Keysight InfiniiVision 6000A X-Series Oscilloscopes

Version 7.60.2023080421

Release Date:	15 September 2023
Instrument software version:	Revision 7.60.2023080421
File Name:	6000X.7.60.2023080421.ksx

Bug Fixes

This software revision includes the following Bug fixes:

- Corrected SCPI query return result for :CHANnel<n>:BANDwidth?

KEYSIGHT

Version 7.57.2023033130

Release Date:	17 April 2023
Instrument software version:	Revision 7.57.2023033130
File Name:	6000X.7.57.2023033130.ksx

Bug Fixes

This software revision includes the following Bug fixes:

- Corrected change in measurement value and probe attenuation for auto-attenuation probes when an acquisition is stopped. Applies to:

  o N7026A

  o DP0010A, DP0011A, DP0012A, DP0013A

  o PP0004A with PP0001A, PP0002A, PP0003A

- For analog channels, a $50\,\Omega$ impedance setting is no longer persisted when the scope power is cycled.

- Fixed FFT Analysis power measurements failing to start when installed using SCPI commands. Applies to:

  o :MEASure:FFT:ACPR

  o :MEASure:FFT:CPOWer

  o :MEASure:FFT:OBW

  o :MEASure:FFT:THD

Version 7.56.2022120226

Release Date:	15 December 2022
Instrument software version:	Revision 7.56.2022120226
File Name:	6000X.7.56.2022120226.ksx

Bug Fixes

This software revision includes the following Bug fixes:

- Corrected measurement results that indicate "No Signal" after executing a Single or Stopping an acquisition.
- Fixed DP0001A probe from reverting to 500:1 attenuation after executing a Single or Stopping an acquisition.
- Corrected SPI triggering on a serial data string > 32 bits.

Known Problems

This software revision includes the following known problem:

- Removed the following fix that was added in version 7.55.2022071828:
- Corrected change in measurement value and probe attenuation for auto-attenuation probes when an acquisition is stopped. Applies to:
  - o N7026A
  - o DP0010A, DP0011A, DP0012A, DP0013A
  - o PP0004A with PP0001A, PP0002A, PP0003A

Version 7.55.2022071828

Released Date:	29 July 2022
Instrument software version:	Revision 7.55.2022071828
File Name:	6000XSeries.7.55.2022071828.ksx

New Features

This software revision includes the following new capabilities:

- Added support for the new 250MHz to 1.7GHz differential probes:

  o *DP0010A, DP0011A, DP0012A, DP0013A*

- Added support for the 6GHz power rail probe:

  o *N7024A*

Bug Fixes

This software revision includes the following Bug fixes:

- Corrected setup file recall to retain labels in firmware releases after 7.55.

- Fixed phase measurement to measure from correct percentage point.

- Corrected change in measurement value and probe attenuation for auto-attenuation probes when an acquisition is stopped. Applies to:

  o N7026A

  o DP0010A, DP0011A, DP0012A, DP0013A

  o PP0004A with PP0001A, PP0002A, PP0003A

- Increased allowable maximum size of CAN .dbc symbolic files

KEYSIGHT

Version 7.50.2021102830

Released Date:	12 November 2021
Instrument software version:	Revision 7.50.2021102830
File Name:	6000XSeries.7.50.2021102830.ksx

Bug Fixes

This software revision includes the following Bug fixes:

- Corrected issue where WaveGen inversion disappears at 50% duty cycle.

- Corrected issue where remote command :WMEM1:SAVE MATH1 does not behave the same as the front panel operation.

- Fixed incorrect scaling issue with N282xA probes

- Corrected firmware update failure (AUX-V)

- Corrected offset range at 1M Ohm. Changed to +/- 40V from +/- 100V.

Version 7.40.2021031202

Released Date:	26 March 2021
Instrument software version:	Revision 7.40.2021031202
File Name:	6000XSeries.7.40.2021031202.ksx

New Features

This software revision includes the following new capabilities:

- Added support for the following new perpetual software licenses:

  o *D6000GENB, D6000AERB, D6000AUTB, D6000PWRB, D600USBB, D6000BDLB*

- Added support for the new Hi-Z+ passive probes and adapter:

  o PP0001A/2A/3A Hi-Z+ passive probes

  o PP0004A Hi-Z+ Adapter

Bug Fixes

This software revision includes the following Bug fixes:

- Corrected wrong number of points returned for the first acquisition after changing acquisition settings.

- Corrected remote segments (WAV:SEGM:ALL ON) in ASCII format sends the wrong amount of data

Version 7.35.2020120822

Released Date:	15 December 2020
Instrument software version:	Revision 7.35.2020120822
File Name:	6000XSeries.7.35.2020120822.ksx

New Features

This software revision includes the following new capabilities:

- Added enhanced security:

    o *DSOX6SECA*

Enhancements

This software revision includes the following new enhancements:

- Chart serial signal for CAN, LIN, and SENT protocols.

- Measurement limit test available with any bundled software license that includes mask testing.

- Channel external scaling.

- In Averaging acquisition mode, "Single" makes the number of acquisitions to average, then stops.

- Web interface VNC authentication.

- Band-pass filter math function.

- SCPI command additions and changes.

- Initial condition option on integrate math function.

- USB test software.

- Delay measurements thresholds settings.

Bug Fixes

This software revision includes the following Bug fixes:

- Corrected CAN load counter freezes on SBUS2

- Restored Lister Data save option to the web interface.

- Corrected license files corrupted by email servers.

Version 7.31.2020012834

Released Date:	26 February 2020
Instrument software version:	Revision 7.31.2020012834
File Name:	6000XSeries.7.31.2020012834.ksx

New Features

This software revision includes the following new capabilities:

- Added support the new 400MHz high voltage differential probe:

    o *DP0001A*

Enhancements

This software revision includes the following new enhancement:

- Added the oscilloscope's Host ID to the About Oscilloscope dialog. The Host ID is used to redeem licenses.

Bug Fixes

This software revision includes the following Bug fixes:

- Changed the My Support Subscriptions table to show N/A for the Support Expiration and Status of legacy perpetual licenses, versus Expired.

- Changed the Installed Options section of the instrument web page to show N/A for the Support Expiration and Status of a legacy perpetual license, versus Expired.

- Networked printing via CUPS print server works correctly.

Version 7.30.2019051434

Released Date:	29 May 2019
Instrument software version:	Revision 7.30.2019051434
File Name:	6000XSeries.7.30.2019051434.ksx

CAUTION	At the end of the upgrade process, the oscilloscope will automatically reboot to finish the installation. If the screen goes blank, or white during the upgrade, do not turn off the power, but rather, wait for the oscilloscope to reboot. Turning off the power during the upgrade could result in your oscilloscope becoming non-operational, requiring it to be sent to a Keysight service center to be repaired.

NOTE	Due to a lack of browser support for Java-based applications, support for the legacy Java-based remote front panel has been removed. A modern HTML5-based remote front panel is available.

New Features

This software revision includes the following new capabilities:

- Added support for the following new models:

    o *D6000AUTA, D6000GENA, D6000AERA, D6000PWRA, D3000USBA, D6000BDLA*

Enhancements

This software revision includes the following new enhancements:

- Frequency Response Analysis (FRA):

    o The sweep frequency range is no longer limited to decade values.

    o The "points per decade" setting has been changed to "total points" for ease of use.

    o Chart:

        ▪ Minor gridlines for the horizontal axis are now shown to improve readability of the plot.

- - - The chart's horizontal display range is now independent of the Start/Stop Frequency setting in the Setup Menu.

- The full waveform data can now be exported while in Roll Mode.

- The `:WAV` subsystem now includes commands to download all segmented memory data in one shot.

- Measurement Trend Math can now be applied on Digital channels.

- The ":MEASure:YATX" and ":MEASure:TEDGe" measurements, previously a SCPI-only operation, are now accessible from the Measurement Menu.

- Added Slew Rate measurement.

- The Delay and count-based measurement can now be applied on Digital channels.

Bug Fixes

This software revision includes the following Bug fixes:

- Corrected the NRZ serial decode from having an extra bit than the frame size when the Start-Bit is 0.

- Corrected ":MEASure:DELay:DEFine" for not accepting a definition that includes the "FALLing" edge parameter.

- Corrected the Reference Waveform data (.h5) from incorrectly saving data with twice the delay where is a delay on the displayed waveform.

- Corrected ":MEAS:SHOW?" always returning "1" regardless of the actual state.

- Fixed various LIN LDF file-parsing bugs.

- Fixed various issues related to the N7026A probe.

Changes

- As of version 7.30, the VNC server software for the remote front panel functionality is no longer bundled with the scope software by default. Upgrading to 7.30 will not delete the VNC server software from the scope, but new scopes will no longer ship with the VNC server software installed. For scopes without the software installed, the Browser Web Control page will provide a link for installing the software.

Version 7.20

Released Date:	26 October 2017
Instrument software version:	Revision 7.20.20171026
File Name:	6000XSeries.7.20.2017102614.ksx

New Features

This software revision includes the following new capabilities:

- Added USB-PD (Power Delivery) triggering and decode option (DSOX6UPD).

Enhancements

This software revision includes the following new enhancements:

- Added a SPI decode control for MISO bit delay.

- Added SENT SPC support.

- Minimum Manchester baud rate was decreased to 500bps.

- Added remote commands for gain margin and phase margin.

- Added a FRA option to display either gain or phase separately.

- Added :DISPlay:MESSage:CLEar command to dismiss "File Saved Successfully" message.

- Added remote command for setting FRA single-mode frequency.

- FRA now allows up to 100 points-per-decade.

- Random trigger holdoff is now allowed in additional trigger modes.

- Added support to load reference waveforms programmatically.

- Added support for the N7026A probe.

Bug Fixes

This software revision includes the following Bug fixes:

- An issue with handling CAN DBC signed integers has been corrected.

- Two channel measurements made with the N2820A probe are now functioning correctly.

Version 7.10

Released Date:	10 April 2017
Instrument software version:	Revision 7.10
File Name:	6000XSeries.7.10.2017041001.ksx

New Features

This software revision includes the following new capabilities:

- Added CXPI triggering and decode option (DSOX6CXPI).

- Added Frequency Response Analyzer option (DSOX6FRA).

- Added Manchester/NRZ serial decode option (DSOX6NRZ).

Enhancements

This software revision includes the following new enhancements:

- The measurement system has been updated to provide more flexibility to support new measurements with more complex configurations. Some installed measurements will not be recallable if the setup (.scp) file was created with firmware prior to version 7.10.

- Users can now pick specific edges to be used by the Delay measurement.

- Bartlett is now supported as an FFT window choice.

- Added remote interface command logger.

- The UART serial decode now supports baud rates to 12Mbits/s.

- DVM and training signals are now standard features.

- Added random trigger holdoff feature.

- Added Channel Power, Occupied Bandwidth, Adjacent Power Ratio, and Total Harmonic Distortion measurements.

Bug Fixes

This software revision includes the following Bug fixes:

- Fixed an issue where in certain circumstances the Serial Lister would not properly display some UART data.

- Fixed an issue where in certain circumstances the Peak-Peak measurement was incorrect.

Oscilloscope Firmware Version 6.12

Release Date:	7 January 2016
Instrument software version:	Revision 6.12
File Name:	6000XSeries.06.12.2016010702.ksx

Enhancements

- Improved some German translations.

Bug fixes

- Fixed coordinate error during Zone Trigger demo.

- Fixed layout issue in Raster video dialog.

- Fixed Single not accumulating mask test results.

- Fixed color grade bin label order in Analysis Results save.

Keysight InfiniiVision 6000 X-Series Oscilloscopes Release Notes

Oscilloscope Firmware Version 6.11

Release Date:	5 November 2015
Instrument software version:	Revision 6.11
File Name:	6000XSeries.06.11.2015103000.ksx

Enhancements

- Support has been added for the N7020A probe to operate on all four channels when the oscilloscope's hardware supports this. Contact your Keysight representative for service options if after installing this version of firmware your scope reports that a desired channel is not supported.

- Localization of more Help subjects and GUI text has been added.

Bug fixes

- Histogram display now works more reliably across segments when using the 'Analyze All Segments ' capability

- A Device Clear sent over the USB interface will now work more reliably.

- Available selections for the bandwidth limit filters have been corrected.

Oscilloscope Firmware Version 6.10

Release Date:	22 July 2015
Instrument software version:	Revision 6.10
File Name:	6000XSeries.06.10.2015061700.ksx

New Features

This software revision includes the following new capabilities:

- DSOX6SENSOR - SENT serial triggering and decode option support has been added.

- DSOX6AUTO – Has been expanded to support CAN-FD signal trigger and decode capabilities, including ISO support.

- CAN-FD eye testing support has been added to DSOX6AUTO option.

- LIN Symbolic decoding support has been added to DSOX6AUTO option.

- DSOX6POWER option now includes Class D harmonics measurements, including mA/W.

- Control Loop measurements for gain and phase have been added to the DSOX6POWER option.

- DSOX6POWER option also supports Keysight's N7020A Power rail probe.

- Bitrate measurement has been added.

- Single shot capability has been added to the Waveform Generator.

- Adjustable phase has been added to dual WaveGen tracking and frequency tracking modes.

- N2804A/N2805A 100MHz/300MHz differential probe support has been added.

- N7020A Power rail probe support has been added.

- Gated FFT capability has been added.

- New math operator has been added - Envelope.

- New training signals have been added: Sine with Harmonics Distortion; Square wave with Sinusoidal Noise Coupling; SENT; CAN-FD; Keysight Arbitrary waveform.

Enhancements

- Product SW has been branded as Keysight.

- User configurable sidebar capability has been added.

- Annotations have been expanded to 10 annotations.

- Waveform label lengths have been increased to 32 characters.

- DSOX6POWER – Several new capabilities have been added.

- Real Time Eye usability improvements – allow scope control while running, added auto-setup function.

- Real Time Eye acquisition can now be stopped via remote front panel operations.

- Math now allows other 2 source math functions as a source for a subsequent 2 source math function.

- For InfiniiMax 1130 family of probes, support has been added for 2.2:1 differential SMA probe heads

Bug Fixes

- DSO6XPOWER – Several issues have been addressed.

- The Averaging math operator now handles the output of several other operators better (square root, low pass filter, high pass filter).

- In DSOX6AUTO, LIN2.x mode checksums are now calculated correctly.

- Histograms counts will now increment after a SINGLE acquisition.

- Long folder names on thumb drives are now supported.

- :HISTogram:WINDow:SOURce?– Now supports a CGRADE selection.

Oscilloscope Firmware Version 6.00

Release Date:	September 2014
Requirements category (e.g., instrument software version):	Revision 6.00
File Name:	6000XSeries.06.00.2014091001.agx

Initial Release