

# Keysight SD1 software

## 2.01.17 Version Information

|                    |  |
|--------------------|--|
| Released Date:     | November, 2017   |
| Operative systems: | Microsoft Windows XP<br>Microsoft Windows 7, 10 (32-bit and 64-bit OS)<br>openSUSE Leap 42.1 64-bit OS |
| Supported Modules: | M3100A, M3102A, M3201A, M3202A, M3300A, M3302A   |
| File Name:         | Windows: SD1software_2.01.17_installer.exe<br>Linux: SD1software-2.01.17_x86_64.rpm                    |

## New Features

- Added support for new module calibration for:
  - M3300A with HW minor version  $\geq 10$ . For example, version 4.10 or 3.10.
  - M3100A with HW minor version  $\geq 2$ . For example, version 4.02 or 3.02.
- AWG's frequency setter returns the frequency that really is set in the channel.

## Bug Fixes

- AWG's IQ modulation setup.
- AWG waveform reload.
- When a binary file is loaded to FPGA of module, the correspondent error is returned if file is invalid. In older versions, the compatibility error was wrongly returned.

## 2.01.15 Version Information

|                    |  |
|--------------------|--|
| Released Date:     | August, 2017   |
| Operative systems: | Microsoft Windows XP<br>Microsoft Windows 7, 10 (32-bit and 64-bit OS)<br>openSUSE Leap 42.1 64-bit OS |
| Supported Modules: | M3100A, M3102A, M3201A, M3202A, M3300A, M3302A   |
| File Name:         | Windows: SD1software_2.01.15_installer.exe<br>Linux: SD1software-2.01.15_x86_64.rpm                    |

## New Features

- Added support for Windows 10 Operative System.
- Module chassis detection when more than one chassis is connected.
- Removed unused trigger mode on triggerIOconfig functions.
- Added triggerIOconfigV5 for Virtex 5 legacy AWGs.
- Added sync mode parameter to triggerIOwrite functions.

## Bug Fixes

- Improved clock initialization to eliminate one-sample start-up skew between channels in M3202A.
- Improved M32x clock configuration to support 1Hz resolution and delay response.
- Improved digitizer scope auto-mode capture.

## 2.01.07 Version Information

|                    |  |
|--------------------|--|
| Released Date:     | June, 2017   |
| Operative systems: | Microsoft Windows XP<br>Microsoft Windows 7 (32-bit and 64-bit OS)<br>openSUSE Leap 42.1 64-bit OS |
| Supported Modules: | M3100A, M3102A, M3201A, M3202A, M3300A, M3302A   |
| File Name:         | Windows: SDIsoftware_2.01.07_installer.exe<br>Linux: SDIsoftware-2.01.07_x86_64.rpm                |

## New Features

- Sync/Immediate external triggers for AWGs (M320xA and M330xA) and DAQs (M310xA and M330xA).
- Added M3102A product support.
- Improved digitizer scope functionment.

## 2.01.05 Version Information

|                    |  |
|--------------------|--|
| Released Date:     | April, 2017  |
| Operative systems: | Microsoft Windows XP<br>Microsoft Windows 7 (32-bit and 64-bit OS)<br>openSUSE Leap 42.1 64-bit OS |
| Supported Modules: | M3100A, M3102A, M3201A, M3202A, M3300A, M3302A   |
| File Name:         | Windows: SDIsoftware_2.01.05_installer.exe<br>Linux: SDIsoftware-2.01.05_x86_64.rpm                |

## New Features

- Added M3302A product support.
- Added *DAQcounterRead* function to M310xA modules.
- Software Front Panel:
  - Digitizer scope data can be saved to file.
  - Added digitizer prescaler compatibility on scope.

## Bug Fixes

- Fixed *getSerial* functions on Python.
- Changed return type of AIN buffer pool on .NET from long-array to short-array.
- Changed waveform load and queue limits from 240 to 1024 on M320xA module.

## 2.01.00 Version Information

First software release.

|                    |  |
|--------------------|--|
| Released Date:     | March, 2017  |
| Operative systems: | Microsoft Windows XP<br>Microsoft Windows 7 (32-bit and 64-bit OS)<br>openSUSE Leap 42.1 64-bit OS |
| Supported Modules: | M3100A, M3102A, M3201A, M3202A, M3300A, M3302A   |
| File Name:         | Windows: SD1software_2.01.00_installer.exe<br>Linux: SD1software-2.01.00_x86_64.rpm                |

## Features

- SD1 driver for SD1 modules
- Full custom control of SD1 modules with programming libraries:
  - C/C++, .NET 3.5/4.5, LabVIEW, MATLAB (using .NET), Python, Borland
  - New open module functions are added in order to make compatible the channel facing numbers with legacy models. For instance, using C++ and DIG module we have these new methods with a new compatibility parameter:

```
int SD_AIN::open(const char* productName, const char* serialNumber, int compatibility);
int SD_AIN::open(const char* productName, int chassis, int slot, int compatibility);
```

The channels on new Keysight SD1 compatible modules are labeled from 1 while on legacy modules the labeling starts from 0. Modules are opened by default with the channel enumeration indicated in the front panel. However, it is possible to open the modules in compatibility mode, forcing the channel enumeration to start from 0 or from 1 depending on the selected option and regardless of the module version. This option is useful when new and legacy modules coexist or when the software must be compatible with both legacy and new modules.

- Software front panel for each module