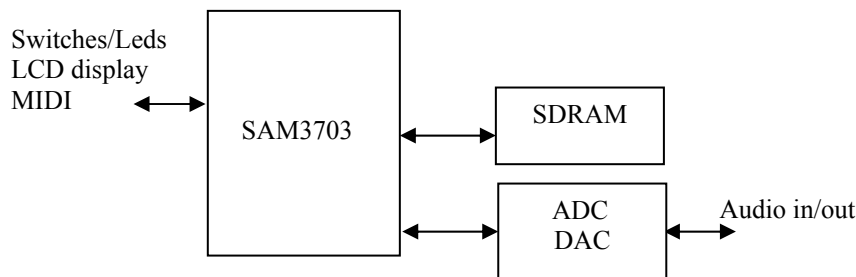


### Overview

3703-EK is a high quality stand-alone evaluation and development board based on SAM3703 dedicated to low cost and low power audio effect applications.

Beside the SAM3703 the 3703-EK hardware includes:

- Stereo Audio CODEC Cirrus CS4270 (103dB DR, -95dB THD+N)
- 32M x 4 SDRAM: MICRON MT48LC32M4A2



### Operating Mode

3703-EK operates on two modes:

- Program mode (SW1=PROGRAM): The software tools are enabled to program the internal EEPROM for stand alone mode.
- Stand-alone mode (SW1=MIDI): In this mode the SAM3703 executes the program from its embedded EEPROM and can talk with external devices via the PANEL interface and/or the MIDI serial port.

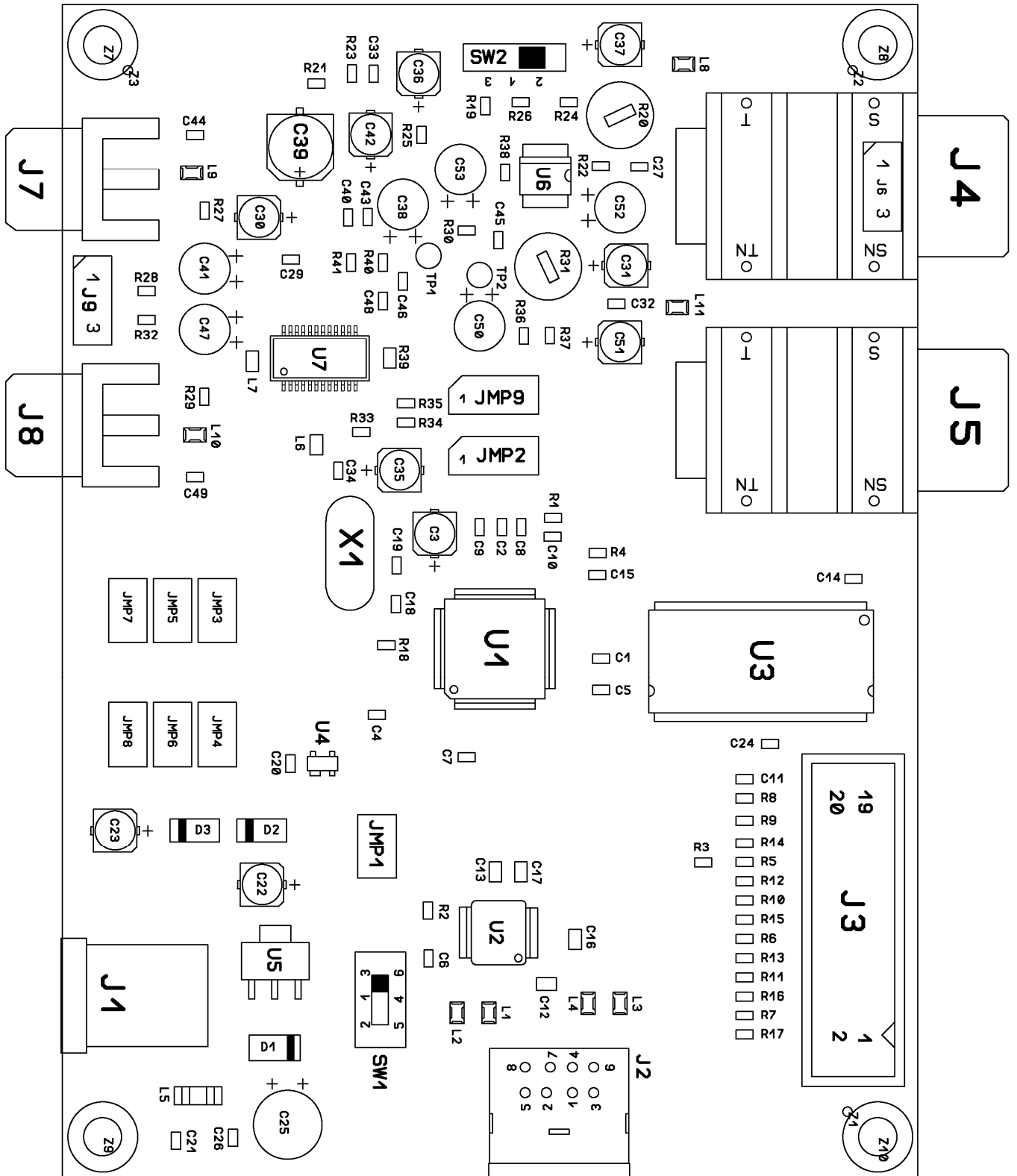
### Connectors Configuration

Reference	Type	Name	Description
J1	DC Plug	DC	Power Supply, 6V...9V, minus on dip
J2	M-DIN 8	MIDI / PROGRAM	MIDI port for remote control from PC / Programming of internal EEPROM memory
J3	HE10-2*10	PANEL	Panel interface
J4	Jack 6.35 (Mono)	GUIT/MIC/LINE IN 1	Audio Input 1 for Guitar, Mike or Line level signal
J5	Jack 6.35 (Mono)	MIC/LINE IN 2	Audio Input 2 for Mike or Line level signal
J6	1*3 (Not Mounted)	MIC/LINE IN 1-2	Stereo Audio Input (stereo)
J7	RCA	LINE OUT LEFT	Left Audio Output
J8	RCA	LINE OUT RIGHT	Right Audio Output
J9	1*3 (Not Mounted)	LINE OUT STEREO	Stereo Audio Output

### Jumper and switch Configuration

Reference	Default Setting	Description
JMP1	Removed	Closed for debugging/programming operations
JMP2	1-2	Digital audio Sample Rate select: <ul style="list-style-type: none"> <li>• 1-2: 32kHz or 48kHz</li> <li>• 2-3: 96kHz</li> </ul>
JMP9	1-2	Digital audio Clock Ratio: <ul style="list-style-type: none"> <li>• 1-2: 256 * FS</li> <li>• 2-3: 384 * FS</li> </ul>
JMP3	Removed	DAAD2 connection
JMP4	Removed	DABD2 connection
JMP5	Removed	DAAD1 connection
JMP6	Removed	DABD1 connection
JMP7	Placed	DAAD0 connection
JMP8	placed	DABD0 connection
SW1	MIDI	<ul style="list-style-type: none"> <li>• MIDI: Enable stand alone mode with PANEL and/or MIDI remote control</li> <li>• PROG: Enable Program Mode</li> </ul>
SW2	Low Z	Impedance select for audio in put 1 <ul style="list-style-type: none"> <li>• Low Z: 10k Ohm</li> <li>• High Z: 1M Ohm</li> </ul>

Layout



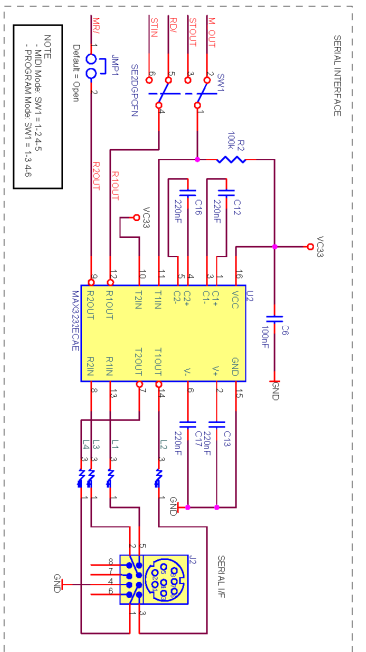
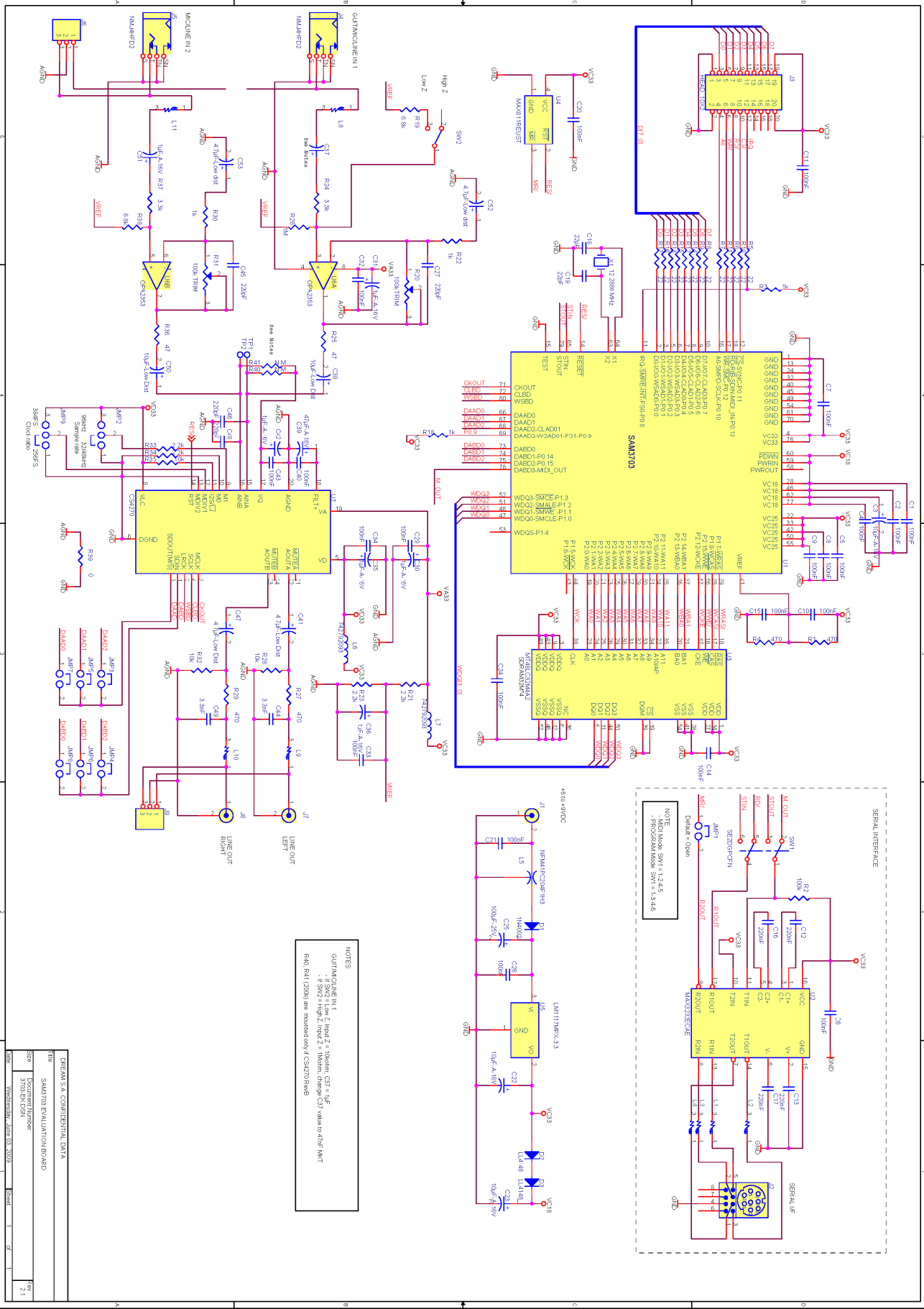
## Bill of Material

SAM3703 EVALUATION BOARD Revised: Wednesday, June 03, 2009  
 3703-EK.DSN Revision: 2.1  
 Bill Of Materials June 3,2009 Page1

Item	Quantity	Reference	Part
1	22	C1, C2, C4, C5, C6, C7, C8, C9, C10, C11, C14, C15, C20, C21, C24, C26, C29, C32, C33, C34, C40, C43	100nF
2	3	C3, C22, C23	10µF-A-16V
3	4	C12, C13, C16, C17	220nF
4	2	C18, C19	22pF
5	1	C25	100µF-25V
6	4	C27, C45, C46, C48	220pF
7	6	C30, C31, C35, C36, C42, C51	1µF-A-16V
8	1	C37	See Note on schematic
9	2	C38, C50	10µF-Low Dist
10	1	C39	47µF-A-16V
11	4	C41, C47, C52, C53	4.7µF-Low dist
12	2	C44, C49	3.3nF
13	1	D1	1N4002
14	2	D2, D3	LL4148
15	7	JMP1, JMP3, JMP4, JMP5, JMP6, JMP7, JMP8	Jumper1P
16	2	JMP2, JMP9	Jumper2P
17	1	J1	DC PLUG
18	1	J2	M-DIN_8-R
19	1	J3	HEAD_10X2
20	2	J4, J5	NMJ4HFD2
21	4	J6, J9, R40, R41	N.M.
22	2	J7, J8	RCA_JACK
23	8	L1, L2, L3, L4, L8, L9, L10, L11	NFM21CC102R1H3
24	1	L5	NFM41PC204F1H3
25	2	L6, L7	742792093
26	4	R1, R4, R27, R29	470
27	1	R2	100k
28	4	R3, R18, R22, R30	1k
29	13	R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17	22
30	2	R19, R38	6.8k
31	2	R20, R31	100k TRIM
32	4	R21, R23, R33, R34	2.2k
33	2	R24, R37	3.3k
34	2	R25, R36	47
35	1	R26	1M
36	3	R28, R32, R35	10k
37	1	R39	0
38	1	SW1	SE2DGPCFN
39	1	SW2	SECME-1K2-V
40	2	TP1, TP2	TEST POINT
41	1	U1	SAM3703
42	1	U2	MAX3232ECAE
43	1	U3	MT48LC32M4A2
44	1	U4	MAX811REUST

Item	Quantity	Reference	Part
45	1	U5	LM1117MPX-3.3
46	1	U6	OPA2353
47	1	U7	CS4270
48	1	X1	12.2880 MHz

# Schematic Diagram



REVISION	3.0	DATE	04/11/2006
DESCRIPTION	SAM7303-EK EVALUATION BOARD		
DESIGNER	W. G. S. S.	STATUS	2.1

**Dream Contact**

[info@dream.fr](mailto:info@dream.fr)

**Website**

<http://www.dream.fr>

*This publication neither states nor implies any warranty of any kind, including, but not limited to, implied warrants of merchantability or fitness for a particular application. Dream assumes no responsibility for the use of any circuitry. No circuit patent licenses are implied.  
The information in this publication is believed to be accurate in all respects at the time of publication but is subject to change without notice. Dream assumes no responsibility for errors and omissions, and disclaims responsibility for any consequences resulting from the information included herein.*