

SIEMENS EDA

Algorithmic C (AC) DSP Release Notes

Software Version v3.4.1
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SIEMENS

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Release 3.4.1

The following topics describes the changes that were made to the *Algorithmic C Digital Signal Processing* (AC DSP) library since the last release.

Enhancements

N/A

Corrected Issues

Corrected the banner text for each file.

Release 3.1.0

This release is the first open-source release of the *ac_dsp* library. This release has the following DSP blocks implemented. This release provides new functionality and bug fixes.

Filter Blocks

Filter Implementation	Class Name	Header File
CIC Decimator (Full Precision)	<code>ac_cic_dec_full</code>	<code>ac_cic_dec_full.h</code>
CIC Interpolator (Full Precision)	<code>ac_cic_intr_full</code>	<code>ac_cic_intr_full.h</code>
FIR Filter – Constant Coefficients	<code>ac_fir_const_coeffs</code>	<code>ac_fir_const_coeffs.h</code>
FIR Filter – Loadable Coefficients	<code>ac_fir_load_coeffs</code>	<code>ac_fir_load_coeffs.h</code>
FIR Filter – Programmable Coefficients	<code>ac_fir_prog_coeffs</code>	<code>ac_fir_prog_coeffs.h</code>
FIR Filter – Register Sharing	<code>ac_fir_reg_share</code>	<code>ac_fir_reg_share.h</code>
Integrate and Dump	<code>ac_intg_dump</code>	<code>ac_intg_dump.h</code>
1-D Moving Average Filter	<code>ac_mv_avg</code>	<code>ac_mv_avg.h</code>
Polyphase Decimation Filter	<code>ac_poly_dec</code>	<code>ac_poly_dec.h</code>
Polyphase Interpolation Filter	<code>ac_poly_intr</code>	<code>ac_poly_intr.h</code>

FFT Blocks

FFT Implementation	Class Name	Header File
DIF Radix-2 In-place	<code>ac_fft_dif_r2_inpl</code>	<code>ac_fft_dif_r2_inpl.h</code>
DIF Mix-Radix Single-Delay Feedback	<code>ac_fft_dif_r2m2p2_sdf</code>	<code>ac_fft_dif_r2m2p2_sdf.h</code>
DIF Radix-2 ² Single-Delay-Feedback	<code>ac_fft_dif_r2p2_sdf</code>	<code>ac_fft_dif_r2p2_sdf.h</code>
DIF Radix-2 ^X Block Floating Point In-place	<code>ac_fft_dif_r2pX_bfp_inpl</code>	<code>ac_fft_dif_r2pX_bfp_inpl.h</code>
DIF Radix-2 ^X Dynamic In-place	<code>ac_fft_dif_r2pX_dyn_inpl</code>	<code>ac_fft_dif_r2pX_dyn_inpl.h</code>
DIF Radix-2 ^X In-place	<code>ac_fft_dif_r2pX_inpl</code>	<code>ac_fft_dif_r2pX_inpl.h</code>
DIF Radix-2 Single-Delay-Feedback	<code>ac_fft_dif_r2_sdf</code>	<code>ac_fft_dif_r2_sdf.h</code>
DIT Radix-2 In-place	<code>ac_fft_dit_r2_inpl</code>	<code>ac_fft_dit_r2_inpl.h</code>
DIT Radix-2 Single-Delay-Feedback	<code>ac_fft_dit_r2_sdf</code>	<code>ac_fft_dit_r2_sdf.h</code>

Supported Compilers

In order to use and run the `ac_dsp` library, it is recommended that the user use the `g++` compiler provided in GCC (Gnu Compiler Collective) version 4.4.7 or later.