SPECTRUM ANALYZERS

Choosing your Wireless/RF Test Solution

See an RF world that others can't with affordable real-time performance. This guide gives an overview of the signal analysis capabilities required to overcome the most challenging wireless and RF design challenges. Spend your time fixing the problem, not looking for it. If you need a refresher on Real-Time Spectrum Analysis, download the <u>Fundamentals of Real-Time Spectrum Analysis Primer</u>.

	RSA306B USB SPECTRUM ANALYZER	RSA500A USB SPECTRUM ANALYZER	RSA600A USB SPECTRUM ANALYZER	RSA5100B REAL TIME SPECTRUM ANALYZER	RSA7100A REAL TIME SPECTRUM ANALYZER
Applications	Portable for field and lab use	Field and lab signal analysis, spectrum management and monitoring	Lab use, including EMI and wireless design validation	High performance, advanced signal analysis	Very high performance, advanced signal analysis, record and playback
Power Source	USB 3.0	Battery or Line	Line	Line	Line
Max Frequency Range	9 kHz - 6.2 GHz	9 kHz - 18 GHz	9 kHz - 7.5 GHz	1 Hz - 26.5 GHz	16 kHz - 26.5 GHz
Max Acquisition Bandwidth (Real Time)	40 MHz	40 MHz	40 MHz	165 MHz	800 MHz
Noise Floor (DANL at 1GHz, Preamp On, dBm/Hz)	-163	-164	-164	-167	-164
Tracking Generator		Option	Option	-	-
Full-feature Spectrum Analysis with Real Time	Yes	Yes	Yes	Yes	Yes
Modulation, Pulse, Wireless Standards Analysis	Option	Option	Option	Option	Option
Recording Time	PC SSD size dependent	PC SSD size dependent	PC SSD size dependent	NA - IQ streaming outputs available	>2 hours
Reference Frequency Accuracy, ppm	± 3	± 1, 0.003 with GPS lock	± 1, 0.003 with GPS lock	± 1 ± 0.1 Opt PFR	±0.05

CHOOSING YOUR REAL-TIME SPECTRUM ANALYZER

Key items for consideration when choosing your Spectrum Analyzer.

1 Frequency Range

Of course, the analyzer chosen must cover all of the frequencies you need to measure. Consider harmonics and spurious signals when making your selection. For example, your fundamental signal may be at 2.4 GHz, but perhaps you will want to see up to 10 harmonics of the signal to meet all the needs of your design.

2 Acquisition/Real-Time Bandwidth

In a real-time spectrum analyzer, this sets the maximum bandwidth for guaranteed capture and triggering on brief signals, and is also the limiting factor in modulation measurements. For example, 802.11n signals require a minimum acquisition bandwidth of 40 MHz so that all signal elements can be acquired and demodulated. However, the entire operating frequency of your signal of interest may need to be considered. Also, wide band radar and electronic warfare signals often require as much bandwidth as possible to completely capture the full bandwidth of a signal, so it is very useful to use an analyzer with the maximum available real-time analysis bandwidth available, at 800 MHz.

3 Dynamic Range

This can be a complex subject. Your definition of dynamic range may be highly specific. Consideration of Adjacent Channel Power Ratio dynamic range, spurious-free dynamic range in a particular frequency range, or harmonic distortion specifications may or may not be important to your application. For example, the RSA5100B has the best Spurious Free Dynamic Range of any wide band analyzer on the market, while the RSA306B has a much smaller form factor and is great for making quick measurements. So the RSA5100B may be more suitable for characterizing things like power amplifiers or radar systems.

Features and Capabilities

All of our real-time spectrum analyzers can run the same feature set and capabilities with SignalVu-PC, from our USB Spectrum Analyzers to the RSA7100A as well as the MDO4000C. Optional features include preamplifiers, acquisition bandwidth options, and analysis options that include WLAN, Bluetooth, P25 and general purpose digital modulation measurements.



USB SPECTRUM ANALYZERS

Big Performance Has Never Been So Small



The RSA Series offers full-featured spectrum analysis and deep signal analysis. Using the latest in commercial interfaces and available computing power, the RSA Series separates signal acquisition from measurement, dramatically lowering the cost of instrument hardware. Data analysis, storage and replay is performed on your **personal computer, tablet or laptop**. Managing the PC separately from the acquisition hardware makes processing upgrades easy, and helps to make the RSA Series an **extremely portable** spectrum analyzer family for many different applications.

1 40MHz Capture Bandwidth

Make complex modulation measurements on wideband standards – 802.11 a/b/d/g/n, Bluetooth, and more.

2 Built-in Tracking Generator

Measure VSWR/Return Loss and distance to fault for component and antenna characterization. (RSA500 and RSA600 Series only)

3 Real-time Analysis

Included DPX Spectrum/Spectrogram measurements minimize time spent on transient discovery and interference hunting. Get immediate insight into your toughest problems.

4 SignalVu-PC Software

Full-featured spectrum analysis software is included free with 17 built-in measurements including spectrum, spur search, spectral emissions, and DPX.

5 Optional Advanced Analysis

Software modules that support modulation analysis, popular wireless standards, pulse, playback of recorded files, mapping, signal classification, EMI/EMC pre-compliance testing, and more are available for SignalVu-PC software.

6 Portable and Lightweight

With units ranging from 1.7 to 5.5 lbs., the RSA Series is easy to move, when and where you need to go.



RSA306B USB Spectrum Analyzer

From basic RF measurements to advanced analysis, the RSA306B offers the full features of a benchtop spectrum analyzer at a fraction of the price. With 17 automated measurements included, you can make common measurements quick and easy. Additional software options enable you to tackle advanced analysis tasks, including modulation analysis, pulse measurements, mapping and pre-compliance EMI/EMC testing. At just 1.7 pounds, the RSA306B takes little space on your bench, and fits easily in your hand, bag, pocket or tool belt.

MODEL	RSA306B
Description	Portable real time USB spectrum analyzer
Frequency Range	9 kHz–6.2 GHz
Capture Bandwidth	40 MHz
Spurious Free Dynamic Range	-60 dBc to 3 GHz
Minimum Signal Duration for 100% Probability of Intercept	100 µs

- Frequency Range: 9 kHz to 6.2 GHz / Acquisition Bandwidth: 40 MHz
- Full featured spectrum analysis capability with Tek SignalVu PC™ Software
- 17 spectrum and signal analysis measurements standard
- Over 15 options for mapping, modulation analysis, standards support, pulse, playback of recorded files, and more
- Small, power consumption less than 4.5 Watts; Weight: 1.7 pounds (0.75 kg)
 Applications: R&D, Education, Interference Hunting, Field Installation and Maintenance

SHIPS WITH PRODUCT

USB 3.0 cable (1 M), USB stick with SignalVu-PC and all documentation, Three-year Warranty

SIGNALVU-PC / DATAVU-PC LICENSES

Recommended SignalVu-PC or DataVu-PC application licenses (Floating and node-locked licenses available). Other applications available, see SignalVu-PC or DataVu-PC data sheet for details. SV23xx-SVPC: WLAN 802.11a/b/g/j/p Measurement Software SV24xx-SVPC: WLAN 802.11n Measurement Software SV25xx-SVPC: WLAN 802.11ac Measurement Software SV27xx-SVPC: Bluetooth Basic LE TX SIG measurements EMCVUxx-SVPC: EMI Pre-compliance and Troubleshooting Software EMCVUNL-SVPC: EMI Pre-compliance and Troubleshooting, Node Locked EMCVUFL-SVPC: EMI Pre-compliance & Troubleshooting, Floating DVPC-MREC: Operate & record two RSA/300/500/600 spectrum analyzers simultaneously DVPC-SPAN50NL: DataVu-PC Software for 50 MHz BW playback files SV28xx-SVPC: LTE downlink (eNB) RF measurements SV54xx-SVPC: Signal Classification/Survey SV56xx-SVPC: Playback of recorded signal files SVAxx-SVPC: AM/FM/PM Direct Audio Measurements SVMxx-SVPC: General Purpose Modulation Analysis, including demodulation for Zigbee and Bluetooth Enhanced Data Rate SVPxx-SVPC: Pulse Measurement Software SVTxx-SVPC: Settling Time (Frequency and Phase) MAPxx-SVPC: Mapping Software

RECOMMENDED ACCESSORIES

DFA0047: Smart Directional Antenna, 20-8500 MHz, with electronic compass & preamp DF-A0047-01: Frequency range extension DF-A0047 directional antenna, 9 kHz-20 MHz, requires DF-A0047

EMI-RE-HWPARTS: Bundle of EMI accessories for radiated pre-compliance test (includes EMI-BICON-ANT, EMI-CLP-ANT, EMI-PREAMP, EMI-TRIPOD, CABLE-5M, CABLE-1M EMI-DEBUG-HWPARTS: Bundle of EMI accessories for Debug (includes EMI-NF-PROBE and EMI-NF-AMP)

OPT CTRL-G1-x: Portable controller, availability varies by region RSA306-BRACK: Rack mount, holds 2 RSA306B, room for 2 Mini-PC's

RECOMMENDED SERVICE & AVAILABLE DOWNLOADS

R5: 5-year Extended Warranty; SignalVu-PC base software; LabVIEW drivers; Applications programming interface; Fully documented programmers manual (Example source code for getting started)

Allice Messtechnik GmbH

SPECTRUM ANALYZERS



RSA500A Series

The RSA500A series offers rugged, portable real time spectrum analysis for interference hunting, spectrum management, network maintenance tasks and precompliance EMI/EMC testing. Capture, stream, analyze and record raw signal data without missing signals of interest to solve your toughest interference challenge. When equipped with the optional Tracking Generator with internal VSWR bridge, and Cable and Antenna testing software, the RSA500A becomes an indispensable field tool. Mapping, signal strength, signal recording and playback and many other options are available to tailor the RSA500A to your requirements.

MODEL	RSA503A	RSA507A	RSA513A	RSA518A
Description	Portable real tin	ne USB spectrum	n analyzer	
Frequency Range	9 kHz - 3.0 GHz	9 kHz - 7.5 GHz	9 kHz - 13.6 GHz	9 kHz - 18.0 GHz
Capture Bandwidth	40 MHz	40 MHz	40 MHz	40 MHz
Spurious Free Dynamic Range	-70 dBc	-70 dBc	-70 dBc	-70 dBc
Minimum Signal Duration for 100% Probability of Intercept	15 µs	15 µs	15 µs	15 µs

• Frequency range: 9 kHz-3.0/7.5/13.6/18.0 GHz / Acquisition bandwidth: 40 MHz

- Spurious-free dynamic range: 70 dB
- Full featured spectrum analysis capability with Tektronix SignalVu-PC software
- 17 spectrum & signal analysis measurements standard
- Over 15 options for modulation analysis, standards support, pulse, playback of recorded files, mapping, signal classification and more
- Tracking generator with gain/loss, cable loss, distance to fault, VSWR options
- Ruggedized Mil-Std PRF-28800F Class 2
- Weight: 8.5 pounds
- Standard integrated GPS receiver for mapping measurements; Standard Preamplifier

SHIPS WITH PRODUCT

Battery pack and charger, Carrying case, Ruggedized USB 3.0 cable, USB stick with SignalVu-PC software and all documentation

SIGNALVU-PC / DATAVU-PC LICENSES

Recommended SignalVu-PC or DataVu-PC application licenses (Floating and node-locked licenses available). Other applications available, see SignalVu-PC or DataVu-PC data sheet for details. DVPC-SPANSONL: DataVu-PC Software for S0 MHz BW playback files; EMCVUxx-SVPC: EMI Pre-compliance and Troubleshooting Software; EMCVUNL-SVPC: EMI Pre-compliance and Troubleshooting, Node Locked (includes CISPR detectors); EMCVUEL-SVPC: EMI Pre-compliance and Troubleshooting Floating (includes CISPR detectors); MAPxx-SVPC: Mapping Software; SV26xx-SVPC: APCO P25 phase 1 and 2 measurements; SV28xx-SVPC: LTE downlink (eNB) RF measurements; SV56xx-SVPC: Signal Classification/Survey; SV56xx-SVPC: Signal Playback: Enables playback and re-analysis of recorded BF files; SV60xx-SVPC: SVBWR, Return Loss, Distance to Fault, Cable Attenuation Measurements. Requires tracking generator on spectrum analyzer; SVAxx-SVPC: AM/FM/PM Direct Audio Measurements; SV1xx-SVPC: General Purpose Modulation Analysis, including demodulation for Zigbee and Bluetooth Enhanced Data Rate; SVPxx-SVPC: Pulse Measurement Software; SVTxx-SVPC: Setting Time (Frequency/Phase)

RECOMMENDED ACCESSORIES

DF-A0047: Smart Directional Antenna, 20-8500 MHz, with electronic compass and preamp; DF-A0047-01: Frequency range extension for DF-A0047 directional antenna, 9 kHz-20 MHz, requires DF-A0047; EMI-RE-HWPARTS: Bundle of EMI accessories for radiated pre-compliance test (includes EMI-BICON-ANT, EMI-CLP-ANT, EMI-PREAMP, EMI-TRIPOD, CABLE-5M, CABLE-1M; EMI-DEBUG-HWPARTS: Bundle of EMI accessories for Debug (includes EMI-INF-PROBE & EMI-NF-AMP); FZ-G1-x: Panasonic Touchpad Instrument Controller; RSA5600 RACK: Rackmount (holds 1 RSA500), Various Calibration Kits, Cables, Adapters; Various Calibration Kits for Cable and Antenna Measurements

INSTRUMENT OPTIONS

OPT 04: Tracking Generator: 10 MHz – to maximum range of instrument; OPT CTRL-G1-x: Portable controller, availability varies by region. Also available as separate item.

RECOMMENDED SERVICE

C3: Calibration Service 3 Years; C5: Calibration Service 5 Years; R5: Standard Warranty Extended to 5 years; D1: Calibration Data Report; D3: Calibration Data Report, 3 years (with option C3); D5: Calibration Data Report, 5 years (with option C5); G3: Three Year Gold Care; G5: Five Year Gold Care



RSA600A Series

The RSA600A series offers mid-range laboratory spectrum analysis at a remarkable price. Forty megahertz of standard analysis bandwidth enables analysis of the latest communications standards up to 802.11n, and real-time spectrum analysis reduces troubleshooting time by finding transient problems that other spectrum aralyzers may miss. An available tracking generator with options for VSWR/Return loss and distance to fault enables component and antenna characterization. The RSA600A runs with SignalVu-PC or an application programming interface for automated measurements.

MODEL	RSA603A	RSA607A
Description	Laboratory real time USB spec	ctrum analyzer
Frequency Range	9 kHz - 3.0 GHz	9 kHz - 7.5 GHz
Capture Bandwidth	40 MHz	40 MHz
Spurious Free Dynamic Range	-70 dBc	-70 dBc
Minimum Signal Duration for 100% Probability of Intercept	100 µs	100 µs

• Frequency range: 9 kHz-3.0/7.5 GHz / Acquisition bandwidth: 40 MHz

- Spurious-free dynamic range: 70 dB
- Full featured spectrum analysis capability with Tektronix SignalVu-PC software
- 17 spectrum and signal analysis measurements standard
 Over 15 options for mapping, modulation analysis, standards support, pulse
- Over 15 options for mapping, modulation analysis, standards support, pulse, playback of recorded files, and more
 Tracking apportance with gain these paths has distance to fault. VOVID options
- Tracking generator with gain/loss, cable loss, distance to fault, VSWR options
 Small Laboratory form factor, power consumption less than 45 W
- Smaller than conventional spectrum analyzers; Weight: ~6.6 pounds (3 kg)
- Wideband modulation analysis.

SHIPS WITH PRODUCT

AC power cord, USB 3.0 cable, SignalVu-PC software and all documentation on USB stick

SIGNALVU-PC / DATAVU-PC LICENSES

Recommended SignalVu-PC or DataVu-PC application licenses (Floating and node-locked licenses available). Other applications available, see SignalVu-PC or DataVu-PC data sheet for details. SV23xx-SVPC: WLAN 802.11a/b/g/j/p Measurement Software; SV24xx-SVPC: WLAN 802.11n Measurement Software; SV25xx-SVPC: WLAN 802.11a Measurement Software; SV25xx-SVPC: Buletooth Basic LE TX SIG measurements; SV28xx-SVPC: ULAN 802.11ac Measurements; SV25xx-SVPC: Signal Classification/Survey; SV56xx-SVPC: Playback of recorded signal files; SV60x-SVPC: Signal Classification/Survey; SV56xx-SVPC: Playback of recorded signal files; SV60x-SVPC: VSWR, Return Loss, Distance to Fault, Cable Attenuation Measurements. Requires tracking generator on your spectrum analyzer; SV4xx-SVPC: Audio Measurements; SV25xx-SVPC: General Purpose Modulation Analysis, including demodulation for Zigbee and Bluetooth Enhanced Data Rate; SVPxx-SVPC: Pulse Measurement Software; SVTxx-SVPC: Settling Time (Frequency and Phase); DVPC-MREC: Operate and record two R5A/300/500/0600 spectrum analyzers simultaneously; DVPC-SPANSONL: DataVu-PC Software for 50 MHz BW playback files; EMCVUFL-SVPC: EMI Pre-compliance and Troubleshooting, Node Locked (includes CISPR detectors); EMCVUFL-

RECOMMENDED ACCESSORIES

EMI-RE-HWPARTS: Bundle of EMI accessories for radiated pre-compliance test (includes EMI-BICON-ANT, EMI-CLP-ANT, EMI-PREAMP, EMI-TRIPOD, CABLE-5M, CABLE-1M; EMI-DEBUG-HWPARTS: Bundle of EMI accessories for Debug (includes EMI-NF-PROBE & EMI-NF-AMP); RSA5600 RACK: Rackmount (holds 2 RSA600), Various Calibration Kits, Cables, Adapters; Multiple Calibration Kits for Cable/Antenna measurements

INSTRUMENT OPTIONS

OPT 04: Tracking Generator: 10 MHz – to maximum range of instrument

RECOMMENDED SERVICE

C3: Calibration Service 3 years; C5: Calibration Service 5 years; R5: Standard Warranty extended to 5 years; D1: Calibration Data Report; D3: Calibration Data Report, 3 years (with option C3); D5: Calibration Data Report, 5 years (with option C5); G3: Three Year Gold Care

AVAILABLE DOWNLOADS

SignalVu-PC base software; LabVIEW drivers; Applications programming interface; Fully documented programmers manual (Example source code for getting started)





RSA5000B Real-Time Spectrum Analyzer

The RSA5000 Series mid-range Real-Time Spectrum Analyzer combines best-inclass RF performance with up to 165 MHz bandwidth and 6th Generation DPX® Technology. This provides the measurement confidence and functionality you demand for everyday tasks and gives you the dynamic range you expect for challenging spectrum analysis measurements.

MODEL	RSA5103B	RSA5106B	RSA5115B	RSA5126B
Capture Bandwidth	25 MHz, 40 MHz	, 85 MHz, 125 MH	z, 165 MHz	
Frequency Range	1 Hz - 3 GHz	1 Hz - 6.2 GHz	1 Hz - 15 GHz	1 Hz - 26.5 GHz
SFDR at 165 MHz BW (typical)	80 dBc	80 dBc	80 dBc	80 dBc
Minimum Event Duration for 100% POI	0.43 µs	0.43 µs	0.43 µs	0.43 µs

Discover difficult to find signal behavior with DPX® Live RF spectrum display

- Save time by isolating signal anomalies on which other instruments can't even trigger
- Seamless data capture of entire duration of signal events, like frequency hopping sequences, PLL settling times, turn on transients, and multiple pulses
- Accelerate troubleshooting and analysis by pinpointing the root cause of problems in any/all domains at any time with correlated markers
- Most advanced Real-time capability
- Automatic pulse measurement and detection

SHIPS WITH PRODUCT

Quick Start Manual, Application Guide, Printable Online Help File, Programmer's manual (on CD), power cord, BNC-N adapter, USB Keyboard, USB Mouse, Front Cover, One-year Warranty

INSTRUMENT OPTIONS

Opt. 09: Enhanced Real-Time; Opt. 10: AW/FW/PM Modulation and Audio Measurements; Opt. 11: Phase Noise / Jitter Measurement; Opt. 12: Settling Time (Frequency and Phase); Opt. 14: Noise Figure and Gain; Opt. 20: Pulse Signal Analysis; Opt. 21: General Purpose Modulation Analysis; Opt. 22: Flexible OFDM Analysis; Opt. 23: WLAN 802.1a/b/g Measurements; Opt. 24: WLAN 802.11n Measurements; Opt. 25: WLAN 802.1a/b/g Measurements; Opt. 24: WLAN 802.11n Measurements; Opt. 27: Bluetooth Basic LE TX SIG Measurements; Opt. 26: LF EPD and TDD BTS Power and BTS ID; Opt. 32: EMI Pre-compliance and Troubleshooting; Opt. MAP: Mapping and Signal Strength; Opt. 53: Memory Extension, 4 GB Acquisition Memory Total; Opt. 54: Signal Classification/Survey; Opt. 65: Digital I and Q Output; Opt. B85: 85 MHz Acquisition Bandwidth; Opt. B16XHD: High Performance Real-Time; Opt. B16x: 165 MHz Acquisition Bandwidth; Opt. B16XHD: High Dynamic Range, 85 MHz acquisition bandwidth; Opt. E51: 25 MHz Acquisition Bandwidth (no charge option); Opt. B40: 40 MHz Acquisition Bandwidth; Opt. B85:HD: High Dynamic Range, 85 MHz acquisition bandwidth; Opt. E51: 125 MHz Acquisition Bandwidth; Opt. B125HD: High Dynamic Range, 125 MHz acquisition Bandwidth; Opt.

RECOMMENDED ACCESSORIES

119-4146-00: Near Field Probe Kit; EMI-RE-HWPARTS: Bundle of EMI accessories for radiated pre-compliance test (includes EMI-BICON-ANT, EMI-CLP-ANT, EMI-PREAMP, EMI-TRIPOD, CABLE-5M, CABLE-1M); EMI-DEBUG-HWPARTS: Bundle of EMI accessories for Debug (includes EMI-NF-PROBE & EMI-NF-AMP); SignalVu-PC: Vector Signal Analysis Software for your PC

RECOMMENDED SERVICE

R3: 3-year Extended Warranty; R5: 5-year Extended Warranty; C3: Calibration Service 3 Years; C5: Calibration Service 5 Years; R3DW: Repair Service Coverage 3 Years; R5DW: Repair Service Coverage 5 Years

LEARN MORE b about Advanced Radar Analysis with the "Tool for Measuring Modern Radar" Application Note.



RSA7100A

The RSA7100A is a high performance spectrum analyzer focused on wideband analysis and signal recording. The RSA7100A wideband signal analyzer offers realtime spectrum analysis up to 800 MHz bandwidth and simultaneous streaming of seamless data at full bandwidth. It enables researchers in communications, Radar and Electronic Warfare to create next-generations designs. SignalVu-PC software is included for real time, spectrum and vector signal analysis, and DataVu-PC software is available for analysis of recorded signals.

MODEL	RSA7100A 14*	RSA7100A 26*
Description	Real-time signal analyzer, up to	0 800 MHz acquisition bandwidth
Frequency Range	16 kHz – 14 GHz	16 kHz – 26.5 GHz
Capture Bandwidth	50 / 320 / 800 MHz	50 / 320 / 800 MHz
Spurious Free Dynamic Range	134 dBc at 1 GHz	134 dBc at 1 GHz
Minimum Signal Duration for 100% Probability of Intercept	700ns	700ns
	*	Only cold in LIK and Linited States

* Only sold in UK and United States

- 16 kHz to 14/26.5 GHz frequency range covers a broad range of analysis needs
- High performance spectrum analysis for advanced design verification with -134 dBc/Hz phase noise at 1 GHz, 10kHz offset and amplitude accuracy of .05dB at 10 GHz to 26.5 GHz
- IQFlow[™] streaming to RAID, LVDS, 40 GbE and an API provides the speed and flexibility needed to perform real-time DSP algorithms, and record/ analyze long event sequences.
- A broad range of analysis tools are standard: channel power, ACLR, CCDF, OBW/EBW, spur search, EMI detectors amplitude, frequency, phase vs. time, DPX spectrum, and spectrograms. Correlated multi-domain displays
- Up to 800 MHz acquisition bandwidth, 320 MHz acquisition bandwidth standard
 The RSA7100A combined with SignalVu-PC application licenses offers
- advanced analysis plus 800 MHz bandwidth and streaming to internal RAID. • With DataVu-PC you can search, mark and measure on up to 2,000,000
- amplitude events or pulses in recorded files.

SHIPS WITH PRODUCT

Installation and safety manual, 3.5mm Crown Connector-Female, PCIe cable, mouse, keyboard, adapter, Mini-Display Port to HDMI, Mini-Display Port to DVI, Power cables, rack mount kits for acquisition unit and controller. Controller rack-mount is a 'telecom-style'. A server-style rackmount can also be used with the controller, available from third parties. Note: A PC monitor is not included with the RSA7100A. Tektronix recommends the Dell UltraSharp U2414H 23.8 in. Widescreen IPS LCD Monitor, or any monitor that supports Display port, DVI or HDMI input and has a minimum 1920 x 1080 display resolution.

INSTRUMENT OPTIONS

RSA7100A GPS: GPS receiver; RSA7100A CAL: Calibration report with data (ISO 17025); RSA7100A GPS: CAL GPS receiver and calibration report with data (ISO17025); RSA7100A C7100-A: Controller, no RAID memory; RSA7100A C7100-B: Controller, RAID memory, >20 minutes recording time (requires STREAMNL-SVPC); RSA7100A C7100-C: Controller, RAID memory, > 120 minutes recording time (requires STREAMNL-SVPC); RSA7100A SV09: High performance real time (export class 3A002), node-locked license

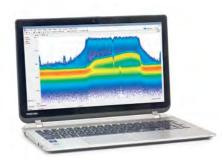
SIGNALVU-PC / DATAVU-PC LICENSES

B800NL-SVPC: License, 800 MHz acquisition bandwidth - RSA7100A, Node Locked; STREAMNL-SVPC: License, Streaming data, Node Locked; SVMHNL-SVPC: License, General Purpose Modulation Analysis to work with analyzer of any acquisition bandwidth and MDO, Node Locked; SVPHNL-SVPC: License, Pulse Analysis to work with analyzer of any acquisition bandwidth and MDO, Node Locked; TRIGHNL-SVPC: License, Mapping and signal strength, Node Locked; SVANL-SVPC: License, Mapping and classification, Node Locked; SVTNL-SVPC: License, Signal survey and classification, Node Locked; SVTNL-SVPC: License, Stelling Time (frequency and phase) measurements, Node Locked; SV23NL-SVPC: License, WLAN 802.11a/b/g//p measurement, Node Locked; SV23NL-SVPC: License, WLAN 802.11a/b/g//p measurement to work with analyzer of any acquisition bandwidth and MDO (requires SV23 and SV24), Node Locked; SV25NL-SVPC: License, APCO P25 measurement, Node Locked; SV27NL-SVPC: License, Buetooth measurement, Node Locked; DVPC-SPAN1000-NL: DataVu Analysis of up to 1000mHz bandwidths, Floating

TEK.COM/SPECTRUM-ANALYZER/RSA7100A

Allice Messtechnik GmbH

SPECTRUM ANALYZERS & SOFTWARE



SignalVu-PC

SignalVu-PC vector signal analysis software helps you easily validate wideband designs. Using the signal analysis engine of the RSA5000 and RSA7100A Series on your computer or Windows tablet, you can now move your analysis of acquisitions off the instrument, and anywhere. Signal/Vu-PC directly controls the RSA306B and RSA500A/600A USB Spectrum Analyzers or the MDO4000C Mixed Domain Oscilloscope RF acquisition, enabling powerful measurements for spectrum analysis, vector signal analysis, pulse measurements, commercial wireless standards, and more. Whether your design validation needs include wideband radar, high data rate satellite links, wireless LAN or frequency-hopping communications, SignalVu-PC vector signal analysis software can speed your time-to-insight by showing you the timevariant behavior of these wideband signals.

- Record/Playback of signals is available for the USB Spectrum Analyzers.
- Power measurements and signal statistics help you characterize components and systems: ACLR, Multicarrier ACLR, Power vs. Time, CCDF, and OBW/EBW.
- PC-based multi-domain vector signal analysis for waveforms acquired by Tektronix real-time signal analyzers and oscilloscopes.
- The basic features for SignalVu-PC are free of charge and available for download from Tek com
- Each option for SignalVu-PC is available as a Node Locked (NL) license or a Floating license (FL). You can try them for free with a 30-day trial license.
- DPX Spectrum
- Mapping and Signal Geolocation
- Bluetooth Signal Analysis

SIGNALVU-PC / DATAVU-PC LICENSES

SV23NL-SVPC, SV23FL-SVPC: WLAN 802.11a/b/g/j/p measurement SV24NL-SVPC, SV24FL-SVPC: WLAN 802.11n measurement (requires SV23) SV25NL-SVPC, SV25FL-SVPC: WLAN 802.11ac measurement to work with analyzer of acquisition bandwidth \leq 40MHz (requires SV23 and SV24) or MDO SV26NL-SVPC, SV26FL-SVPC: APCO P25 measurement SV27NL-SVPC, SV27FL-SVPC: Bluetooth measurement to work with analyzer of acquisition bandwidth \leq 40MHz or MDO SV28NL-SVPC, SV28FL-SVPC: LTE Downlink RF measurement to work with analyzer of acquisition bandwidth ≤ 40MHz or MDO SV54NL-SVPC, SV54FL-SVPC: Signal survey and classification SV56NL-SVPC, SV56FL-SVPC: Playback of recorded files SV60NL-SVPC, SV60FL-SVPC: VSWR, Return Loss, Distance to Fault cable and antenna measurements. Required tracking SV2CNL-SVPC, SV2CFL-SVPC: WLAN 802.11a/b/g/j/p/n/ac and live link to MDO4000C to work with analyzer of acquisition bandwidth ≤ 40MHz or MDO

SVANL-SVPC, SVAFL-SVPC: AM/FM/PM/Direct Audio Analysis

SVMNL-SVPC, SVMFL-SVPC: General Purpose Modulation Analysis to work with analyzer of acquisition bandwidth ≤ 40MHz or MDO

SVONL-SVPC, SVOFL-SVPC: Flexible OFDM Analysis

SVPNL-SVPC, SVPFL-SVPC: Pulse Analysis to work with analyzer of acquisition bandwidth \leq 40MHz or MDO

SVTNL-SVPC, SVTFL-SVPC: Settling Time (frequency and phase) measurements CONNL-SVPC, CONFL-SVPC: SignalVu-PC live link to the MDO4000C series mixed-domain oscilloscopes

EDUFL-SVPC: Education-only version of all modules for SignalVu-PC

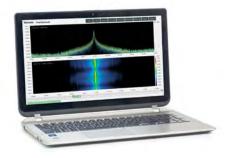
MAPNL-SVPC, MAPFL-SVPC: Mapping

EMCVUNL-SVPC: License, EMI Pre-compliance and Troubleshooting (not for RSA7100), Node locked (includes CISPR detectors)

EMCVUFL-SVPC: License, EMI Pre-compliance and Troubleshooting (not for RSA7100), Floating (includes CISPR detectors)

RSA5000B Opt. 32: EMI Pre-compliance and Troubleshooting for RSA5000B

LEARN MORE A about the signals around you by downloading the SignalVu-PC "eGuide to RF Signals."



DataVu-PC

DataVu-PC can be used to record 1 or 2 USB Spectrum Analyzers. For the USB Spectrum Analyzers, this can include a controlling one instrument to search while the second instrument can stare and record the signal. Alternatively, both instruments could record simultaneously. Once the recording is made, DataVu can play back and process the larger recorded files an all USB Tektronix spectrum analyzers, as well as from the RSA7100A. DataVu-PC can turn hours of attended monitoring into fast post-acquisition search, mark, and measurement tasks. Analyzer your results and search for specific signal artifacts with a mask search.

- · Record and frequency scan on 2 instruments simultaneously.
- Search based on signal amplitude characteristics, marking each event occurrence for later examination.
- Make an unlimited number of Scalar pulse measurements with the eMarker application and export the results in Pulse Descriptor Word format for integration into other.
- · Export results to in-depth analysis packages like SignalVu-PC from within DataVu-PC – without any additional conversion software.
- Time overview views the whole file at once, controls start-stop time of analysis.
- DataVu PC basic application license based on acquisition bandwidth, three bandwidths available.

DATAVU-PC LICENSES

DVPC-SPAN50NL: DataVu-PC operation on acquisitions to 50 MHz bandwidth, Node Locked License

DVPC-SPAN50FL: DataVu-PC operation on acquisitions to 50 MHz bandwidth, Floating License DVPC-SPAN200NL: DataVu-PC-PC operation on acquisitions to 200 MHz bandwidth, Node Locked License

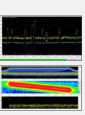
DVPC-SPAN200FL: DataVu-PC operation on acquisitions to 1000 MHz bandwidth, Floating License

DVPC-SPAN1000NL: DataVu-PC operation on acquisitions to 1000 MHz bandwidth, Node Locked License

DVPC-SPAN1000FL: DataVu-PC operation on acquisitions to 1000 MHz bandwidth, Floating License

DVPC-PULSENL: DataVu-PC pulse analysis including frequency mask, Node Locked License DVPC-PULSEFL: DataVu-PC pulse analysis including frequency mask, Floating License DVPC-MREC-NI: Multi-unit recording for USB analyzers. Node Locked

DVPC-MREC-FL: Multi unit recording for USB analyzers, Floating





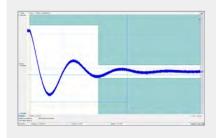
RF Application Solutions

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Bluetooth®

Get your design to market faster

- Perform Bluetooth SIG standard-based transmitter RF measurements in time, frequency and modulation domains
- Customizable limits and Bluetooth pre-sets for push-button testing
- Option for Bluetooth Low Power v5



Settling Time (Frequency and Phase) Analysis

Easy setup; automated time measurements

- User defined measurement bandwidth, tolerance bands and reference frequency
- Establish up to 3 tolerance bands vs. time for pass/fail testing
- Reference time settings to external or internal triggers, and from the last settled frequency or phase

tek.com/product-software-series/signalvu-pc

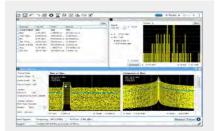


AM/FM/PM Direct Audio Measurements

Tools for comprehensive audio measurements

- Carrier power, frequency error, modulation frequency, modulation parameters SINAD, modulation distortion, S/N,THD, hum and noise
- Preset or user-defined high pass, low pass and deemphasize filters

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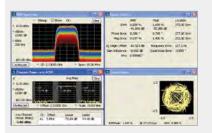


Pulse Analysis

Performance, precision and insight for radar and electronic warfare designs

- 31 individual measurements to automatically characterize long pulse trains
- Cumulative statics of key performance indicators and histograms for thorough analysis

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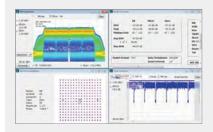


General Modulation Analysis

User-friendly, advanced RF analysis

- Error Vector Magnitude, Modulation Error Rate, Magnitude Error, and more
- Support for 27 different modulation schemes, including 256 QAM, CPM, nFSK, and others
- Sync word search to lock on constellations, Burst Mode to detect and analyze modulation quality on bursted signals
- Useful for measuring modulation quality of Zigbee, Bluetooth EDR, TETRA, and DVB-S devices
- Allows OFDM analysis for signals that are close in format to 802.11a or 802.16.d (fixed WiMAX) signals

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WLAN Analysis

Perform transmitter measurements in the time, frequency, and modulation domains

- Physical layer RF transmitter measurements supporting IEEE 802.11a/b/g/j/p/n/ac standards for up to 160 MHz
- Robust measurement summary reporting

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SPECTRUM ANALYZER SOFTWARE

RF Application Solutions



Phase Noise and Jitter Measurements for the RSA5000 Series

Measurement margin for the task

- 10 Hz to 1 GHz frequency offset range, log frequency scale traces -2
- ± Peak trace, average trace, trace smoothing and averaging

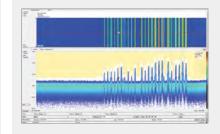
tek.com/datasheet/spectrum-analyzer

Mapping

Accurately locate signals of interest fast

- Azimuth function to draw lines or arrows on a map
- Integrates with GPS and other Global Satellite Navigation receivers
- Plot measurements based on time or distance traveled

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Playback of Recorded Files

Reduce hours of watching and waiting for spectral violations to minutes

- Capture hours of recorded data for real-time or post analysis
- Advanced frequency masks, with actions on mask violations including beep, stop, save trace, picture and data
- Support for numerous file formats including MIDAS

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EMCVu

Reduce EMI compliance design and test costs

- Automated easy-to-use Set-Up Wizard, robust measurements and reporting capabilities
- Push button support for FCC, MIL-STD, DEF-STAN and CISPR regulations
- Harmonic markers and faster scans using peak detector, quasi-peak and average detector failures

tek.com/landing-page/emcvu-software-andaccessories Device structures and the structure structure

Signal Survey/Classification

Efficiently locate, classify and sort signals

- Graphical tools to quickly create a spectral region of interest
- Quickly classify WLAN, GSM, W-CDMA, CDMA, Bluetooth, LTE FDD and TDD, and ATSC signals

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