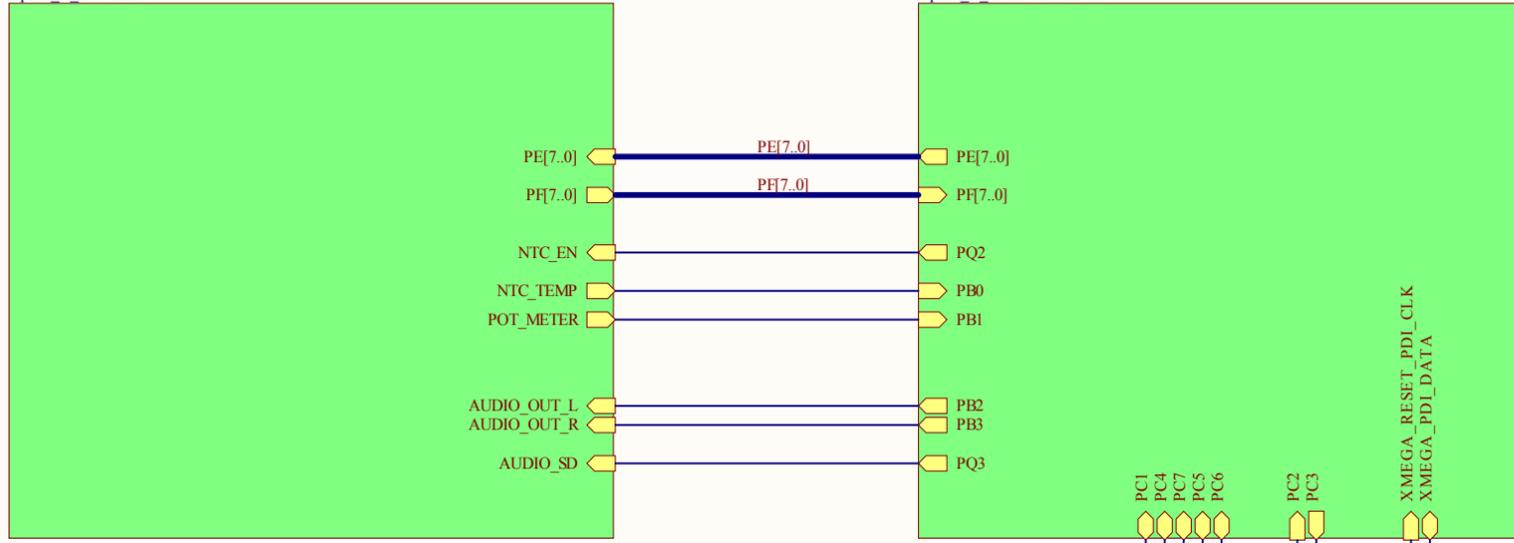


A

A

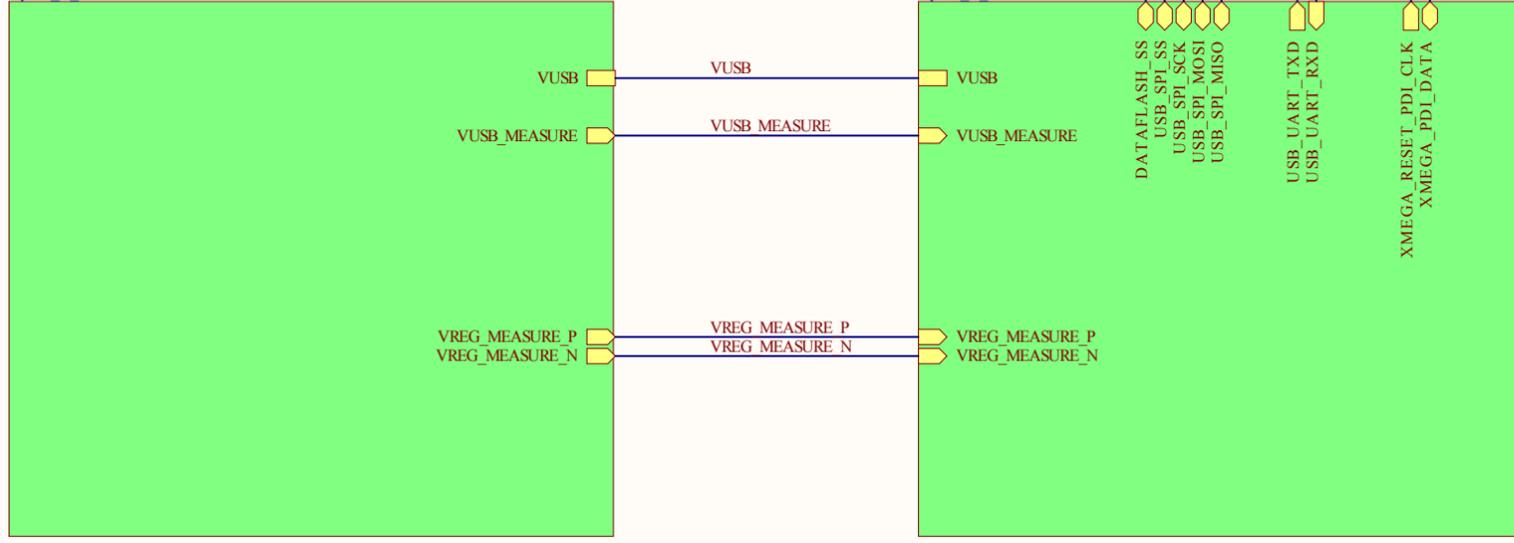
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Designator
Xplain_A_XMEGA.SchDoc

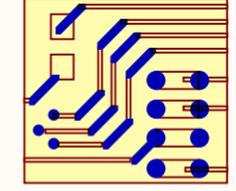


Designator
Xplain_A_PSU.SchDoc

Designator
Xplain_A_USB.SchDoc



PCB1
A08-0551



C

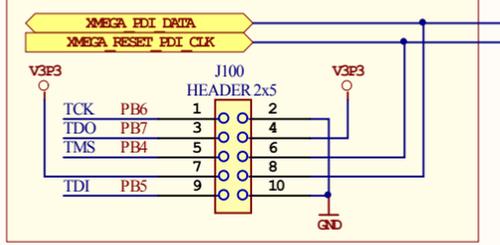
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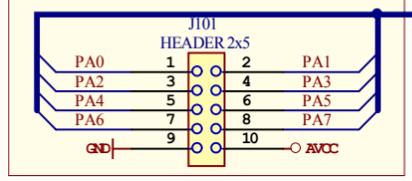
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ATMEL Norway					
Vestre Rosten 79					
7075 TILLER					
NORWAY					
Date:	10.02.2009	16:08:03	PAGE:	1 of 5	
Document number:	A08-0551		Revision:	A	
TITLE: AVR1907: Xplain evaluation board, Top-Level					
Xplain_A.SchDoc					

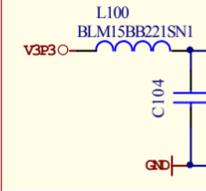
JTAG/PDI Interface



Spare ADC/DAC/AC channels



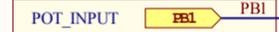
Analog power



NTC measure input



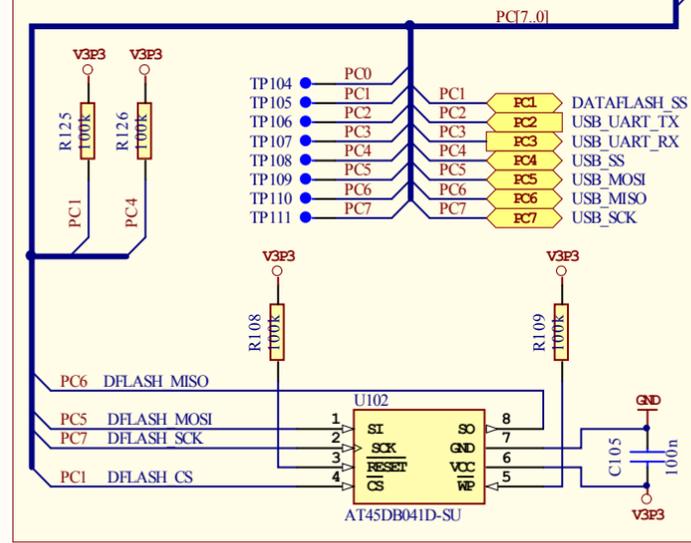
Potmeter measure input



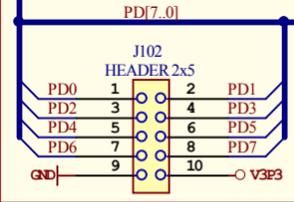
Audio DAC outputs



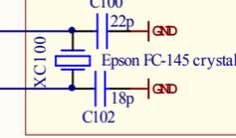
0.5MB Dataflash and SPI-BUS



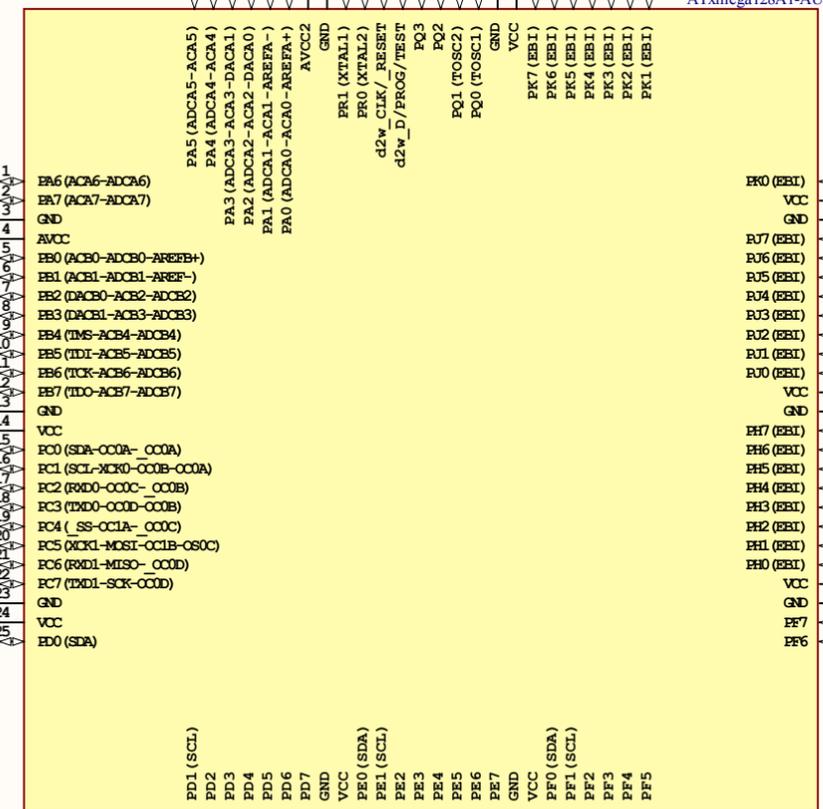
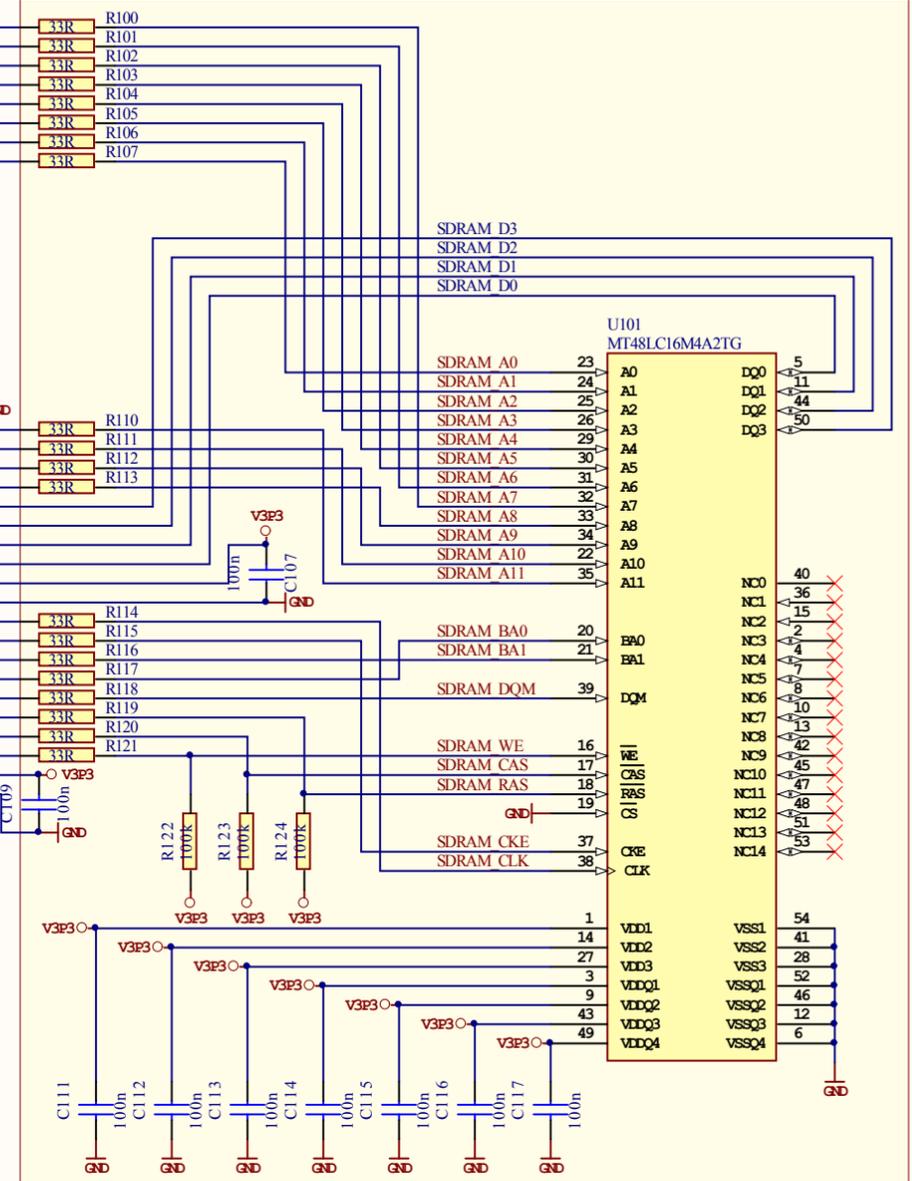
Spare digital port



RTC, 32768Hz



8MB SDRAM



ATMEL Norway			
Vestre Rosten 79			
7075 TILLER		PAGE: 2 of 5	
NORWAY		Revision: A	
Date:	10.02.2009	16:08:03	
Document number:	A08-0551		
TITLE: AVR1907: Xplain evaluation board, Xmega CPU Module			
Xplain_A_XMEGA.SchDoc			

A

A

B

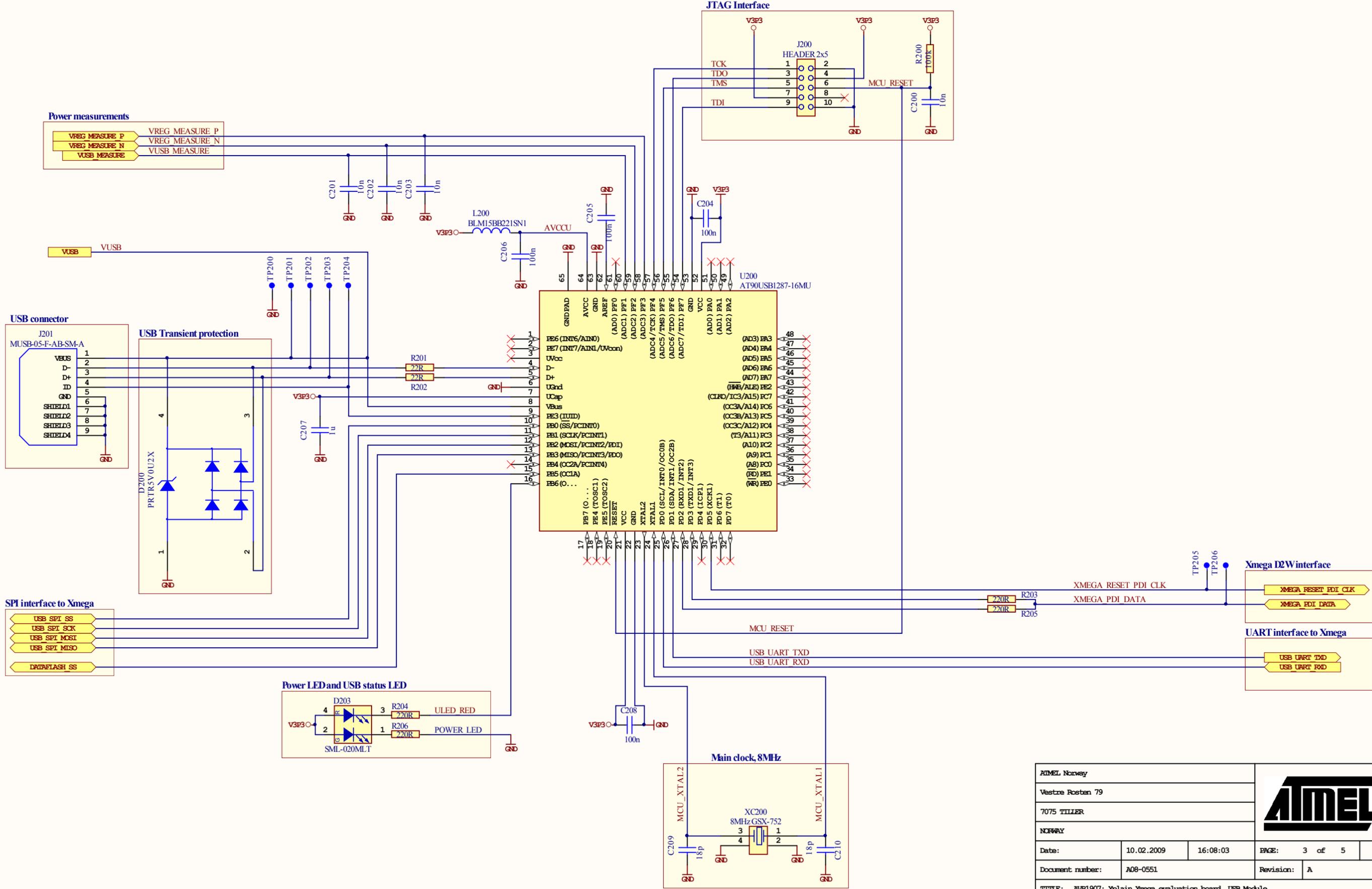
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C

C

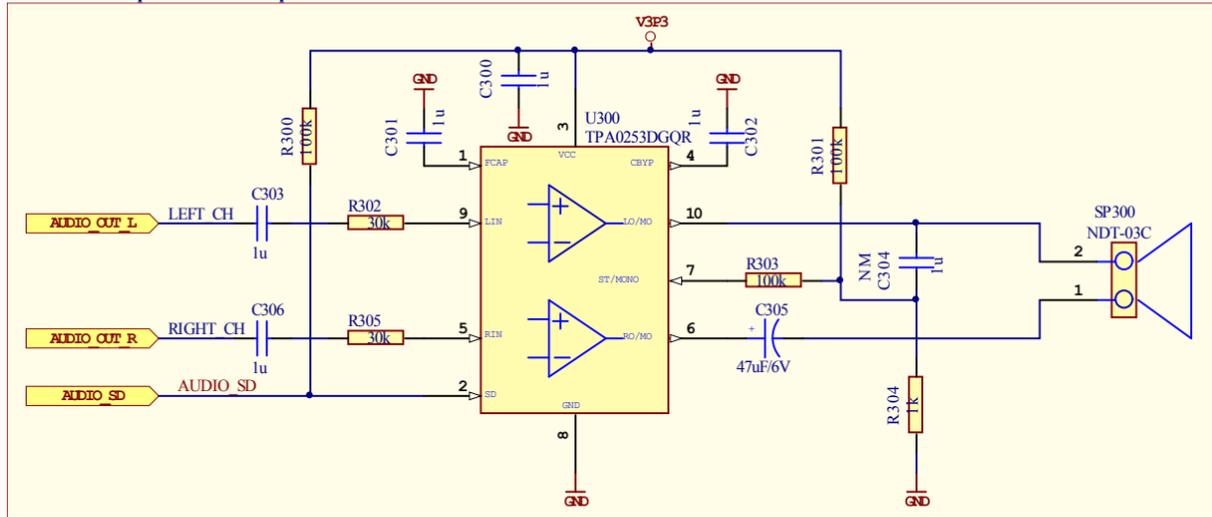
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D

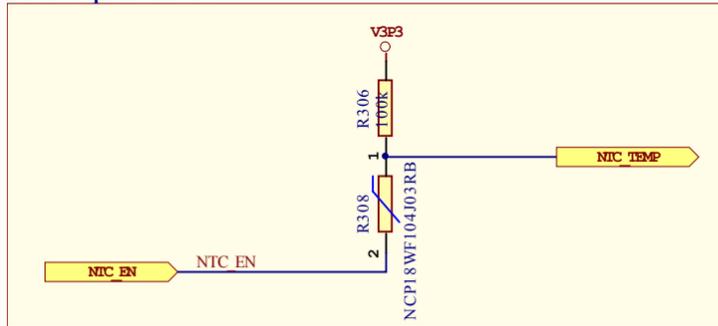


ATEL Norway			
Vestre Rosten 79			
7075 TILLER		PAGE: 3 of 5	
NORWAY		Revision: A	
Date:	10.02.2009	16:08:03	
Document number:	A08-0551		
TITLE: AVR1907: Xplain Xmega evaluation board, USB Module			
Xplain_A_USB.SchDoc			

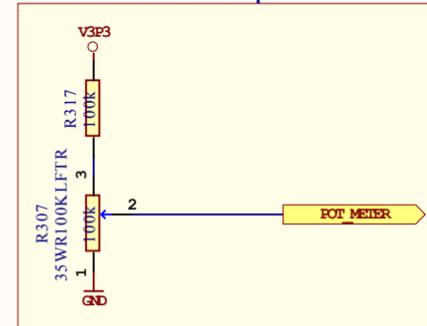
Mono audio output with onboard speaker



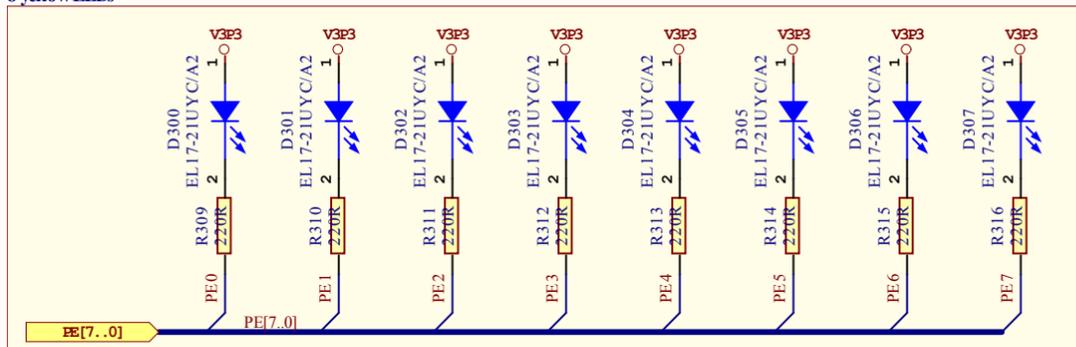
NTC Temperature sensor



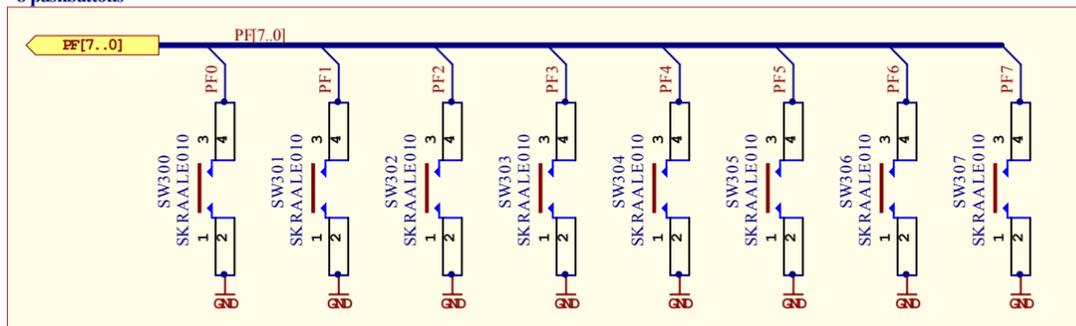
Potentiometer for 0V - 2.0V output



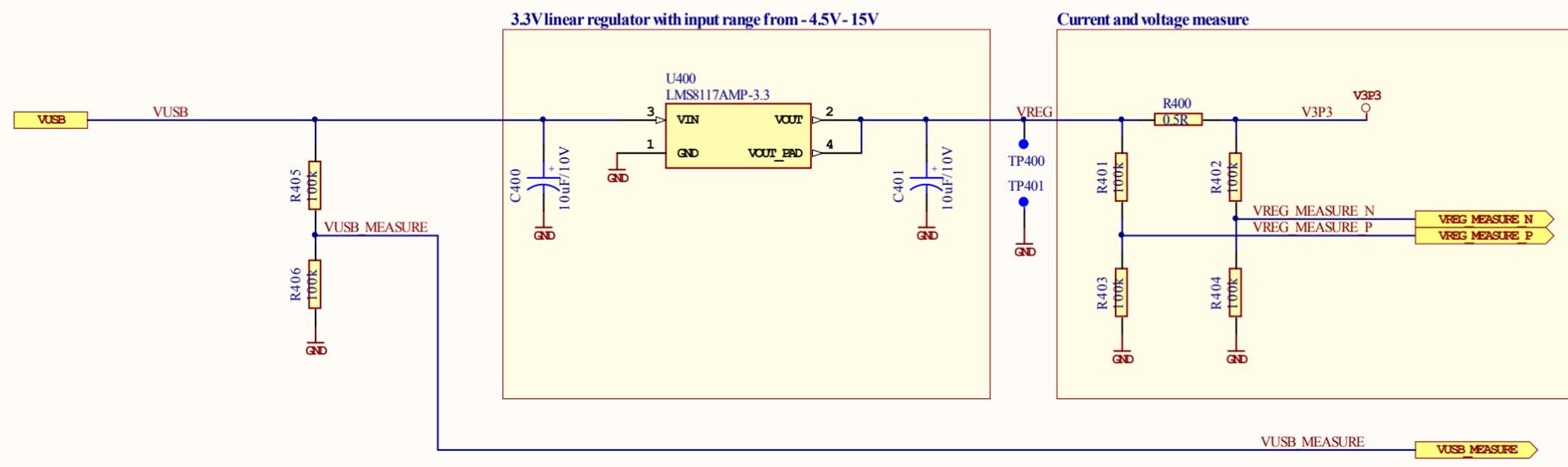
8 yellow LEDs



8 pushbuttons

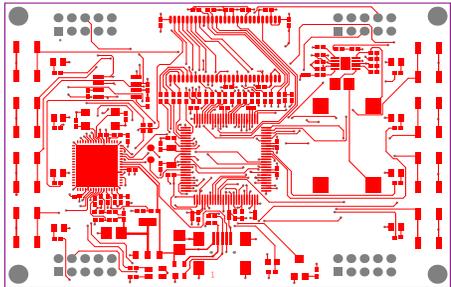


ATEL Norway			
Vestre Rosten 79			
7075 TILLER		PAGE: 4 of 5	
NORWAY		Revision: A	
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Document number:	A08-0551		
TITLE: AVR1907: Xplain Mega evaluation board, IO Module			
Xplain_A_IO.SchDoc			



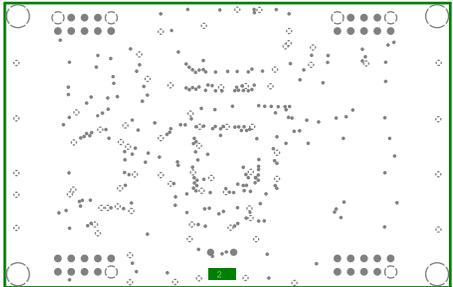
ATMEL Norway			
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NORWAY			
Date:	10.02.2009	16:08:04	PAGE: 5 of 5
Document number:	A08-0551		Revision: A
TITLE: AVR1907: Xplain evaluation board, Power-Supply Module			
Xplain_A_PSU.SchDoc			

Quantity	Designator	MPN	Description	Value	Manufacturer
1	C100		Ceramic capacitor, SMD 0402, NF 50V, +/-5%	22p	
22	C101, C103, C104, C105, C106, C107, C108, C109, C110, C111, C112, C113, C114, C115, C116, C117, C118, C119, C204, C205, C206, C208	C0402C104K4RACTU	Ceramic capacitor, SMD 0402, X7R, 16V, +/-10%	100n	Kemet
3	C102, C209, C210		Ceramic capacitor, SMD 0402, NF 50V, +/-5%	18p	
4	C200, C201, C202, C203		Ceramic capacitor, SMD 0402, X7R, 25V, +/-10%	10n	
6	C207, C300, C301, C302, C303, C306	C0402C105K9PAC	Ceramic capacitor, SMD 0402, X5R, 6.3V, +/-10%	1u	Kemet
1	C305	T494B476M006AT	SMD tantalum capacitor, precision molded chip, ESR=0,5	47uF/6V	Kemet
2	C400, C401	T491B106M010AT	SMD tantalum capacitor, precision molded chip. ESR = 3,5	10uF/10V	Kemet
1	D200	PRTR5V0U2X	Double rail-to-rail USB ESD protection diode	PRTR5V0U2X	Philips
1	D203	SML-020MLT	LED, 2 colour (RED/GREEN), transparent clear lens, SMD	SML-020MLT	ROHM
8	D300, D301, D302, D303, D304, D305, D306, D307	EL17-21UYC/A2	LED, Yellow, Wave length=591nm, SMD 0805 ±70°	EL17-21UYC/A2	Everlight
4	J100, J101, J102, J200	CD075014 2X5	2x5 pin header, 2.54 mm pitch, Pin-in-Paste THM	CD075014 2X5	Freber
1	J201	MUSB-05-F-AB-SM-A		MUSB-05-F-AB-SM-A	SAMTEC
2	L100, L200	BLM15BB221SN1	SMD RF inductor 0402. Z=220Ohm (@100MHz), Max R(dc)=0.80Ohm, Max current=200mA	BLM15BB221SN1	Murata
1	PCB1	A08-0551	Xplain PCB, 4-layer, size 54mm x 85mm	A08-0551	
20	R100, R101, R102, R103, R104, R105, R106, R107, R110, R111, R112, R113, R114, R115, R116, R117, R118, R119, R120, R121		Thick film resistor, SMD 0402, 1/16W, 1%	33R	
19	R108, R109, R122, R123, R124, R125, R126, R200, R300, R301, R303, R306, R317, R401, R402, R403, R404, R405, R406		Thick film resistor, SMD 0402, 1/16W, 1%	100k	
2	R201, R202		Thick film resistor, SMD 0402, 1/16W, 1%	22R	
12	R203, R204, R205, R206, R309, R310, R311, R312, R313, R314, R315, R316		Thick film resistor, SMD 0402, 1/16W, 1%	220R	
2	R302, R305		Thick film resistor, SMD 0402, 1/16W, 1%	30k	
1	R304		Thick film resistor, SMD 0402, 1/16W, 1%	1k	
1	R307	35WR100KLFTR	3mm single-turn SMD potmeter	35WR100KLFTR	BI Technologies
1	R308	NCP18WF104J03RB	NTC Thermistor 100kOhm @ 25deg, 1/10W, 5%, SMD 0603	NCP18WF104J03RB	Murata
1	R400	LRCS0402-0R5FT5	Thick film resistor, SMD 0402, 1/16W, 1%	0.5R	Welwyn
1	SP300	NDT-03C	SMD Speaker, 0.5W, 15x15mm	NDT-03C	Star Micronics
8	SW300, SW301, SW302, SW303, SW304, SW305, SW306, SW307	SKRAALE010	6.2x6.2 mm SMD tact switch	SKRAALE010	ALPS
1	U100	ATxmega128A1-AU	AVR 8-bit RISC MCU	ATxmega128A1-AU	ATMEL
1	U101	MT48LC16M4A2P-75:G	64Mbit SDRAM 16Mx4, 3,3V.	MT48LC16M4A2P-75:G	Micron
1	U102	AT45DB041D-SU	4-Mbit dataflash SOIC-8W	AT45DB041D-SU	ATMEL
1	U200	AT90USB1287-16MU		AT90USB1287-16MU	ATMEL
1	U300	TPA0253DGQR	1W mono audio power amplifier w headphone drive	TPA0253DGQR	Texas Instruments
1	U400	LMS8117AMP-3.3	3.3V 1A Low Dropout Linear Regulator SOT223_4	LMS8117AMP-3.3	National Semiconductor
1	XC100	Q13FC1450000614	32kHz crystal, SMD, 4.1 x 1.5 mm FC-145	Q13FC1450000614	Epson Toyocom
1	XC200	GSX-752B/551EF 8MHz		8MHz GSX-752	Golledge



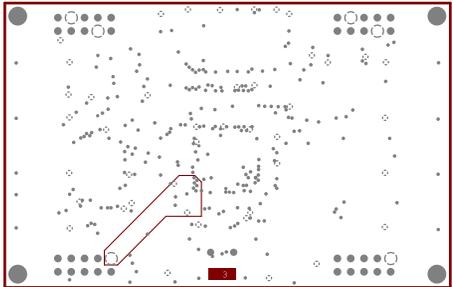
ATMEL, NORWAY
 VARE Plassen 78
 N-2075 Thor

DESIGNER PCB DESIGNER	TITLE	
DATE 10.03.2009	PART NO.	REV.
FILE NAME 1909_074608	DWG NO.	SCALE



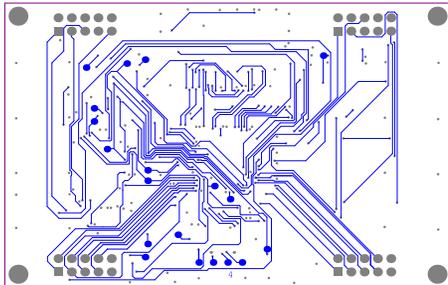
ATMEL, HOLBURY
Vance Plazan 79
N. 7075 Stm

DESIGNER	TITLE		
PCB DESIGNER			
DATE	PART NO.	REV.	
10.03.2009			
FILE NAME	DWG NO.	SCALE	
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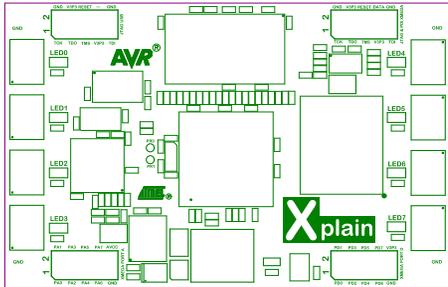
ATMEL, HOLBURY
 1999, PLYMOUTH
 HUNTSVILLE, TN

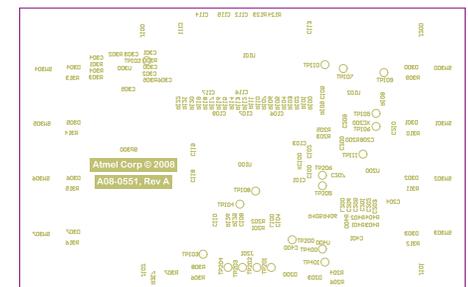
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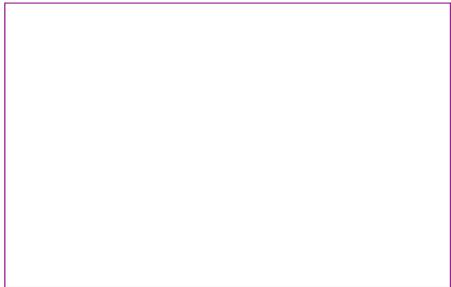


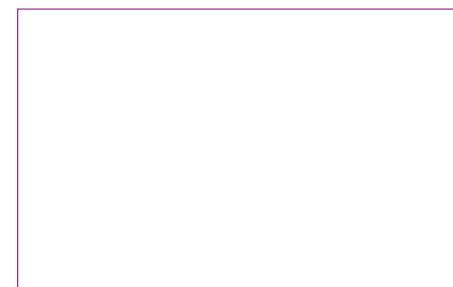
ATMEL, HIGHWAY
 MARK PROGRAM 79
 81-7076 3TR

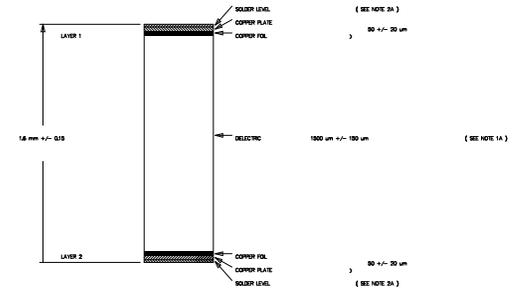
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PCB DESIGNER	PART NO.		REV.
DATE	10.03.2009	DWG NO.	SCALE
FILE NAME	1999_A74609		











NOTE 1A. DIELECTRIC FINISH
 IN SURFACE PROTECTION HAS.
 THE BOARD MUST BE RMA3 COMPLIANT

DETAIL A (CROSS-SECTION)
 SCALE = NONE



 ATMEL, NORWAY VAREFORSK 79 N-2075 Thor	ENGINEER PCB DESIGNER	TITLE	
	DATE: 10.03.2009	PART NO.	REV.
FILE NAME: 1909_A74600	DWG NO.	SCALE	



AVR®

ATMEL®

Xplain

GND V3P3 RESET --- GND

GND V3P3 RESET DATA GND

TCK TDO TMS V3P3 TDI

TCK TDO TMS V3P3 TDI

LED0

LED4

LED1

LED5

LED2

LED6

LED3

LED7

PA1 PA3 PA5 PA7 AVCC

PD1 PD3 PD5 PD7 V3P3

PA0 PA2 PA4 PA6 GND

PD0 PD2 PD4 PD6 GND

XMEGA PORT A

XMEGA PORT D

JTAG USB

JTAG & PDI XMEGA

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A08-0551, Rev A

TP102 ○

TP110 ○

TP107 ○

TP109 ○

TP105 ○

TP106 ○

TP111 ○

TP206 ○

TP205 ○

TP108 ○

TP104 ○

TP200 ○

TP400 ○

TP401 ○

TP103 ○

TP204 ○

TP203 ○

TP202 ○

TP201 ○