

Release Notes

Keysight M8131A
Digitizer and
Keysight M8132A Digital
Signal Processor Module

Version 4.3.20.1 Information

Released Date:	September 13, 2023
Operating System:	Windows 10 (32-bit or 64-bit)
Hardware Revision:	3.0
File Name:	M8131_Setup.exe

New Functionality

- N/A

Addendum to the User's Guide

- N/A

Breaking Changes

- N/A

Fixed Defects

- M8132A: Certain settings in the "Control In/Out" section of the "IOs" tab not handled correctly.
- M8132A: "Trigger Input" and "Control In/Out" not routed correctly.

Known Issues

- M8131A: 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 4.3.1.0 Information

Released Date:	March 27, 2023
Operating System:	Windows 10 (32-bit or 64-bit)
Hardware Revision:	3.0
File Name:	M8131_Setup.exe

New Functionality

- N/A

Addendum to the User's Guide

- N/A

Breaking Changes

- N/A

Fixed Defects

- Streaming could not be started after deterministic latency calibration in combined mode.
- Under certain circumstances no data was transmitted when streaming was started.
- SCPI: query SYSTem:COMMunicate:HiSLip?returned the VXI-11 index instead of the HiSLIP index.

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 4.2.2.0 Information

Released Date:	31 January 2022
Operating System:	Windows 10 (32-bit or 64-bit)
Hardware Revision:	3.0
File Name:	M8131_Setup.exe

New Functionality

- M8131A: Added capability to synchronize with an external GPS signal generated by the M9506A AXIe chassis and generate time stamps based on this GPS signal.
- M8132A: Added usability enhancements for the FSP.

Addendum to the User's Guide

- N/A

Breaking Changes

- M8132A transitioned from using KF9000A to latest version KF9000B. RSP API is not supported by KF9000B anymore. RSP was removed from M8132A. RSP API is supported with M8131A/M8132A V4.1.2.0 in combination with KF9000A.

Fixed Defects

- M8131A: Resolved a problem regarding accuracy of time stamp generation.

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 4.1.2.0 Information

Released Date:	18 November 2020
Operating System:	<ul style="list-style-type: none"> • Windows 10 (32 bit or 64 bit) • Windows 8.1 (32 bit or 64 bit)
Hardware Revision:	3.0
File Name:	M8131_Setup.exe

New Functionality

- M8132A: Added new configurations to the BSP including API and SFP enhancements supporting 8 x 10Gb Ethernet interface and 3 x ODI.
- M8132A: Added a bidirectional parallel data interface for the BSP between FPGA A and FPGA B running at 16 x 22Gb/s.
- M8132A: Support of Trigger Out. Support of threshold adjustment for Trigger In.

Addendum to the User's Guide

- N/A

Breaking Changes

- N/A

Fixed Defects

- M8131A: Resolved trigger problems while controlled from 89600 VSA.
- M8131A: Resolved a sporadically occurring dead lock condition.
- M8131A: Resolved a problem with wrong units in the phase information returned by the SCPI query “:CHANnel<N>:DPRocessing:CHARacteris[:VALue]?”. Now it is always radians as documented.

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 4.0.15.2 Information

Released Date:	07 August 2020
Operating System:	<ul style="list-style-type: none">• Windows 10 (32 bit or 64 bit)• Windows 8.1 (32 bit or 64 bit)
Hardware Revision:	3.0
File Name:	M8131_Setup.exe

New Functionality

- N/A

Addendum to the User's Guide

- N/A

Breaking Changes

- N/A

Fixed Defects

- M8131A: 32GSa/s streaming over ODI.
- M8131A: Wrong segment length of the first segment in 'Segmented Variable VITA-49' streaming over ODI mode.
- M8131A: Hold-off time related trigger problems.

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 4.0.1.1 Information

Released Date:	5 June 2020
Operating System:	<ul style="list-style-type: none"> • Windows 10 (32 bit or 64 bit) • Windows 8.1 (32 bit or 64 bit)
Hardware Revision:	3.0
File Name:	M8131_Setup.exe

New Functionality

- Enhanced DDC modulation bandwidth in 16GSa/s mode to 3.2GHz and in 32GSa/s mode to 6.4GHz. NCO resolution improved.
- Enhanced DDC to support spectrum mirroring.
- Added -SEG segmented streaming capability.
- Added time stamp generation.
- Supports VITA-49 data formats for data streaming over ODI.
- Added synchronization capability for up to four M8131A digitizers.
- Enhanced data export capability to support additional data formats.
- Added various example programs in different programming languages.
- Enhanced the functionality of M8131A control through 89600 VSA
- Updated the User's Guide.

Addendum to the User's Guide

- N/A

Breaking Changes

- N/A

Fixed Defects

- Fixed defects in SCPI commands, ODI as well as the SFP.
- Fixed problems around 89600 VSA controlling the M8131A.

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 3.0.2.1 Information

Released Date:	14 August 2019
Operating System:	<ul style="list-style-type: none"> • Windows 10 (32 bit or 64 bit) • Windows 8.1 (32 bit or 64 bit) • Windows 7 (32 bit or 64 bit)
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"> • Windows 10 (32 bit or 64 bit) • Windows 8.1 (32 bit or 64 bit) • Windows 7 (32 bit or 64 bit)
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 → OOBPlaneXXX, 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"> • Windows 10 (32 bit or 64 bit) • Windows 8.1 (32 bit or 64 bit) • Windows 8 (32 bit or 64 bit) • Windows 7 (32 bit or 64 bit)
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">• Windows 10 (32 bit or 64 bit)• Windows 8.1 (32 bit or 64 bit)• Windows 8 (32 bit or 64 bit)• Windows 7 (32 bit or 64 bit)
Hardware Revision:	1.0
File Name:	M8131_Setup.exe

New Functionality

- Raw data streaming over ODI 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">• Windows 10 (32 bit or 64 bit)• Windows 8.1 (32 bit or 64 bit)• Windows 8 (32 bit or 64 bit)• Windows 7 (32 bit or 64 bit)
Hardware Revision:	1.0
File Name:	M8131_Setup.exe

Initial Release