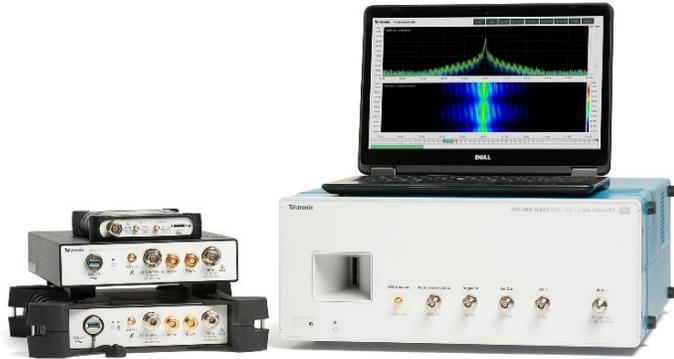


# DataVu-PC

## Software



DataVu-PC analysis software for recordings makes short work of searching through large datasets for signals of interest. You can measure pulses and mark signals for export to other analysis programs, reducing time spent in post-capture analysis.

### Features & Benefits

- Provides a single interface across all recording solutions (RSA300/500/600/7100 series), reducing time spent learning new tools
- Color-graded spectrum density display visualizes infrequent signal occurrences, reducing analysis time
- Color-graded spectrogram display shows time and frequency relationships
- Power vs. time display provides streaming zero-span display for detailed pulse analysis
- FFT overlap and speed controls optimize between highest probability of intercept vs. analysis time
- User settable sliders for start/stop point saves time in re-examination of signals of interest
- Export areas of interest to .XDAT, .SIQ or .TIQ formats for further analysis
- eMarkers provide search, mark and save on up to 2,000,000 user-defined amplitude events
- Pulse analysis calculates start/stop time, average/peak power, pulse duration, Pulse Repetition Interval (PRI) and start/stop frequencies on up to 2,000,000 pulses
- Pulse analysis results can be saved in Pulse Descriptor Word (PDW) format for use with other tools
- File progress bar gives analysis position at a glance, with visual display of marker events
- Analyzes files in .XDAT format from any source, including third-party recording solutions

### Applications

- Spectrum management
- Interference hunting
- Pulsed signal analysis

### DataVu-PC saves you time and helps you succeed

When combined with the signal recording capabilities of all Tektronix spectrum analyzers, DataVu-PC can turn hours of attended monitoring into fast post-acquisition search, mark and measurement tasks. You can search based on signal amplitude characteristics, marking each occurrence of an event for later examination. Pulse measurements can be made with the pulse application on up to 2,000,000 pulses and PDWs can be exported in tab-delimited format with headers for integration into other workflows.

Should you need to perform in-depth modulation, pulse or standards-based analysis, DataVu-PC can convert recordings to the SignalVu-PC file format (.TIQ), and can convert recordings made with Tektronix USB-based spectrum analyzers and SignalVu-PC from .R3F format into formats compatible with DataVu-PC.

Three bandwidth options are available to make DataVu-PC the most affordable and efficient tool to analyze large files from all Tektronix recording spectrum analyzers.

## Functions available in the free download version of DataVu-PC

The free download includes a recorded file with the software. The file contains Bluetooth, WLAN and microwave oven signals. You can open the file and view the content utilizing any of the following three displays: spectrum, spectrogram and/or power vs. time. Basic controls for the three displays are available. The free version includes file conversion of all supported file types for any given length. Full functionality for all application licenses can be activated with 30-day trial licenses, available at [www.tek.com](http://www.tek.com).

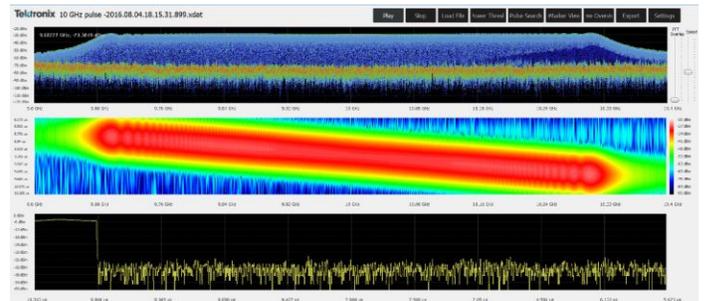
Features (Free Version)	Description
File Types Supported For Playback	.XDAT, .TIQ and .SIQD files at all bandwidths. Maximum playback length: 100 milliseconds
File Conversions Supported	R3F to .SIQD or .TIQ. 12-bit .XDAT to 16-bit .XDAT All supported file types for playback
Playback functionality	Fixed FFT overlap and speed controls. Ability to play back a recorded file using any of the available displays: spectrum, spectrogram and/or power vs. time. Controls for persistence spectrum decay, max hold trace, continuous playback, windows, and power scale adjustments

## Measurements and functions included in DataVu-PC base version application license

The base application license of DataVu-PC enables replay of recorded files in XDAT, TIQ, and SIQD formats. Three views are available: a color-graded persistence spectrum, spectrogram and power vs. time. FFT processing can be adjusted up to 99% overlap ensuring no signal is missed, and speed can be adjusted to minimize playback time. All adjustments can be made during file playback without a restart of the analysis.

Features and Functions, DVPC-SPAN licenses	Description
DVPC-SPAN1000 Application License DVPC-SPAN200 Application License DVPC-SPAN50 Application License	Base features of DataVu-PC up to 1000 MHz acquisitions Base features of DataVu-PC up to 200 MHz acquisitions Base features of DataVu-PC up to 50 MHz acquisitions
File Types Supported For Playback	.XDAT, .SIQD and .TIQ
File Conversions Supported	R3F to .SIQD or .TIQ 12-bit .XDAT to 16-bit .XDAT (DVPC-SPAN1000 only) All supported file types for playback
Playback Controls	Adjust FFT skip/overlap up to 99% overlap Adjust speed from 3 to 384 FFTs/frame for faster playback

Features and Functions, DVPC-SPAN licenses	Description
Persistence Spectrum Settings	Decay Settings - How long a signal persists in Spectrum view (short, medium, long, infinite) Max Hold Trace - Retains the maximum height of a signal in Spectrum view Continuous Loop - Continuously replay given file Power Axis - Adjust maximum and minimum ( $\pm 200$ dBm) Window functions (Gaussian, Blackman, Hamming, Hann, Welch, Bartlett, Rectangle)
Spectrogram Settings	Power axis - Adjust maximum and minimum ( $\pm 200$ dBm)
Power versus time display	Power axis - Adjust maximum and minimum ( $\pm 200$ dBm)
Progress Bar	Displays progress of the file being replayed Graphical sliders to adjust start and stop indexes for replay Jump to any location in the file on a mouse click Provides time values on mouse hover for all bars

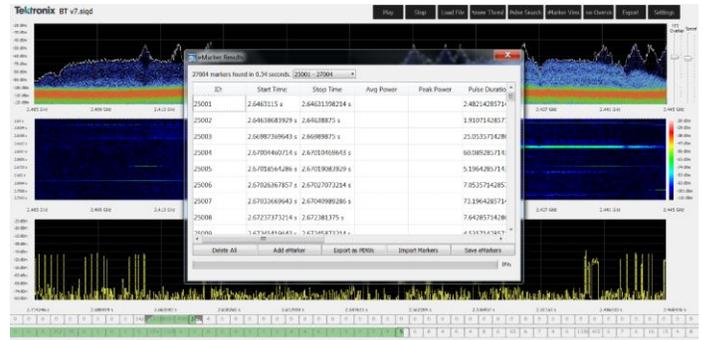


In the illustration above, analysis is performed with the base application license for DataVu-PC. The signal is a linear frequency chirp of 10 usec duration, 700 MHz bandwidth acquired with the RSA7100A. The spectrogram analysis is set to 99% FFT overlap on a pulse of 10 usec duration.

## Measurements enabled with application license DVPC-SMARK

DVPC-SMARK enables the smart markers in DataVu-PC, with user-defined amplitude search and mark, and enables the Time Overview display. Requires a Base version application license. Capabilities are shown in the table below.

Features and Functions	Description
DVPC-SMARK application license (requires base version)	Ability to search or tag an unlimited number of markers in a file Save up to 2,000,000 markers in PDW or JavaScript Object Notation (JSON) format Adds Power Threshold sSearch, eMarker View and Time Overview features to any base version of DataVu-PC
eMarker Functions	Manually add a marker on mouse click or in table Add user comments on each marker Make delta marker measurements Define file start-stop time to be between any two markers Store and recall saved markers in PDW format Load existing marker or event trigger files from previous analysis in .xmark or .emark formats Delete individual or all markers
eMarker Visualizations	Visually display all markers on progress bar Provides nested marker display for files with up to 2,000,000 markers View all markers in eMarker list display
Power Threshold Search	Power Threshold: Minimum power amplitude a signal must exceed to be discovered as a marker Set Minimum Sample Dropout: Ignore dropouts less than user-defined number of samples in length Set Minimum Pulse Sample Duration: Ignore pulses less than user-defined number of samples in length Moving Average Filter: Determines number of filter points to use in search
Time Overview Display	Time Overview displays the entire recording in a single view. You can zoom on areas of interest. The zoomed in area sets the start/stop points for detailed analysis in the spectrum, spectrogram and power vs. time displays



eMarkers allow you to find all possible markers that match your desired criteria and save up to 2,000,000 points of interest in a file. In the illustration above, the power threshold search has been used to find signals of interest and place them in the eMarker list view. The marker points are also indicated as vertical grey lines on the green progress bar at the bottom of the screen. Up to three nested progress bars can be displayed for greater marker resolution in the file. Marker points can be used to define the re-analysis point for the recording, allowing you to quickly zoom in on the signal of interest for deeper examination.

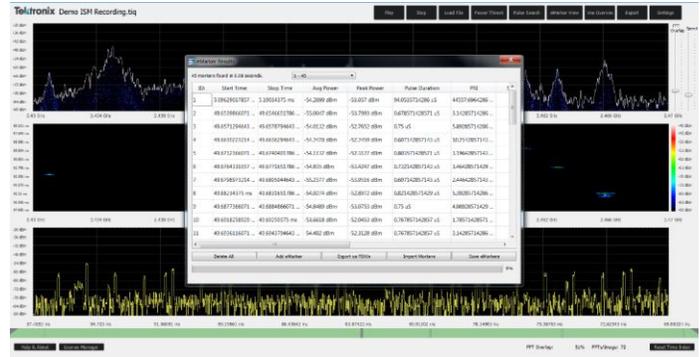


The Time Overview display in application license SMARK provides the +peak (yellow), -peak (purple) and average (blue) traces of the entire recording in a single snapshot. You can use the mouse to identify an area of interest, and this portion of the time record is used to set the start and stop points of the detailed analysis. In this way, you can easily zoom in on active regions, quickly examining areas of interest.

## Measurements enabled with application license DVPC-PULSE

DVPC-PULSE enables search and marker measurements. Up to 2 million pulses can later be stored for reanalysis in PDW and JSON format. Requires the Base and SMARK application licenses. Functions and features of DVPC-PULSE are shown below.

DVPC-PULSE Application License (requires DVPC-SPAN and DVPC-SMARK licenses)	Adds pulse measurements
Pulse Measurements	Results for start/stop times, pulse average power, peak power, pulse duration, PRI and pulse start/stop frequencies View all pulse results in eMarkers list view View and save up to 2,000,00 pulse results as eMarkers Export pulse measurements in PDW format



The pulse analysis application license enables you to search for pulses and return all results with start/stop time, average power, peak power, pulse duration, PRI and start/stop frequencies. Pulse parameters can be exported as PDWs or emrk for use with other tools.

PC Windows 7, 8 or 10 (64-bit) with minimum 1 GB RAM, 400 MB drive space, and internet connection for software activation.

## Licensing information

DataVu-PC uses the Tektronix Asset Management System (AMS) for licensing your applications. Node-locked and floating licenses are available.

The free version of DataVu-PC gives you limited functionality to view any supported recording for a short duration (100 milliseconds). A recording of Bluetooth, WLAN and microwave oven signals is included with the software for your evaluation.

When purchasing DataVu-PC, you choose any one of the three base version 'span' licenses (50 MHz, 200 MHz or 1000 MHz). The only difference between span licenses is the bandwidth of the allowed analysis. Choose the bandwidth that covers the maximum bandwidth of your acquisition/recording system.

SMARK and PULSE licenses are independent of the bandwidth chosen for analysis. SMARK license requires a base license of any bandwidth, and PULSE license requires an SMARK license.

Node-locked and floating licenses are available. Node-locked licenses can be moved twice over their lifetime to account for changing PCs over the life of the license. Floating licenses can be checked into and out of the Tektronix Asset Management System (AMS) an unlimited number of times, and licenses can be assigned to users as needed, providing an effective way to reduce cost for multiple users.

## Trial licenses

30-day trial licenses for all bandwidth and measurement functions are available at [www.tek.com](http://www.tek.com).

## DataVu-PC ordering information

DataVu-PC is distributed via [www.tek.com](http://www.tek.com). Hard copy versions of the software are not available. An operation manual is distributed in .pdf format with the software.

Nomenclature	License type	Description
DVPC-SPAN50NL	Node locked	Base version, DataVu-PC operation on acquisitions to 50 MHz bandwidth
DVPC-SPAN50FL	Floating	
DVPC-SPAN200NL <sup>1</sup>	Node locked	Base version, DataVu-PC operation on acquisitions to 200 MHz bandwidth
DVPC-SPAN200FL	Floating	
DVPC-SPAN1000NL	Node locked	Base version, DataVu-PC operation on acquisitions to 1000 MHz bandwidth
DVPC-SPAN1000FL	Floating	
DVPC-SMARKNL	Node locked	DataVu-PC smart markers and time overview (requires base version)
DVPC-SMARKFL	Floating	
DVPC-PULSENL	Node locked	DataVu-PC pulse analysis (requires DVPC-SMARKNL)
DVPC-PULSEFL	Floating	

### Recommended products:

DataVu-PC operates on recordings from all of the instruments listed below.

In addition, recordings made with the RSA5000A/B and RSA6000A/B series using third-party recorders in .XDAT or .TIQ waveform formats can also be analyzed.

Instrument	Description
RSA306B	Spectrum Analyzer, 9 kHz-6.2 GHz, 40 MHz acquisition bandwidth, portable form factor
RSA503A	Spectrum Analyzer, 9 kHz-3.0 GHz, 40 MHz acquisition bandwidth, portable form factor
RSA507A	Spectrum Analyzer, 9 kHz-7.5 GHz, 40 MHz acquisition bandwidth, portable form factor
RSA603A	Spectrum Analyzer, 9 kHz-3.0 GHz, 40 MHz acquisition bandwidth, laboratory form factor
RSA607A	Spectrum Analyzer, 9 kHz-7.5 GHz, 40 MHz acquisition bandwidth, laboratory form factor
RSA7100A	Spectrum Analyzer, 16 kHz-26.5 GHz, up to 800 MHz acquisition bandwidth, laboratory form factor



Tektronix is registered to ISO 9001 and ISO 14001 by SRI Quality System Registrar.



Product(s) complies with IEEE Standard 488.1-1987, RS-232-C, and with Tektronix Standard Codes and Formats.



Product Area Assessed: The planning, design/development and manufacture of electronic Test and Measurement instruments.

<sup>1</sup> DataVu-PC can open files recorded in 16-bit .XDAT format from any source. If you have a data source that records at 50 MHz to 200 MHz bandwidth, such as a Tektronix RSA5000 or RSA6000 series spectrum analyzer with a third-party recording solution, choose DVPC-SPAN200.

**ASEAN / Australasia** (65) 6356 3900  
**Belgium** 00800 2255 4835\*  
**Central East Europe and the Baltics** +41 52 675 3777  
**Finland** +41 52 675 3777  
**Hong Kong** 400 820 5835  
**Japan** 81 (3) 6714 3086  
**Middle East, Asia, and North Africa** +41 52 675 3777  
**People's Republic of China** 400 820 5835  
**Republic of Korea** +822 6917 5084, 822 6917 5080  
**Spain** 00800 2255 4835\*  
**Taiwan** 886 (2) 2656 6688

**Austria** 00800 2255 4835\*  
**Brazil** +55 (11) 3759 7627  
**Central Europe & Greece** +41 52 675 3777  
**France** 00800 2255 4835\*  
**India** 000 800 650 1835  
**Luxembourg** +41 52 675 3777  
**The Netherlands** 00800 2255 4835\*  
**Poland** +41 52 675 3777  
**Russia & CIS** +7 (495) 6647564  
**Sweden** 00800 2255 4835\*  
**United Kingdom & Ireland** 00800 2255 4835\*

**Balkans, Israel, South Africa and other ISE Countries** +41 52 675 3777  
**Canada** 1 800 833 9200  
**Denmark** +45 80 88 1401  
**Germany** 00800 2255 4835\*  
**Italy** 00800 2255 4835\*  
**Mexico, Central/South America & Caribbean** 52 (55) 56 04 50 90  
**Norway** 800 16098  
**Portugal** 80 08 12370  
**South Africa** +41 52 675 3777  
**Switzerland** 00800 2255 4835\*  
**USA** 1 800 833 9200

\* European toll-free number. If not accessible, call: +41 52 675 3777

**For Further Information.** Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology. Please visit [www.tek.com](http://www.tek.com).

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