

# SIGLENT TECHNOLOGIES

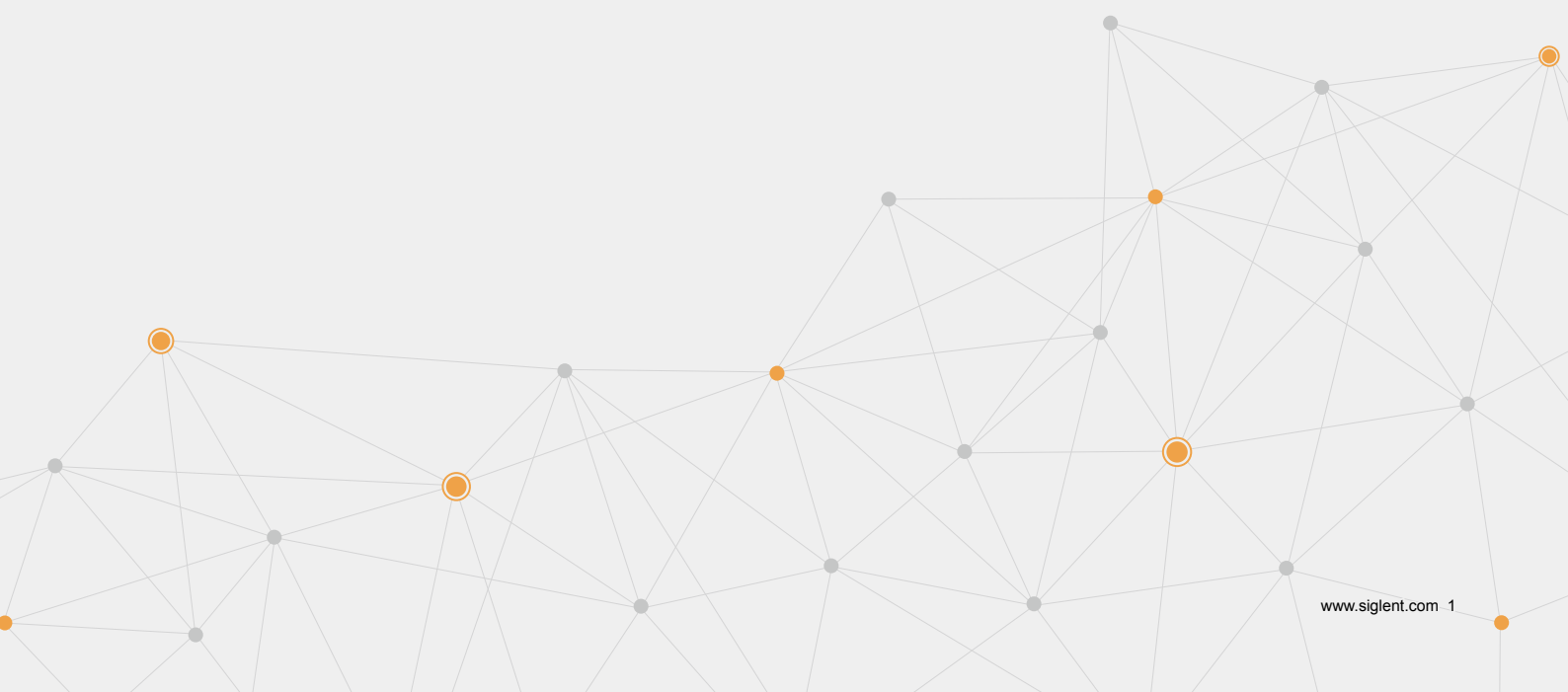
## RF PRODUCT CATALOG

- Spectrum Analyzer
- Spectrum & Vector Network Analyzer
- Vector Network Analyzer
- RF/MW Signal Generator



# CATALOG

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# Company Profile

SIGLENT TECHNOLOGIES Co., Ltd.

## The Best Value in Electronic Test & Measurement.

**SIGLENT** has been providing test & measurement solutions for almost 15 years from its headquarter in Shenzhen, China. There are more than 300 employees, one third of whom are high-educated R&D engineers.

**SIGLENT** has many patent technologies. We are dedicated to develop sophisticated and high quality digital oscilloscopes, waveform generators, RF signal generators, handheld digital oscilloscopes, spectrum analyzers, vector network analyzers and DC power supplies, DC Electronic Loads, digital multimeters. We strive to deliver the highest quality of customer service and satisfaction to our customers.



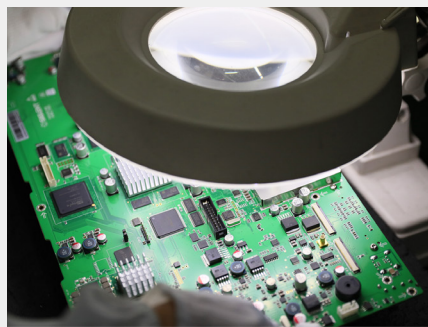
### **SIGLENT** provides the following instruments:

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

**SIGLENT** sincerely invite you to join

Please email :

[sales@siglent.com](mailto:sales@siglent.com)





# SNA5000A

## Vector Network Analyzer



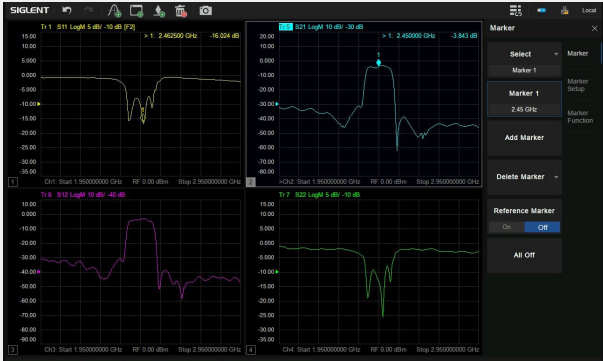
### Features and Benefits

- Frequency range: 9 kHz - 8.5 GHz
- Frequency resolution: 1 Hz
- Level resolution: 0.05 dB
- Range of IFBW: 10 Hz~3 MHz
- Setting range of output level: -55 dBm ~ +10 dBm
- Dynamic range: 125 dB
- Types of calibration: Response calibration, Enhanced Response calibration, Full-one port calibration, Full-two port calibration, Full-three port calibration, Full-four port calibration, TRL calibration
- Types of measurement: Scattering-parameter measurement, differential-parameter measurement, receiver measurement, time-domain parameter analysis, limit test, ripple test, impedance conversion, fixture simulation, adapter removal/insertion
- Support Bias-Tees
- Interface: LAN, USB Device, USB Host(USB-GPIB)
- Remote control: SCPI/Labview/IVI based on USB-TMC/VXI-11/Socket/Telnet/WebServer
- 12.1-inch touch screen
- Video output: HDMI

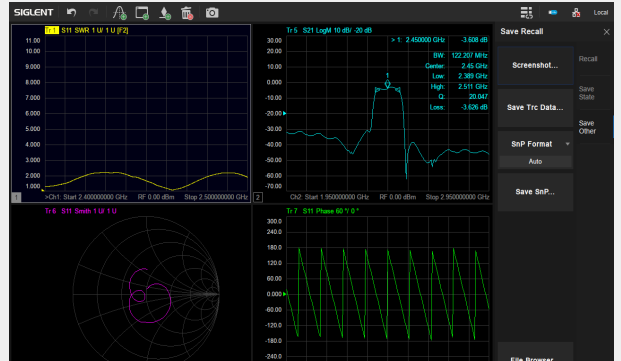


 Design features

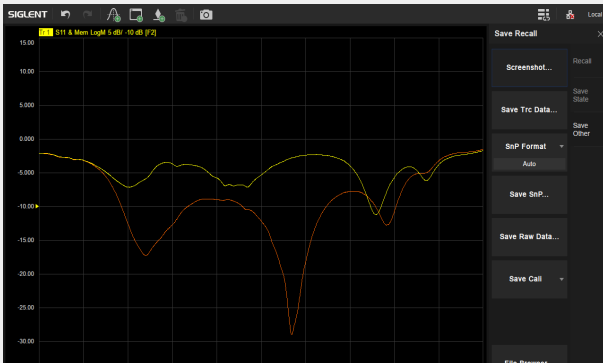
• Multi-window display



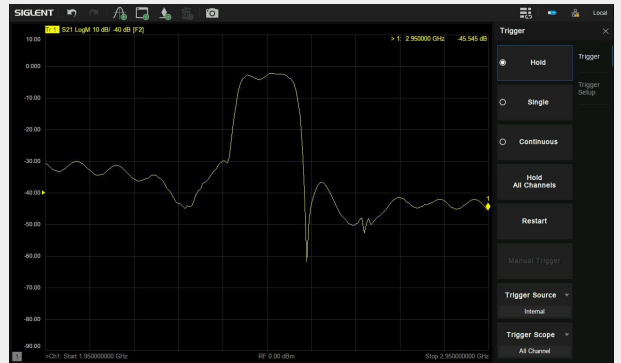
• Multi-format display



• Display and compare memory and current data



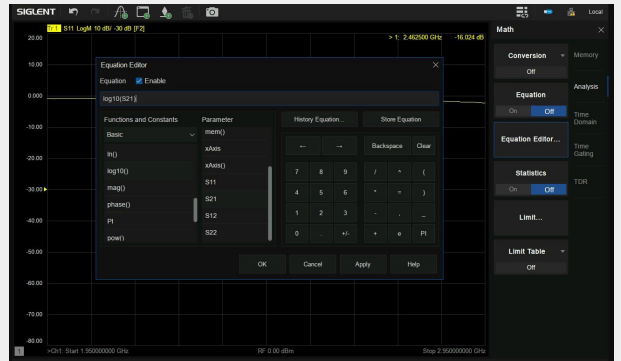
• Display data hold



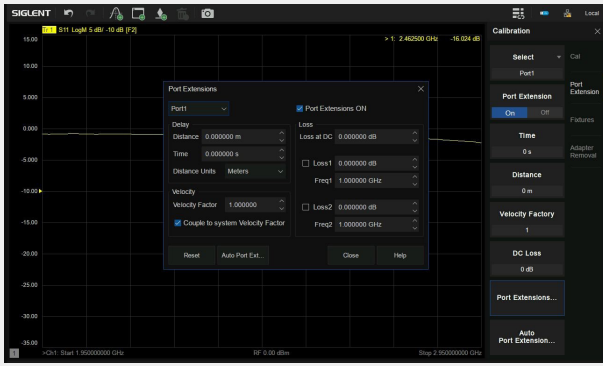
• Impedance conversion



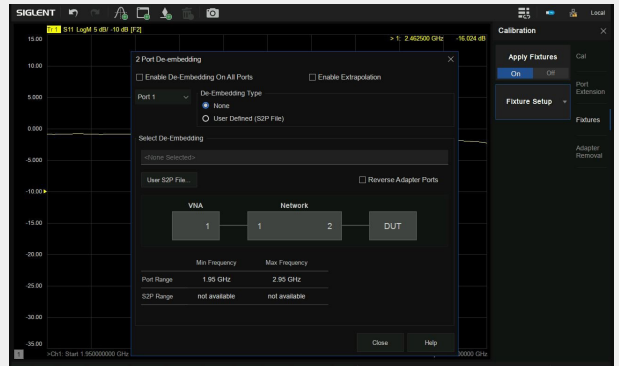
• Equation Editor



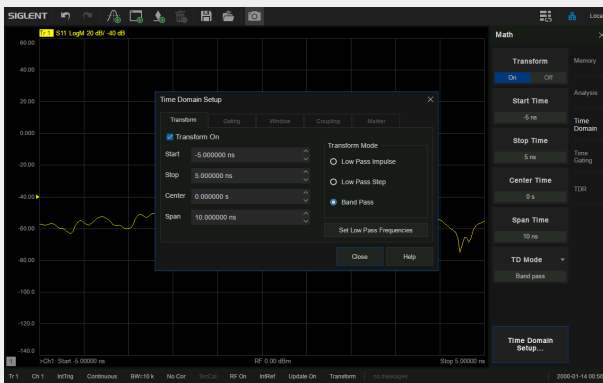
## • Port Extensions



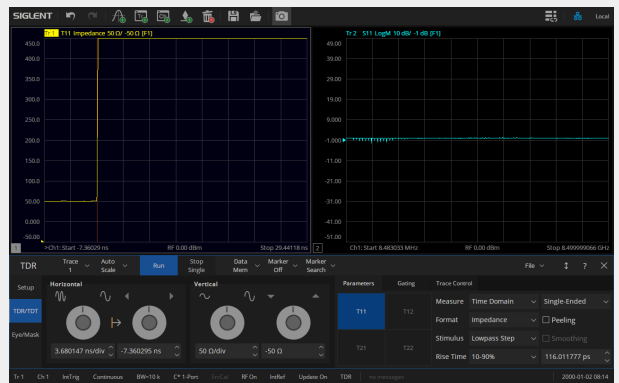
## • Embedding and De-Embedding



## • Time-Domain analysis



## • Enhanced Time-Domain analysis(TDR)



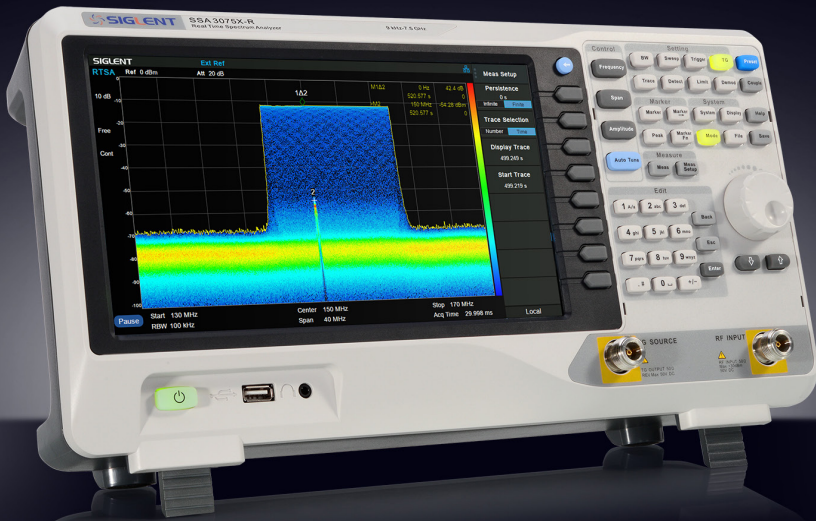
## Model and Main index

Model	SNA5002A	SNA5012A	SNA5004A	SNA5014A
Frequency range	9 kHz~4.5 GHz	9 kHz~8.5 GHz	9 kHz~4.5 GHz	9 kHz~8.5 GHz
Ports	2	2	4	4
Frequency resolution	1 Hz			
Level resolution	0.05 dB			
Range of IFBW	10 Hz~3 MHz			
Setting range of output level	-55 dBm ~ +10 dBm			
Dynamic range	125 dB			
Types of calibration	Response calibration, Enhanced Response calibration, Full-one port calibration, Full-two port calibration, Full-three port calibration, Full-four port calibration, TRL calibration			
Types of measurement	Scattering-parameter measurement, differential-parameter measurement, receiver measurement, time-domain parameter analysis, limit test, ripple test, impedance conversion, fixture simulation, adapter removal/insertion, enhanced time-domain parameter analysis(TDR)			
Bias-Tees	Support			
Interface	LAN, USB Device, USB Host(USB-GPIB)			
Remote control	SCPI/Labview/IVI based on USB-TMC/VXI-11/Socket/Telnet/WebServer			
Display	12.1-inch touch screen			
Video output	HDMI			



## Ordering Information

Items	Description	Order number
Products	2 ports, 4.5G Vector Network Analyzer	SNA5002A
	2 ports, 8.5G Vector Network Analyzer	SNA5012A
	4 ports, 4.5G Vector Network Analyzer	SNA5004A
	4 ports, 8.5G Vector Network Analyzer	SNA5014A
Standard Accessories	One Quick-start, one Power-cable, one USB-cable, One calibration-certificate	
Optional Accessories	High-performance reference source	SNA5000-HPR
	Time-Domain analysis	SNA5000-TDA
	Enhanced Time-Domain analysis	SNA5000-TDR
	N-type, Male, 50Ω Calibration Kit, 0-4.5GHz	F503ME
	N-type, Female, 50Ω Calibration Kit, 0-4.5GHz	F503FE
	3.5 mm, Male, 50Ω Calibration Kit, 0-4.5GHz	F603ME
	3.5 mm, Female, 50Ω Calibration Kit, 0-4.5GHz	F603FE
	N-type, Male, 50Ω Calibration Kit, 0-9GHz	F504MS
	N-type, Female, 50Ω Calibration Kit, 0-9GHz	F504FS
	N-type, Male and Female, 50Ω Calibration Kit, 0-9GHz	F504TS
	3.5 mm, Male, 50Ω Calibration Kit, 0-9GHz	F604MS
	3.5 mm, Female, 50Ω Calibration Kit, 0-9GHz	F604FS
	3.5 mm, Male and Female, 50Ω Calibration Kit, 0-9GHz	F604TS



# SSA3000X-R

## Real-Time Spectrum Analyzer



### Features and Benefits

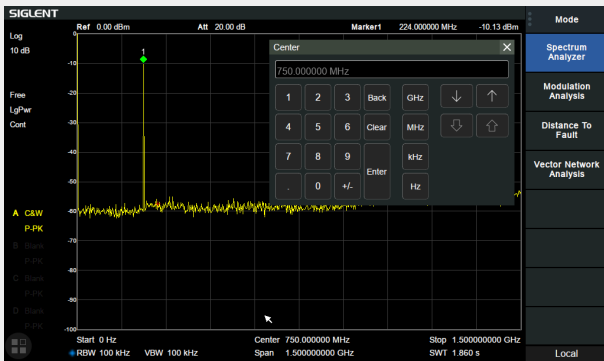
- Spectrum Analyzer Frequency Range from 9 kHz up to 5.0 GHz / 7.5 GHz
- -165 dBm/Hz Displayed Average Noise Level (Typ.)
- -98 dBc/Hz.@10 kHz Offset Phase Noise (1 GHz, Typ.)
- Level Measurement Uncertainty < 0.7 dB (Typ.)
- 1 Hz Minimum Resolution Bandwidth (RBW)
- Pre-amplifier Standard
- Tracking Generator Standard
- Up to 40 MHz Real Time Analysis Bandwidth
- 100% POI 7.20  $\mu$ s, 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.)
- 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



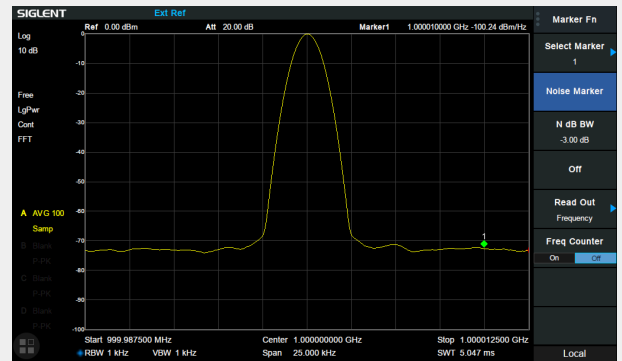


## Design features

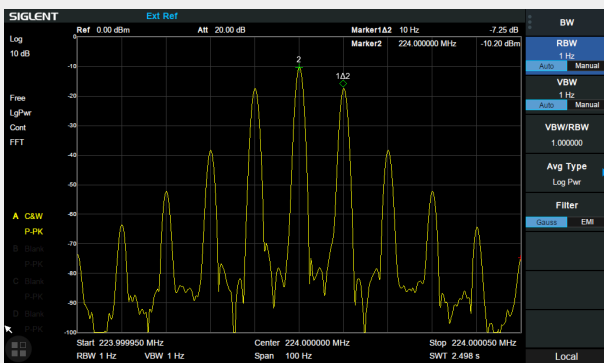
### • 10.1 Inch Display with Multi-Touch Screen



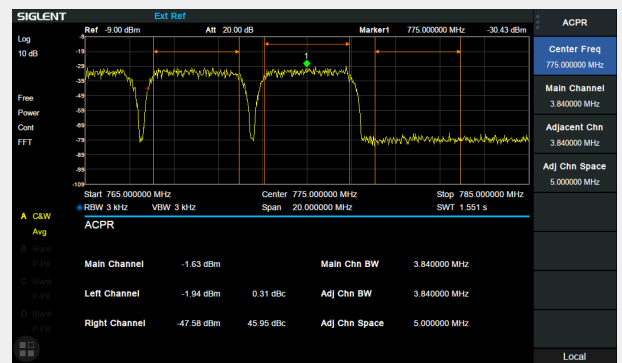
### • Phase noise <math>< -98 \text{ dBc/Hz}</math>@1 GHz



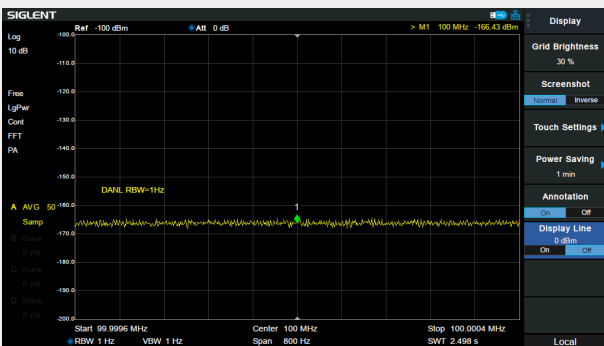
### • Minimum 1 Hz Resolution Bandwidth (RBW)



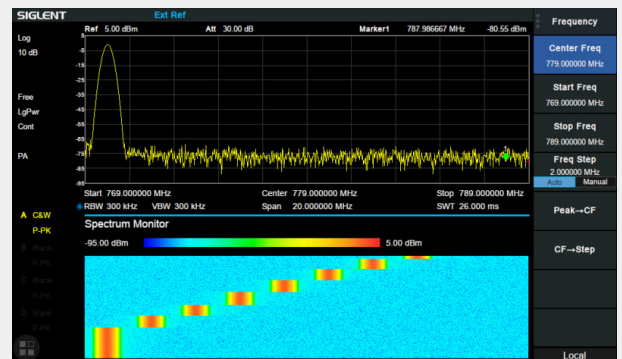
### • ACPR in Advanced Measurement Kit



### • -165 dBm/Hz Displayed Average Noise Level

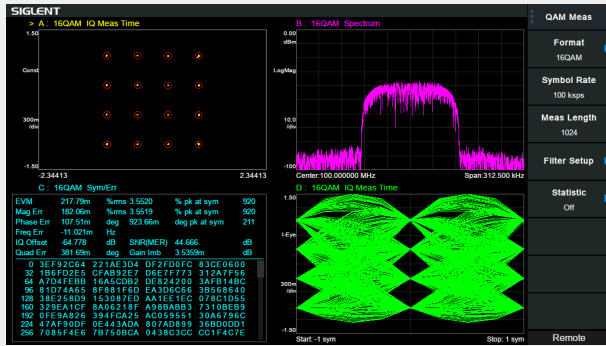


### • Monitor in Advanced Measurement Kit



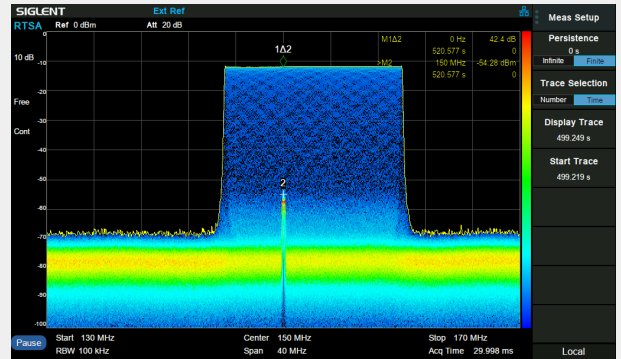
## • Modulation Analysis Mode

AM/FM, ASK/FSK/PSK/MSK/QAM Vector Signal Modulation Analysis and EVM evaluation. The analysis BW is same with real-time BW in RTSA mode



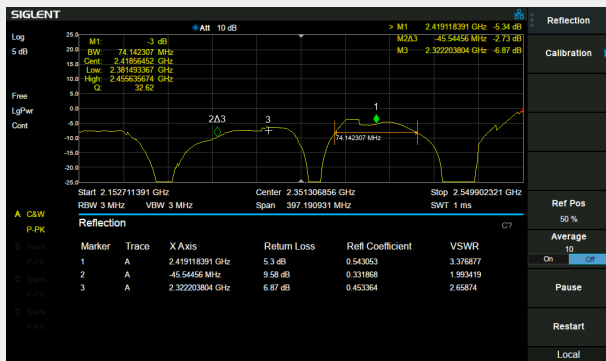
## • Real Time Analysis Mode

Density, 3D, Spectrogram, PVT, Multi-view and dimensions to monitor complex signals



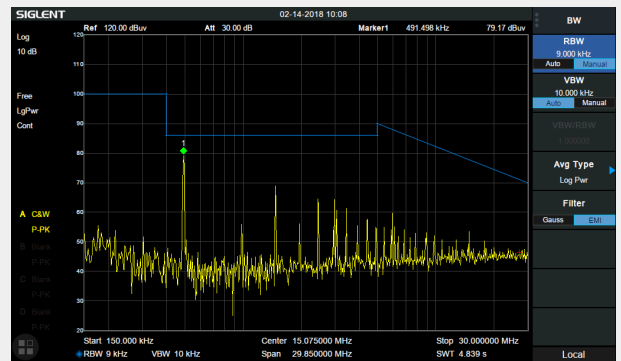
## • Reflection Measurement

VSWR and Return Loss measurement with Q value measurement



## • EMI Pre-Compliance Test

CISPR 16-1-1 EMI filter and Quasi-peak Detector, Log scale and Limit line



## Model and Main index

Model	SSA3050X-R	SSA3075X-R
Frequency Range	9 kHz~5.0 GHz	9 kHz~7.5 GHz
Resolution Bandwidth	1 Hz~3 MHz	1 Hz~3 MHz
Displayed Average Noise Level	-165 dBm/Hz	-165 dBm/Hz
SSB Phase Noise	<-98 dBc/Hz	<-98 dBc/Hz
Total Amplitude Accuracy	< 0.7 dB	< 0.7 dB
Tracking Generator	100 kHz - 5.0 GHz	100 kHz - 7.5 GHz
Real Time Band Width	25 MHz, 40 MHz (Option)	
SFDR	60 dB	
100% POI	7.20 μs	
RTSA Measurement	Density, Spectrogram, 3D, PVT	
Touch Screen	Multi Touch, Mouse and Keyboard supported	
Advanced Measurement	CHP, ACPR, OBW, CNR, Harmonic, TOI, Monitor	
Modulation Analysis	AM, FM, ASK, FSK, MSK, PSK, QAM	
Reflection Measurement	VSWR measurement using Reflection Bridge	
EMI Test	EMI Filter and Quasi-Peak Detector, Log Scale and Limit Line	
Communication Interface	LAN, USB Device, USB Host (USB-GPIB)	
Remote Control Capability	SCPI/Labview/IVI based on USB-TMC/VXI-11/Socket/Telnet	
Remote Controller	NI-MAX, Web Browser, Easy Spectrum software, File Explorer	



## Ordering Information

Product	Description	Order Number
Product Code	Real Time Spectrum Analyzer, 5.0 GHz	SSA3050X-R
	Real Time Spectrum Analyzer, 7.5 GHz	SSA3075X-R
Standard Accessories	Quick Start, USB Cable, Power Cord	
Common Options and Accessories	Advanced Measurement Kit	SSA3000XR-AMK
	Utility Kit: 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	UKitSSA3X
	N(M)-SMA(M) cable, 70cm, 6 GHz	N-SMA-6L
	N(M)-N(M) cable, 70cm, 6 GHz	N-N-6L
	N(M)-BNC(M) cable, 70cm, 2 GHz	N-BNC-2L
	N(M)-SMA(M) cable, 100cm, 18 GHz	N-SMA-18L
	N(M)-N(M) cable, 100cm, 18 GHz	N-N-18L
	USB-GPIB Adaptor	USB-GPIB
	Soft carrying bag	BAG-S2
	6U Rack Mount Kit	SSA-RMK
Real-Time Options	40 MHz Real-Time BandWidth	SSA3000XR-RT40
Reflection Measurement Options	Reflection Measurement	SSA3000-Ref1
	Reflection Bridge Kit: Reflection Bridge (1 MHz ~ 2.5 GHz), N(M)-N(M) adaptors (2 pcs)	RB3X25
EMI test Options	EMI Measurement Kit: EMI Filter and Quasi Peak Detector, EMI Receiver Mode in EasySpectrum Software	SSA3000XR-EMI
	300 kHz~3 GHz Near Field Probe Kit: 3 H-probes (20/10/5 mm), 1 E-probe (5 mm)	SRF5030T
Modulation Analysis Options	Analog Modulation Analysis: AM, FM	SSA3000XR-AMA
	Digital Modulation Analysis: ASK, FSK, MSK, PSK, QAM. The analysis BW is the real-time BW in RTSA mode	SSA3000XR-WDMA



# SSA3000X Plus

## Spectrum Analyzer



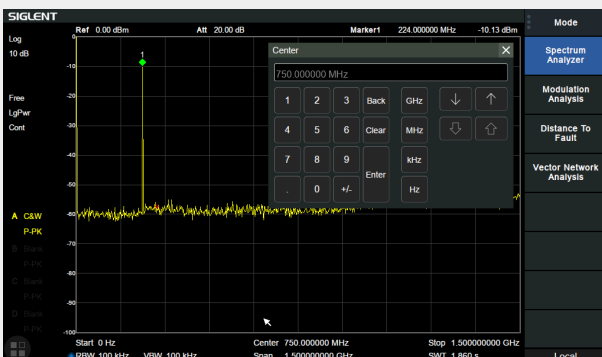
### Features and Benefits

- Frequency Range from 9 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 included at no charge
- Vector Signal Modulation Analysis (Opt.)
- EMI Filter and Quasi-Peak Detector (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

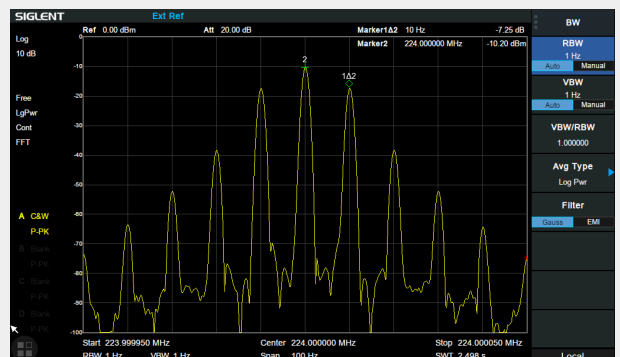


### Design features

#### • 10.1 Inch (1024x600) Touch Screen

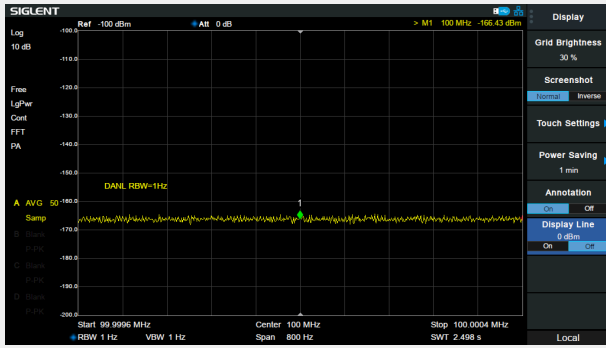


#### • Minimum 1 Hz Resolution Bandwidth (RBW)

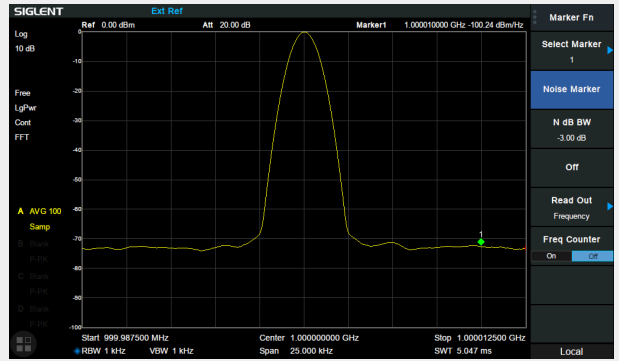




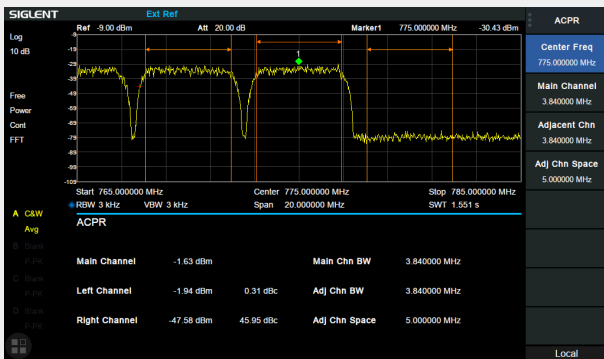
## • -165 dBm/Hz Displayed Average Noise Level



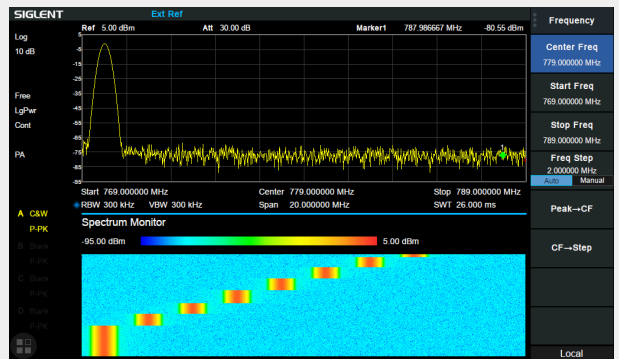
## • Phase noise <-98 dBc/Hz@1 GHz



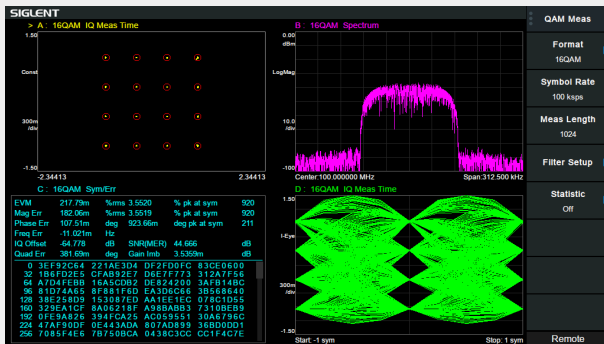
## • Advanced Measurement Kit



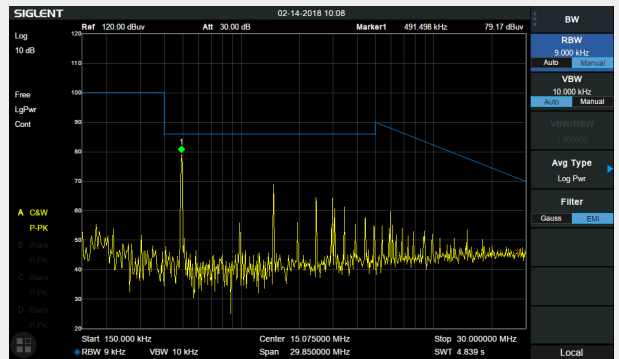
## • Spectrum Monitor in Advanced Measurement Kit



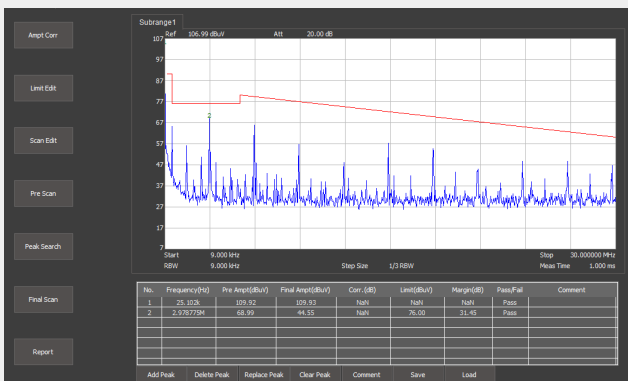
## • Digital Modulation Analysis Mode



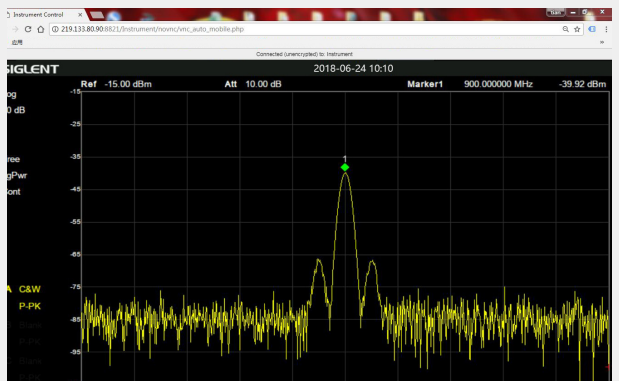
## • EMI filter and Quasi-peak Detector for EMI Pre-compliance Test



## • Easy Spectrum<sup>T</sup> Software for Free



## • Remote Control on Web Browser





## Model and Main index

Model	SSA3021X Plus	SSA3032X Plus	SSA3075X Plus
Frequency Range	9 kHz ~ 2.1 GHz	9 kHz~3.2 GHz	9 kHz~7.5 GHz
Resolution Bandwidth	1 Hz~1 MHz	1 Hz~1 MHz	1 Hz~3 MHz
Displayed Average Noise Level	-161 dBm/Hz	-161 dBm/Hz	-165 dBm/Hz
SSB Phase Noise	< -98 dBc/Hz	<-98 dBc/Hz	<-98 dBc/Hz
Total Amplitude Accuracy	< 0.7 dB	< 0.7 dB	< 0.7 dB
Tracking Generator	100 kHz ~ 2.1 GHz	100 kHz~3.2 GHz	100 kHz~7.5 GHz
Touch Screen	Multi Touch, Mouse and Keyboard supported		
Advanced Measurement	CHP, ACPR, OBW, CNR, Harmonic, TOI, Monitor		
Reflection Measurement	VSWR measurement using Reflection Bridge		
EMI Test	EMI Filter and Quasi-Peak Detector, Log Scale and Limit Line		
Modulation Analysis	AM, FM; ASK, FSK, MSK, PSK, QAM		
Communication Interface	LAN, USB Device, USB Host (USB-GPIB)		
Remote Control Capability	SCPI/Labview/IVI based on USB-TMC/VXI-11/Socket/Telnet		
Remote Controller	NI-MAX, Web Browser, Easy Spectrum software, File Explorer		



## Ordering Information

Product	Description	Order Number
Product Code	Spectrum Analyzer, 9 kHz ~ 2.1 GHz	SSA3021X Plus
	Spectrum Analyzer, 9 kHz ~ 3.2 GHz	SSA3032X Plus
	Spectrum Analyzer, 9 kHz ~ 7.5 GHz	SSA3075X Plus
Standard Accessories	Quick Start, USB Cable, Power Cord	
Common Options and Accessories	Tracking Generator	SSA3000XP-TG
	Advanced Measurement Kit	SSA3000XP-AMK
	Utility Kit: N(M)-SMA(M) cable (6 GHz), N(M)-N(M) cable (6 GHz), N(M)-BNC(F) adaptor x 2, N(M)-SMA(F) adaptor x 2, 10 dB 1W attenuator	UKitSSA3X
	N(M)-SMA(M) cable, 70cm, 6 GHz	N-SMA-6L
	N(M)-N(M) cable, 70cm, 6 GHz	N-N-6L
	N(M)-BNC(M) cable, 70cm, 2 GHz	N-BNC-2L
	USB-GPIB Adaptor	USB-GPIB
	Soft carrying bag	BAG-S2
	6U Rack Mount Kit	SSA-RMK
	Reflection Measurement Options	Tracking Generator
Reflection Measurement		SSA3000-Ref1
Reflection Bridge Kit: Reflection Bridge (1 MHz ~ 2.5 GHz), N(M)-N(M) adaptors (2 pcs)		RB3X25
50 Ω, N type Male, 4.5 GHz Economic Calibration Kit: Open(M), Short(M), Match(M), Through Adapter(F-F)		F503ME
EMI test Options	EMI Measurement Kit: EMI Filter and Quasi Peak Detector, EMI Receiver Mode in EasySpectrum Software	SSA3000XP-EMI
	300 kHz~3 GHz Near Field Probe Kit: 3 H-probes (20/10/5 mm), 1 E-probe (5 mm)	SRF5030T
Modulation Analysis Options	Digital Modulation: ASK, FSK, MSK, PSK, QAM	SSA3000XP-DMA
	Analog Modulation: AM, FM	SSA3000XP-AMA



# SSA3000X

## Spectrum Analyzer



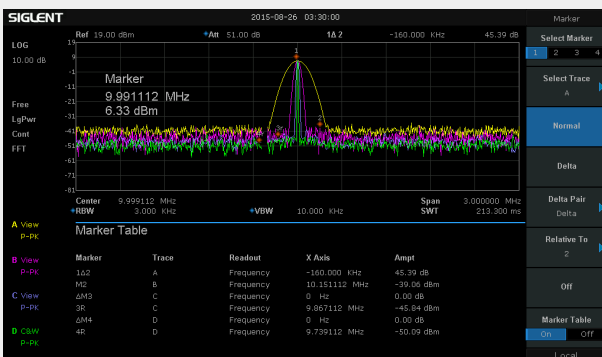
### Features and Benefits

- All-Digital IF Technology
- Frequency Range from 9 kHz up to 3.2 GHz
- -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 Kit
- Reflection Measurement Kit (Opt.)
- Advanced Measurement Kit (Opt.)
- EMI Pre-compliance Measurements Kit (Opt.)
- 10.1 Inch WVGA (1024x600) Display

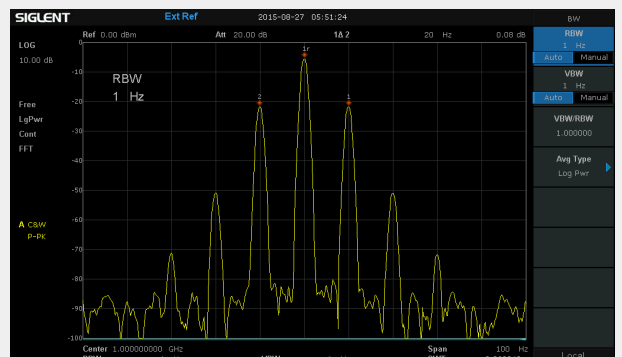


### Design features

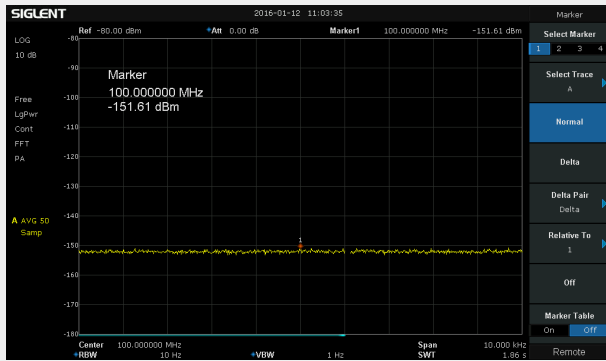
- Support four traces and cursors independently



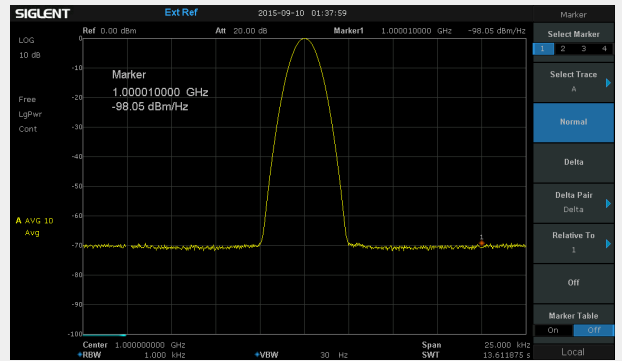
- 1 Hz Minimum Resolution Bandwidth (RBW)



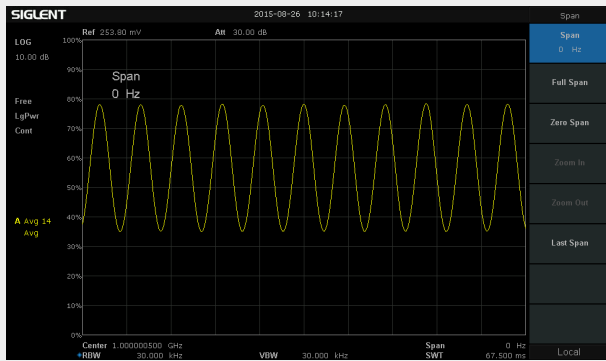
- 151 dBm Displayed Average Noise Level (RBW=10 Hz)



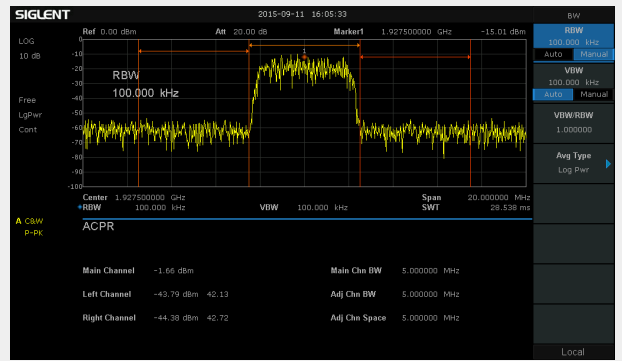
- Phase noise -98 dBc/Hz@1 GHz, offset 10 kHz



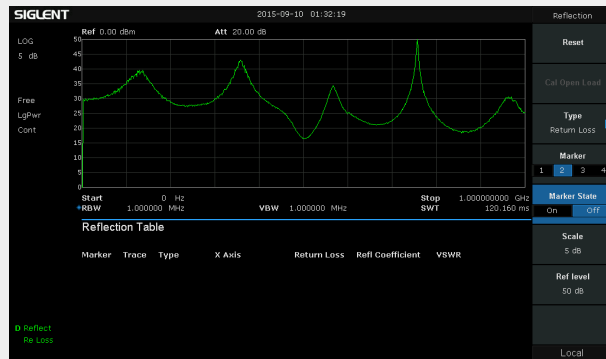
- Demodulation at the zero span



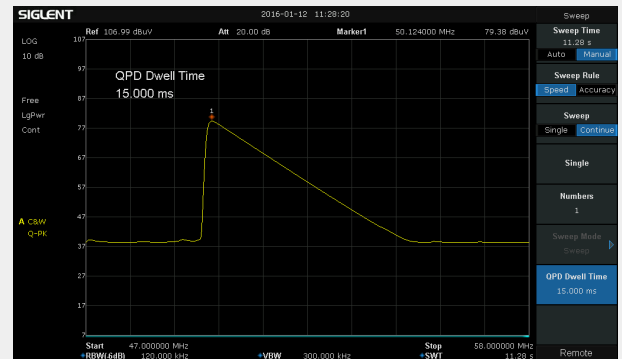
- Advanced power measurement, calculate the ACPR parameters



- Reflection measurement, acquire characteristic curve of the Return Loss



- EMI filter, Quasi-Peak detector following CISPR 16



## Model and Main index

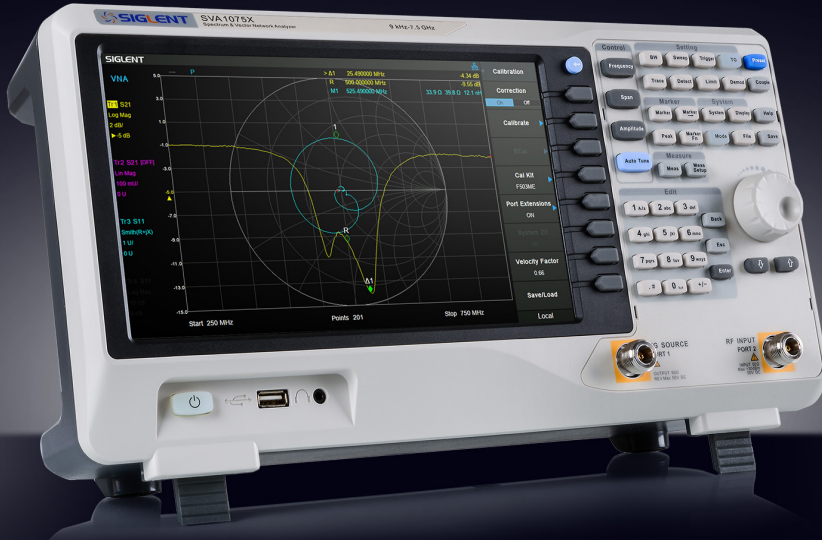
Model	SSA3021X	SSA3032X
Frequency Range	9 kHz~2.1 GHz	9 kHz~3.2 GHz
Resolution Bandwidth	1 Hz~1 MHz, in 1-3-10 sequence	1 Hz~1 MHz, in 1-3-10 sequence
Displayed Average Noise Level	-161 dBm/Hz, Normalize to 1 Hz (typ.)	-161 dBm/Hz, Normalize to 1 Hz (typ.)
Phase Noise	<-98 dBc/Hz@1 GHz, 10 kHz offset	<-98 dBc/Hz@1 GHz, 10 kHz offset
Amplitude Precision	< 0.7 dB	< 0.7 dB





## Ordering Information

Product Description	SSA3000X Spectrum Analyzer	Order Number
Product code	Spectrum Analyzer, 9 kHz~2.1 GHz	SSA3021X
	Spectrum Analyzer, 9 kHz~3.2 GHz	SSA3032X
Standard configurations	A Quick Start, A Product Certification, A USB Cable, A Calibration Certificate	QG-SSA3000X
Utility Options	Advanced Measurement Kit (Software)	AMK-SSA3000X
	Utility Kit: 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	UKitSSA3X
	N (M)-SMA (M) cable	N-SMA-6L
	N (M)-N (M) cable	N-N-6L
	N (M)-BNC (M) cable	N-BNC-2L
	Soft carrying bag	BAG-S2
	EMI Options	EMI Measurement Kit: EMI Filter and Quasi Peak Detector, EMI test option in EasySpectrum Software
Near Field Probe:H field probe sets (20 mm, 10 mm, 5 mm) , E field probe (5 mm), 300 kHz~3.0 GHz		SRF5030-T
Tracking Generator Kit (standard)		TG-SSA3000X
Reflect Measurement Options	Reflect Measurement Kit (Software)	SSA3000-RefI
	VSWR Bridge Kit: including SSA3000-RefI VSWR Bridge(1 MHz~2 GHz) N(M)-N(M) adaptor(2 pcs)	RBSSA3X20



# SVA1000X

## Spectrum & Vector Network Analyzer



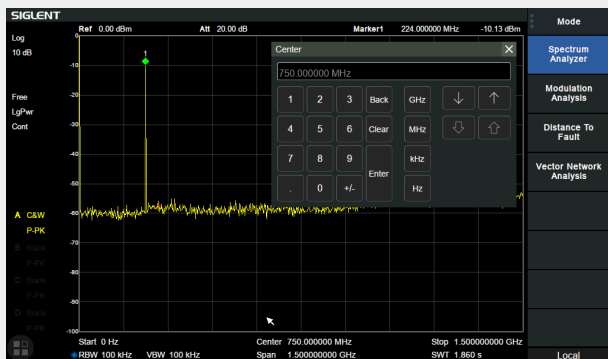
### Features and Benefits

- Spectrum Analyzer Frequency Range from 9 kHz up to 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.)
- Vector Signal Modulation Analysis (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

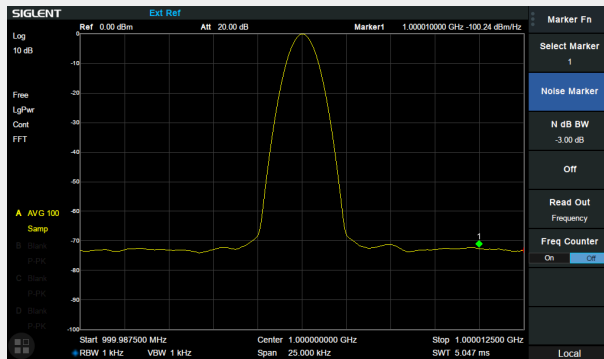


Design features

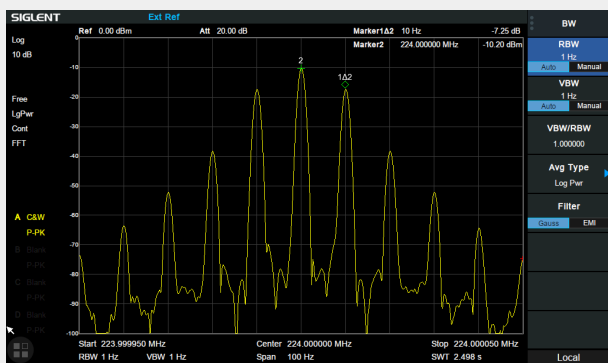
• 10.1 Inch Display with Multi-Touch Screen



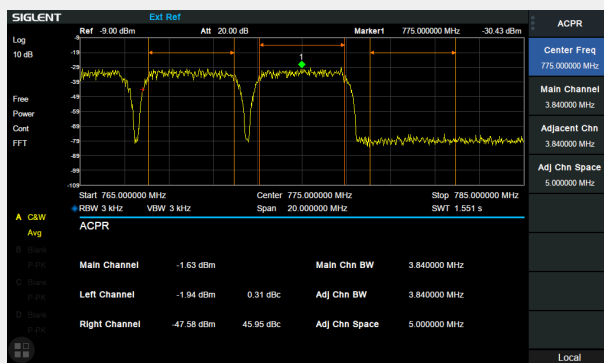
• Phase noise <-98 dBc/Hz@1 GHz, offset 10 kHz



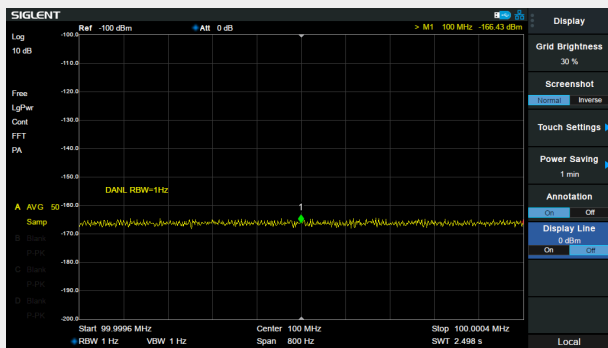
• Minimum 1 Hz Resolution Bandwidth (RBW)



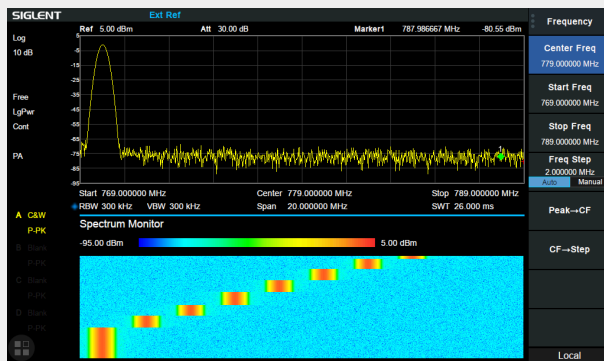
• ACPR in Advanced Measurement Kit



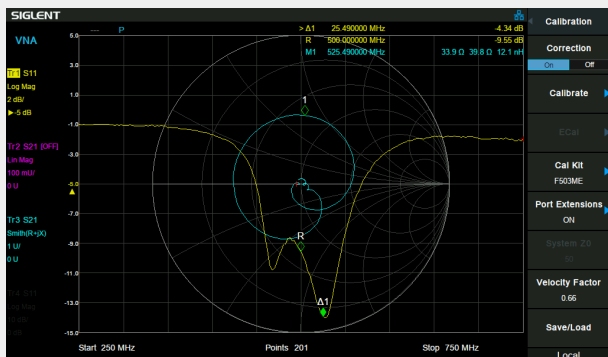
• -165 dBm/Hz Displayed Average Noise Level



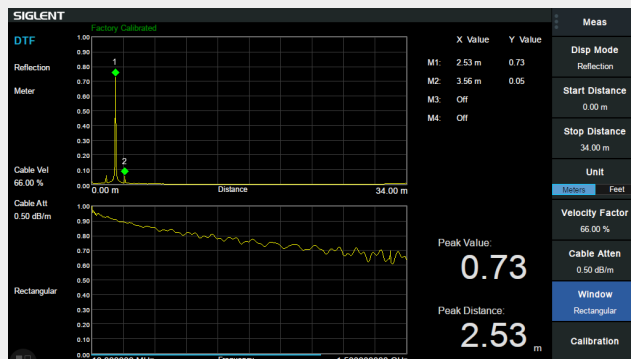
• Monitor in Advanced Measurement Kit



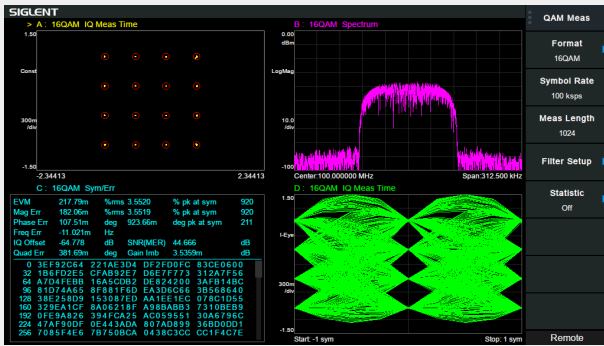
• 100 k-7.5 GHz Vector S11 and S21 measurement, Multi Formats Overlay Display



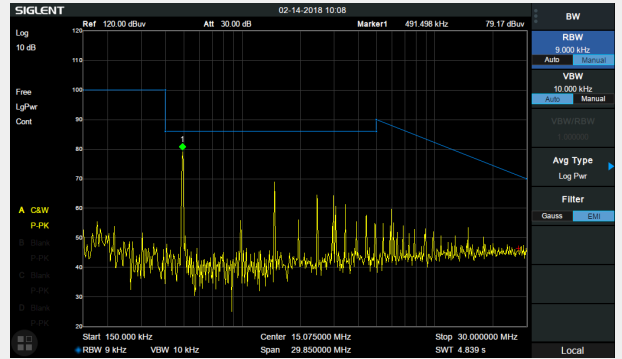
• Cable and Antenna Test based on Timing Domain Analysis



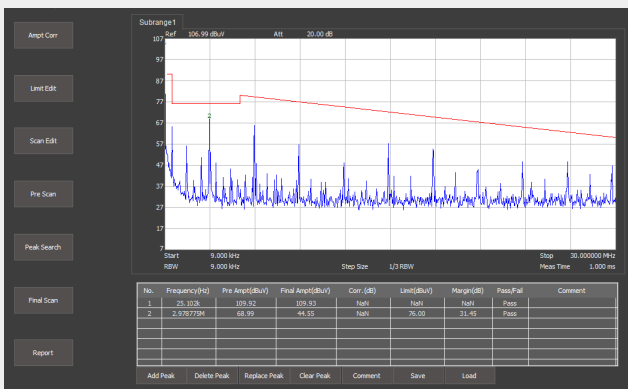
## • AM/FM,ASK/FSK/PSK/MSK/QAM Vector Signal Modulation Analysis



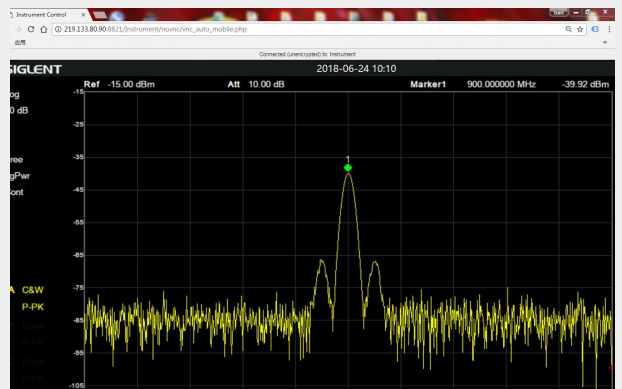
## • CISPR 16-1-1 EMI filter and Quasi-peak Detector , Log scale and limit line



## • Easy Spectrum<sup>T</sup> Software for Free



## • Remote Control on Web Browser



## Model and Main index

Model	SVA1015X	SVA1032X	SVA1075X
Spectrum Analyzer Frequency Range	9 kHz~1.5 GHz	9 kHz~3.2 GHz	9 kHz~7.5 GHz
Vector Network Analyzer Frequency Range	10 MHz~1.5 GHz	100 kHz~3.2 GHz	100 kHz~7.5 GHz
Resolution Bandwidth	1 Hz~1 MHz	1 Hz~1 MHz	1 Hz~3 MHz
Displayed Average Noise Level	-156 dBm/Hz	-161 dBm/Hz	-165 dBm/Hz
SSB Phase Noise	<-99 dBc/Hz	<-98 dBc/Hz	<-98 dBc/Hz
Total Amplitude Accuracy	< 1.2 dB	< 0.7 dB	< 0.7 dB
Tracking Generator	5 MHz~1.5 GHz	100 kHz~3.2 GHz	100 kHz~7.5 GHz
VNA measurement	Vector S11, Vector S21		
Distance to Fault	VNA Timing Domain Analysis Locator		
Touch Screen	Multi Touch, Mouse and Keyboard supported		
Advanced Measurement	CHP, ACPR, OBW, CNR, Harmonic, TOI, Monitor		
Reflection Measurement	VSWR measurement using Reflection Bridge		
EMI Test	EMI Filter and Quasi-Peak Detector, Log Scale and Limit Line		
Modulation Analysis	AM, FM; ASK, FSK, MSK, PSK, QAM		
Communication Interface	LAN, USB Device, USB Host (USB-GPIB)		
Remote Control Capability	SCPI/Labview/IVI based on USB-TMC/VXI-11/Socket/Telnet		
Remote Controller	NI-MAX, Web Browser, Easy Spectrum software, File Explorer		





## Ordering Information

Product	Description	Order Number
Product Code	Spectrum & Vector Network Analyzer, 1.5 GHz	SVA1015X
	Spectrum & Vector Network Analyzer, 3.2 GHz	SVA1032X
	Spectrum & Vector Network Analyzer, 7.5 GHz	SVA1075X
Standard Accessories	Quick Start, USB Cable, Power Cord	
Common Options and Accessories	Advanced Measurement Kit	SVA1000X-AMK
	Utility Kit: N(M)-SMA(M) cable (6 GHz), N(M)-N(M) cable (6 GHz), N(M)-BNC(F) adaptor x 2, N(M)-SMA(F) adaptor x 2, 10 dB 1W attenuator	UKitSSA3X
	N(M)-SMA(M) cable, 70cm, 6 GHz	N-SMA-6L
	N(M)-N(M) cable, 70cm, 6 GHz	N-N-6L
	N(M)-BNC(M) cable, 70cm, 2 GHz	N-BNC-2L
	N(M)-N(M) cable, 100cm, 18 GHz	N-N-18L
	N(M)-SMA(M) cable, 100cm, 18 GHz	N-SMA-18L
	USB-GPIB Adaptor	USB-GPIB
	Soft carrying bag	BAG-S2
	6U Rack Mount Kit	SSA-RMK
VNA Options	Distance To Fault	SVA1000X-DTF
	Mechanical Calibration Kit: Open(M), Short(M), Match(M,50), Through(F-F), 4.5 GHz, N-Male connector	F503ME
	Mechanical Calibration Kit: OSLT, DC - 4.5 GHz, N-Female connector	F503FE
	Mechanical Calibration Kit: OSLT, DC - 4.5 GHz, 3.5mm SMA-Male connector	F603ME
	Mechanical Calibration Kit: Open(M), Short(M), Match(M,50), Through(F-F), 4.5 GHz, SMA-Female connector	F603FE
	Mechanical Calibration Kit: OSLT, DC - 9 GHz, N-Male connector	F504MS
	Mechanical Calibration Kit: OSLT, DC - 9 GHz, N-Female connector	F504FS
	Mechanical Calibration Kit: OSLT, DC - 9 GHz, 3.5mm SMA-Male connector	F604MS
	Mechanical Calibration Kit: OSLT, DC - 9 GHz, 3.5mm SMA-Female connector	F604FS
	N-type, Male and Female, 50Ω Calibration Kit, 0-9GHz	F504TS
3.5 mm, Male and Female, 50Ω Calibration Kit, 0-9GHz	F604TS	
EMI test Options	EMI Measurement Kit: EMI Filter and Quasi Peak Detector, EMI Receiver Mode in EasySpectrum Software	SVA1000X-EMI
	300 kHz~3 GHz Near Field Probe Kit: 3 H-probes (20/10/5 mm), 1 E-probe (5 mm)	SRF5030T
Modulation Analysis Options	Digital Modulation: ASK, FSK, MSK, PSK, QAM	SVA1000X-DMA
	Analog Modulation: AM, FM	SVA1000X-AMA



# SSG5000X

## RF Signal Generator

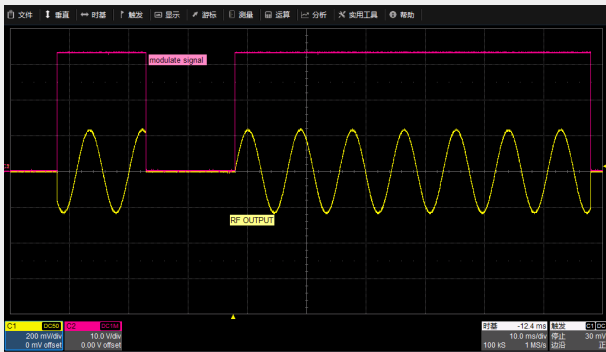


### Features and Benefits

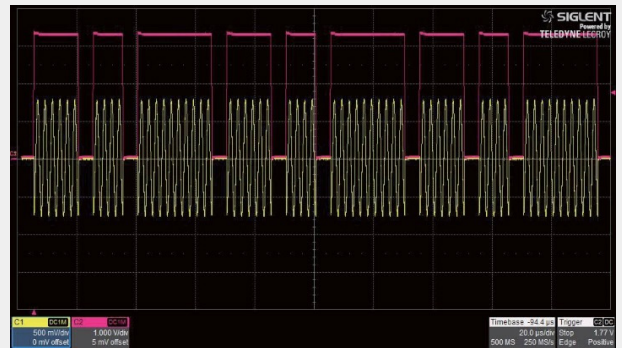
- Frequency up to 4 GHz/6 GHz
- 0.001 Hz frequency setting resolution
- High output power up to +26 dBm (typ.)
- Phase Noise: -120 dBc/ Hz @ 1 GHz, 20 kHz offset (typ.)
- User flatness correction with power sensor to correct the cable loss
- Provides AM, FM, PM analog modulation with internal, external or Int+Ext source
- Single pulse, double pulse and Pulse train generator (option)
- Internal IQ modulation with 150 MHz modulation bandwidth with perfect in-factory 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

**Design features**

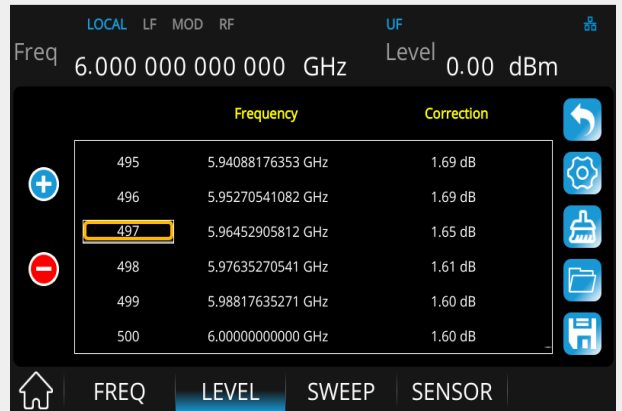
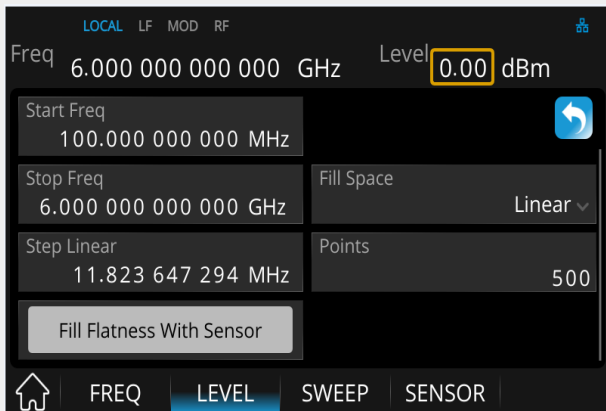
• **Double pulse modulation**



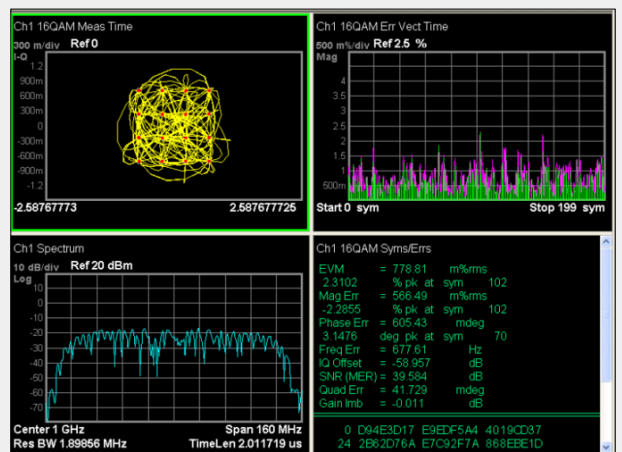
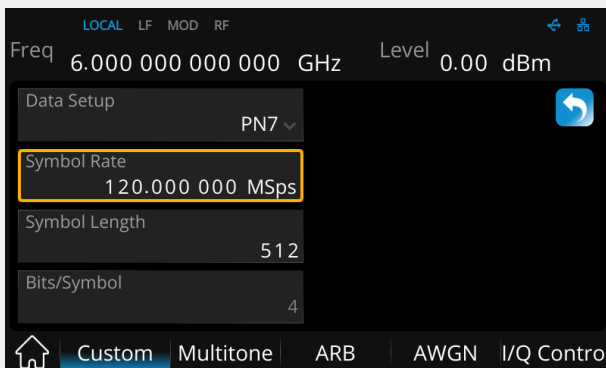
• **Pulse train generator**



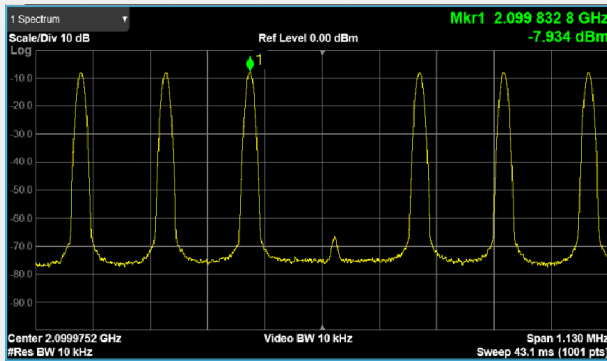
• **Works with Power sensor to use the measured values to compensate the cable losses with internal control functions**



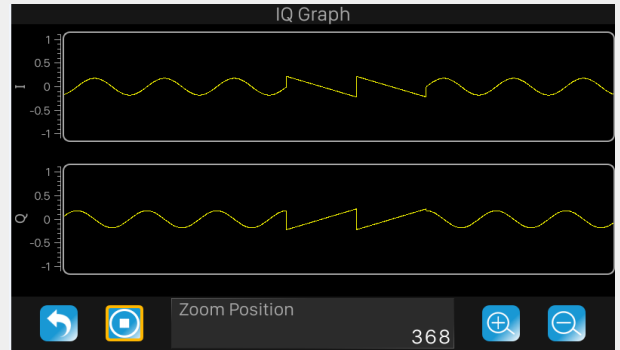
• **Custom mod can generate IQ modulated signal such as QAM, PSK, ASK, FSK, the maximum sample rate is 120 Msps/s**



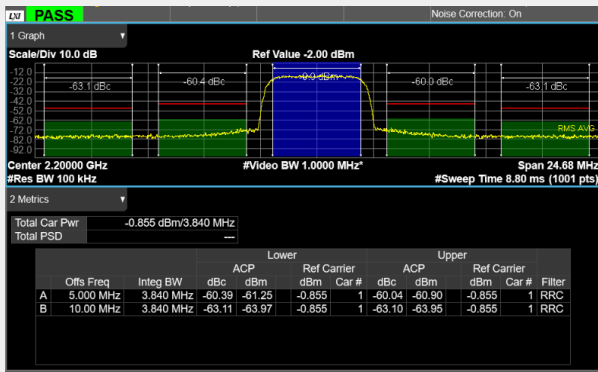
- Multi-tone mode to output multi-signal



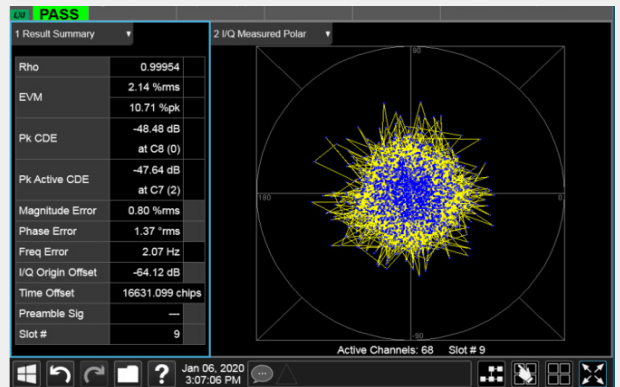
- ARB mode to build and replay waveform sequence



- Arb mode to replay back communication stand files

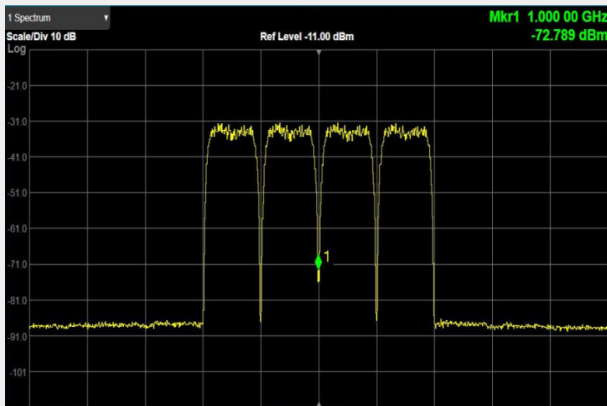


3GPP WCDMA TM1-64DPCH ACPR

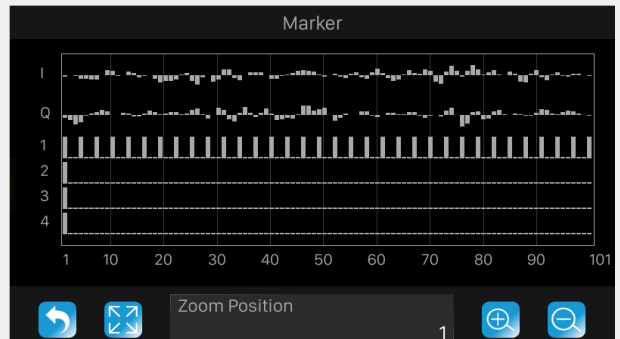


3GPP WCDMA TM1-64DPCH EVM

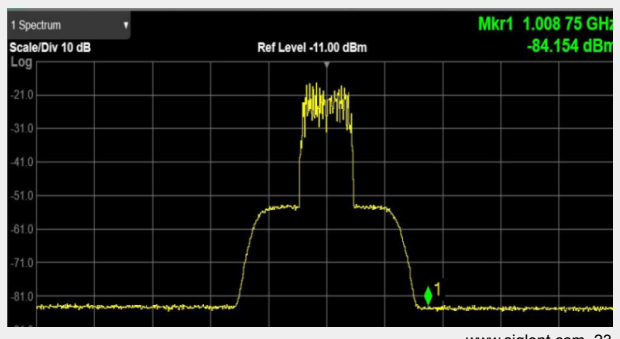
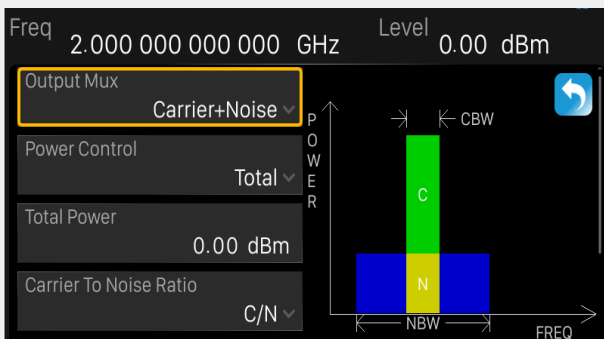
- ARB mod to generate multi-carrier



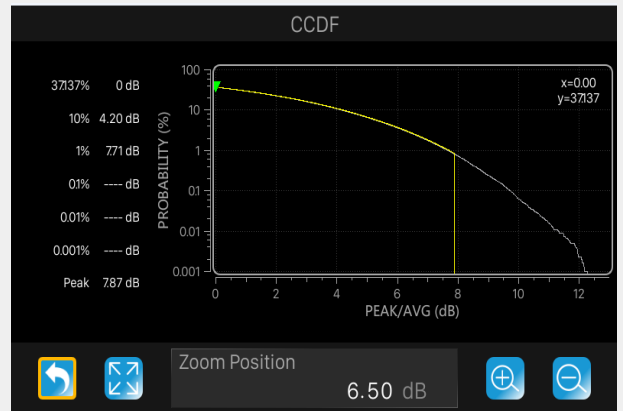
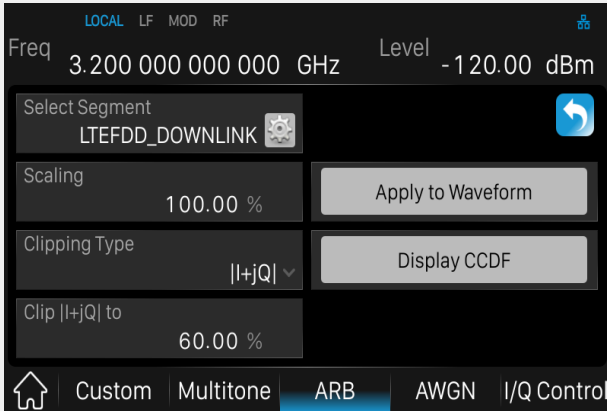
- ARB mod to use the marker to label symbol of the waveform files and simultaneously output a pulse from the invent interface, this can synchronize another device.



- ARB mode to add real time AWGN to the digital IQ to satisfy the receiver performance tests of receiver



• ARB mod to clip the signal of the peak power and display the CCDF (cytotoxic cell differentiation factor)

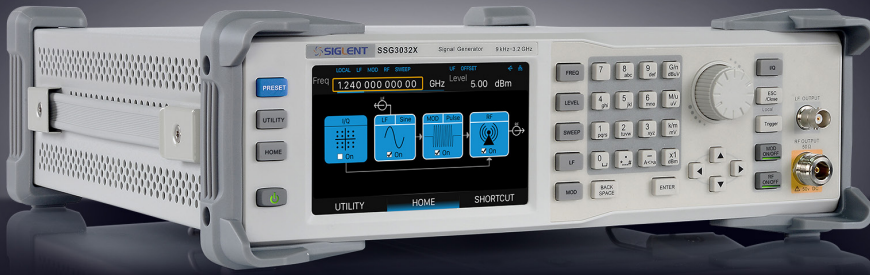


 **Model and Main index**

Model	SSG5040X	SSG5060X	SSG5040X-V	SSG5060X-V
Frequency Range	CW MODE 9 kHz~4 GHz	CW MODE 9 kHz~6 GHz	CW MODE 9 kHz~4 GHz IQ MODE 10 MHz~4 GHz	CW MODE 9 kHz~6 GHz IQ MODE 10 MHz~6 GHz
Frequency Resolution	0.001 Hz			
Amplitude Resolution	0.01 dB			
Level accuracy	0.7 dB (typ.)			
Phase noise	-120 dBc/Hz @1 GHz, offset 20 kHz (typ.)			
Display	Sinch capacitance touch screen, RGB (800*480)			

 **Ordering Information**

Product Description	SSG5000X Signal Generator	Order Number
Product code	Analog Signal Generator 9 kHz~4 GHz	SSG5040X
		SSG5060X
	Vector Signal Generator 10 MHz~6 GHz	SSG5040X-V
		SSG5060X-V
Standard configurations	quick start, an USB cable, calibration certificate, power cord	
	pulse train generator	SSG5000X-PT
option	rack mount kit	SSG-RMK
	USB-GPIB adapter	USB-GPIB
	Upgrade 4 GHz to 6 GHz	SSG5000X-F60
	Upgrade IQ bandwidth from 75 MHz to 150 MHz	SSG5000XV-B150
	Precision Frequency Reference	10M_OCXO_L



# SSG3000X

## RF Signal Generator



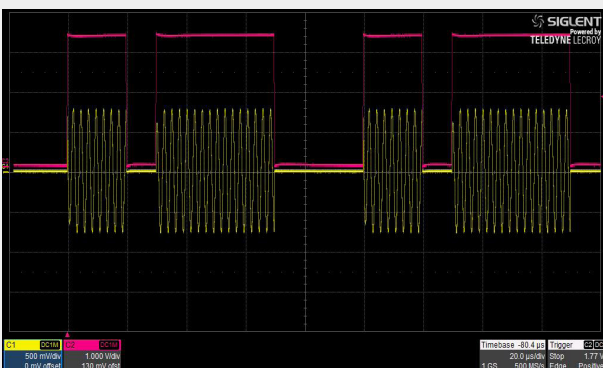
### Features and Benefits

- Frequency up to 2.1 GHz/3.2 GHz
- 0.01 Hz frequency setting resolution
- Level output from -110 dBm to +13 dBm
- Maximum level up to +20 dBm (typ.)
- Phase Noise: -110 dBc/ Hz @ 1 GHz , 20 kHz offset (typ.)
- Level accuracy  $\leq 0.7$  dB (typ.)
- Provides AM, FM & PM analog modulation with internal, external or Int+Ext source
- Pulse modulation, on/off ratio  $\geq 70$  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

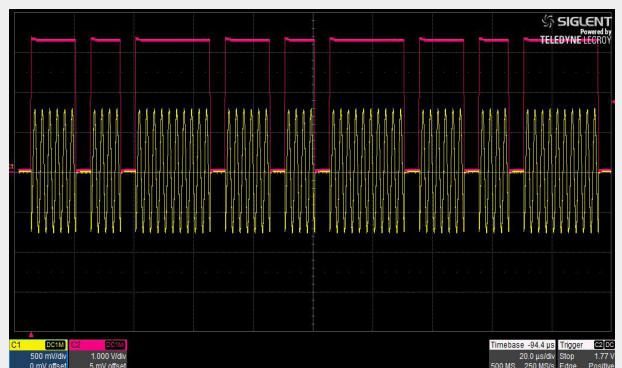


### Design features

#### • Double pulse modulation

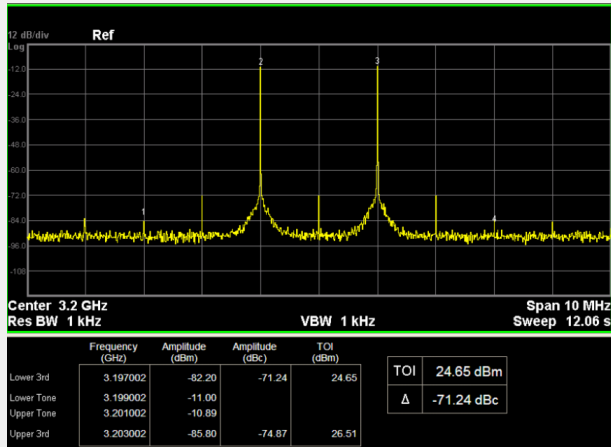


#### • Pulse train generator

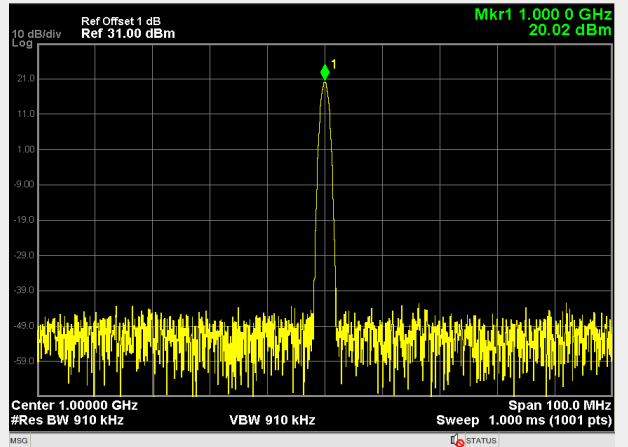




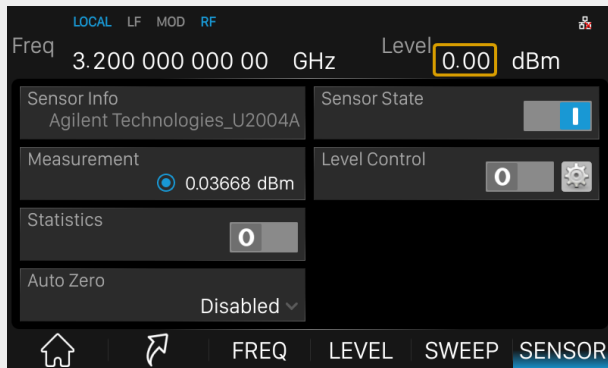
- Provides double-tone signal with IQ modulation, easily do TOI testing



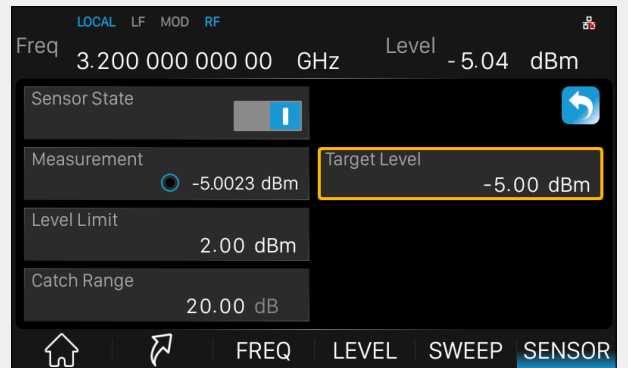
- Maximum output level up to +20 dBm



- Power output display using USB power sensor



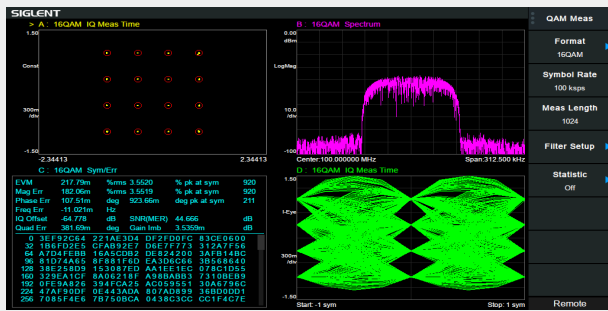
- Power output control using USB power sensor



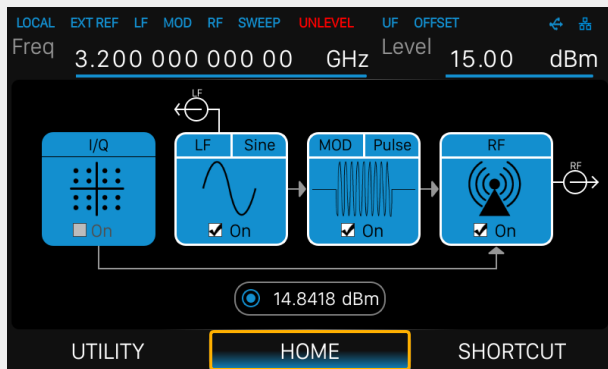
- Example for auto level control



## External IQ modulation using the SDG6000X as the baseband source



## 5 inch touch screen, keyboard and mouse support



## Specifications

Specifications are valid under the following condition: The instrument is within the calibration period, has been stored between 0 and 50°C for at least 2 hours prior to use, and has been powered on and warmed up for at least 40 minutes. The specifications include the measurement uncertainty, unless otherwise noted.

**Specifications:** All products are guaranteed to meet published specifications when operating temperatures from 5 to 45°C, unless otherwise noted.

**Typical (typ.):** Performance deemed typical implies that 80 percent of the measurement results will meet the typical published performance with a 95th percentile confidence level at room temperature (approximately 25°C). Typical performance is not warranted and does not include measurement uncertainty.

**Nominal (nom.):** This value indicates the expected mean or average performance, or an attribute whose performance is by design, such as the 50 ohm connector.











## Model and Main index

Model	SSG3021X	SSG3032X	SSG3021X-IQE	SSG3032X-IQE
Frequency Range	CW MODE 9 kHz~2.1 GHz	CW MODE 9 kHz~3.2 GHz	CW MODE 9 kHz~2.1 GHz IQ MODE 10 MHz~2.1 GHz	CW MODE 9 kHz~3.2 GHz IQ MODE 10 MHz~3.2 GHz
Frequency Resolution	0.01 Hz			
Amplitude Resolution	0.01 dB			
Level accuracy	0.7 dB (typ.)			
Phase noise	-110 dBc/Hz @1 GHz ,offset 20 kHz (typ.)			
Display	5 inch capacitance touch screen, RGB (800*480)			



## Ordering Information

Product Description	SSG3000X Signal Generator	Order Number
Product code	Signal Generator 9 kHz~2.1 GHz	SSG3021X
	Signal Generator 9 kHz~3.2 GHz	SSG3032X
Standard configurations	quick start, an USB cable, calibration certificate, power cord	SSG3021X-IQE
		SSG3032X-IQE
option	pulse train generator	SSG3000X-PT
	rack mount kit	SSG-RMK
	USB-GPIB adapter	USB-GPIB
	Upgrade 2.1 GHz to 3.2 GHz	SSG3000X-21BW32
	Upgrade 2.1 GHz to 3.2 GHz (with external IQ)	SSG3000X-IQE-21BW32

Type	Model	Picture	Specifications
<b>Near-field Probe</b>	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
<b>Cable</b>	N-BNC-2L		N-BNC cable for SSA3000X Series; 2 GHz bandwidth
<b>Cable</b>	N-N-6L		N-N cable for SSA3000X, SSA3000X Plus, SSA3000X-R, SVA1000X 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
	N-SMA-6L		N-SMA cable for SSA3000X, SSA3000X Plus, SSA3000X-R, SVA1000X Series; 6 GHz bandwidth
<b>Reflection Bridge</b>	RB3X25		VSWR bridge: (1 MHz~2.5 GHz), N (M) -N (M) adaptor (2 pcs)
<b>SSA3000X Utility Kit</b>	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

Type	Model	Picture	Specifications
<b>VNA Calibration Kit</b>	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		Mechanical Calibration Kit: OSLT, DC - 9 GHz, N-Male connector
	F504FS		Mechanical Calibration Kit: OSLT, DC - 9 GHz, N-Female connector
	F504TS		N-type, Male and Female, 50Ω Calibration Kit, 0-9GHz
	F603ME		Mechanical Calibration Kit: OSLT, DC - 4.5 GHz, 3.5mm SMA-Male connector
	F603FE		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
	F604TS		3.5 mm, Male and Female, 50Ω Calibration Kit, 0-9GHz
<b>Rack Mount</b>	SSA-RMK		Single instrument rack mount kit for SSA3000X, SVA1000X series
<b>Carry Bag</b>	BAG-S2		Soft Carry Case for SDS2000X, SDS5000X, SSA3000X, SVA1000X, SSA3000X Plus

## Other Products Overview

SIGLENT also provides other instruments like Oscilloscopes, AWG, Multimeters, Electronic load, Power Supply.

### ※ Oscilloscopes ※



	SDS6000A	SDS5000X	SDS2000X plus	SDS2000X-E	SDS1000X-E	SDS1104 X-U	SDS1000 CML+	SDS1000 DL+
Bandwidth	350 MHz ~ 2 GHz	350 MHz ~ 1 GHz	100 MHz ~ 500 MHz	200 MHz ~ 350 MHz	100 MHz ~ 200 MHz	100 MHz	70 MHz ~ 150 MHz	50 MHz
Sample rate	5 GSa/s (10 GSa/s ESR)	5 GSa/s	2 GSa/s	2 GSa/s	1 GSa/s	1 GSa/s	1 GSa/s	500 MSa/s
ADC per analog input	Yes							
Analog channel	4	4	2/4	2	2/4	4	2	2
Memory depth	500 Mpts	250 Mpts	200 Mpts	28 Mpts	14 Mpts	14 Mpts	2 Mpts	32 kpts
Waveform update Rate	170,000 wfm/s	110,000 wfm/s	120,000 wfm/s	110,000 wfm/s	100,000 wfm/s	100,000 wfm/s		
Protocol analysis	Standard: I2C, SPI, UART, CAN, LIN; Option: CAN FD, FlexRay, I2S, MIL-STD-1553B			Standard: IIC, SPI, UART, CAN, LIN				
Sequence	Yes	Yes	Yes	Yes	Yes	Yes		
History	Yes	Yes	Yes	Yes	Yes	Yes		
Math traces	4	2	2	1	1	1	1	1
FFT points	8 Mpts	2 Mpts	2 Mpts	1 Mpts	1 Mpts	128 kpts		
Search and Navigate	Yes	Yes	Yes	Yes	Yes	Yes		
DVM	Yes	Yes						
Counter	Yes	Yes	Yes					
Histogram	Yes	Yes	Yes					
Bode plot	Yes	Yes	Yes	Yes	Yes			
Power analysis	Yes	Yes	Yes					
Eye/Jitter analysis	Yes							
Digital channels	Yes	Yes	Yes	Yes	Yes			
AWG	25 MHz	25 MHz	50 MHz	25 MHz	25 MHz			
Zone Trigger	Yes	Yes	Yes					
Webserver	Yes	Yes	Yes	Yes	Yes			
HDMI output	Yes							
Porbe Adapters	Yes	Yes						
Screen	12.1" touch	10.1" touch	10.1" touch	7" LCD	7" LCD	7" LCD	7" LCD	7" LCD



## ※ Arbitrary Waveform Generator ※



	<b>SDG7000A</b>	<b>SDG6000X</b>	<b>SDG2000X</b>	<b>SDG1000X</b>	<b>SDG800</b>
Bandwidth	350/500 MHz, 1 GHz	200/300/500 MHz	40/80/120 MHz	30/60 MHz	5/10/30 MHz
Number of channels	2 Differential/ Single-ended	2 Single-ended	2 Single-ended	2 Single-ended	1 Single-ended
Output range	± 24 V (48 V)	±10V	±10V	±10V	±10V
Digital bus(Optional)	16-bit, LVTTTL or LVDS output Bit rate 1μbps ~ 1 Gbps				
Sampling rate	5 GSa/s	2.4 GSa/s (2X Interpolation)	1.2 GSa/s (4X Interpolation)	150 MSa/s	125MSa/s
Vertical resolution	14-bit	16-bit	16-bit	14-bit	14-bit
Arbitrary waveform length	24pts ~ 512 Mpts/ch	2 ~ 20 Mpts	8 ~ 8 Mpts	16 kpts	16 kpts
Modulation types	AM, FM, PM, PWM, FSK, PSK, ASK, QAM	AM,FM,PM,ASK,FSK,PSK, PWM, QAM	AM,FM,PM,ASK,FSK,PSK, PWM	AM, DSB-AM, FM,PM, FSK, ASK, PSK, PWM	AM, DSB-AM, FM, PM, FSK, ASK, PWM
Harmonic output	16	10	10	16	
Sweep & Burst	Yes	Yes	Yes	Yes	Yes
IQ Signal Generator	Yes	Yes			
PRBS Generator	Yes	Yes			
Display	5" touch screen , 800*480	4.3" touch screen, 480*272	4.3" touch screen, 480*272	4.3" LCD, 480*272	3.5" LCD, 320*240



## ※ Power Supply ※

	SPS5000X	SPD3000X	SPD3303C	SPD1000X
Output Channel	1/2/3	3	3	1
Max. Voltage	40/50/80/160 V	32 V	32 V	16/30 V
Max. Current	7.5/15/22.5/30/45/60/90	3.2 A	3.2 A	5/ 8 A
Max. Power	180/360/720/1080 W	220 W	220 W	128/150 W
Resolution	1 mV/1 mA	1 mV/1 mA	10 mV/10 mA	1 mV / 1 mA
Screen	2.4" OLED	4.3" LCD	LED	2.8" LCD

## ※ DC Electronic Load ※

	SDL1020X	SDL1020X-E	SDL1030X	SDL1030X-E
Min. readback resolution	0.1 mV, 0.1 mA	1 mV, 1 mA	0.1 mV, 0.1 mA	1 mV, 1 mA
Input power	200 W		300 W	
Input current	30 A			
Input voltage	150 V			
CC Dynamic mode frequency	25 kHz			
Current slew rate	0.001 A/us~2.5 A/us			
Display	3.5 inch TFT-LCD display			

## ※ Digital Multimeter ※

	SDM3045X	SDM3055	SDM3065X
Reading resolution	4 1/2	5 1/2	6 1/2
DC voltage	600 mV ~ 1000 V	200 mV ~ 1000 V	200 mV ~ 1000 V
AC voltage	600 mV ~ 750 V	200 mV ~ 750 V	200 mV ~ 750 V
DC current	600 $\mu$ A ~ 10 A	200 $\mu$ A ~ 10 A	200 $\mu$ A ~ 10 A
AC current	60 mA ~ 10 A	20 mA ~ 10 A	200 $\mu$ A ~ 10 A
Scanner card	Not support	Support	Support
Display	4.3" TFT-LCD, 480*272		



## Service Promise:

Since the date of purchase, we offer three year’s warranty for the main unit:

- During the warranty period, if the products cause any hardware or software failure because of the quality, Siglent's after-sales service center or Siglent's designated maintenance points will offer the maintenance of the fault products for the user.
- Because of improper use or any other artificial reason, the damage won't be included in the free maintenance.

### 1. Extension after-sales service

Extension service is based on the main unit (not including accessories) as an object. During the extension service, Siglent still offer free maintenance after the standard warranty period.

#### 1.1 Three advantages:

- Guarantee investment. To extend the life cycle of the products.
- Save money. To prevent the high cost of maintenance after the warranty period.
- Avoid the repeated investment. To prevent buying new equipments because it can't be repaired after the warranty period.

#### 1.2 The content of the extension service

You can buy the following extension service according to your demand:

Solution	Viability	Instruction
ES4	One year after the warranty period	According to the service terms, Siglent will offer another one year for the after-sales maintenance service
ES5	Two years after the warranty period	According to the service terms, Siglent will offer another two years for the after-sales maintenance service

### 2. Calibration services

After long-term use, oscilloscope will cause the deviation of measured value and waveform display, because of its work temperature and humidity. Siglent will restore the original performance and accuracy of factory setting to calibrate the deviation.

- Eliminate the error of measurement
- Restore the original performance and accuracy of the factory setting to the “new” state
- The upgrade of the firmware and the software
- Make the instruments comply with the standard of the ISO9001 quality management process
- Traceable calibration certificates



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