SCPI, LabView driver



### SPD3303C Series

SPD3303C (10 mv,10 mA)

- 3 independent high precision output: 30 V/3 A\*2, 2.5 V/3.3 V/5 V/3 A\*1, total 195 W power
- 4 digits voltage and 3 digits current display, min resolution: 10 mV, 10 mA
- Support timing programming and timing output
- Three output modes: independent, series and parallel connect, enhance output power range
- 100 V/120 V/220 V/230 V compatible design, to meet the need of different power grids
- Smart temperature controlled fan, effectively reduce the noise
- Save/Recall 5 group system specifications, support data storage expansion
- provide EasyPower software to meet the control and communication needs
- Support USB-TMC protocol and SCPI remote command, LabView driver

### **Programmable Linear DC Power Supply**



### SPD3303X Series

SPD3303X-E (10 mv, 10 mA) SPD3303X (1 mv, 1 mA)

### **Features and Benefits**

- 3 independent controlled and isolated outputs, 32 V/3.2 A×2, 2.5 V/3.3 V/5 V/3.2 A×1, total 220 W
- 5 digits Voltage, 4 digits Current Display, Minimum Resolution: 1 mV/1 mA (SPD3303X)
- Supports front panel timing output functions
- 4.3 inch true color TFT- LCD 480x272 display
- 3 types of output modes: independent, series, parallel
- 100 V/120 V/220 V/230 V compatible design to meet the needs of different power grids
- Intelligent temperature-controlled fan, effectively reducing noise
- Clear graphical interface, with the waveform display function
- Internal 5 groups of system parameter save/recall, supports data storage space expansion
- Provides PC software: Easypower, supports SCPI, LabView driver

### **Handheld Oscilloscope**



### SHS1000 Series

SHS1102 (100 MHz) SHS1062 (60 MHz)

#### **Features and Benefits**

- Completely isolated oscilloscope channels, isolated between oscilloscope and multimeter channels
- Oscilloscope isolation level: CAT I 1000 V and CAT II 600 V
- Combines the functions of oscilloscope, multimeter and recorder in one instrument
- Support waveform print and USB storage
- 60/100 MHz bandwidth , 2 input channels, 2 Mpts memory depth
- 1 GSa/s real time sampling rate,50 GSa/s equivalent sampling rate
- Equipped with high precision multimeter and many usual testing functions
- 3 kinds of cursor mode, 32 kinds of automatic waveform measurements
- 5.7 inch color TFT-LCD
- Support trend plot and long time data recorder function



### **SHS800 Series**

SHS820 (200 MHz) SHS810 (100 MHz) SHS806 (60 MHz)

- Combines the functions of oscilloscope, multimeter and recorder in one instrument
- Support waveform print and USB storage
- 60/100/200 MHz bandwidth, 2 input channels, 2 Mpts memory depth
- $\bullet \quad 1$  GSa/s real time sampling rate, 50 GSa/s equivalent sampling rate
- $\bullet\hspace{0.4cm}$  Equipped with high precision multimeter and many usual testing functions
- $\bullet\ \ 3$  kinds of cursor mode, 32 kinds of automatic waveform measurements
- 5.7 inch color TFT-LCD
- Support trend plot and long time data recorder function

### **Programmable DC Electronic Load**



### SDL1000X Series

SDL1020X/X-E (200W) SDL1030X/X-E (300W)

### **Features and Benefits**

- SDL1020X (Single channel ): DC 150 V/30 A, total power up to 200 W
- SDL1030X (Single channel ): DC 150 V/30 A, total power up to 300 W
- 4 static modes / Dynamic mode: CC/CV/CR/CP
- CC Dynamic mode: Continuous, pulsed, toggled
- CC Dynamic mode: 25 kHz, CP Dynamic mode: 12.5 kHz, CV Dynamic mode: 0.5 Hz
- Measuring speed of voltage and current: up to 500 kHz
- Adjustable current rise time range: 0.001 A/us~2.5 A/us
- Min. readback resolution: 0.1 mV, 0.1 mA
- Short-circuit, Battery test, CR-LED mode, and factory test functions
- 4-wire SENSE compensation mode function
- List function supports editing as many as 100 steps
- Program function supports 50 groups of steps
- OCP, OVP, OPP, OTP and LRV protection
- External analog control
- Voltage, Current monitoring via 0-10 V
- 3.5 inch TFT-LCD display, capable of displaying multiple parameters and states simultaneously
- Built-in RS232/USB/LAN communication interface, USB-GPIB module (ontional)
- Waveform trend chart and ease-to-use file storage and call functions
- Includes PC software: Supports SCPI, LabView driver

### **Digital Multimeter**



### SDM3065X Series

SDM3065X SDM3065X-SC (with Scanner Card)

#### **Features and Benefits**

- 4.3" TFT-LCD, 480\*272
- Real 61/2 digits readings resolution (2,200,000 counts)
- 1Gb Nand flash size, Mass storage configuration files and data files
- True-RMS AC Voltage and AC Current measuring
- Supports double display, Chinese and English Menu
- File management (support for U-disc and local storage)
- Built-in cold terminal compensation for thermocouple
- Comes with easy, converient and flexble any sensor measurement control software: EasyDMM
- Standard interfaces: USB Device, USB Host, LAN (Optional Accessories: USB-GPIB Adapter)
- Scanner Card SC1016 (Only for SDM3065X-SC)
- · Built-in Hlep system makes information acquisition easier
- Support remote control operation via SCPI commands. Compatible with commands of other main stream multimeters
- Supports intelligent management system for laboratory based on BS framework and LAN



### SDM3055 Series

SDM3055 SDM3055-SC (with Scanner Card)

- Real 51/2 digits readings resolution ( 240, 000 counts )
- Up to 150 rdgs/s measurement speed
- True-RMS AC Voltage and AC Current measuring
- 1 Gb Nand flash size, Mass storage configuration files and data files
- Built-in cold terminal compensation for thermocouple temperature measurements
- With easy, convenient and flexible PC software: EasyDMM standard interfaces: USB Host, LAN ( Optional Accessories USB-GPIB Adapter )
- Scanner Card SC1016 (Only for SDM3055-SC)
- Support remote control operation via SCPI commands.Compatible with
- commands of main stream multimeters

### **Digital Multimeter**



### SDM3045X Series

#### SDM3045X

#### **Features and Benefits**

- Real 41/2 digit (60000 count) readings resolution
- Up to 150 rdgs/s measurement speed
- True-RMS AC Voltage and AC Current measuring
- 1 Gb NAND flash size, Mass storage configuration files and data files
- Built-in cold terminal compensation for thermocouple
- With easy, convenient and flexible PC software: EasyDMM
- Standard interface: USB Device, USB Host, LAN (Optional Accessories: USB-GPIB Adapter)
- USB & LAN remote interfaces support common SCPI command set.
   Compatible with other popular DMMs on the market

### **RF Signal Generator**



### SSG3000X Series

SSG3032X (CW MODE 9 kHz~3.2 GHz) SSG3021X (CW MODE 9 kHz~2.1 GHz) SSG3032X-IQE (IQ MODE 10 MHz~3.2 GHz) SSG3021X-IQE (IQ MODE 10 MHz~2.1 GHz)

#### **Features and Benefits**

- 0.01 Hz frequency setting resolution
- Level output from -110 dBm to +13 dBm
- Maximum level up to +20 dBm (typ.)
- $\bullet~$  Phase Noise: -110 dBc/ Hz @ 1 GHz , 20 kHz offset (typ.)
- Level accuracy ≤0.7 dB (typ.)
- Provides AM, FM, &PM analog modulation with internal, external or Int+Ext source
- Pulse modulation, on/off ratio ≥70 dBc
- Pulse train generator (option)
- External IQ modulation with SDG6000X as the baseband IQ signal
- USB-power meter measurement
- 5 inch TFT capacitive touch screen, mouse and keyboard supported
- Web browser remote control on PC and mobile terminals
- Standard interface include USB Host, USB Device (USB TMC), LAN (VXI-11, Socket, Telnet). Optional interface: GPIB

### **RF Signal Generator**



### SSG5000X Series

SSG5040X (CW MODE 9 kHz  $\sim$  4 GHz) SSG5060X (CW MODE 9 kHz  $\sim$  6 GHz) SSG5040X-V (CW MODE 9 kHz  $\sim$  4 GHz / IQ MODE 10 MHz  $\sim$  4 GHz) SSG5060X-V (CW MODE 9 kHz  $\sim$  6 GHz / IO MODE 10

#### **Features and Benefits**

• Frequency up to 4 GHz/6 GHz

MHz ~ 6 GHz)

- 0.001 Hz frequency setting resolution
- High output power up to +26 dBm (typ.)
- Phase Noise: -120 dBc/ Hz @ 1 GHz, 20 kHz offset (typ.)
- User flatness correction with power sensor to correct the cable loss
- Provides AM, FM, PM analog modulation with internal, external or Int+Ext source
- Single pulse, double pulse and Pulse train generator (option)
- Internal IQ modulation with 150 MHz modulation bandwidth with perfect infactory calibration
- Internal include some digital communication stand file such as 5G-NR, LTE, WCDMA, WLAN, and playback them
- Internal Custom mode generate common IQ signal such as QAM, FSK, ASK, MSK
- Analog differential I/Q outputs
- External analog I/Q input
- USB-power meter measurement
- 5inch TFT capacitive touch screen, mouse and keyboard supported
- Web browser remote control on PC and mobile terminals
- Standard interface included USB Host, USB Device (USB TMC), LAN (VXI-11, Socket, Telnet). Optional interface: GPIB

### **Real-Time Spectrum Analyzer**



### SSA3000X-R Series

SSA3050X-R (9 kHz~5.0 GHz) SSA3075X-R (9 kHz~7.5 GHz)

### **Features and Benefits:**

- -165 dBm/Hz Displayed Average Noise Level (Typ.)
- -98 dBc/Hz.@10 kHz Offset Phase Noise (1 GHz, Typ.)
- Level Measurement Uncertainty < 0.7 dB (Typ.)
- 1 Hz Minimum Resolution Bandwidth (RBW)
- Preamplifier Standard
- Tracking Generator Standard
- Up to 40 MHz Real Time Analysis Bandwidth
- 100% POI 7.20 µs, Dynamic Range 60 dB
- Multi-view for Density, Spectrogram, PvT, and multi trigger and FMT
- Modulation Analysis up to 40 MHz BW (Opt.)
- Reflection Measurement Kit (Opt.)
- EMI Filter and Quasi-Peak Detector Kit(Opt.)
- 10.1 inch Multi-Touch Screen , Mouse and Keyboard supported
- Web Browser Remote Control on PC and Mobile Terminals and File Operation

### **Spectrum Analyzer**



### SSA3000X Series

SSA3032X (9 kHz~3.2 GHz) SSA3021X (9 kHz~2.1 GHz)

#### **Features and Benefits:**

- -161 dBm/Hz Displayed Average Noise Level (Typ.)
- -98 dBc/Hz @10 kHz Offset Phase Noise (1 GHz, Typ.)
- Total Amplitude Accuracy < 0.7 dB
- 1 Hz Minimum Resolution Bandwidth (RBW)
- Preamplifier Standard
- Up to 3.2 GHz Tracking Generator (Standard)
- Reflection Measurement Kit (Opt.)
- Advanced Measurement Kit (Opt.)
- EMI Pre-compliance Measurements Kit (Opt.)
- 10.1 Inch WVGA (1024x600) Display

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### SSA3000X Plus Series

SSA3021X Plus (9 kHz~2.1 GHz) SSA3032X Plus (9 kHz~3.2 GHz) SSA3075X Plus (9 kHz~7.5 GHz)

#### **Features and Benefits:**

- -165 dBm/Hz Displayed Average Noise Level (Typ.)
- -98 dBc/Hz.@10 kHz Offset Phase Noise (1 GHz, Typ.)
- Level Measurement Uncertainty < 0.7 dB (Typ.)
- 1 Hz Minimum Resolution Bandwidth (RBW)
- Preamplifier Standard
- Tracking Generator (Opt.)
- Analog and Digital Signal Modulation Analysis Mode (Opt.)
- Reflection Measurement Kit (Opt.)
- EMI Filter and Quasi-Peak Detector Kit(Opt.)
- 10.1 Inch Multi-Touch Screen , Mouse and Keyboard supported
- Web Browser Remote Control on PC and Mobile Terminals and File Operation

### **Spectrum & Vector Network Analyzer**



### **SVA1000X Series**

SVA1015X (9 kHz~1.5 GHz) SVA1032X (9 kHz~3.2 GHz) SVA1075X (9 kHz~7.5 GHz)

- Vector Network Analyzer Frequency Range from 100 kHz up to 7.5 GHz
- -165 dBm/Hz Displayed Average Noise Level (Typ.)
- -98 dBc/Hz.@10 kHz Offset Phase Noise (1 GHz, Typ.)
- Level Measurement Uncertainty < 0.7 dB (Typ.)
- 1 Hz Minimum Resolution Bandwidth (RBW)
- Preamplifier Standard
- Tracking Generator Standard
- Distance To Fault (Opt.)
- Analog and Digital Signal Modulation Analysis Mode (Opt.)
- EMI Filter and Quasi-Peak Detector Kit(Opt.)
- Advanced Measurement Kit (Opt.)
- 10.1 Inch Multi-Touch Screen , Mouse and Keyboard supported
- Web Browser Remote Control on PC and Mobile Terminals and File Operation

## **Probes and Accessories**

Туре	Model	Picture	Specifications
Passive Probe	PB470 PP510 PP215 PP430		PB470,70 MHz bandwidth PP510,100 MHz bandwidth PP215,200 MHz bandwidth PP430,300 MHz bandwidth 1 X/10 X decay, 1 M/10 Mohm, 300 V/600 V
	PB925		Bandwidth 250 MHz, fixed 10 X decay, the rise time of about 1.2 ns, input capacitance: 16 pF, compensation range: 10 pF-35 pF, input impedance 10 M $\Omega$ , length 120 cm, safe voltage levels: CAT II 1000 V, CAT III 600 V
	PB830		Bandwidth 300 MHz, fixed 10 X decay, the rise time of about 1 ns, input capacitance: 16 pF, compensation range: 10 pF-20 pF, input impedance 10 M $\Omega$ , length 140 cm, safe voltage levels: CAT II 1000 V, CAT III 600 V
Current Probe	CPL5100		Bandwidth: DC-600 kHz; Current range L, H; Maximum operation current 10 A(L)/ 100 A(H); Max operation voltage 600 V; DC Accuracy: $3\%\pm50$ mA (L); 1500 mA $\sim$ 40 A Peak: $4\%\pm50$ mA; 40 A $\sim$ 100 A Peak: $\pm15\%$ Maximum (H); 9 V alkaline layer-built battery/ 15 H
	CP4020		Bandwidth: 100 KHz; Maximum continuous current 20 Arms; Peak current 60 A; Switching ratio: 50 mV/A; 5 mV/A; DC measurement accuracy: 50 mV/A (0.4 A-10 ApK) ± 2%; 5 mV/A (1 A-60 ApK)±2%; 9 V battery-powered
	CP4050		Bandwidth: 1 MHz; Maximum continuous current 50 Arms; Peak current 140 A; Switching ratio: 500 mV/A; 50 mV/A; DC measurement accuracy: 500 mV/A (20 mA-14 ApK) ±3%±20 mA; 50 mV/A (200 mA-100 ApK)±4%± 200 mA; 50 mV/A (100 A-140 ApK)±15% max; 9 V battery-powered
	CP4070		Bandwidth: 150 KHz; Maximum continuous current 70 Arms;Peak current 200 A; Switching ratio: 50 mV/A; 5 mV/A; DC measurement accuracy: 50 mV/A (0.4 A-10 ApK) ±2%, 5 mV/A (1 A-200 ApK)±2%;9 V battery-powered
	CP4070A		Bandwidth: 300 KHz; Maximum continuous current 70 Arms; Peak current 200 A;Switching ratio: 100 mV/A;10 mV/A; DC measurement accuracy: 100 mV/A(50 mA-10 ApK) ±3%±50 mA; 10 mV/A (500 mA-40 ApK) ±4%±50 mA; 10 mV/A (40 A-200 ApK) ±15%max; 9 V battery-powered
	CP5030		Bandwidth: 50 MHz; Maximum continuous current 30 Arms; Peak current 50 A;Switching ratio: 100 mV/A; 1 V/A; AC/DC measurement accuracy: 1 A(±1%±1 mA); 100 mV/A(±1%±10 mA); Standard DC12 V/1.2 A power adapter
	CP5030A		Bandwidth: 100 MHz; Maximum continuous current 30 Arms; Peak current 50 A;Switching ratio: 100 mV/A; 1 V/A; AC/DC measurement accuracy: 1 A (±1%±1 mA); 100 mV/A (±1%±10 mA); Standard DC12 V/1.2 A power adapter
	CP5150		Bandwidth: 12 MHz; Maximum continuous current 150 Arms; Peak current 300 A; Switching ratio: 100 mV/A; 1 V/A; AC/DC measurement accuracy: 100 mV/A (±1%±1 mA); 10 mV/A (±1%±10 mA); Standard DC 12 V/1.2 A power adapter
	CP5500		Bandwidth: 5 MHz; Maximum continuous current 500 Arms; Peak current 750 A; Switching ratio: 100 mV/A; 10 mV/A; AC/DC measurement accuracy: 100 mV/A (±1%±1 mA); 10 mV/A (±1%±10 mA); Standard DC 12 V/1.2 A power adapter

Туре	Model	Picture	Specifications
High Voltage Differential Probe	DPB1300		Bandwidth: DC-50 MHz, Rise time $\leq$ 7 ns; DC Accuracy $\pm$ 2%; Attenuation Ratio 50 X/500 X; Max Differential Test Voltage (DC + Peak AC) 50 X: $\pm$ 130 V, 500 X: $\pm$ 1300 V; DC 12 V/1.2 A Power
	DPB4080		Bandwidth: 50 MHz; Maximum input differential voltage 800 V (DC + Peak AC); Range selection (attenuation ratio):10 X/100 X; Accuracy: $\pm 1\%$ ; Standard DC 9 V/1 A power adapter
	DPB5150		Bandwidth: 70 MHz; Maximum input differential voltage 1500 V (DC + Peak AC); Range selection (attenuation ratio): 50 X/500 X; Accuracy: ±2%; Standard 5 V/1 A USB power adapter
	DPB5150A		Bandwidth: 100 MHz; Maximum input differential voltage 1500 V (DC + Peak AC); Range selection (attenuation ratio): 50 X/500 X; Accuracy: ±2%; Standard 5 V/1 A USB power adapter
	DPB5700		Bandwidth: 70 MHz; Maximum input differential voltage 7000 V (DC + Peak AC); Range selection (attenuation ratio): 100 X/1000 X; Accuracy: ±2%; Standard 5 V/1 A USB power adapter
	DPB5700A		Bandwidth: 100 MHz; Maximum input differential voltage 7000 V (DC + Peak AC);Range selection (attenuation ratio): 100 X/1000 X; Accuracy: ±2%; Standard 5 V/1 A USB power adapter
High Voltage Probe	HPB4010		Bandwidth: 40 MHz; Maximum measurement voltage DC: 10 KV; AC(rms): 7 KV (sine); AC (Vpp): 20 KV (Pulse); attenuation ratio1:1000; Accuracy: ≤3%
Logic Probe	SPL1016		Logic Probe for SDS1000X+ series, 16-channel, 500 MSa/s
	SPL2016		Logic Probe for SDS2000X and SDS5000X series , 16-channel, 500 MSa/s
Logic Analyzer	SLA1016		16 logic analyzer hardware module, suitable for SDS1000X-E 4 channel series and SDS2000X-E oscilloscope.
Near-Field Probe	SRF5030T		Near Field Probe: H field probe sets (20 mm, 10 mm, 5 mm) , E field probe (5 mm), 300 kHz~3.0 GHz; distinguished within 10 cm range of the magnetic field; for EMI radiation interference and the intensity detector
Isolated Front End	ISFE		Realize isolation among ordinary oscilloscope channels, isolation between the measured signal and ground, use USB 5 V power supply, plug and play, the maximum input voltage of up to $\pm$ 600 Vpk
GPIB	USB-GPIB Adapter	- 100 mm	The USB Device interface extends into the GPIB interface, USB-GPIB adapter can more easily complete the task of the operation command through the GPIB, USB follow the USB2.0 specification, GPIB follow the IEEE488.2 standard
Demo Board	STB3		Output signals include square waves, sine, AM, pulse, PWM, fast edge, I2C, CAN, LIN signal etc

Туре	Model	Picture	Specifications
Deskew Fixture	DF2001A		Supporting power analysis software for calibration phase voltage and current probes generated during transmission
Cable	N-BNC-2L		N-BNC cable for SSA3000X Series; 2 GHz bandwidth
	N-N-6L		N-N cable for SSA3000X Series; 6 GHz bandwidth
	N-SMA-6L		N-SMA cable for SSA3000X Series; 6 GHz bandwidth
	N-N-18L		N(M)-N(M) cable for SSA3000X, SSA3000X Plus, SSA3000X-R, SVA1000X series, 100cm, 18 GHz bandwidth
	N-SMA-18L		N(M)-SMA(M) cable for SSA3000X, SSA3000X Plus, SSA3000X-R, SVA1000X series, 100cm, 18 GHz bandwidth
Reflection Bridge	RB3X25		VSWR bridge: (1 MHz~2.5 GHz), N (M) -N (M) adaptor (2 pcs)
SSA3000X Utility Kit	UKitSSA3X		Utility Kit for SSA3000X Series: N (M) -SMA (M) cable, N (M) -N (M) cable, N (M) -BNC (F) adaptor (2 pcs), N (M) -SMA (F) adaptor (2 pcs), 10 dB attenuator;
WIFI Adapter	TL_WN725N	S SIGNAT	USB-WIFI adapter, suitable for SDS1000X-E 4 channel series oscilloscope
USB AWG Module	SAG1021I	SAG10211 and contain feedback to provide the second	Output Sine, Square, Ramp, pulse, Noise, DC and 45 built-in waveforms.  The arbitrary waveforms can be accessed and edited by the EasyWave PC software.  Isolated voltage ±42 Vpk.
Carry Bag	BAG-S1	© SIGLENT	Soft Carry Case for SDS1000DL+/CML+, SDS1000X, SDS1000X-E, SDS2000X-E Series
	BAG-S2	Ordinary .	Soft Carry Case for SDS2000X, SDS5000X, SSA3000X, SVA1000X, SSA3000X Plus

Туре	Model	Picture	Specifications
Rack Mount	SDG-2-RMK		Rackmount kit for two intruments , compatible with the SDG800, SDG1000, SDG1000X, SDG2000X, SDG5000 and SDG6000X series function generator and SDM3045X, SDM3055, SDM3065X digital multimeter
	SDS1X-E-RMK		The height is 4U, suitable for SDS1000X-E oscilloscope
	SDG-RMK		Single instrument rack mount kit 19" shelf design is compatible with the SDG800, SDG1000, SDG1000X, SDG2000X, SDG6000X, and SDG5000 series function generators as well as the SDM3000 series of DMMs
	SSA-RMK		Single Instrument rack mount kit, suit for SSA3000X, SVA1000X
	SPD3000-RMK		Compatible with SPD3000X / X-E / D / S / C models.4U rack height
	SDS2000-RMK		19" rack mount kit for a single SDS2000 or SDS2000X series oscilloscopes
Amplifier	SPA1010	(4887)	Increase the voltage and current output capabilities to generators like the SIGLENT SDG family. Typical Input Impedance: $15k\Omega$ Input: $+/-6.5V$ Vpp (Gain: X1) $+/-1.3$ V (Gain: X10) Gain: Switched $10V/1V$ and $10V/10V$ Output Voltage: $25.4$ Vpp Output Current: $1.12$ A Slew Rate: $\geq 90$ V/ $\mu$ s Overshoot: $\leq 4\%$ Compatible with all SIGLENT SDG series generators
VNA Calibration Kit	F503ME		Mechanical Calibration Kit: Open(M), Short(M), Match(M,50), Through(F-F), 4.5 GHz
	F503FE		Mechanical Calibration Kit: OSLT, DC - 4.5 GHz, N-Female connector
	F504MS	GDED GOOT	Mechanical Calibration Kit: OSLT, DC - 9 GHz, N-Male connector
	F504FS	LOAD	Mechanical Calibration Kit: OSLT, DC - 9 GHz, N-Female connector
	F603ME	COEN.	Mechanical Calibration Kit: OSLT, DC - 4.5 GHz, 3.5mm SMA-Male connector
	F603FE	COAD WITCHEST	Mechanical Calibration Kit: Open(M), Short(M), Match(M,50), Through(F-F), 4.5 GHz, SMA-type
	F604MS		Mechanical Calibration Kit: OSLT, DC - 9 GHz, 3.5mm SMA-Male connector
	F604FS		Mechanical Calibration Kit: OSLT, DC - 9 GHz, 3.5mm SMA-Female connector



### **About SIGLENT**

SIGLENT is an international high-tech company, concentrating on R&D, sales, production and services of electronic test & measurement instruments.

SIGLENT first began developing digital oscilloscopes independently in 2002. After more than a decade of continuous development, SIGLENT has extended its product line to include digital oscilloscopes, function/arbitrary waveform generators, RF generators, digital multimeters, DC power supplies, spectrum analyzers, vector network analyzers, isolated handheld oscilloscopes, electronic load and other general purpose test instrumentation. Since its first oscilloscope, the ADS7000 series, was launched in 2005, SIGLENT has become the fastest growing manufacturer of digital oscilloscopes. We firmly believe that today SIGLENT is the best value in electronic test & measurement.

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