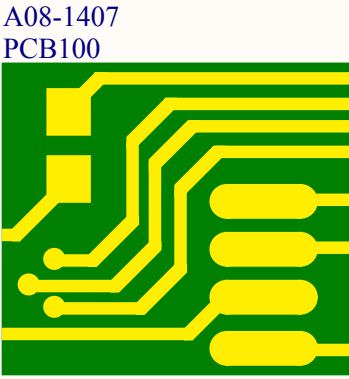
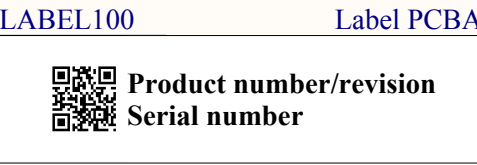
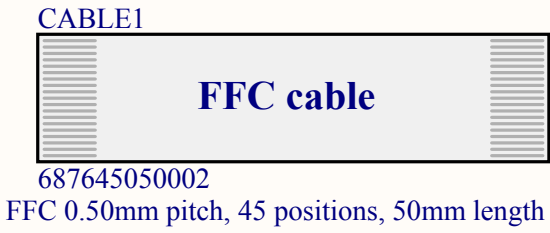
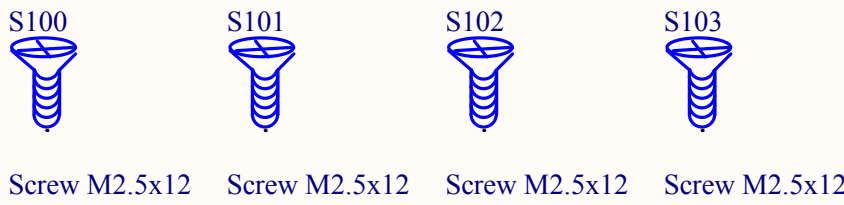
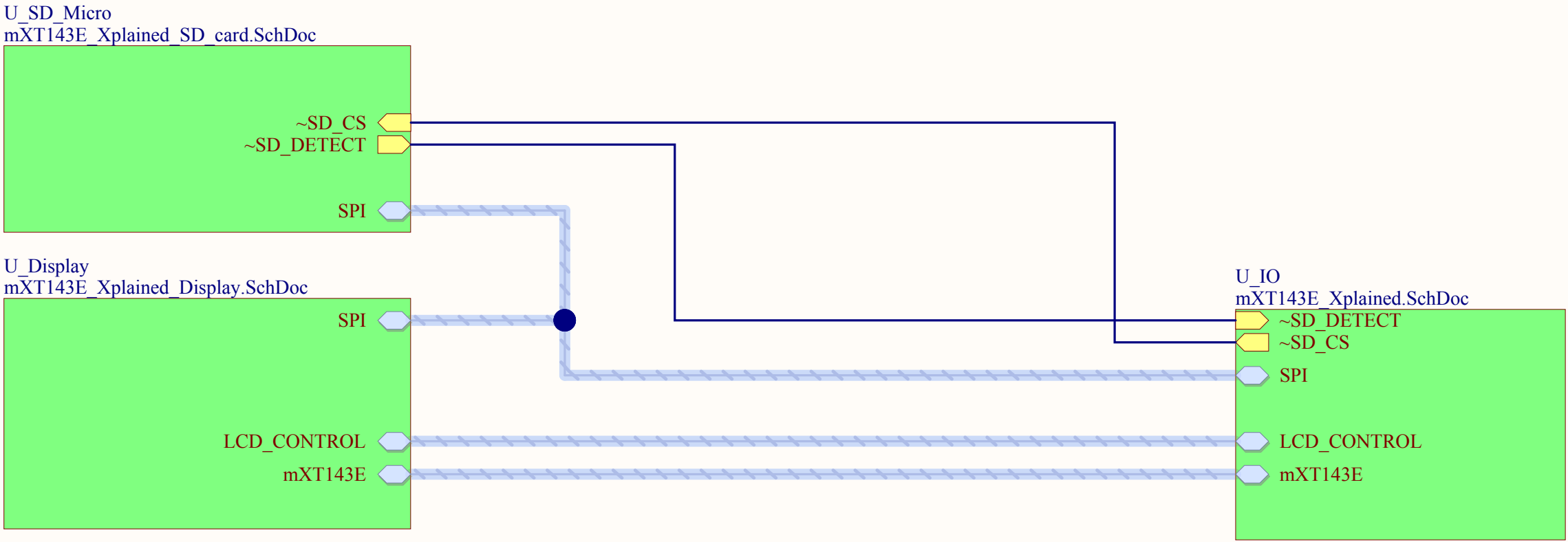



mXT143E Xplained



ATMEL Norway	*				
Vestre Rosten 79	*				
N-7075 TILLER	*				
NORWAY					
Date:	28.03.2012	14:18:05	PAGE:	1 of 4	
Document number:	1		Revision	2	
TITLE: mXT143E Xplained top level schematics					
mXT143E_Xplained_TopLevel.SchDoc					

A

A

B

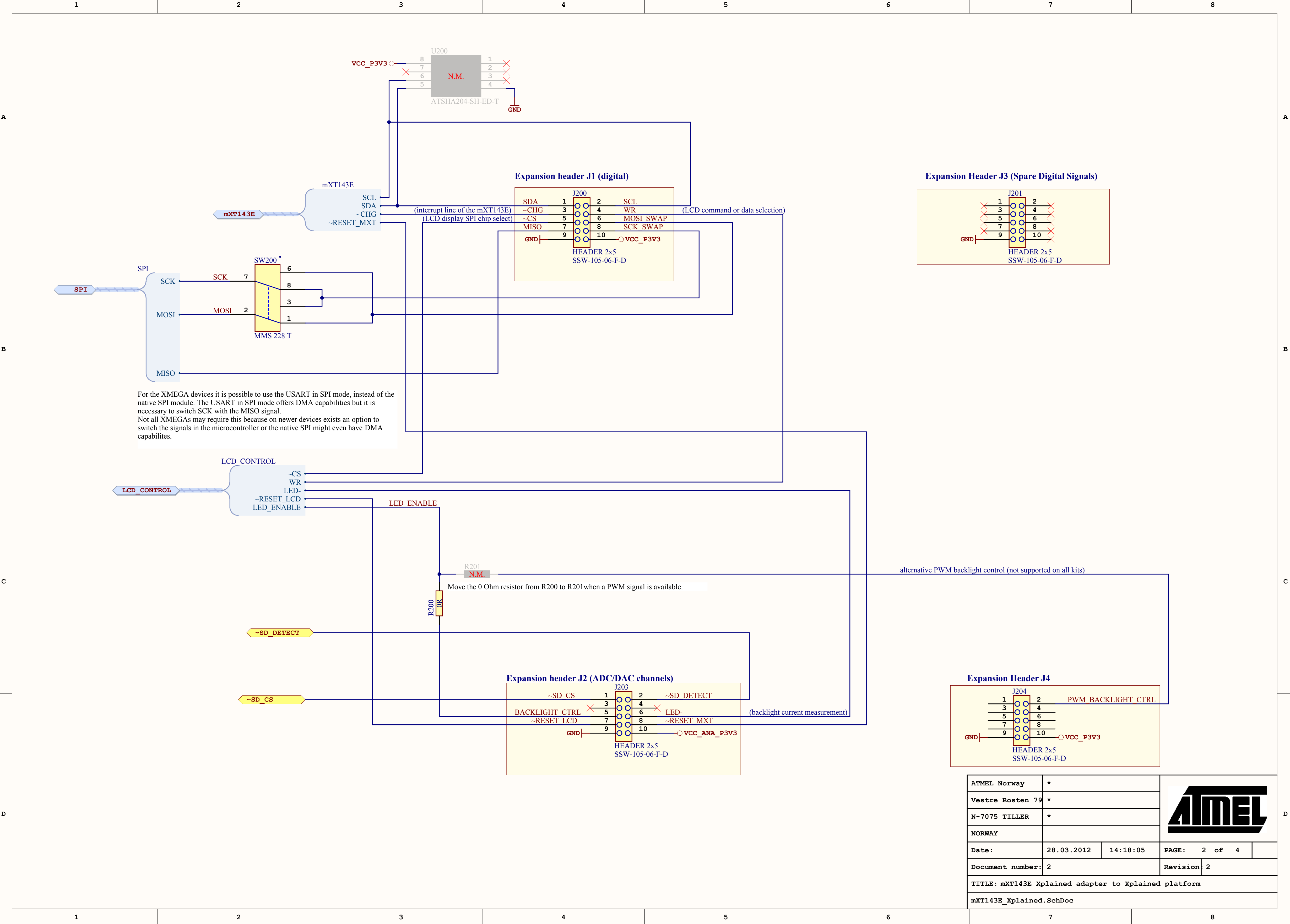
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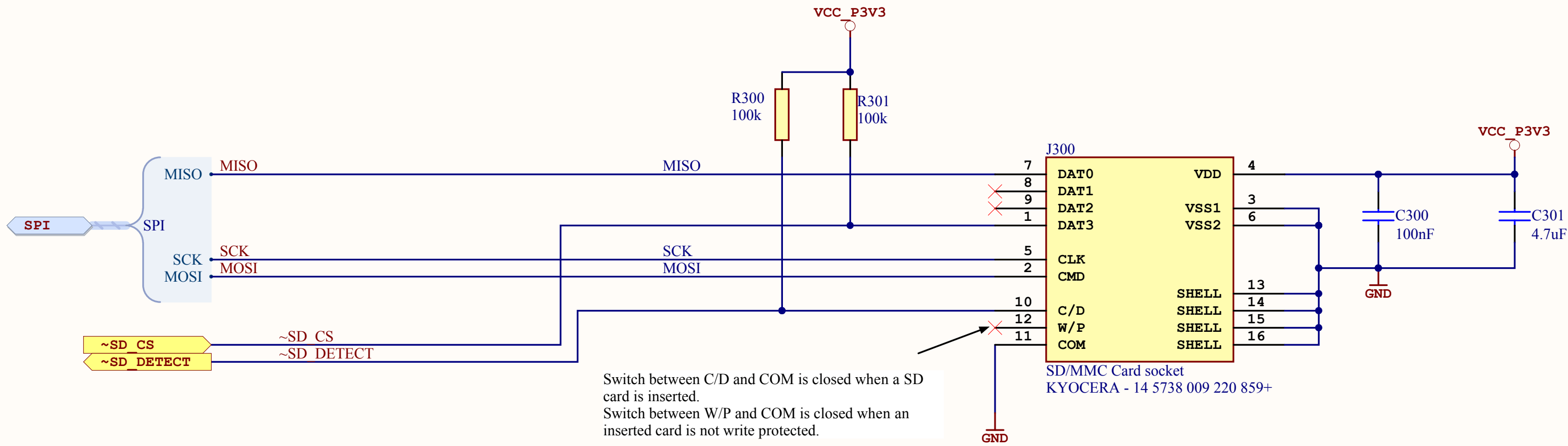
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C

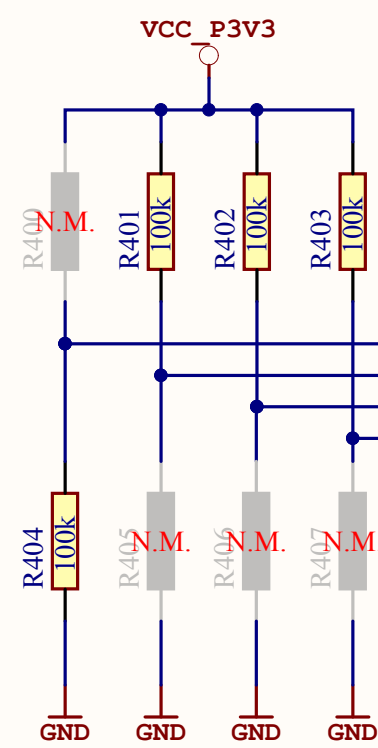
D

D

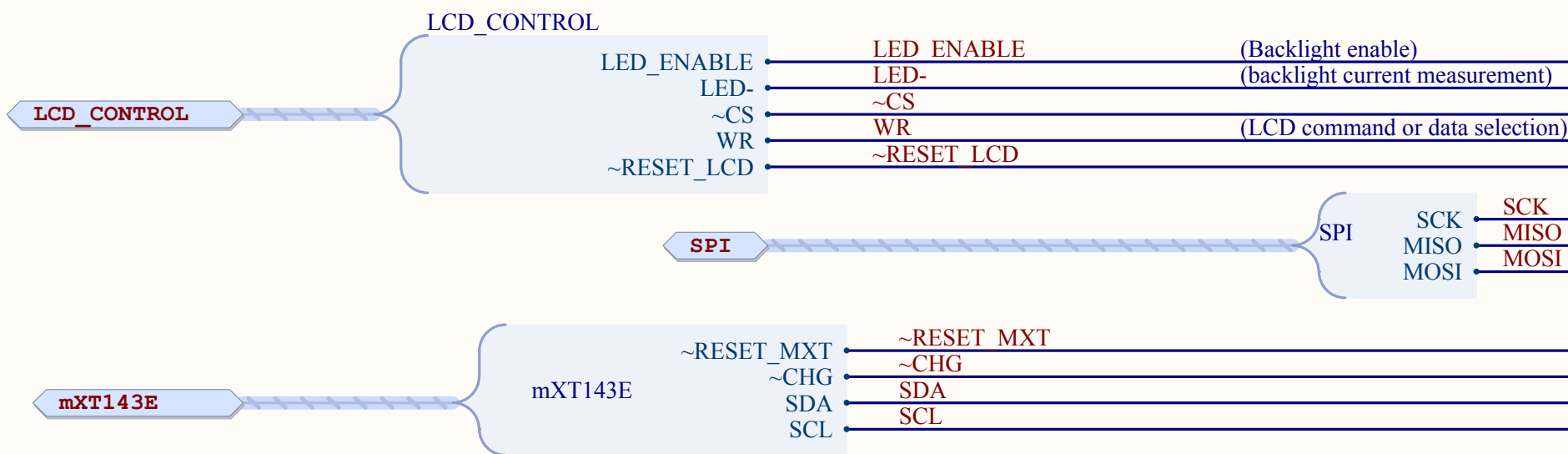




Display interface mode selection

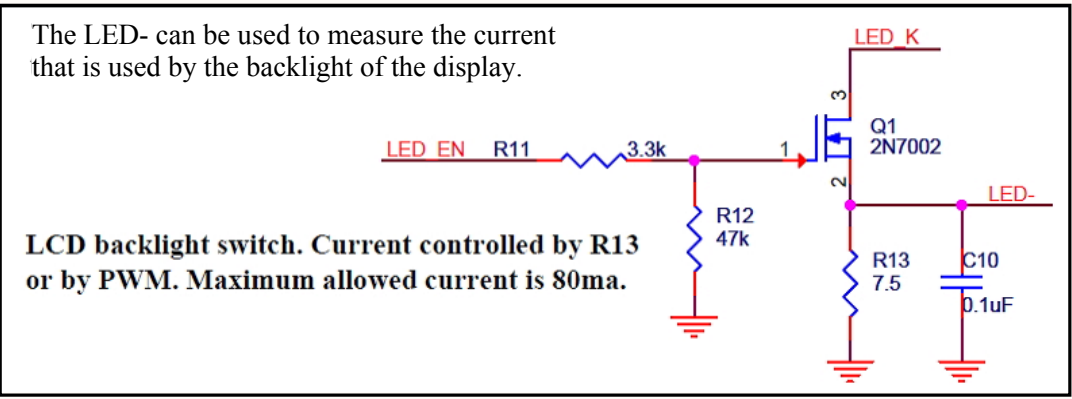


Interface selection:  
IM[3..0] = 0b1110, 3 wire SPI (8-bit) + CMD/DATA select line (default selection)  
IM[3..0] = 0b1101, 3 wire SPI (9-bit)  
for other interfaces take a look at the datasheet.

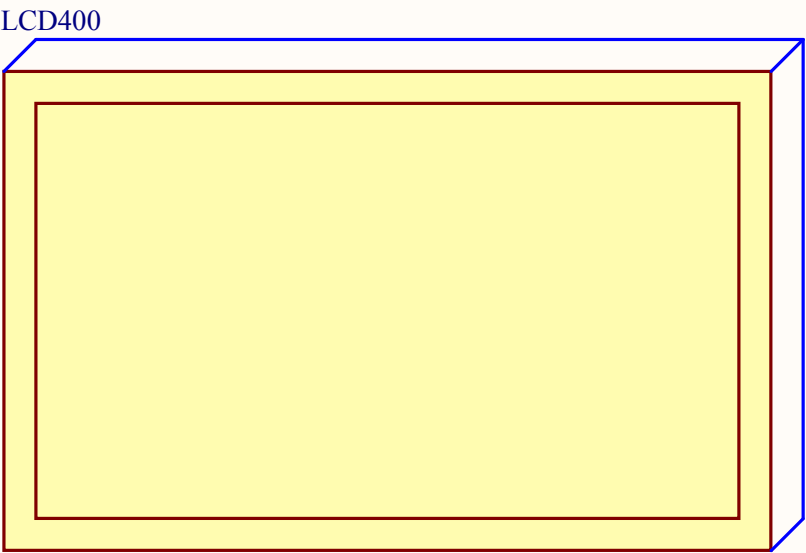


In serial mode the WR pin is used to select data or command input.  
WR = 0 -> next byte on SPI is a command  
WR = 1 -> next byte on SPI is data  
In serial mode the RS/SCL signal is used for the SPI clock.

Backlight driver circuit inside the display module




LCD backlight switch. Current controlled by R13 or by PWM. Maximum allowed current is 80ma.

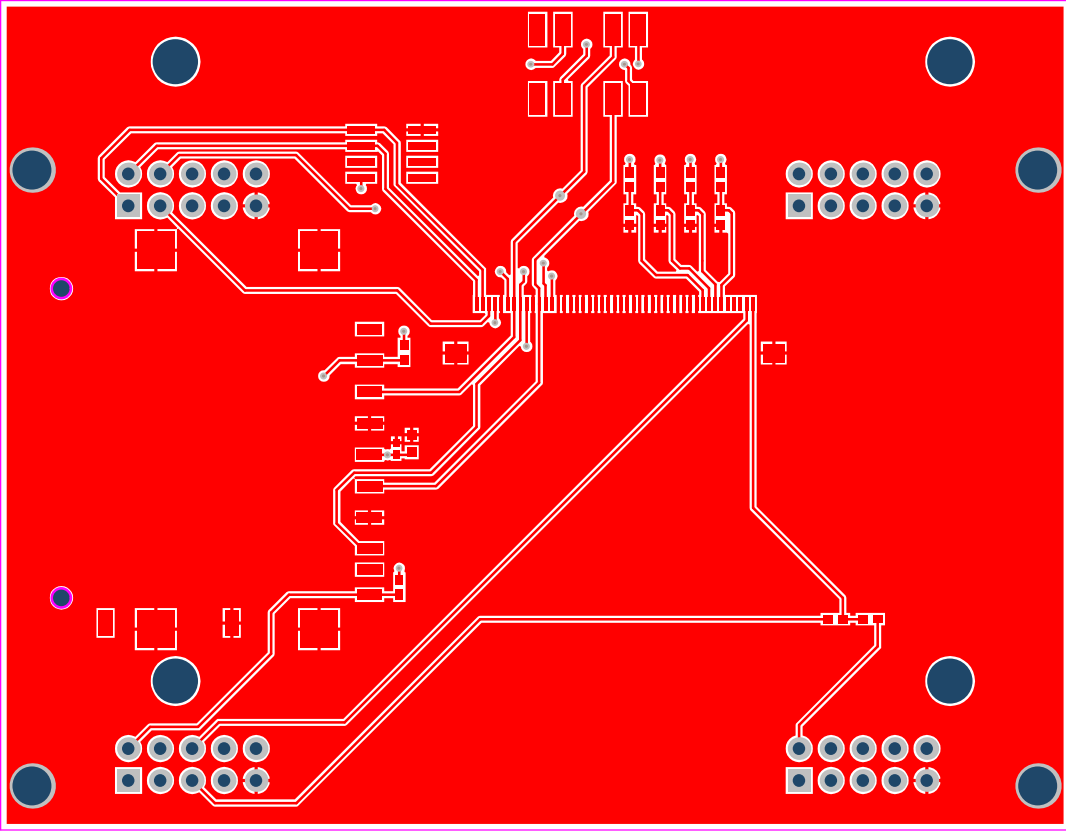


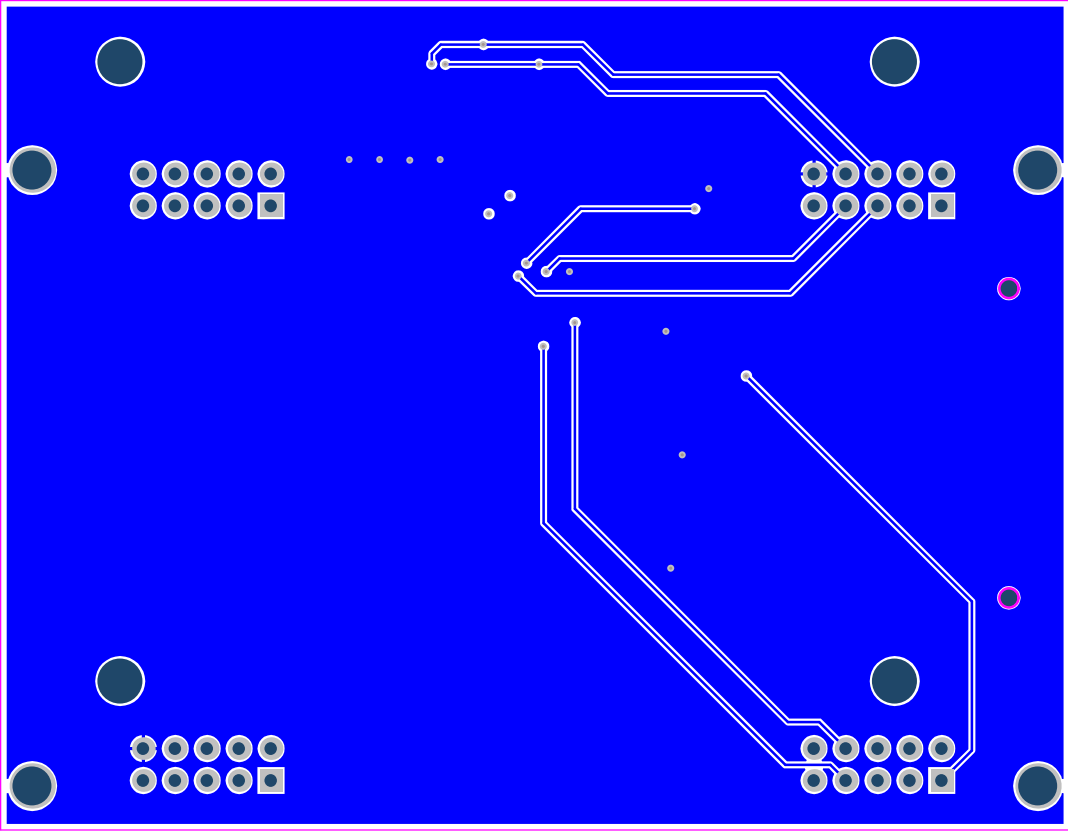
PDA 2.8 inch mXT143E LCD display module

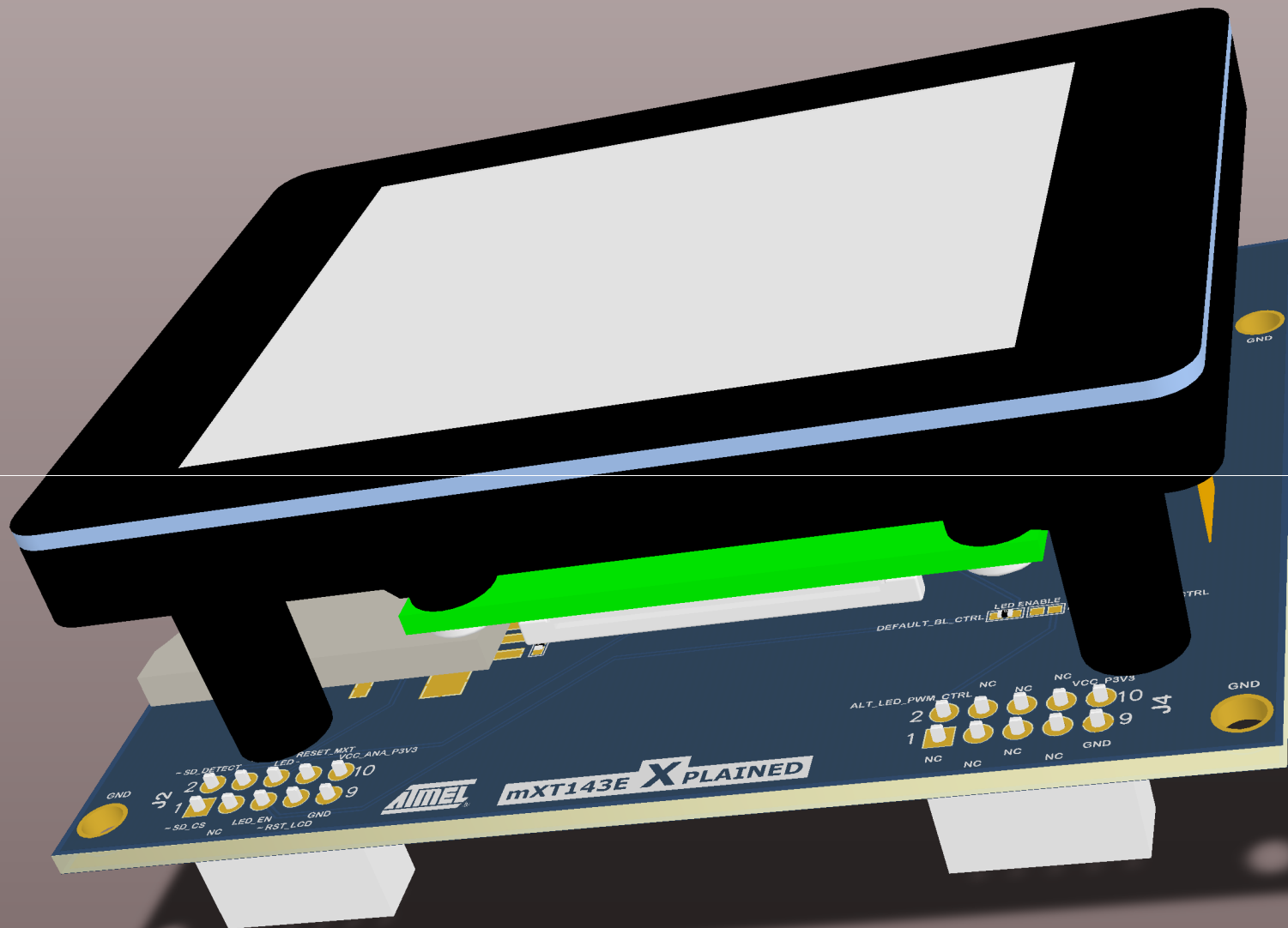
The following signals have pull-ups mounted inside the module:  
RESET\_MXT (47k)  
RESET\_LCD (47k)  
CS (47k)  
CHG (47k)  
SDA (3.3k)  
SCL (3.3k)  
The following signals have pull-downs mounted inside the module  
SYNC (47k)  
LED\_EN

ATMEL Norway		*			
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NORWAY					
Date:		28.03.2012	14:18:05	PAGE:	4 of 4
Document number:		4		Revision	2
TITLE: mXT143E Xplained maXTouch enabled display module					
mXT143E_Xplained_Display.SchDoc					

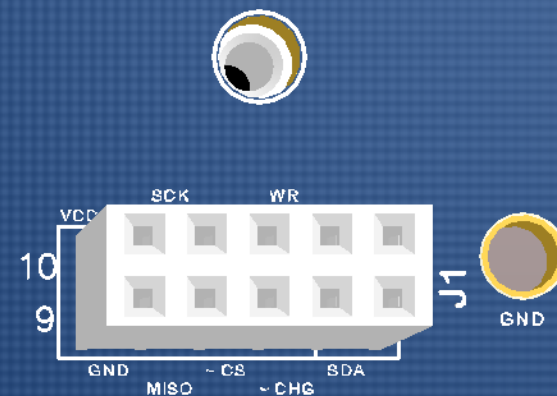
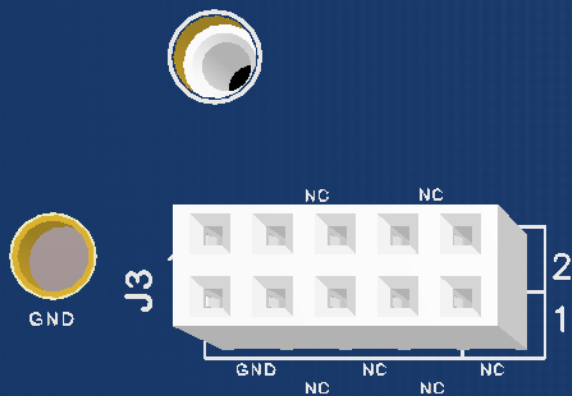




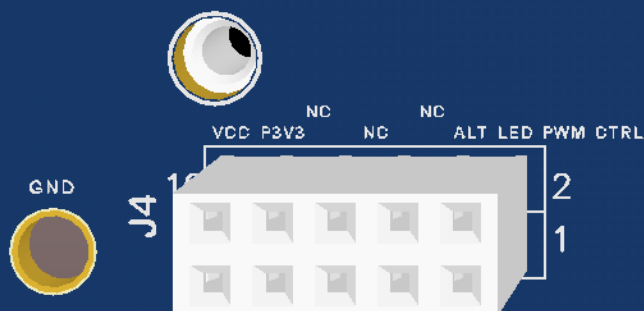








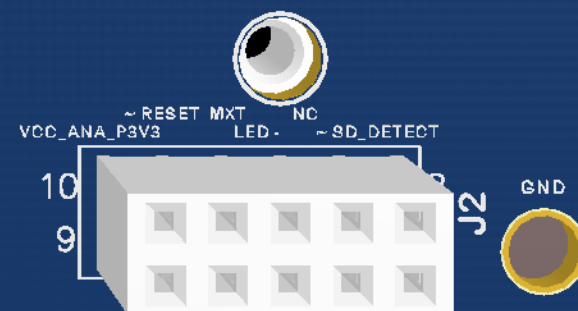
CE

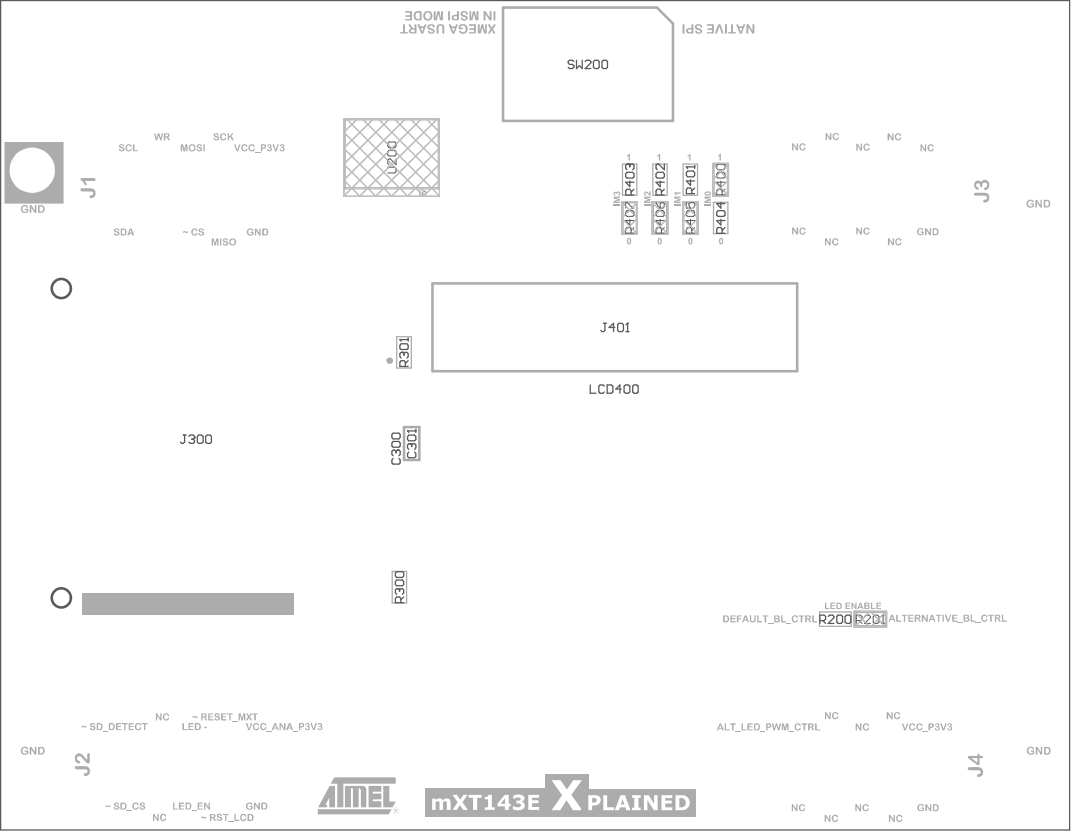


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# Component list

mXT143E Xplained top level schematics



Source Data From:	mXT143E_Xplained.PrjPCB
Project:	mXT143E_Xplained.PrjPCB
Variant:	Variant of mXT143E_Xplained

Report Date: 28.03.2012 14:18:18  
Print Date: 28.03.2012 14:18:16

#	Designator	Quantity	Value	Manufacturer	MPN	Description
1	C300	1	100nF			Ceramic capacitor, SMD 0402, High Density Footprint
2	C301	1	4.7uF	tdk	C1608X5R1A475K	Ceramic capacitor, SMD 0603, X5R, 10V, 10% (de31036)
3	CABLE1	1	687645050002	Würth Elektronik	687645050002	FFC 0.50mm pitch, 45 positions, 50mm length
4	J200, J201, J203, J204	4	SSW-105-06-F-D	SAMTEC	SSW-105-06-F-D	2x5 Female Header receptacle, no guide 2.54mm
5	J300	1	KYOCERA - 14 5738 009 220 859+	Kyocera-elco	KYOCERA - 14 5738 009 220 859+	SDMMC socket, 2.7mm, push-push, SMD
6	J401	1	XF2M-4515-1A	Omron Components	XF2M-4515-1A	45 pin double sided FPC connector with 0.5mm pitch
7	LABEL 100	1	Label PCBA	ACT Logimark AS	505462	PCBA identification label PP Top White Gloss
8	LCD400	1	PDA 2.8 inch mXT143E LCD display module	Precision Design Associates (PDA)	PDA028-mXT143E	PDA 2.8 inch mXT143E LCD display module
9	PCB100	1	A08-1407		A08-1407	mXT143E Xplaine printed circuit board PCB, 4-layer, 85mm x 66mm
10	R200	1	0R			Thick film resistor, SMD 0402, 1/16W, 1%
11	R300, R301, R401, R402, R403, R404	6	100k			Thick film resistor, SMD 0402, 1/16W, 1%
12	S100, S101, S102, S103	4	Screw M2.5x12			Screw M2.5x12
13	SD1	1	4GB SDSC card	Kingston		4GB Kingston SDSC Card
14	SW200	1	MMS 228 T	Knitter-Switch	MMS 228 T	Slide Switch, Knitter, 2 Pos 2 Pol, SMD
		25				

Approved

Notes