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Analog Devices, Inc.

[www.analog.com](http://www.analog.com)

# SigmaStudio Release Notes

<b>Document Status:</b>	Approved
<b>Approved By:</b>	Automotive Software Head

## 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.
4.1	13.02.2017	Updated release notes for 3.15.1 Beta
4.2	13.02.2017	Copyright information is updated.
5.0	13.02.2017	Approved and baselined.
5.1	26.06.2017	Updated for 3.15.2 Beta Release.
5.2	28.06.2017	SQAE comments closed.
6.0	29.06.2017	Baselined after approval.
6.1	30.06.2017	Created Empty Feature list for next release.
6.2	15.09.2017	Release notes is updated for 3.15 Release
7.0	29.09.2017	Baselined
7.1	02.11.2017	3.16.1 Beta
8.0	03.11.2017	Baselined
8.1	17.11.2017	3.16.2 Alpha
8.2	20.11.2017	Resolved review comments
9.0	21.11.2017	Baselined after approval.
9.1	29.11.2017	3.16.3 Beta

10.0	01.12.2017	Baselined after approval.
10.1	08.12.2017	Updated for 3.16 Release.
10.2	21.12.2017	Closed review comments
11.0	21.12.2017	Baselined after approval for 3.16 Release
11.1	08.02.2018	Updated for 3.17 Release
11.2	09.02.2018	Closed SQA comments
12.0	12.02.2018	Baselined after ASH approval.
12.1	16.03.2018	Updated release notes for 4.0 Release.
13.0	21.03.2018	Release Notes Baselined
13.1	24.05.2018	Updated release notes for 4.1 Release.
13.2	30.05.2018	Minor mistakes corrected,
14.0	05.06.2018	Baselined after approval.
14.1	05.06.2018	Updated features section.
15.0	05.06.2018	Baselined after approval.

## **Copyright, Disclaimer Statements**

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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 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.

## 1.2 Scope

The scope of this release is to add multiple new algorithms for SigmaDSP family of processors and support and fix bugs reported in UI and the SigmaDSPs.

## 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-Rel 4.1 -x64.exe	64-bit Installer for SigmaStudio 4.1 Release	4.1 Release
2.	SigmaStudio_4.1_Release_Notes.pdf	Release notes. (Refers this document)	4.1 Release

Table 2: Release Contents

### 2.2 Hardware and Software Requirements

Pre-Requirement	Details
<b>Hardware Requirements</b>	<ul style="list-style-type: none"> <li>• 256 MB of RAM (1GB recommended)</li> <li>• 80 MB of available hard disk space</li> <li>• 1024 x 768 screen resolution</li> <li>• USB 2.0/3.0 data port (Required for use with Evaluation hardware only)</li> </ul>
<b>Software Requirements</b>	<ul style="list-style-type: none"> <li>• Windows 7/ Windows 10 (x64)</li> <li>• Microsoft .NET Framework 4.7</li> </ul>

Table 3: Hardware and Software Requirements



### 3 Supported Features

Release Number	Release Date	Features /Bug Fixes
4.1 Release	5-Jun-18	<p><b>Communication Channels:</b></p> <ul style="list-style-type: none"> <li>An issue which causes the USBi not to respond when the USBi is connected to USB3.0 port with Windows 10 OS is resolved.</li> </ul> <p><b>ADAU145x/ADAU146x:</b></p> <ul style="list-style-type: none"> <li>FFT, IFFT, <a href="#">Real FFT</a> and <a href="#">Real IFFT</a> algorithms are optimized for cycles.</li> <li>Compatibility with Real FFT output is added for <a href="#">Complex Magnitude</a>, <a href="#">Complex Multiplication</a>, <a href="#">Complex Conjugate Multiplication</a> and <a href="#">Complex Divide</a>.</li> <li>A bug in <a href="#">sine tone oscillator</a> when the growth is more than 4 is resolved.</li> <li>A bug in block division is resolved.</li> <li>Coefficients used in Analysis and Synthesis window is configurable now.</li> <li>Transfer function related issues are resolved in multiple filters.</li> <li>An UI issue in Digital Mic is resolved.</li> <li>Multiple issues in Master Control port modules are resolved for SPI.</li> <li><a href="#">Flash programmer</a> now supports an option to specify the starting address to program to.</li> <li><a href="#">WavPlayer</a> supports upto 16 file in a single instance.</li> <li>Compiler issues where the size of DM reported wrongly for ADAU146x is resolved.</li> </ul> <p><b>Others:</b></p> <ul style="list-style-type: none"> <li>Now the <a href="#">short parameter name feature</a> supports cells with multiple algorithm.</li> <li>Sequence file generated from sequence window can save the address in hexadecimal format now.</li> </ul>

**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 4.1)

+---Docs

| 2005-06-13-SigmaStudio EULA.pdf - License Agreement

|

+---Help

| SigmaStudioHelp.chm - SigmaStudio help document

|

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

|---Setup – Driver setup files.

| SStudio.exe – SigmaStudio Executable Application

| uninstall.exe – Uninstaller for SigmaStudio Software

| Other DLLs and support files used by the SigmaStudio tool.

### Documents Folder (Users Documents Folder)

+--- Sample Schematics – Sample schematics for SigmaStudio

+--- Speaker Measurement Samples – Speaker measurement sample files

## 6 Installation Information

To install SigmaStudio™ 4.1 or higher versions

1. Quit any applications you are running.
2. Delete any files in AppData (%APPDATA%/Analog Devices/SigmaStudio 4.1) before installation.
3. Double-click on the SigmaStudio 4.1 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 4.1 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.

### Notes:

1. The user must be an administrator when installing SigmaStudio.
2. When installing SigmaStudio 4.1 first time on Windows 7 PC, installation of .NET 4.7 Framework might show up the following error. Follow the steps provided in the [Microsoft Support page](#), if you face this error.



## 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.

### 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. Undo operation does not work with 'User Comment' and 'User Image' modules.
4. Block Size doesn't propagate when the board input is directly connected to board output/ multiple level boards are used.
5. Transfer function is not working for Parametric EQ, when multiple filters are added for ADAU145x
6. ADAU145x Flash Programmer will not work as expected if the 'Verify Target Memory' is not done after a write.
7. USBi status is not updated when 5 ICs are connected to USBi.
8. Block Schematic tab is not visible sometimes when multiple ICs are added in the Hardware Configuration tab.
9. When Freeze option is enabled, users have to save the schematic manually. Tool does not prompt warning when closed without saving.
10. Tracking Filter does not save the parameters in the schematic.
11. When Cell label is being edited, doing any zoom related operation causes exception.
12. Block schematic tab is not visible when multiple ICs are added and some ICs support block processing and some does not support block processing.

## **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 4.1) before SigmaStudio installation.

## **8 Usage Instructions**

[SigmaStudio wiki page](#) in [www.analog.com](http://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**

<b>Term</b>	<b>Description</b>
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**

<b>Reference No.</b>	<b>Description</b>