

Keysight SD1 3.x Software

This document contains latest information on the Keysight SD1 3.x software for M310xA Digitizers, M320xA AWGs and M330xA AWG & Digitizer Combinations.

Related Documents

For detailed information, refer to the following Help documents. The Online Help format can be accessed from within the SD1 3.x Software after installation.

Document name	Location	Format
SD1 3.x Software Startup Guide	M3201A PXIe Arbitrary Waveform Generators Document Library	PDF
SD1 3.x Software for M320xA / M330xA Arbitrary Waveform Generators User's Guide	M3202A PXIe Arbitrary Waveform Generators Document Library	
SD1 3.x Software for M310xA / M330xA Digitizers User's Guide	M3100A PXIe Digitizer Document Library	
	M3102A PXIe Digitizer Document Library	
	M3300A PXIe AWG & Digitizer Combo Document Library	
	M3302A PXIe AWG & Digitizer Combo Document Library	
AWG User Guide.htm	C:\Program Files\Keysight\SD1\help\M32_M33XX_AWG	WebHelp
DigitizerUser Guide.htm	C:\Program Files\Keysight\SD1\help\M31_M33XX_Digitizer	WebHelp

SD1 3.x Software

Release Version 3.01.10

Released Date	6 th January, 2021
Operating System	Microsoft Windows 10 (x64 bit)
HVI Core	1.4.3 (alpha)
HVI Engine	0.17.9
Board Support Package (BSP)	0.2.139.0
Firmware Update Packages (Upgrade FW for SW & BSP compatibility)	M3202A (AWG 1G) FW version >= 4.01.20 M3201A (AWG 500) FW version >= 4.02.85 M3102A (DIG 500) FW version >= 2.01.60 M3100A (DIG 100) FW version >= 2.01.02 M3302A (COMBO 500 500) FW version >= 4.01.02 M3300A (COMBO 500 100) FW version >= 4.01.53
File Name:	SD1software_3.01.10_installer.exe

Changes

- Updated SD1 version 3.1 FirmWare to support HVI engine 0.17.9 and SD1 version 3.1 Software supports HVI core 2020 U1 (1.4.3_alpha).
- Modified both SD1 SFP and wrapper interfaces to support x64 architecture only. Removed 32-bit support in SD1 SFP from version 3.1 onwards.
- Modified location of SD1 API libraries to *C:\Program Files\Keysight\SD1\Libraries*.
- Added support for BSP (-FP1 option) on M3100A, M3300A and M3302A modules.
- Added support for Variable Clock (-CLV) option on M3202A and M3201A modules, with synchronization currently restricted to default clock frequency only.
- Added support for LabVIEW and MATLAB programming in SD1 software API.
- Modified list in SD1 SFP Hardware Manager to display firmware versions that are compatible with SD1 version 3.1 only. Incompatible (backward) firmware versions will not be displayed.
- Installing / Upgrading to SD1 version 3.1 is mandatory prior to upgrading module with the latest FW versions, which are compatible with SD1 3.1 software and latest BSP version.
- Fixed issue with Trigger IO Read on M3100A and M3300A modules.
- Added new APIs to configure sandbox registers and to obtain Kernel UUID from K7z bitfile.
- Modified certain APIs to verify that the values you input for the related parameters are within the defined range.

Known behavior

- Temp files, which are generated when FPGAconfigureFromK7z() and FPGALoad() APIs are called, are not deleted automatically when using Spyder IDE only.
- Keysight does not recommend simultaneous loading of bitstream files to more than one module.
- Modules with variable clock (-CLV) option currently do not support synchronization with clock frequencies different from the default clock frequency.
- SD1 SFP may show performance degradation upon setting higher number of acquisition points.

Release Version 3.0.95

Released Date	30 th September, 2020
Operating System	Microsoft Windows 10 (x64 bit)
HVI Core	1.0.14
HVI Engine	0.17.8
Board Support Package (BSP) (for M3202A, M3201A and M3102A modules only)	0.2.101.0
Firmware Update Packages (Upgrade FW for latest BSP compatibility on supported modules)	M3202A (AWG 1G) FW version >= 4.00.95 M3201A (AWG 500) FW version >= 4.02.65 M3102A (DIG 500) FW version >= 2.01.40 M3100A (DIG 100) FW version >= 2.00.30 M3302A (COMBO 500 500) FW version >= 4.00.31 M3300A (COMBO 500 100) FW version >= 4.01.32
File Name:	SD1software_3.00.95_installer.exe

Changes

- Updated HVI Core 1.0.14 and HVI Engine 0.17.8 in SD1.
- Added 48-bit HVI register support on all AWG and DIG modules.
- Added Literals APIs for DIG HVI instructions.
- Fixed defects in M3100A DIG 100, M3201A AWG 500, M3202A AWG 1G modules and Soft Front Panel (SFP).

Release Version 3.0.89

Released Date:	17 th August, 2020
Operating System:	Microsoft Windows 10 (x64 bit)
HVI Core	1.0.2
HVI Engine	0.17.1
Supported Modules (with corresponding Firmware version)	M3100A (DIG 100) FW version >= 2.0 M3102A (DIG 500) FW version >= 2.0 M3201A (AWG 500) FW version >= 4.0 M3202A (AWG 1G) FW version >= 4.0 M3300A (COMBO 500 100) FW version >= 4.0 M3302A (COMBO 500 500) FW version >= 4.0
File Name:	SD1software_3.00.89_installer.exe

New Features

- Modules supported for HVI integration using KS2201A PathWave Test Sync Executive software
 - M3202A AWG 1G (Fixed Clock) (4 CH) (FPGA - K16 / K32 / K41)
 - M3201A AWG 500 (Fixed Clock) (4 CH) (FPGA - K16 / K32 / K41)
 - M3102A DIG 500 (Fixed Clock) (4 CH) (FPGA - K16 / K32 / K41)
 - M3100A DIG 100 (Fixed Clock) (4 CH) (FPGA - K32 / K41)
 - M3302A Combo 500-500 (Fixed Clock) (2 CH AWG, 2 CH DIG) (FPGA - K41)
 - M3300A Combo 500-100 (Fixed Clock) (2 CH AWG, 4 CH DIG) (FPGA - K41)
- BSP (PathWave FPGA) Support for M3202A AWG 1G, M3201A AWG 500, M3102A DIG 500
- Software Interfaces Supported : Python, .NET, C++