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Analog Devices, Inc.

www.analog.com

SigmaStudio Release Notes

Document Status:	Approved
Approved By:	Automotive Software Team

Revision List**Table 1: Revision List**

Revision	Date	Description
0.1	22.04.2016	Draft Version. Taken from previous Release notes
0.2	25.04.2016	Updated for 3.13.1Beta
0.3	28.04.2016	Updated the Limitations.
0.4	29.04.2016	SQAE, SQAL review comments are addressed
1.0	29.04.2016	Approved and baselined.
1.1	16.06.2016	Added bug fix details for the 3.13.2 Beta
1.2	31.08.2016	Added details for 3.13 Release
1.3	07.09.2016	Updated Test results to the release notes.
2.0	07.09.2016	Baselined after Review and Approval
2.1	19.11.2016	Added details for 3.14.1Beta
2.2	25.11.2016	Updated for SQAE review comments.
3.0	26.11.2016	Baselined and approved
3.1	17.12.2016	Updated for 3.14 Release.
3.2	22.12.2016	Added Known Issues.
4.0	23.12.2016	Baselined after the review and approval.

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1 Introduction

The SigmaStudio graphical development tool is the programming, development, and tuning software for the SigmaDSP audio processors. Familiar audio processing blocks can be wired together as in a schematic, and the compiler generates DSP-ready code and a control surface for setting and tuning parameters.

1.1 Purpose

The purpose of this release is to extend TCP/IP channel support to various ICs, add various algorithms to module library and fix various bugs found in SigmaStudio tool.

1.2 Scope

This release contains the SigmaStudio installer in binary format.

1.3 Organization of the document

Section 1 to 5 details about the content of the releases, the changes or the features which got added

Section 6 captures the installation procedure for the SigmaStudio software tool.

Section 7 captures the known issues/ problems and work arounds for the issues in the release.

2 Release Information

2.1 Release Contents

Sl. No.	Release Item	Description	Version Details
1.	ADI_SigmaStudio-Rel3.14-x64.exe	64-bit Installer for SigmaStudio 3.14 Release	3.14 Release
2.	ADI_SigmaStudio-Rel3.14-x86.exe*	32-bit Installer for SigmaStudio 3.14 Release	3.14 Release
3.	SigmaStudio_3.14_Release_Notes.pdf	Release notes.(Refers this document)	3.14 Release

Table 2: Release Contents

Note: 32-bit installer shall not be supported from the next SigmaStudio release.

2.2 Hardware and Software Requirements

Pre-Requisite	Details
Hardware Requirements	<ul style="list-style-type: none"> • 256 MB of RAM (1GB recommended) • 50 MB of available hard disk space • 1024 x 768 screen resolution • USB 2.0 data port (Required for use with Evaluation hardware only)
Software Requirements	<ul style="list-style-type: none"> • Windows 7/ Windows 10 (x86/x64) • Microsoft .NET Framework 3.5

Table 3: Hardware and Software Requirements

3 Supported Features

Release Number	Release Date	Features Supported
3.14 Release	23-Dec-16	<ul style="list-style-type: none"> • TCP/IP Channel support is added for ADAU145x and ADAU144x • Wav Player algorithm is added for ADAU145x. • Asymmetric Soft Clippers modules are added for ADAU145x. • General FIR filter algorithm is added for ADAU145x. • IIR with slew is added for ADAU145x. • Loading from file option is added in index selectable filter. • Various bugs in 2nd Order filter Coefficient calculation is fixed for ADAU145x. • Critical bug in Mux and De-mux switches are addressed for ADAU145x. • Bug in SigmaStudioServer.dll which caused the MATLAB interface to fail is addressed. • Bug in pulse block is fixed for ADAU145x. • A minor bug in freeze schematic feature is addressed. • A bug in feedback cell addressed for AD71096. • Copy/paste functionality is improved.

Table 4: Supported Features

Please refer [‘Release Information’](#) section of [SigmaStudio wiki](#) page for details on the previous releases.

4 Performance Figures

MIPS and memory usage for each of the algorithms in the schematic can be found in the Output window of SigmaStudio.

5 Package Details

Installation Path (C:\Program Files\Analog Devices\SigmaStudio 3.14)

+---Docs

- | **2005-06-13-SigmaStudio EULA.pdf** - License Agreement
- | **SigmaStudio_3.14_Release_Notes.pdf** - Release Notes

+---Help

- | **SigmaStudioHelp.chm** - SigmaStudio help document

---USB drivers – USB drivers required for USBi connectivity to SigmaStudio

- | **SStudio.exe** – SigmaStudio Executable Application
- | **uninstall.exe** – Uninstaller for SigmaStudio Software
- | Other DLLs and support files used by the SigmaStudio tool.

6 Installation Information

To install SigmaStudio™ 3.14 or higher versions

1. Quit any applications you are running.
2. Delete any files in AppData (%APPDATA%/Analog Devices/SigmaStudio 3.14) before installation.
3. Double-click on the SigmaStudio 3.14 installer, "Sigma Studio xxx.exe", to start the installation.
4. Review the contents of the license agreement, if you agree click "I Agree".
5. SigmaStudio 3.14 may be installed alongside or over an existing copy of SigmaStudio, Select an existing installation directory if you wish to overwrite a previous SigmaStudio version.
6. If you are installing SigmaStudio for the first time, restart your computer when the installation is complete.

Note: The user must be an administrator when installing SigmaStudio.

7 Known Issues & Workarounds

7.1 Limitations

1. When the schematic is zoomed in or zoomed out, the controls in the schematic cannot be updated.
2. ADAU145X Master Control port interface modules, Master control port run time modules does not support SPI.

7.2 Known Problems

This section lists know problems which shall be fixed in the upcoming releases.

1. The following shortcuts do not work as expected.
 - a. Ctrl + L – Left align blocks
 - b. Ctrl + W – Allow real time testing
 - c. Ctrl + F – Freeze schematic
 - d. Ctrl + Q – Propagate sampling rate
2. 'Ctrl+C' cannot be used to copy the module's label alone
3. Freeze Schematics feature doesn't work when one uses Link Compile connect instead of Link Compile Download.
4. Mux/Demux modules shall not work as expected for ADAU145x ICs when grown for more than 1 channels.
5. Undo operation does not work with 'User Comment' and 'User Image' modules.
6. Block Size doesn't propagate when the board input is directly connected to board output.
7. Export file for Nth order filter contains duplicate parameters.
8. Transfer function is not working in Stimuli and Probe for Parametric EQ and General Eq (Coeff Calculation) filters
9. Loudness algorithm for ADAU145x causes some distortion.
10. I2C address in USBi for ADAU1966 does not match the data sheet.
11. Transfer function is not working for Parametric EQ, when multiple filters are added for ADAU145x
12. ADAU145x Flash Programmer will not work as expected if the 'Verify Target Memory' is not done after a write.
13. USBi status is not updated when 5 ICs are connected to USBi.

7.3 Work Arounds

1. 'Reset Zoom' before updating any controls/parameters.
2. Use options from the menu instead of shortcuts.
3. Labels can be copied by write click->copy instead of Ctrl+V shortcut
4. Close and reopen the schematic if the 'Flash Programmer' for ADAU145x is not working as expected.

7.4 Notes

1. Delete any files in AppData (%APPDATA%/Analog Devices/SigmaStudio 3.14) before SigmaStudio installation.

8 Usage Instructions

[SigmaStudio wiki page](#) in www.analog.com provides instruction on SigmaStudio Tool usage.

9 Technical Support

9.1 Contact information

Any bug in SigmaStudio, can be reported on the [Analog Devices EngineerZone forum for SigmaDSP](#). Description shall include the steps to reproduce the bug, implication, the version of SigmaStudio, and include any error messages from SigmaStudio.

Additional features or enhancements required for SigmaStudio can be submitted on the [Analog Devices EngineerZone forum for SigmaDSP](#).

9.2 Type of support

All technical queries, bug reporting, issues and feedbacks posted in the engineering zone shall be processed and responded accordingly based on the nature of the support required.

Terminology

Table 5: Terminology

Term	Description
GUI	Graphical User Interface
EQ	Equalizer
MB	Mega Bytes
USB	Universal Serial Bus
USBi	USB Interface
DLL	Dynamic Link Library
DSP	Digital Signal Processor
SPI	Serial Peripheral Interface

References

Table 6: References

Reference No.	Description
[1]	SigmaStudioHelp.chm
[2]	https://ez.analog.com/community/dsp/sigmadsp
[3]	https://wiki.analog.com/resources/tools-software/sigmastudio