

SSA3000X-R Firmware Revision History

Version	Revision
V6.3R2 2025/3/18	<p>Notice:</p> <p>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.</p> <p>New Functionality:</p> <ul style="list-style-type: none"> ● Add measurement related functions, including: APSK function, Marker Band function, MA Record function and 200 Hz EMI RBW. ● Add system related functions, including: local oscillator feedthrough self calibration, 10M out frequency accuracy Self-Calibration function and FTP function. <p>Improvements:</p> <ul style="list-style-type: none"> ● Optimize the auto-save function, add the auto-save switch and auto-save time function to Last Preset. ● Add SCPI command, you can use the pscpi command to set/query the reference clock source used by the machine. ● Improve the measurement function, including increasing the number of markers in VNA mode to 14; optimize the measurement accuracy of the channel power measurement mode to ensure higher measurement accuracy. <p>Solved Issues:</p> <ul style="list-style-type: none"> ● Fixed some known defects.
V3.2.2.6.2R5 2024/2/22	<p>Notice:</p> <p>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.</p> <p>New Functionality:</p> <ul style="list-style-type: none"> ● VNA mode Ecal add Ecal Check, S11 Ecal, S21 Ecal. Add SCPI Command for Ecal Check [:SENSe#]:CORRection:ECAL:CONFidence:CHECK. Add SCPI Command for PV test [:SENSe#]:CORRection:ECAL:S11:PVTest, [:SENSe#]:CORRection:ECAL:S21:PVTest <p>Improvements:</p> <ul style="list-style-type: none"> ● Display the exit command in Remote Control mode interface. ● SA/EMI/MA mode saves the current trace when saving user configuration ● SA mode auto tune does not change the amplitude Unit and Scale Type (Log/Linear) ● EMI mode exports Freq Interpolation (Log/Linear) when saving lmt file, and import the configuration when recalling the lmt file. <p>Solved Issues:</p> <ul style="list-style-type: none"> ● Fix the problem of MA mode setting the SCPI command for filter type: DDEMod:FILTer:MEASurement setting root raised cosine and raised cosine failed. ● Fix the problem that when the EMI mode does not have touch screen function, it is impossible to pull down to see more measurement results ● Fix the problem of unit error when the command DISPlay:WINDow:TRACe:Y:SCALE:RLEVel

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	<p>for setting the reference level in the RTSA mode does not contain units</p> <ul style="list-style-type: none"> Fix the problem that when the RTSA mode's Persistence state is infinite, using the command <code>DISPlay:VIEW:DENSity:PERSistence</code> can still set the Persistence time
V3.2.2.6.2 2023/12/14	<p>Notice:</p> <p>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.</p> <p>New Functionality:</p> <ul style="list-style-type: none"> Add Picture Viewer Add Open Source Acknowledge Add Remote Control Mode, when entering, the interface displays system time, limit status, system messages, etc., shielding UI refresh. SCPI: <code>DISPlay:WINDow:ENABle ON OFF</code> Save the configuration every 60 seconds, and load it when Power On is turned Last SA/VNA mode Limit Setup adds Fail to Save, which automatically saves screenshot and trace data when the Limit Test result is Fail. It can only be used when Fail to Stop is turned ON <p>Improvements:</p> <ul style="list-style-type: none"> Preset optimization: When pressing the Preset button, it will first jump to the Preset menu instead of directly performing Preset; Touch Assist's Preset adds preset option Optimization System Info display content When taking screenshots, do not capture the message indicating successful screenshot Limit the length of numbers entered on the screen and keypad Add SCPI commands to read system messages: <code>SYSTem:MESSAge?</code> Added screenshot function under the Help window Set the FFT menu to invalid when the SA mode cannot select FFT SA mode can open the Freq Counter for markers other than marker 1 The SA mode peak table displays the peak of the current trace The SA mode peak table displays the peak of the current trace, rather than the current marker's trace The dBc parameter range of the SA mode OBW is changed to negative numbers When Noise Marker is turned on in SA mode, set Detect Type to Average In SA/MA/EMI mode, Wait for Trigger is displayed only if Trigger is not triggered for 2 seconds. Add Display Line in VNA/DTF/MA/RTSA/EMI mode When using markers in SA/VNA/DTF/MA/EMI modes, display the marker info enlarged in the upper left corner of the screen SA/EMI mode display more information of limit fail and pass Return more marker information when using SCPI command <code>:CALCulate#:MARKer#:Y?</code> in SA mode The MA mode supports the SCPI command: <code>TRACe#[:DATA]?</code> to get trace data SCPI command for setting marker X in MA mode: <code>TRACe#:MARKer#:X</code> supports specifying time units

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	<p>Solved Issues:</p> <ul style="list-style-type: none"> Fix the problem of the inconsistency between the numerical accuracy displayed in SA mode Freq menu Ref Offset and the status bar on the left Fix the problem of Marker display unit error when Noise Marker is turned on in SA mode Fix the problem of the SCPI command TRACe#:MODE in the SA mode setting trace type, which causes a crash when the selected trace exceeds the range. Fix the problem of not adding Freq Offset to the marker x value in SA mode Fix the problem of Correction errors when switching between X-Scale Lin and Log in SA mode Fix the problem of inconsistent units and settings for values obtained by SCPI commands :DISPlay:WINDow:TRACe:Y:RLEVel? in SA/EMI mode Fix the problem where Sweep Time may be incorrect when set EqLPF to Auto in MA mode Fix the problem of Max Hold error in RTSA mode
V3.2.2.6.0R7 2023/5/3	<p>Notice:</p> <p>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.</p> <p>New Functionality:</p> <ul style="list-style-type: none"> Add ECal in VNA mode Add three new formats in VNA mode: Unwrap Phase/Real/Imaginary Add Z Reflection in VNA mode Add PM demodulation in MA mode The time of analog demodulation in MA mode is adjustable <p>Improvements:</p> <ul style="list-style-type: none"> Add SCPI command in VNA mode: Set the format Unwrap Phase/Real/Imaginary: CALCulate#[:SElected]:FORMat adds three new parameters for UWPH/REAL/IMAG Set Z Reflection: CALCulate#:TRACe#:CONVersion:FUNCTION OFF/ZREFlection Get the marker y value for Phase format with unwrap phase value: CALCulate#:FSCan:MARKer#:Y? Add SCPI commands for Calibration: Select Open Calibration [:SENSe#]:CORRection:COLlect:METHod[:RESPonse]:OPEN Select Short Calibration [:SENSe#]:CORRection:COLlect:METHod[:RESPonse]:SHORT Select Enhance calibration [:SENSe#]:CORRection:COLlect:METHod:ENHAnced Select Through Calibration [:SENSe#]:CORRection:COLlect:METHod[:RESPonse]:THRU Select 1 Port Calibration[:SENSe#]:CORRection:COLlect:METHod:SOLT1 Add SCPI commands in MA mode: Set the scan time: [:SENSe]:SWEep:TIME Set the demodulation type: ADEMod:STYLE (new parameter is PM) Get AM parameters: FETCh:AM#? Get FM parameters: FETCh:FM#?

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	<p>Get PM parameters: FETCh:PM#?</p> <ul style="list-style-type: none"> Add system SCPI command: *OPC for EMI mode <p>Exit remote status: SYSTem: LOCal for all mode</p> <p>Solved Issues:</p> <ul style="list-style-type: none"> Fix the problem that the bandwidth of the emi filter in SA mode Fix the problem that setting the TG Level in SA mode may cause TG to have no output Fix the problem that the n dB Marker measurement results in SA mode are inconsistent with the OBW measurement results Fix the problem that there is an invalid frequency menu in Harmonic in SA mode Fix the problem that the SCPI command: READ:ADEMod? would return an invalid value when reading the analog demodulation measurement results in MA mode Fix the abnormality of the first scan in EMI mode Fix the problem that setting rbw may crash when qpd is not enabled in EMI mode Fix the problem of wrong reset when switching continue/single in RTSA mode Fix the problem that the 3D Spectrogram in RTSA mode will be abnormally full when pressing pause under continuous scanning Fix an issue where 'micro' relative units represented by 'u' were not recognized when reading files
V3.2.2.5.1R1 2022/5/10	<p>Notice:</p> <p>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.</p> <p>Improvements:</p> <ul style="list-style-type: none"> Optimize the Ref level and Att couple Add SCPI commands in MA Mode <ul style="list-style-type: none"> •READ:ADEMod:AVG? •[:SENSe]:ADEMod:FM:DEVI? •[:SENSe]:ADEMod:FM:DRIFt? •[:SENSe]:BWIDth[:RESolution] •[:SENSe]:BWIDth[:RESolution]? •[:SENSe]:BWIDth:EQLPf •[:SENSe]:BWIDth:EQLPf? •CALCulate:MARKer#:PTPeak Add Cable Atten to correct cable loss in DTF Mode Add .trc file in EMI Mode Add .lic file auto scan <p>Solved Issues:</p> <ul style="list-style-type: none"> Fix the false signals in density view in RTSA mode Fix pi/4 DPSK 和 pi/8 DPSK decode errors in MA mode

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	<ul style="list-style-type: none"> Fix calibration error when port extension on in VNA mode Fix fft frequency error in narrow span in SA mode Fix trace avg calculation error in SA mode Fix the zero sweep type when fft in SA mode
V3.2.2.5.0 2021/9/30	<p>Notice:</p> <p>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.</p> <p>New Functionality:</p> <ul style="list-style-type: none"> Add Ext Trigger Delay from 0-10 seconds in SA Mode Add Limit in Log mag and Lin mag format; add calibration average; add s1p touchstone file save in VNA mode <p>Improvements:</p> <ul style="list-style-type: none"> 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 <p>Solved Issues:</p> <ul style="list-style-type: none"> SA: Fixed the difference between marker and peak and marker style; Center Freq error; Limit fail to stop error; Auto frequency error; In normalization, auto re-normalized after any setting changes VNA: Fixed Phase error; STA file saving error; CSA file loading error; S21 calibration error; Enhanced calibration error RTSA: Fixed continue peak preset error; freq step error EMI: Fixed frequency offset error; saving std lim path error Web browser: Fixed change IP error, Login error after changing password
V3.2.2.4.0 2021/1/15	<ul style="list-style-type: none"> Fix TG switch error at small RBW Fix Help and Limit file lost when Factory reset Fix Auto open delay unit error in VNA mode Fix CNR calc error when no peak found Fix OBW result overflow Fix Harmonic calc error at 100Hz RBW Fix Reflection Open+Short calibration action Fix spectrum amplitude error in DMA mode Optimize EMI .csv file content to all signal list Optimize EMI peak search Optimize Auto cal process Add Peak search to Spectrum in DMA mode This version can not be rolled back

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V3.2.2.3.3R1 2020/12/01	<p>New Functionality:</p> <ul style="list-style-type: none"> Add EMI filter in SA for EMI option <p>Solved Issues:</p> <ul style="list-style-type: none"> Optimize the response in RTSA Optimize the TG flatness and control procedure Optimize Help Fix Correction, .csv file, add peak numbers to 20 in EMI mode Fix ADC overload warning error, and time unit error in Calibration in VNA Mode Fix amplitude error in DMA Mode Fix the frequency band downgrade to 3.2GHz on some units <p>Fix upgrade failure issue</p>
V3.2.2.3.2 2020/09/09	<p>New Functionality:</p> <ul style="list-style-type: none"> Add VNA and DTF mode Update EMI option to a new EMI measurement mode <p>Solved Issues:</p> <ul style="list-style-type: none"> Fix bug in Help File Fix some ADC overload warning Fix some PvT and Density marker bugs. Fix Ch Power calculation bug in small span in SA Mode Fix amplitude bug in AMA Mode Fix peak search bug in SCPI command