

1. Overview

The ATSAM2195-EK demonstrates a typical low cost and low power application of ATSAM2195 (Single Chip Synthesizer with Effect, Parallel Interface, Stereo DAC).

Figure 1-1. ATSAM2195-EK



ATSAM2195-EK provides:

- High Quality Wavetable Synthesis with 64 Voices Polyphony (38 Voices with Effects)
- General MIDI implementation
- General MIDI Compatible Reverb and Chorus
- Spatial Effect
- 4-band Stereo Equalizer

For a full list of available features and detailed MIDI implementation please refer to the [ATSAM2195 user guide](#).



**Evaluation Kit
for
ATSAM2195**

ATSAM2195-EK

6389A-DRMSD-04-Nov-08





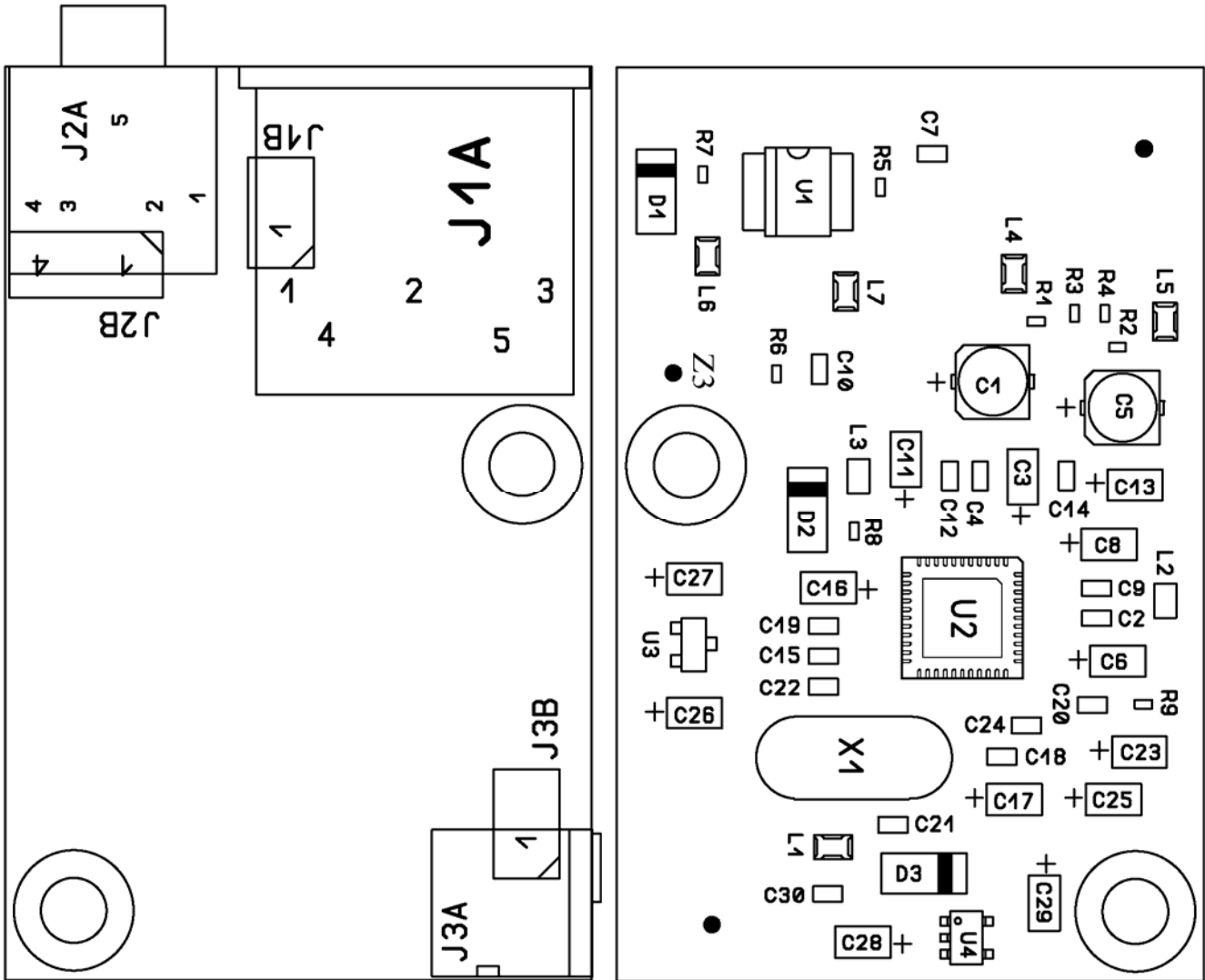
Table 1-1. Connector Configuration

Reference	Type	Name	Description
J1A	Din	MIDI IN	MIDI interface input
J1B	1*2 (Not Mounted)	MIDI IN	MIDI input
J2A	Mini Jack (Stereo)	LINE OUT	Stereo Audio Output
J2B	1*3 (Not Mounted)	LINE OUT	Stereo Audio Output
J3A	DC Plug	DC	Power Supply, +9V, minus on tip
J3B	1*2 (Not Mounted)	DC	Power Supply, +9V, minus on pin1



2. Layout

Figure 2-1. ATSAM2195-EK Layout:
Size: 0.18 dm² (53.00 mm x 34.00 mm)



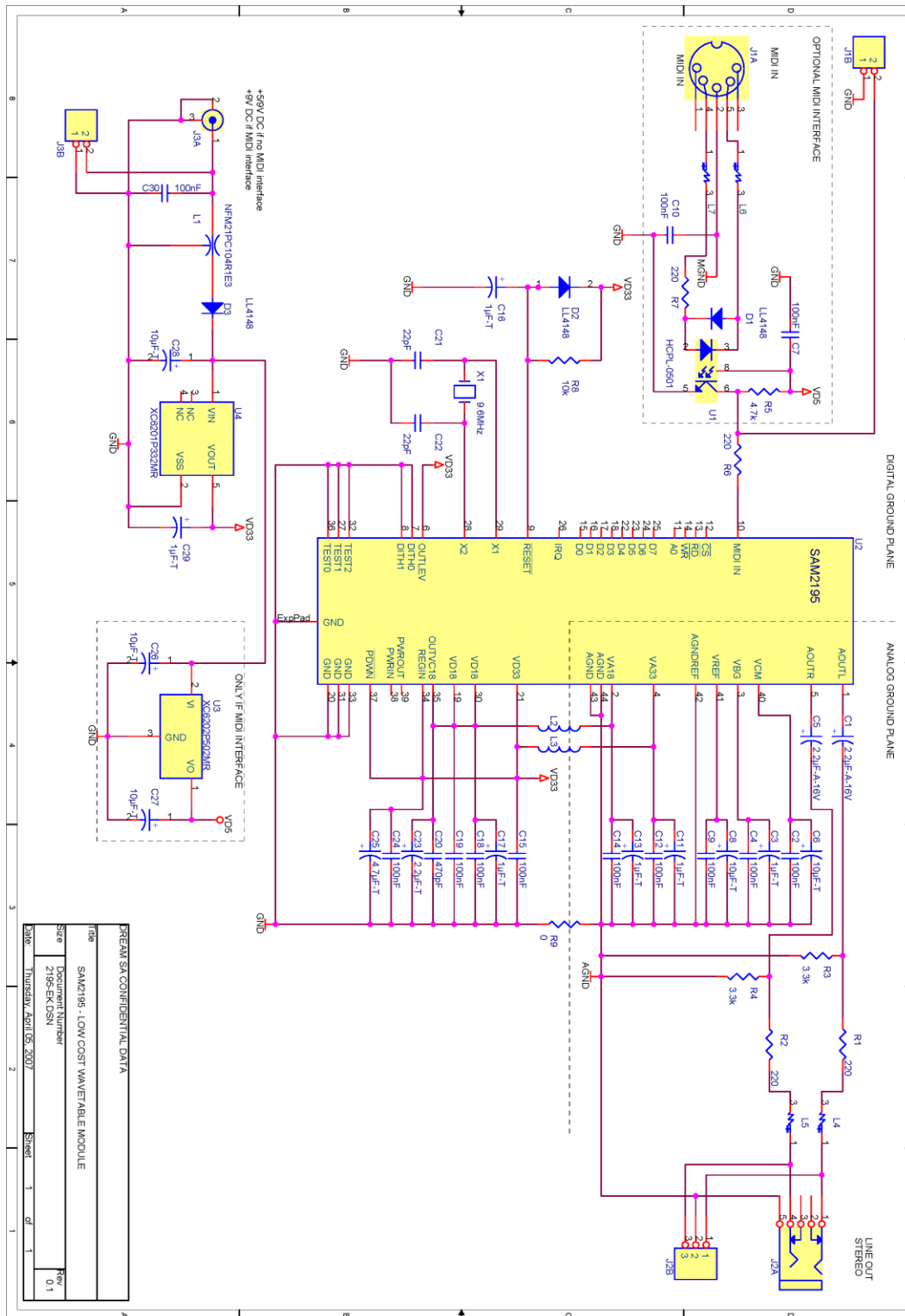
3. Bill of Materials

Table 3-1. Bill of Materials

Item	Quantity	Reference	Part
1	2	C1, C5	2.2 μ F-A-16V
2	12	C2, C4, C7, C9, C10, C12, C14, C15, C18, C19, C24, C30	100 nF
3	6	C3, C11, C13, C16, C17, C29	1 μ F-T
4	5	C6, C8, C26, C27, C28	10 μ F-T
5	1	C20	470 pF
6	2	C21, C22	22 pF
7	1	C23	2.2 μ F-T
8	1	C25	4.7 μ F-T
9	3	D1, D2, D3	LL4148
10	1	J1A	MIDI_DIN
11	2	J1B, J3B	HEAD_2
12	1	J2A	JACK 3.5 STEREO
13	1	J2B	HEAD_3
14	1	J3A	DC PLUG
15	1	L1	NFM21PC104R1E3
16	2	L2, L3	742792093
17	4	L4, L5, L6, L7	NFM21CC102R1H3
18	4	R1, R2, R6, R7	220
19	2	R3, R4	3.3k
20	1	R5	4.7k
21	1	R8	10k
22	1	R9	0
23	1	U1	HCPL-0501
24	1	U2	ATSAM2195
25	1	U3	XC6202P502MR
26	1	U4	XC6201P332MR
27	1	X1	9.6 MHz

4. Schematic

Figure 4-1. Schematic Diagram



PRELIMINARY CONFIDENTIAL DATA	
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5. Revision History

Document Ref.	Comments	Change Request Ref
6389A	First issue.	





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