Revision Record

Date	Version	Revision
1/16/2025	0.9.9R7	1. Supported new low impedance passive probe SP6150A 2. Optimized SCPI command "WF" 3. FileConverter tool upgraded to version 3.5.8 4. Fixed several bugs a) SCP5500 bandwidth displayed incorrectly b) Scope + SCP5030A probe configuration is slow in Roll mode c) PSRR measurement unexpectedly returns to bode plot d) Some error in saving .mat files
6/29/2024	0.9.9R6	Made Option 16LA and Option FG Standard
4/16/2024	0.9.9R3	**CAUTION**: This release cannot be downgraded to previous releases. 1. Compatible with new hardware 2. Supported new probes: SCP5030A/SCP5150/SCP5500, SAP5000D 3. Trigger: modified the trigger strategy of /AND and OR trigger from FALSE-to-TRUE to TRUE-to-FALSE 4. Acquisition: modified the Average strategy in Single mode from acquiring one frame to acquiring averaged X frames (where X = Average count) 5. Optimized UI 6. Fixed several bugs a) Freezing issue in Roll mode b) Freezing issue relative to Stop-on-Search-Event in Search mode **c)** In some case the scope does not update the waveform traces after a long time
9/6/2023	0.9.8R2	Fixed an issue in production process.
6/1/2023	0.9.8R1	1. Increased the data width of saved Average and ERES data from 8-bit to 16-bit 2. Decode: added ARINC429 3. Math: added RBW display for FFT 4. Supported 12-hour time with AM and PM 5. Remote control: a) Supported the USB-GPIB adapter b) Added command supporting to query average count when Acquisition = Average c) Added command supporting to enable/disable axis labels 6. Fixed several bugs a) Incorrect prompt when saving .csv with "Save all channels" to a U-disk as specified file name b) Channel ON / OFF labels are inconsistent 7. Freezing issue caused by command CURSor:XDELta?
9/30/2022	0.9.7R5	1. Optimized frequency response of 350 MHz model 2. Fixed several bugs

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		a) Screenshot Save Info Box does not close automatically
		b) Random +/-400 ps skew between channels after power cycle
		c) No display from Web Server if the scope boots with a USB device connected
4/25/2022	0.9.7R2	1. Acquire: supported Fixed Sample Rate and Fixed Memory Depth modes
		2. Connectivity：
		a) Supported LXI
		b) Supported Network Storage
		3. Measure: improved the AIM limit from 1,000 to up to 25,000 (AIM limit: the upper limit of horizontal parameters measure statistics in one frame)
		4. Power Analysis: supported MOSFET SOA (Safe Operating Area)
		5. Channel:
		a) Two custom probe ratio options supported
		b) Supported CP030 current probe (with LPA10 adapter)
		6. UX: Added support for mouse wheel when using a mouse
		7. Optimized UI
		8. Remote Control: Supported to read sequence segments by WF command
		9. Optimized the Bode Plot
		10. Fixed several bugs
		a) Incorrect zoom trace in Roll mode (Stop)
		b) Bode Plot draw error (missing draw)
		c) Bode Plot zig-zag phase
		11. [Measure] Gating settings cannot be typed in
8/8/2021	0.9.5R3	1. Supported CAN-H, CAN-L as decode sources
		2. Fixed several bugs
		a) Unexpected skew between channels after Stop in Roll mode
		b) Some trigger setting with dual-level may lead the scope not to start-up properly
5/22/2021	0.9.5R2	Fixed a bug which may cause failure on installation of option key in 0.9.5R1.
4/30/2021	0.9.5R1	1. Expanded the post-trigger range from 5,000 to 10,000 divisions
		2. Measurement:
		a) Supported cursors for measurement
		b) Supported Track plot
		3. Display:
		a) Supported to show bandwidth information on the channel descriptor box
		b) Supported to display axis label
		4. Save/Recall:
		a) Supported to Print only grid area
		b) Supported to save FFT result

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		5. DVM: Supported limit beeper
		6. Updated Russian menu
		7. Fixed several bugs
		a) Last Save/Recall path is not remembered
		b) Measurement invalid in Roll when acquisition stops and Zoom is enabled
9/29/2020	0.9.3R3	1. Expanded the offset range
		2. New serial protocols supported (optional):
		a) SENT, trigger & decode
		b) Manchester, decode only
		3. Measurement enhancement:
		a) Supported user-defined thresholds (Upper, Middle and Lower): Measure | Config | Threshold
		b) Added items: +Area@AC, -Area@AC, Area@AC, AbsArea@AC
		4. Math:
		a) Added new operator – Interpolate
		b) Added function expression information to the math descriptor box
		5. Display:
		a) Supported selectable color for traces: Display | Color Setting
		b) Supported floating menu so that the waveform is not compressed horizontally when the right-side menu is displayed: Display | Menu Style
		c) Supported to hide analog traces
		6. Save/Recall:
		a) Added option "Save all channel" for csv file
		b) Supported to save math traces (except FFT)
		7. Supported serial trigger as source of the frequency counter
		8. Supported LeCroy probes ZD1000/ZD1500 with LPA10 probe adapter; supported Tek TekProbe interface level II probes with TPA10 probe adapter
		9. Added button to reset remote password: Utility | System Setting | I/O | Web Server
		10. Fixed several bugs
		a) AutoSet cannot find signal with small duty-cycle and large offset in AC/LFR coupling mode
		b) Sometimes the FFT Harmonics Marker results are not correct
		11. Backlight is not shutdown when screensaver is active
3/24/2020	0.9.1B2	1. Fixed the bug the attenuation factor is not correct for the SAP1000 probe
3/16/2020	0.9.1	1. Acquire enhancement:
		a) Added memory depth options: 5K(2CH), 10K(1CH), 25K(2CH), 50K(1CH)
		b) Added the upper limit of Average to 65536, and optimized speed

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		of Average
		c) Supported ERES in Roll mode
		2. New Triggers: Nth edge, Setup/Hold and Delay
		3. Math enhancement:
		a) Supported new math operators: Sign, Abs, Exp, Log, Identity and Negate
		b) Supported F1 and F2 as the source of Formula editor
		c) Supported Span-Center/Start-End mode in FFT
		4. Measure: Supported setting maximum statistics number
		5. Remote Control optimization:
		a) Optimized read speed of WF command
		b) Supported to export Math traces using WF command
		6. Supported "Apply to AWG"in the "Cx -> Apply to" menu
		7. Optimized SPO display
		8. Supported saving .mat data format and bin2csv tool
		9. Updated the Help information
		10. Fixed several bugs
		a) Vertical measure error increases as offset increases
		b) Any operations when recalling default setting may cause UI abnormal
		c) The scope sometimes forgets the previous math settings
		d) Incorrect horizontal offset on reference of FFT trace
		e) AWG auto-zero fails in normal mode
		f) Some FFT parameters are not correctly saved
10/9/2019	0.8.7R1B1	1. Supported Power Analysis (optional) (Analysis | Power Analysis)
		2. Supported Bode Plot (Analysis | Bode Plot)
		3. Supported Totalizer (Analysis | Counter). Frequency and period parameters are moved from DVM to Counter
		4. Supported 2 math traces and formula editor
		5. Optimized FFT
		a) Optimized menu structure
		b) Supported peak and marker (Math | FFT | Tools)
		c) Supported setting max points (Math | FFT | Config)
		6. Measurement enhanced
		a) Optimized the UI. In the "Basic" tab the items can be customized (long pressing an item to add to or delete from Basic tab)
		b) Added items: Median, Cycle median, -Bwidth, Time@max, Time@min, 20-80%Rise, 80-20%Fall, +Area, -Area, Area, AbsArea, Cycles, Rising Edges, Falling Edges, Edges, PPulses, Npulses
		c) Supported statistics on maximum 12 parameters at the same time (M2);
		d) Optimized measurement accuracy of Rise/fall

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		e) Supported Trend Plot of measurement items
		7. Optimized UX of knobs
		8. Set the default function of the universal knob as adjusting the trace intensity
		9. Optimized SPO display
		10. Supported moving the location of the decode buses vertically
		11. Supported single step back or forward in Navigator
		12. Added bandwidth limit indicator below 2.45mV/div (1GHz, 500MHz)/1mV/div(350MHz
		13. Supported Zone trigger in Sequence mode
		14. Added entry for Zone trigger in the right side trigger menu
		15. Mask Test: Supported failed history (Mask Test | Failure to History)
		16. Increased frequency setting digits of the AWG from 3 to 7
		17. After gesture control of the vertical gain, the v/div knob still is in the mode that has been used before with the gesture controls.
		18. UART/LIN decode/trigger: supported baud rate > 5Mb/s
		19. Reference position: Added user defined delay
		20. Optimized UI in Zoom mode
		21. Deleted the SCPI command which can start Telnet
		22. Supported tapping on zone/histogram region to open the corresponding menu
		23. Fixed several bugs
4/9/2019	0.8.2R1	1. Supported search across history frames
		2. Optimized zone trigger and mask test accuracy in zoom mode;
		3. Supported editing a trigger zone after creating it
		4. Supported MIL-STD-1553B trigger
		5. Improved the input frequency upper limit of holdoff by event from 20 MHz to 120 MHz
		6. Solved the defect that the scope possibly does not trigger on the first edge of a burst train with carrier frequency above 120 MHz
		7. Added Reboot and Shutdown function under "Utility" top bar menu, so the instrument can be remotely rebooted and shutdown by web
		8. Supported saving the decode list as a CSV file
		9. Optimized response time of mask test when disabling/enabling it or changing the type
		10. Optimized webserver response when dragging a trace in vertical direction; Added alternative VNC port for webserver
		11. Added automatic clear of measurement statistics when changing horizontal/vertical/trigger settings
		12. Supported editing selected measurement parameter
		13. Fixed several bugs
		a) Cursors: Unexpected jump when changing horizontal settings
		14. Webserver: Incorrect mouse position with IE in full screen mode

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2/25/2019	0.8.0R1B5	

Version Compatibility

| Source Version	Object Version	Compatibility
0.9.9R3	0.9.9R7	Tested
0.9.7R5	0.9.9R3	Tested
0.9.8R1	0.9.9R3	Tested
0.9.8R1	0.9.8R2	Tested
0.9.7R2	0.9.8R1	Tested
0.9.5R2	0.9.8R1	Tested
0.9.3R3	0.9.8R1	Tested
0.8.7R1B1	0.9.8R1	Tested
0.9.7R2	0.9.7R5	Tested
0.9.5R3	0.9.7R2	Tested
0.9.5R2	0.9.7R2	Tested
0.9.5R1	0.9.7R2	Tested
0.9.3R3	0.9.7R2	Tested
0.9.1B2	0.9.7R2	Tested
0.8.7R1B1	0.9.7R2	Tested
0.8.2R1	0.9.7R2	Tested
0.9.5R2	0.9.5R3	Tested
0.9.5R1	0.9.5R3	Tested
0.9.3R3	0.9.5R3	Tested
0.9.1B2	0.9.5R3	Tested
0.8.7R1B1	0.9.5R3	Tested
0.8.2R1	0.9.5R3	Tested
0.9.5R1	0.9.5R2	Tested
0.9.3R3	0.9.5R2	Tested
0.9.3R3	0.9.5R1	Tested
0.9.1B2	0.9.5R1	Tested
0.8.7R1B1	0.9.5R1	Tested
0.8.2R1	0.9.5R1	Tested
0.9.1B2	0.9.3R3	Tested
0.8.7R1B1	0.9.3R3	Tested
0.8.2R1	0.9.3R3	Tested
0.8.0R1B5	0.9.3R3	Tested
0.9.1	0.9.1B2	Tested
0.8.7R1B1	0.9.1B2	Tested
0.8.2R1	0.8.7R1B1	Tested
0.8.0R1B5	0.8.7R1B1	Tested
0.8.0R1B5	0.8.2R1	Tested

Upgrade Instructions

Upgrade from a U-disk (USB Memory device)

WARNING: DO NOT shut off the instrument until the update is completed.

1. Copy the update file (*.ads) to a FLASH type U-disk, and then insert the U-disk into one of the USB host ports of the instrument. The firmwares after x.x.0.8.0 support both NTFS and FAT32 format.

2. Press the Utility button on the front panel, and press "*Maintenance* -> *Upgrade*". The following the menu should pop up and allow you to select the upgrade file
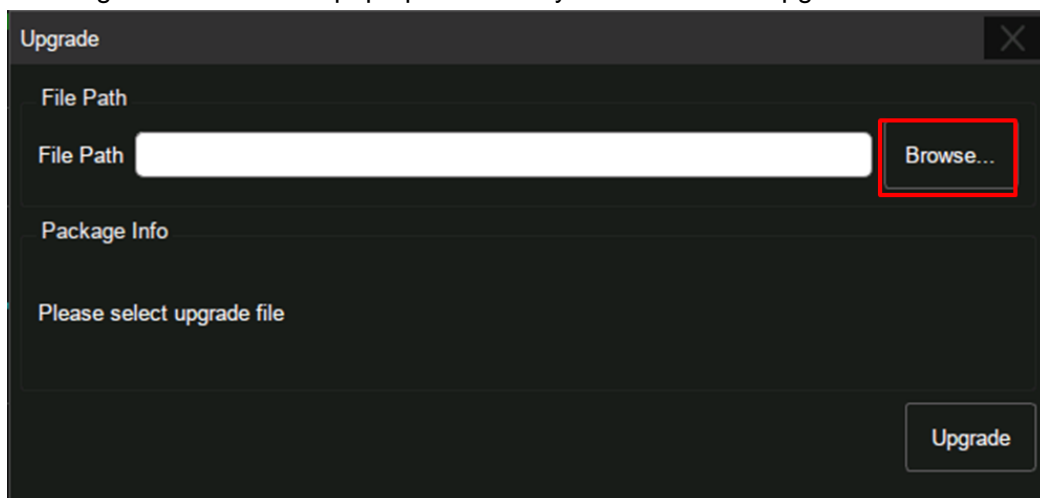
3. Click *Browse* in the menu above, select the correct update file (*.ads) in the pop-up File Manager, and then click *Recall*
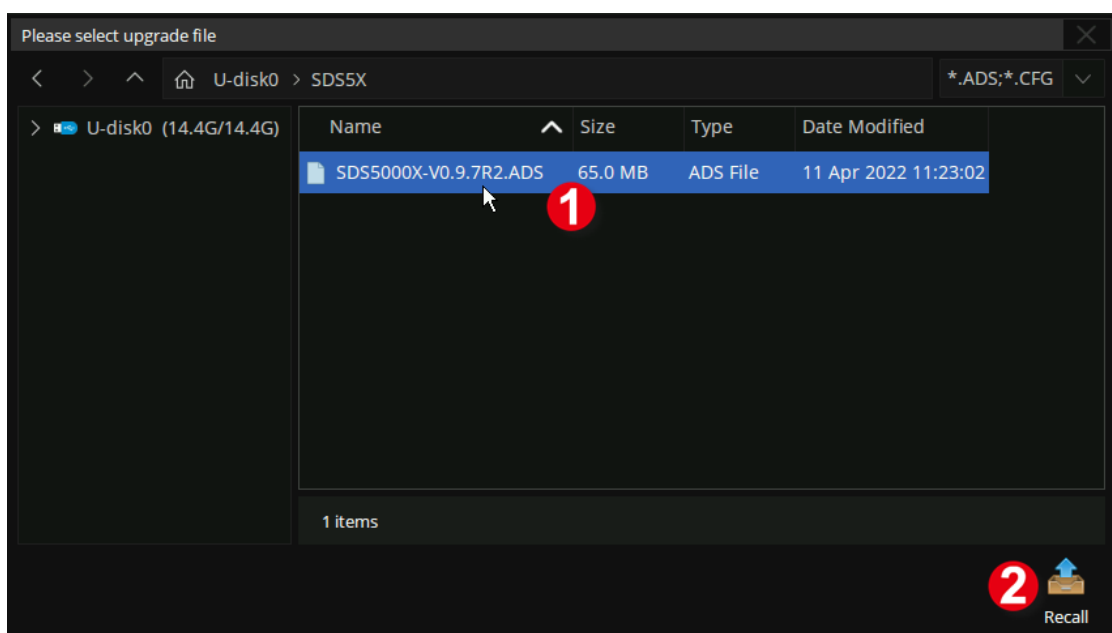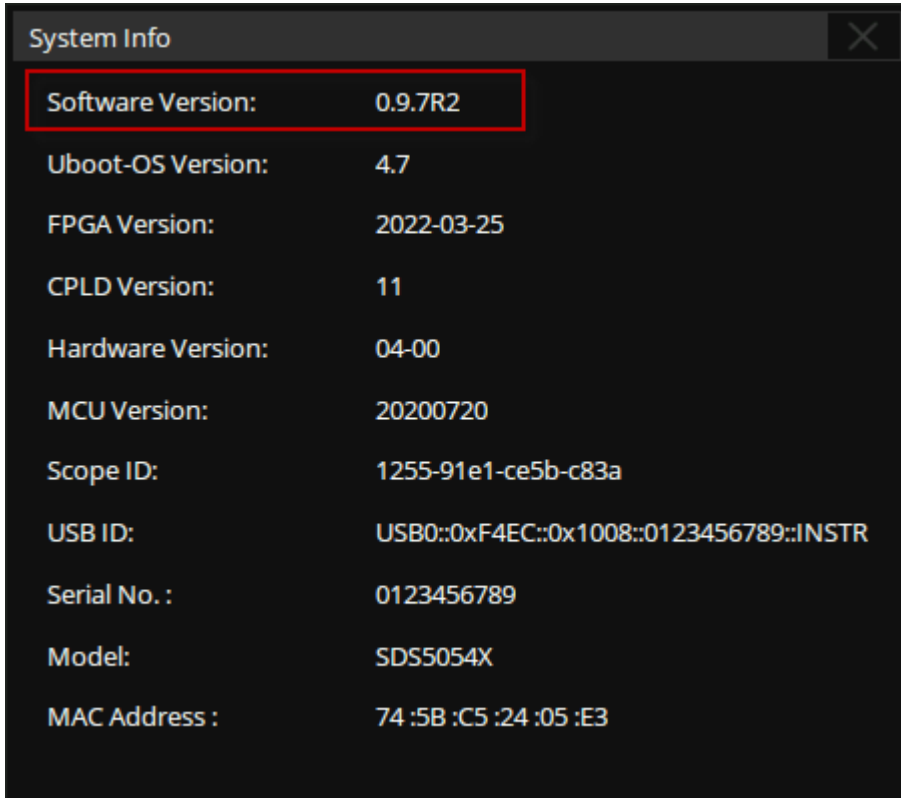
4. Click *Upgrade* to perform the upgrade operation:
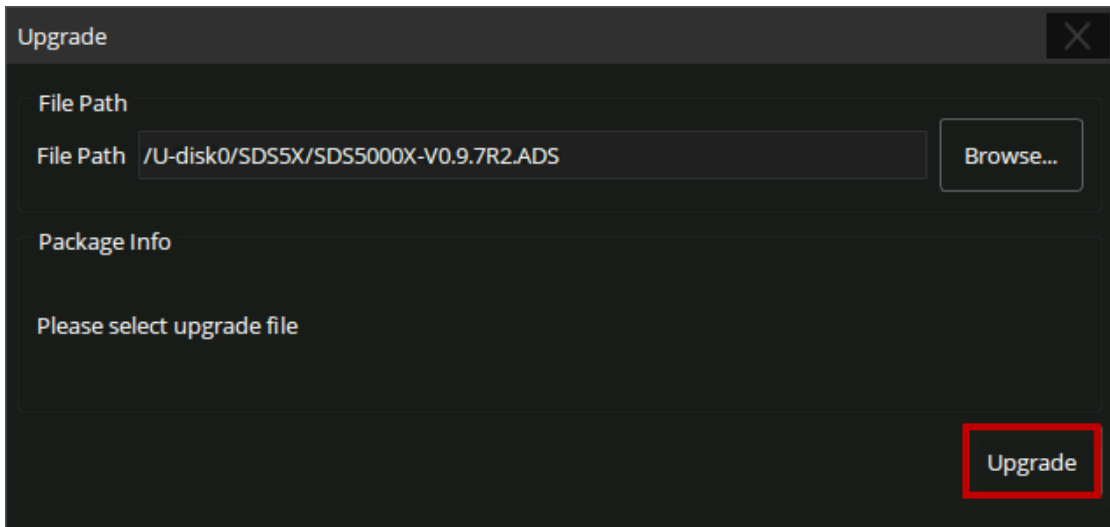
5. The system will first copy and verify the upgrade package. After the upgrade package is validated, the following interface will appear. Click *Reboot* to continue the upgrade, or click *Cancel* to cancel it.
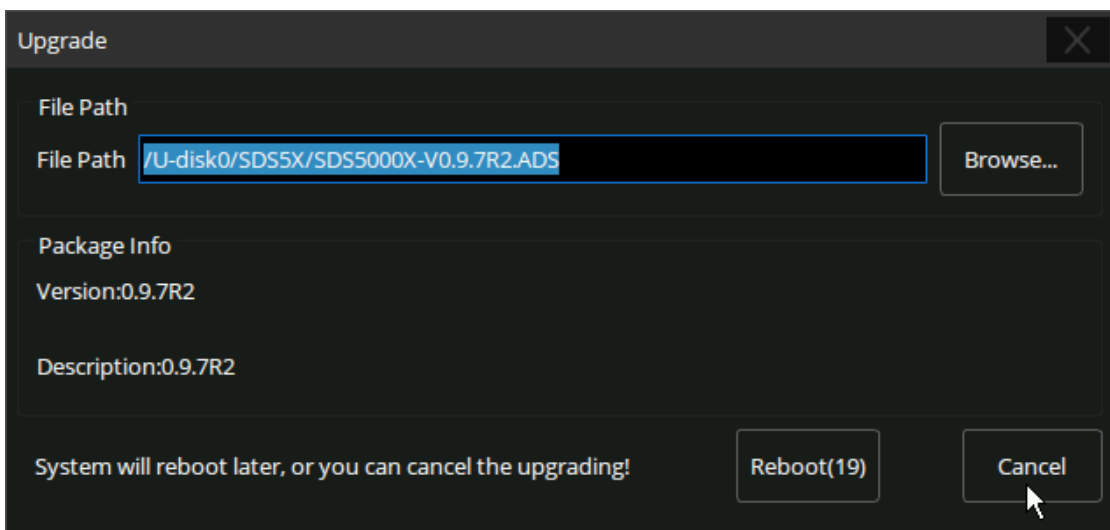
6. After the instrument reboots, check the version number through the Utility -> *System Info* to confirm if the upgrade is successful.

System Info	
Software Version:	0.9.7R2
Uboot-OS Version:	4.7
FPGA Version:	2022-03-25
CPLD Version:	11
Hardware Version:	04-00
MCU Version:	20200720
Scope ID:	1255-91e1-ce5b-c83a
USB ID:	USB0::0xF4EC::0x1008::0123456789::INSTR
Serial No. :	0123456789
Model:	SDS5054X
MAC Address :	74 :5B :C5 :24 :05 :E3

WARNING: DO NOT shut off the instrument until the update is completed.

Upgrade from the Web Server

A built-in web server provides an approach to control the instrument by web browser. This process doesn't require any additional software to be installed on the controlling computer. Set the LAN port correctly (see the User Manual for details), input the IP address of the instrument in the browser address bar, and then the user can browse and control the instrument on the web.
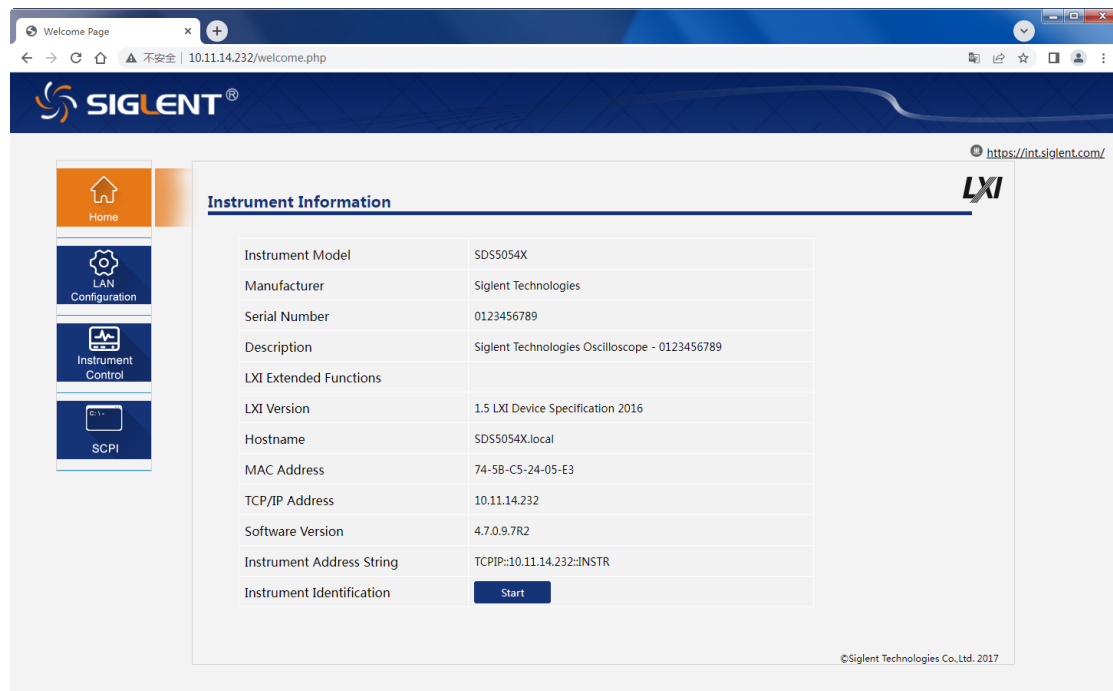
WARNING: DO NOT shut off the instrument until the update is completed.

1. Click the "FirmwareUpdate" button in the web interface

2. Select the correct update file (*.ads) stored on the computer. The instrument will automatically download the update file and perform the upgrade once the file is specified.

WARNING: DO NOT shut off the instrument until the update is completed.