

## Release Notes

# Keysight M8131A Digitizer

## Version 3.0.2.1 Information

Released Date:	14 August 2019
Operating System:	<ul style="list-style-type: none"><li>• Windows 10 (32 bit or 64 bit)</li><li>• Windows 8.1 (32 bit or 64 bit)</li><li>• Windows 7 (32 bit or 64 bit)</li></ul>
Hardware Revision:	3.0
File Name:	M8131_Setup.exe

## New Functionality

- Increased capture memory size to 1.6 GSa per module.
- Support for option -01n.
- Added frequency response flatness calibration.
- Provide user access to frequency response data as well as correction FIR filter taps.
- Added deterministic latency calibration in combination with Keysight M8121A AWG.
- Added instrument calibration for modules with options -01n, -06n, -13n using Keysight N2136A calibration module.
- Significantly reduced M8131A calibration time for modules with options -FDn.
- Added SCPI commands for M8131A calibration control.
- Trigger support. Trigger on External Input and trigger on waveform including hold-off capability.
- Display spectrum in DDC mode in the SFP
- Added 8 GHz clock loss handling.
- Detection of input overload and output clipping inside the correction FIR filter.
- Enhanced ODI link activation process to ensure ODI interoperability across various instruments.
- Various usability as well as performance improvements.

## Addendum to the User's Guide

- N/A

## Breaking Changes

- SCPI command: `WAVEform:SOURce:` is now deprecated. Use the channel parameter for the queries below instead:
  - `WAVEform:DATA? CHANnel(1|2|3|4), start, size`
  - `WAVEform:XORigin? CHANnel(1|2|3|4)`
  - `WAVEform:XINCrement? CHANnel(1|2|3|4)`
  - `WAVEform:YORigin? CHANnel(1|2|3|4)`
  - `WAVEform:YINCrement? CHANnel(1|2|3|4)`

## Fixed Defects

- Fixed defects in SCPI commands, ODI as well as the SFP.

## Known Issues

- If too many traces are displayed at the same time in the SFP with of very long captured data, the software runs out of memory on certain PC.

## Version 2.1.18.0 Information

Released Date:	08 February 2019
Operating System:	<ul style="list-style-type: none"> <li>• Windows 10 (32 bit or 64 bit)</li> <li>• Windows 8.1 (32 bit or 64 bit)</li> <li>• Windows 7 (32 bit or 64 bit)</li> </ul>
Hardware Revision:	3.0
File Name:	M8131_Setup.exe

## New Functionality

- Keysight 89600 VSA software supports scaling for -13n and -06n.
- Various usability as well as performance improvements.

## Addendum to the User's Guide

- New SCPI command :DIGitize:NDISplay  
This works like :DIGitize, but suppresses the display update to save time. Data is captured for all channels with the "Display On" checkbox checked. The GUI shows the last traces captured without :NDISplay, but when a "Display On" checkbox is unchecked and checked again, the corresponding trace is cleared.
- Added an optional channel parameter to some SCPI queries that overrides the channel set with :WAVEform:SOURce:
  - WAVEform:DATA? [CHANnel(1|2|3|4),] start, size
  - WAVEform:YORigin? [CHANnel(1|2|3|4)]
  - WAVEform:YINCrement? [CHANnel(1|2|3|4)]

## Breaking Changes

- SCPI API/WAVEform subsystem: Removed WAVEform:FORMat and added a separate query WAVEform:DATA:BLOCK? for reading of captured data as binary block.
- SCPI API/ODI subsystem:
  - The command :ODI:PORT<N>:CSTATUS was renamed to :ODI:PORT<N>:CSTATUS to make it compliant with SCPI naming conventions.
  - Changed some enums (which were not compliant with SCPI naming conventions):
    - Direction
      - BIDirectional → BIDirection
      - DUAL → DUDirection
    - Flow Control
      - OOBBackplaneXXX → OOBbplaneXXX, with XXX in {0, 1, ..., 12}
    - Packet Format
      - NOHeader → NHeader
      - VWContext → VWContext

- Time Stamp Format
  - NOTimestamp → NTIMestamp
  - SAMPLEcount → SCOUNT

## Fixed Defects

- Sporadic overflow with DDC with decimation by 128 or by 256
- Various problems around 89600 VSA controlling the M8131A in multi-channel configurations, using -13n, -06n as well as changing the sample rate between 16GSa/s and 32GSa/s
- Many minor defects fixed.

## Known Issues

- N/A

## Version 2.0.5.1 Information

Released Date:	30 October 2018
Operating System:	<ul style="list-style-type: none"> <li>• Windows 10 (32 bit or 64 bit)</li> <li>• Windows 8.1 (32 bit or 64 bit)</li> <li>• Windows 8 (32 bit or 64 bit)</li> <li>• Windows 7 (32 bit or 64 bit)</li> </ul>
Hardware Revision:	3.0
File Name:	M8131_Setup.exe

## New Functionality

- Support new options: -FD1, -FD2, -FD4, -061, -062, -064, -131, -132.
- 16 GSa/s & 32 GSa/s operation.
- Control the M8131A through Keysight 89600 VSA software.
- Option – DDC: Digital-Down Conversion (DDC) & decimation.
- Option -STR: Streaming over ODI (Optical Data Interface) in 10-bit, 16-bit and 32-bit IQ data formats.

## Breaking Changes

- N/A

## Fixed Defects

- Many minor defects fixed.

## Known Issues

- N/A

## Version 1.1.7.1 Information

Released Date:	25 June 2018
Operating System:	<ul style="list-style-type: none"><li>• Windows 10 (32 bit or 64 bit)</li><li>• Windows 8.1 (32 bit or 64 bit)</li><li>• Windows 8 (32 bit or 64 bit)</li><li>• Windows 7 (32 bit or 64 bit)</li></ul>
Hardware Revision:	1.0
File Name:	M8131_Setup.exe

### New Functionality

- Raw data streaming in 10-bit format.

### Breaking Changes

- SCPI API: Changed enum names for WAVEform:SOURce from "CH1", "CH2", "CH3", "CH4" to "CHANnel1", "CHANnel2", "CHANnel3", "CHANnel4"

### Fixed Defects

- Many minor defects fixed.

### Known Issues

- N/A

## Version 1.0.4.1 Information

Released Date:	09 April 2018
Operating System:	<ul style="list-style-type: none"><li>• Windows 10 (32 bit or 64 bit)</li><li>• Windows 8.1 (32 bit or 64 bit)</li><li>• Windows 8 (32 bit or 64 bit)</li><li>• Windows 7 (32 bit or 64 bit)</li></ul>
Hardware Revision:	1.0
File Name:	M8131_Setup.exe

## Initial Release

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