SVA1000X Firmware Revision History

Version	Revision
V3.2.2.5.0 2021/9/30	**Notice:** This firmware must be upgraded from V3.2.2.4.0 or later. If your analyzer has an earlier version, please update to V3.2.2.4.0 first and then proceed to update to the latest version. **New Functionality:** • Added Ext Trigger Delay from 0-10 seconds in SA Mode • Added Limit in Log mag and Lin mag format; • Added calibration average; • Added s1p touchstone file save in VNA mode **Improvements:** • VNA sweep points up to 10001; Scale down to 0.001 in Smith chart; • MA Filter type Nyquist change to Raised Cosine to align SCPI command; improve filter performance in low frequency • EMI RBW/Step from 1 to 3 **Solved Issues:** • SA mode: Fixed the difference between marker and peak and marker style; Fixed Center Freq error; Fix limit fail to stop error; Fixed Auto frequency error; Fixed In normalization, auto re-normalized after any setting changes • VNA mode: Fixed Phase error; Fixed STA file saving error; Fixed CSA file loading error; Fixed S21 calibration error; Fixed Enhanced calibration error • EMI mode: Fixed Frequency offset error; Fixed Saving std lim path error • Web browser cannot change IP, and cannot login after changing password
V3.2.2.4.0R2 2021/2/9	**Notice:** This firmware must be upgraded from V2.1.1.1.12a or later. If your SVA1000X has an earlier version, please update to V2.1.1.1.12a first and then proceed to update to the latest version. • Fixed the VNA option license error on some SVA1015 and SVA1075 units
V3.2.2.4.0 2021/1/15	**Notice:** This firmware must be upgraded from V2.1.1.1.12a or later. If your SVA1000X has an earlier

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	version, please update to V2.1.1.1.12a first and then proceed to update to the latest version. • Fixed TG switch error at small RBW • Fixed Help and Limit file lost when Factory reset • Fixed Auto open delay unit error in VNA mode • Fixed CNR calc error when no peak found • Fixed OBW result overflow • Fixed Harmonic calc error at 100Hz RBW • Fixed Reflection Open+Short calibration action • Fixed spectrum amplitude error in DMA mode • Optimized EMI .csv file content to all signal list • Optimized EMI peak search • Optimized Auto cal process • Added Peak search to Spectrum in DMA mode • This version con not be rolled back
V3.2.2.3.3R1 2020/12/01	Notice: This firmware must be upgraded from V2.1.1.1.12a or later. If your SVA1000X has an earlier version, please update to V2.1.1.1.12a first and then proceed to update to the latest version. New Functionality: • Added EMI filter in SA for EMI option Solved Issues: • Optimized the TG flatness and control procedure • Optimized Help • Fixed Correction, .csv file, add peak numbers to 20 in EMI mode • Fixed ADC overload warning error, and time unit error in Calibration in VNA Mode • Fixed amplitude error in DMA Mode • Fixed upgrade failure issue
V3.2.2.3.2 2020/09/09	Notice: This firmware must be upgraded from V2.1.1.1.12a or later. If your SVA1000X has an earlier version, please update to V2.1.1.1.12a first and then proceed to update to the latest version. New Functionality: • Added user defined VNA calibration kits • Added VNA 0 span calibration Solved Issues: • Fixed avg power bug in EMI Mode • Fixed amplitude bug in AMA Mode • Fixed peak search bug in SCPI command

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V2.2.1.2.8 2020/07/20	Notice: This firmware must be upgraded from V2.1.1.1.12a or later. If your SVA1000X has an earlier version, please update to V2.1.1.1.12a first and then proceed to update to the latest version. New Functionality: • Updated EMI option to a new EMI measurement mode • Added more VNA calibration kits with N/3.5mm type connectors to 4.5G/9.0GHz • Added *.CSA file type to store instrument setup and calibration data in one file for easy recall and use of a saved state. • Update user calibration data format. CAUTION: User calibration data taken with previous firmware revisions will no longer be compatible with the instrument after upgrading to V2.8. You will have to store new user calibration files if you update the instrument. • VNA Port 1 output power and Port2 input Att adjustable Improvements: • Improved TG output harmonic performance • Updated Help file Solved Issues: • Fix some ADC overload warning • Fix Ch Power calculation bug in small span
V2.2.1.2.7 2020/05/12	Notice: This firmware must be upgraded from V2.1.1.1.12a or later. If your SVA1000X has an earlier version, please update to V2.1.1.1.12a first and then proceed to update to the latest version. New Functionality: • Added Limit mask offset in SA mode • Frequency LOG scale in VNA mode • Add OPEN、SHOT、enhanced response in VNA mode • Add 85033D/E Cal kit in VNA mode • Save/recall .cal file in VNA mode • Port 1 power (TG) adjustable in VNA mode • Zero span in VNA mode Improvements: • Smooth the glitch in Phase format in VNA mode Solved Issues: • Fixed AM and FM symbol rate error, Lpf coefficient error, in AMA mode • Fixed Filter bandwidth error in DMA mode • Fixed Freq counter error in SA mode

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	• Fixed Harmonic error in SA mode • Help Display error
V2.2.1.2.5 2019/11/11	Notice: This firmware must be upgraded from V2.1.1.1.12a or later. If your SVA1000X has an earlier version, please update to V2.1.1.1.12a first and then proceed to update to the latest version. Improvements: • Optimize trace, marker, signal track, TG normalization in SA Mode • Optimize calibration flow, calibration algorithm and sweep speed in VNA Mode • Optimize web server UI Solved Issues: • Fixed video trigger fail, errors in Harmonic measurement in SA Mode • Fixed admittance error, port extensions error in VNA Mode • Fixed spectrum amplitude error, meas error, waveform discontinue in MA Mode • Fixed English help, system message
V2.2.1.2.2 2019/8/1	Notice: This firmware must be upgraded from V2.1.1.1.12a or later. If your SVA1000X has an earlier version, please update to V2.1.1.1.12a first and then proceed to update to the latest version. New Functionality: • Add a spectrum view, marker for MA Mode • Add mode couple for center frequency • Add system message Improvements: • Optimize .sta file, trace interpolation for VNA Mode • Optimize PSK/QAM clock sync ability for MA Mode Solved Issues: • Fixed AVG, Math bug for VNA Mode • Fixed Date&Time set bug
V2.2.1.2.1 2019/6/1	Notice: This firmware must be upgraded from V2.1.1.1.12a or later. If your SVA1000X has an earlier version, please update to V2.1.1.1.12a first and then proceed to update to the latest version. New Functionality: • Add CNR, Harmonic measurement in AMK options for SA Mode • Add port extensions, user cal kit, new marker functions, correction switch, multi-traces and multi-format overlay display for VNA Mode

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	• Extend xQAM, MSK, xPSK modulation analysis in DMA option for MA Mode • Add new marker functions, multi-traces and multi-format overlay display for MA Mode • Add SCPI commands for VNA and MA Modes • Add some system functions: Screen Annotation in Display menu, FTP server for file transfer Improvements: • Optimize UI, refresh and response for all Modes • Optimize SCPI commands for basic control, such as INIT, *OPC?, *ESR, Abort, etc. • Optimize Log scale axes, Peak search, Auto tune, TG normalization for SA Mode • Optimize S11 and S21 simultaneous measurement, calibration control, trace control and auto scale for VNA Mode • Optimize some system functions: Power Saving, IP config Solved Issues: • Fixed OBW Transmit Freq Error • Fixed bugs during Mode switch
V2.1.1.1.13 2018/11/1	New Functionality: • Screen saver for power saving • VNC View only for web server • VNA: .csv file for each format, Expand Phase for marker Improvements: • VNA: Auto Scale, min Scale to 0.1 dB • DTF: logistic scale for RL display Solved Issues: • Invalid Demod time in FM • Scale in TG • Wrong units in Markers and peaks • Boot or Mode start lock up • Udisk display wrong files • SCPI command incompatible • Min span to 10kHz in AMK power measurement
V2.1.1.1.12a 2018/8/8	1. Spectrum Analysis mode：Improved the stability of sweep and interface. 2. VNA mode: fasten the VNA sweep speed; expand the minimum span from 10M to 10 kHz. 3. Modulation Analysis mode: add trigger, optimize the modulation analysis algorithm. 4. Add user port number selection for web server.