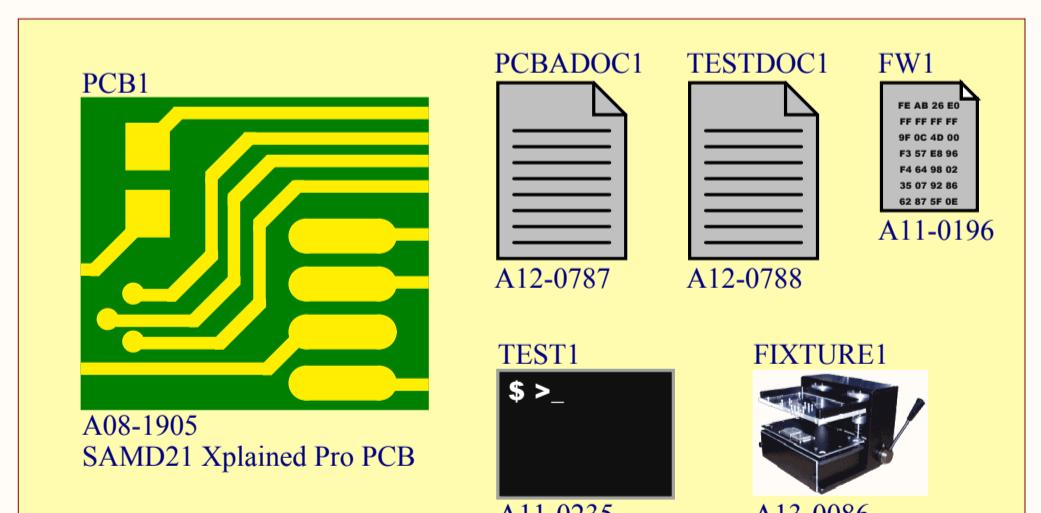
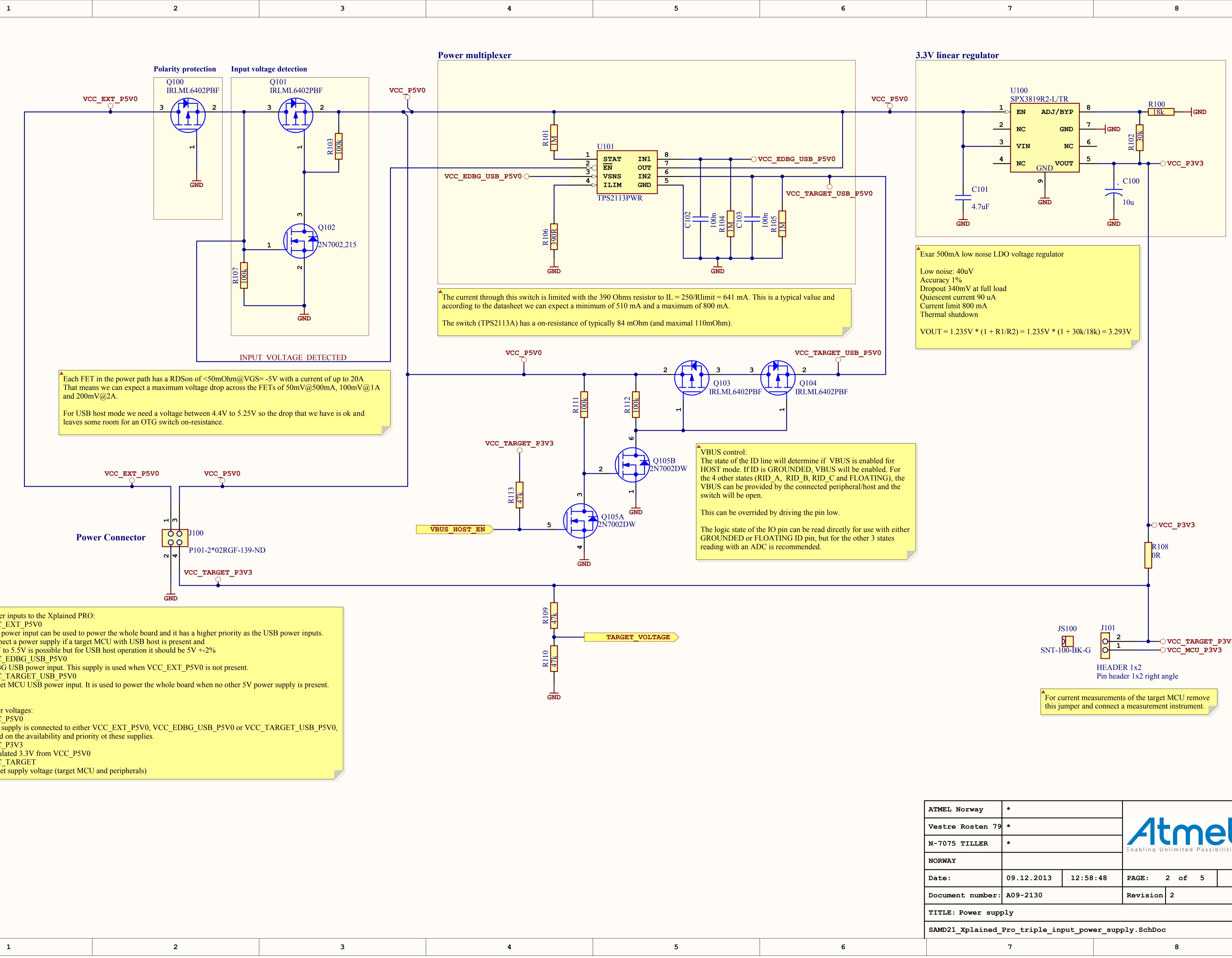


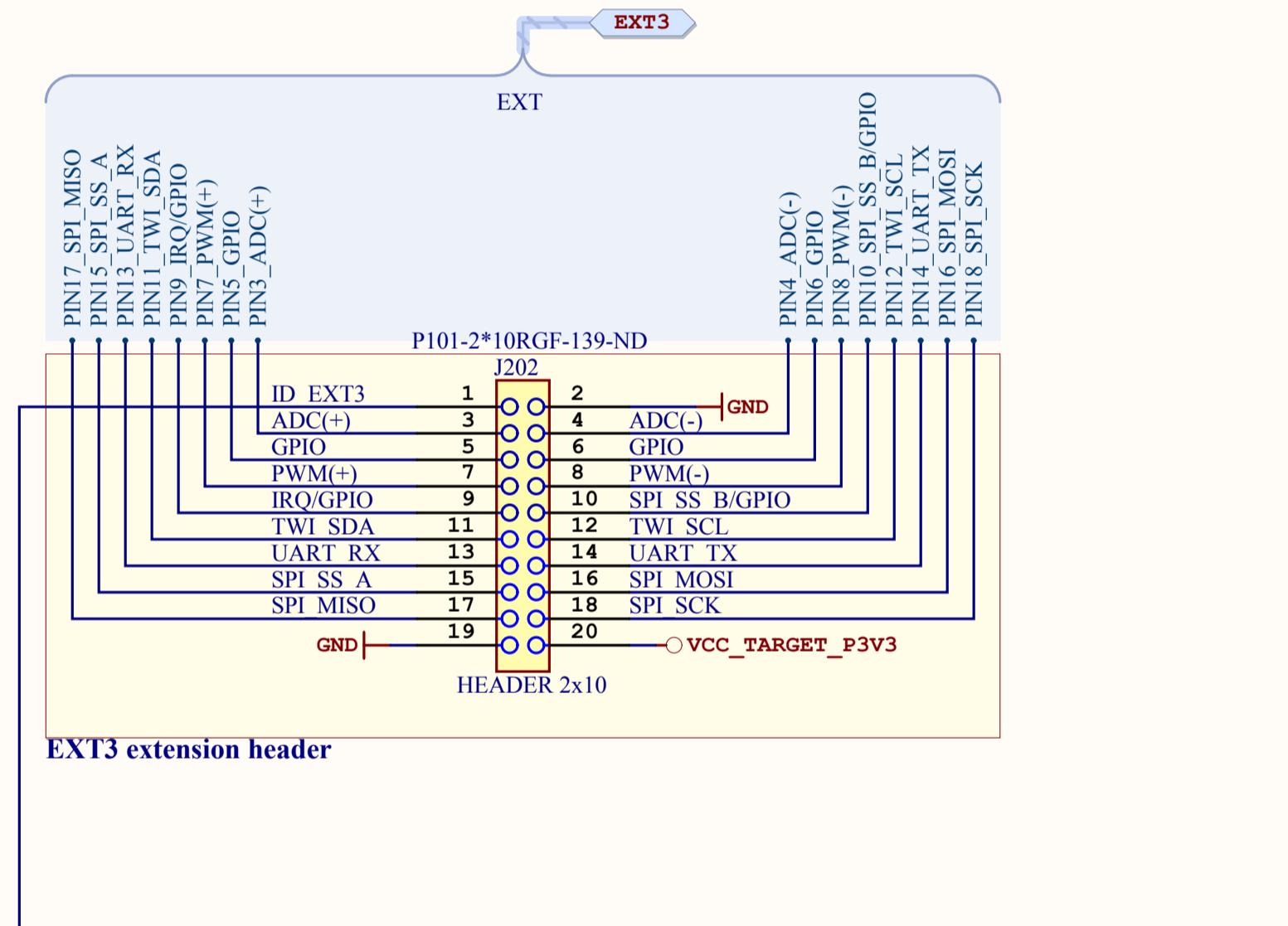
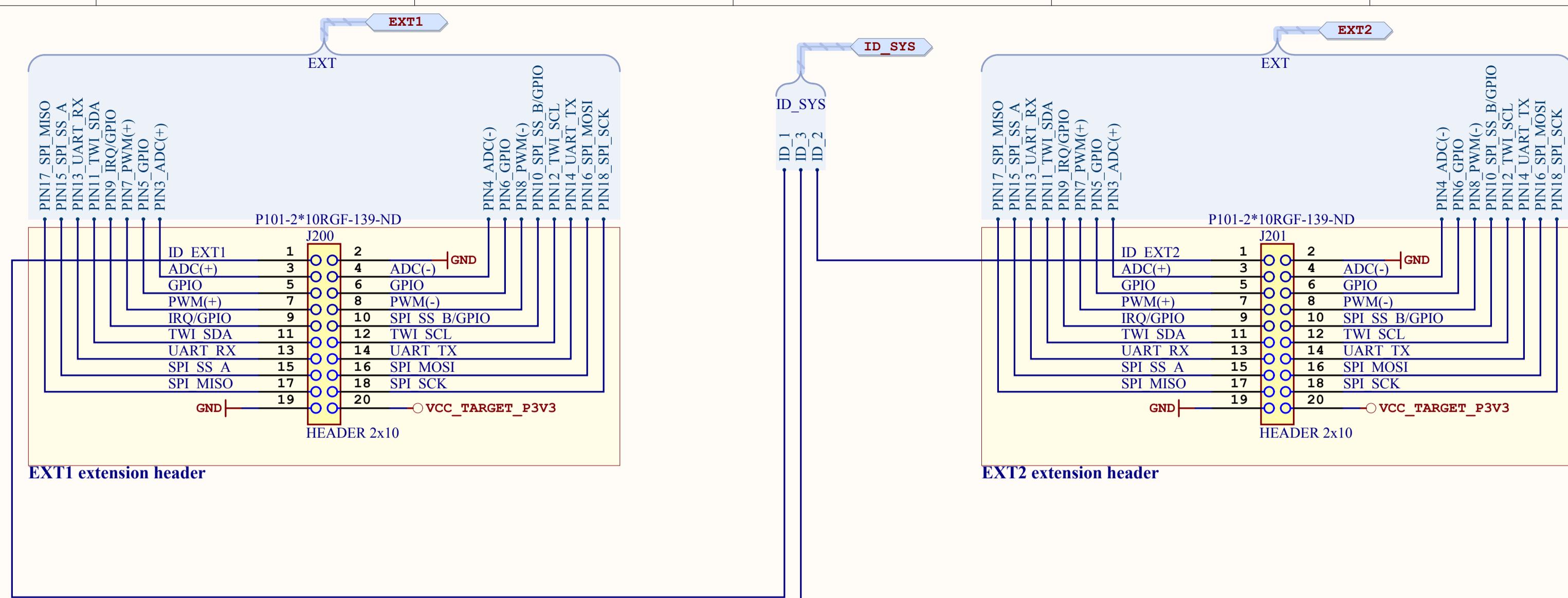
LABEL1
 Product number/revision
 Serial number

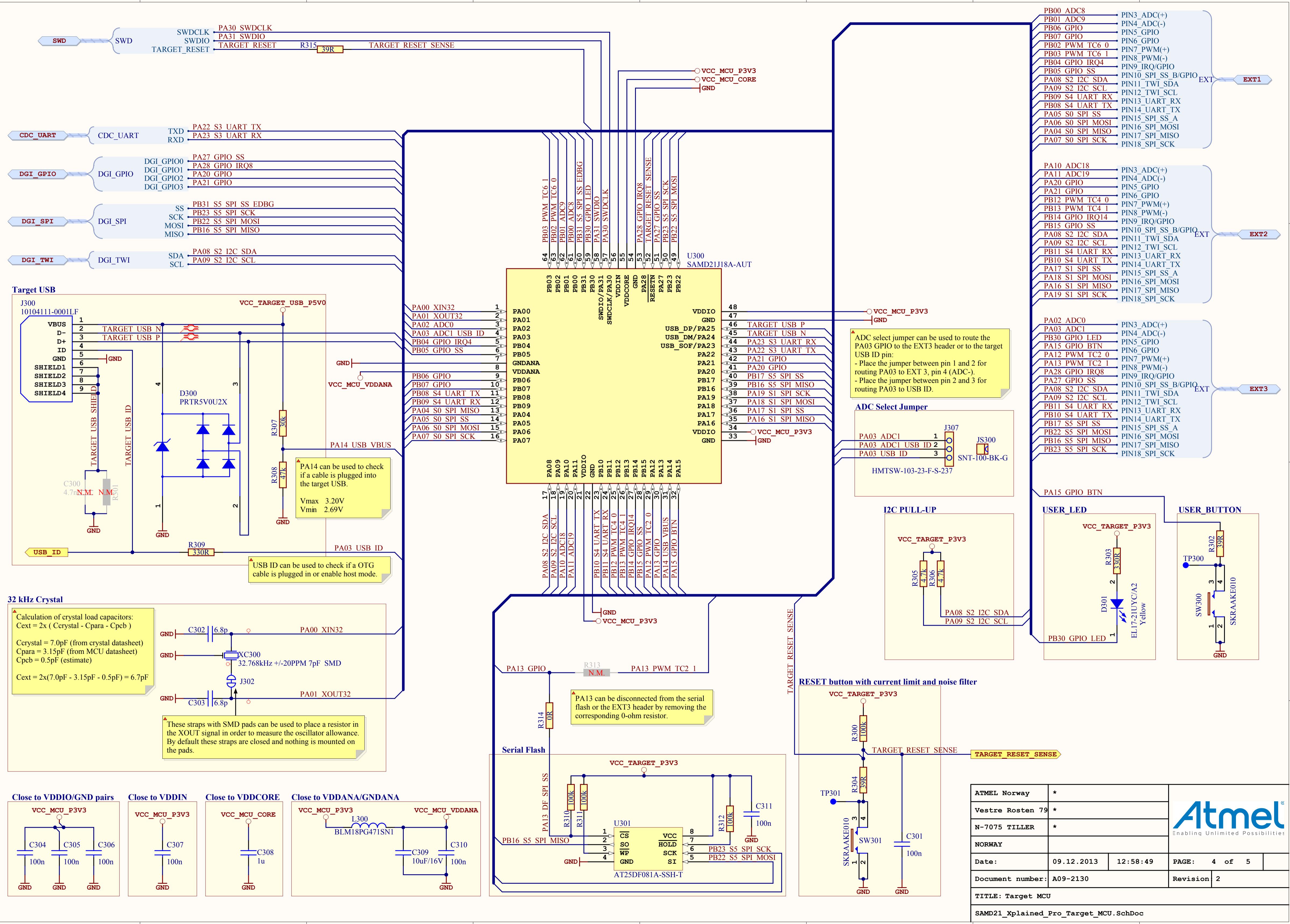
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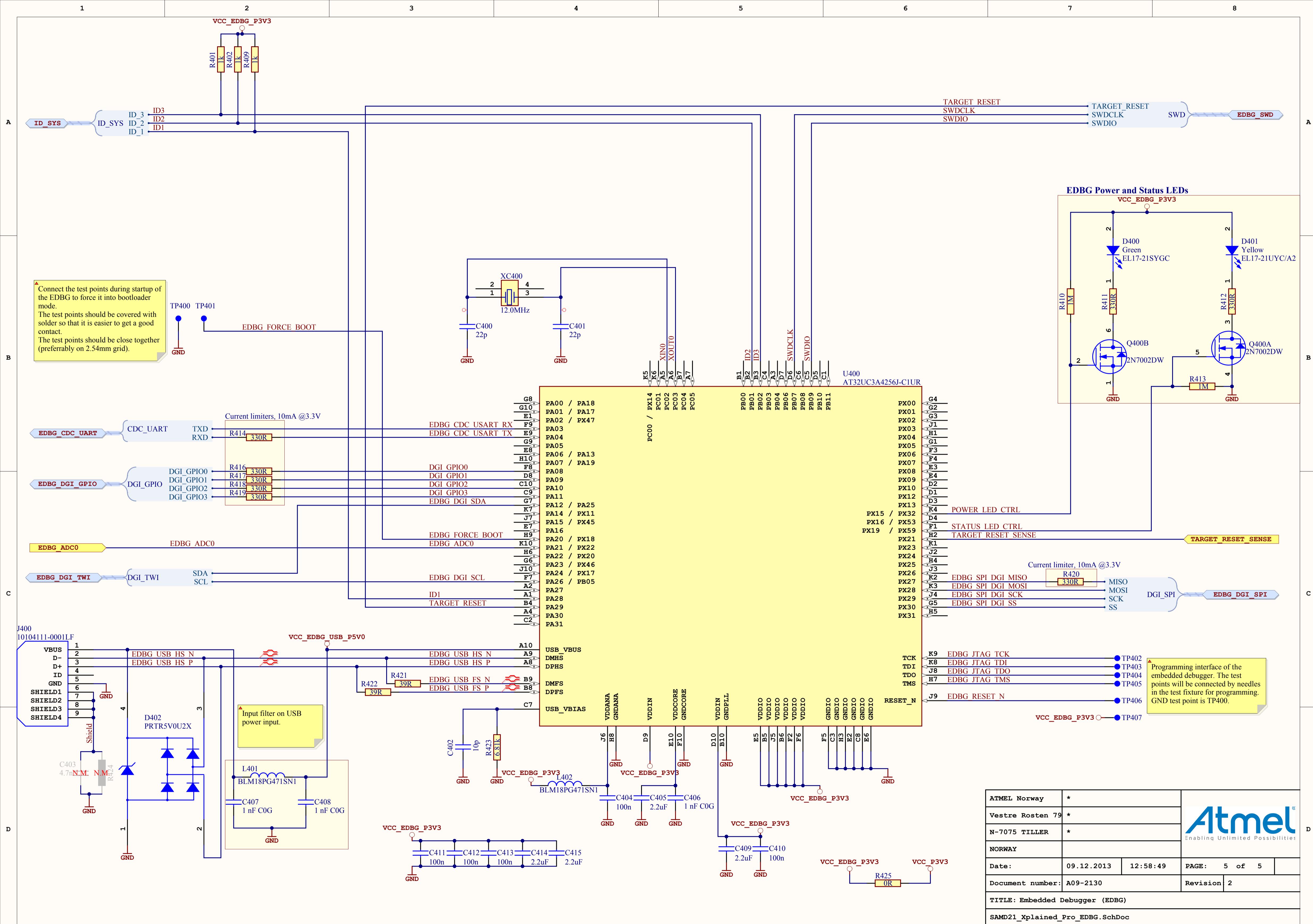


ATMEL Norway	*		
Vestre Rosten 79	*		
N-7075 TILLER	*		
NORWAY			
Date:	09.12.2013	12:58:48	PAGE: 1 of 5
Document number:	A09-2130	Revision	2
TITLE: Top Level Schematics			
SAMD21_Xplained_Pro_TopLevel.SchDoc			

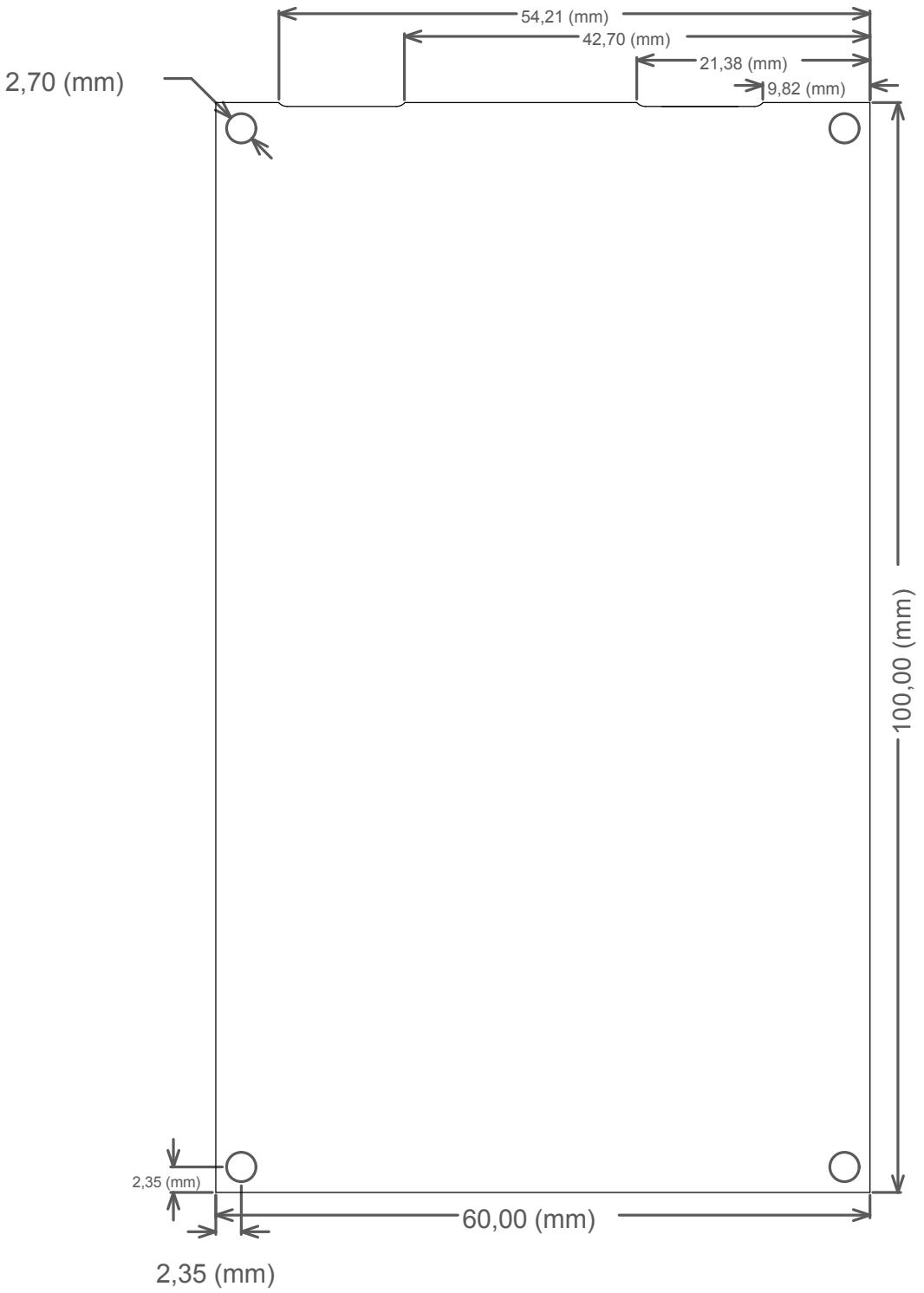




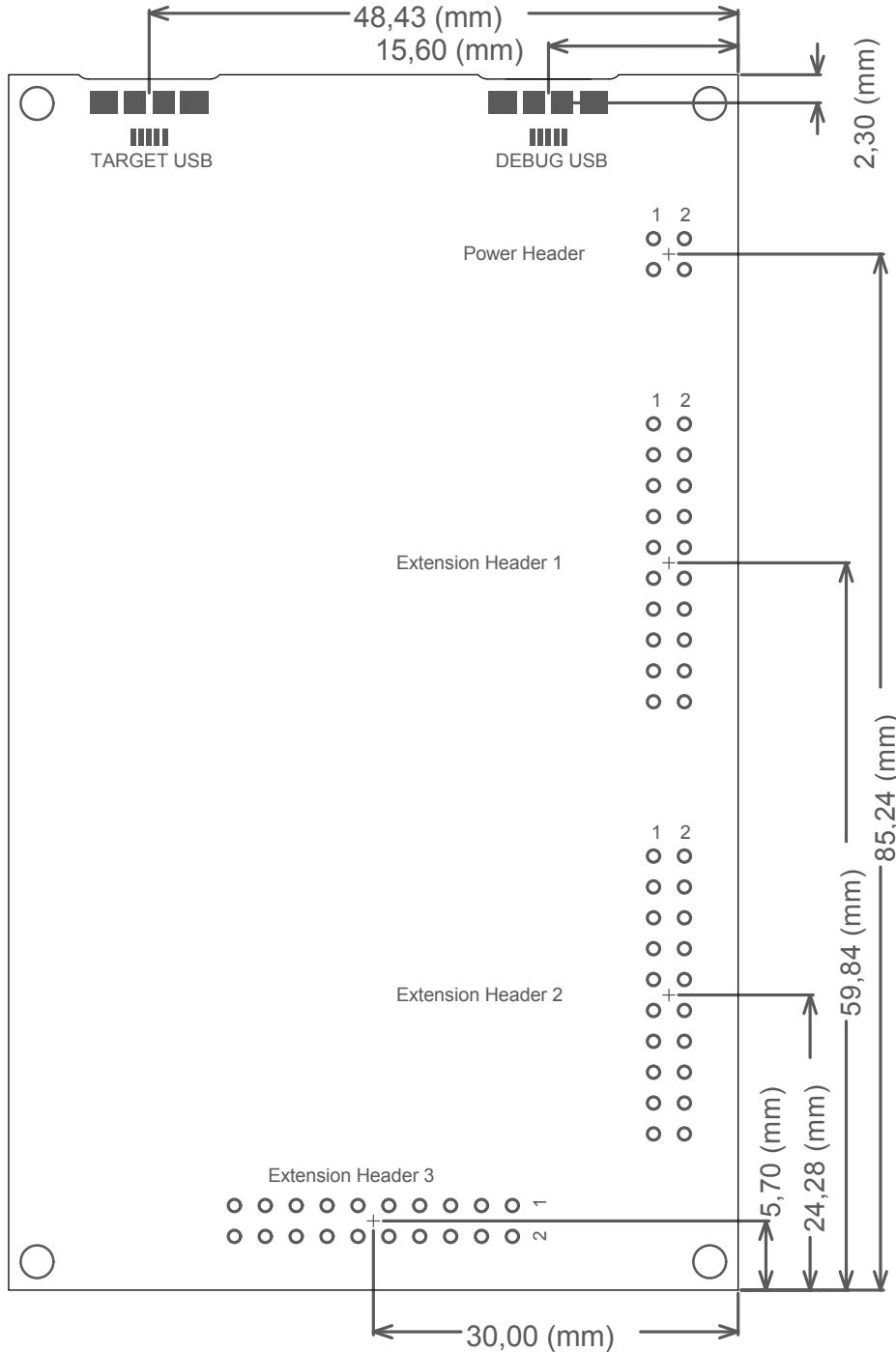


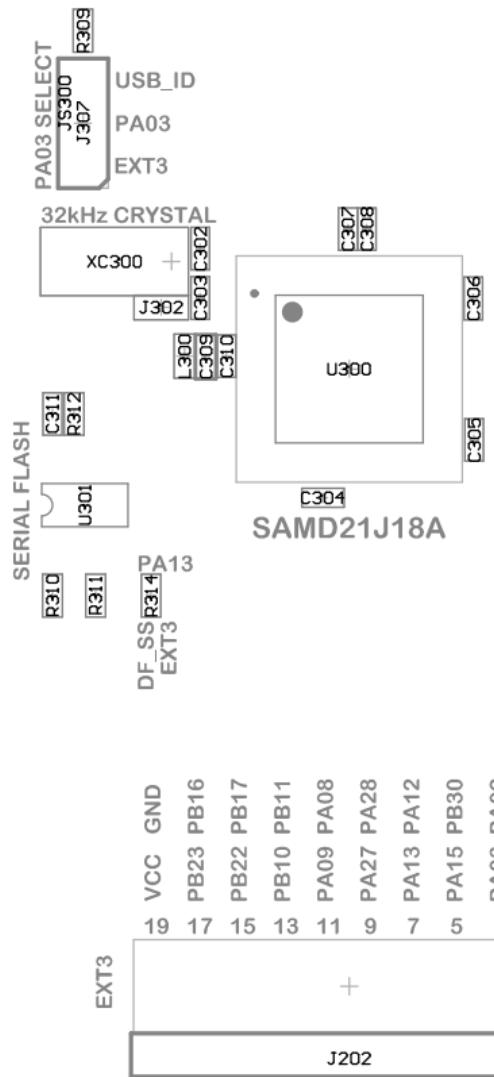
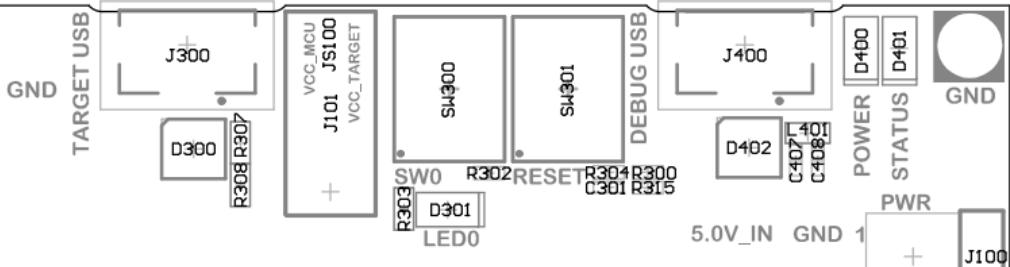


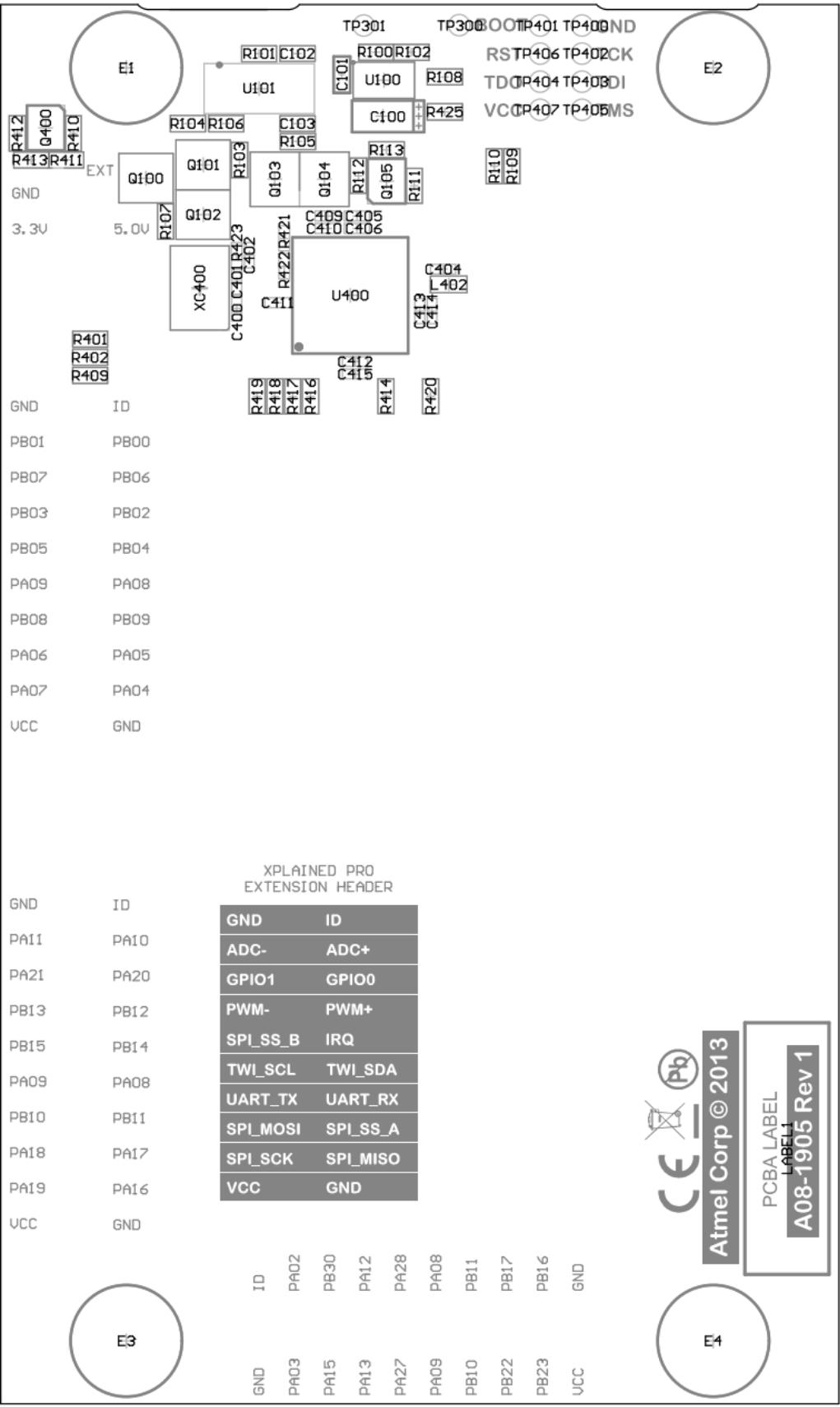
Medium MCU Mechanical Dimensions

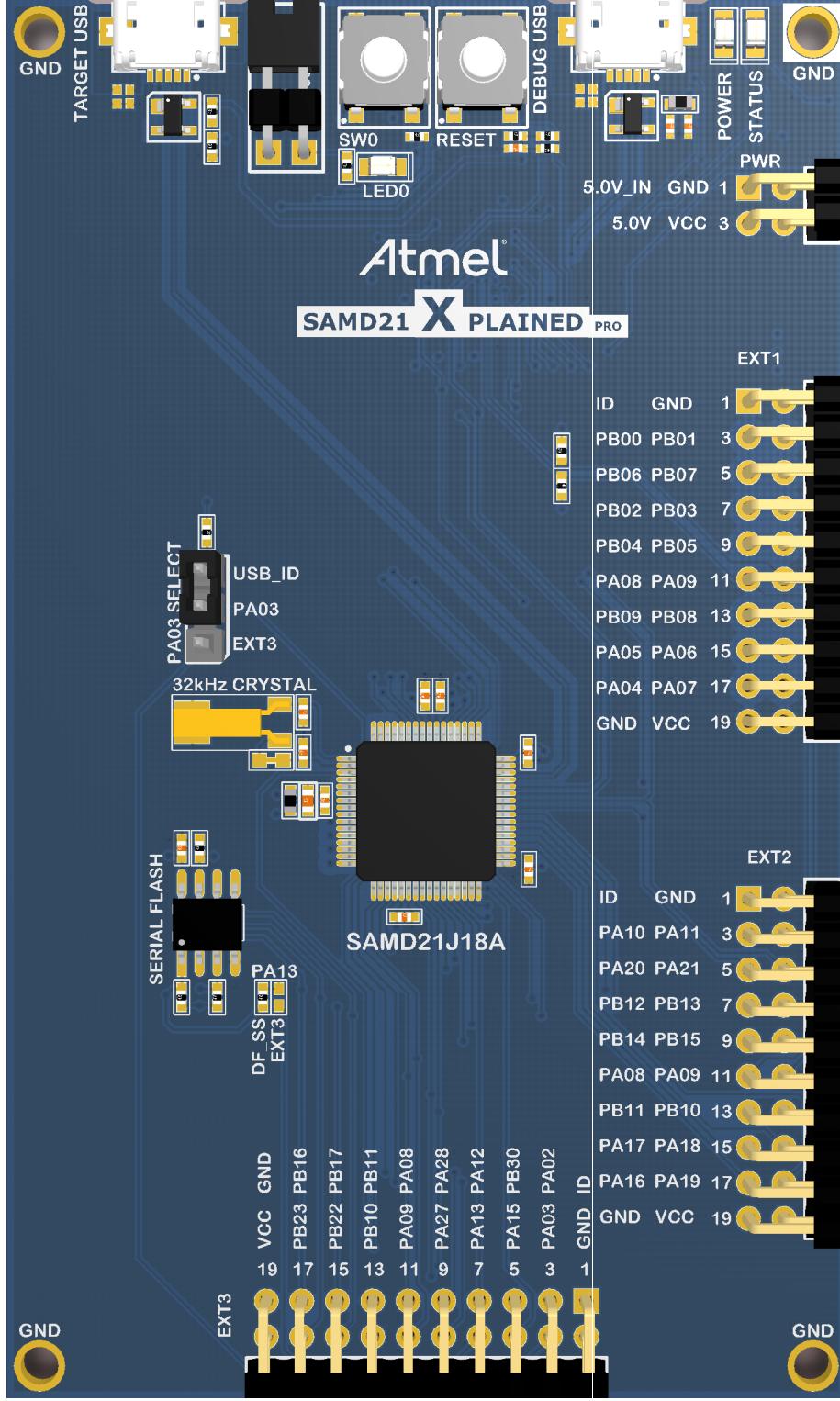


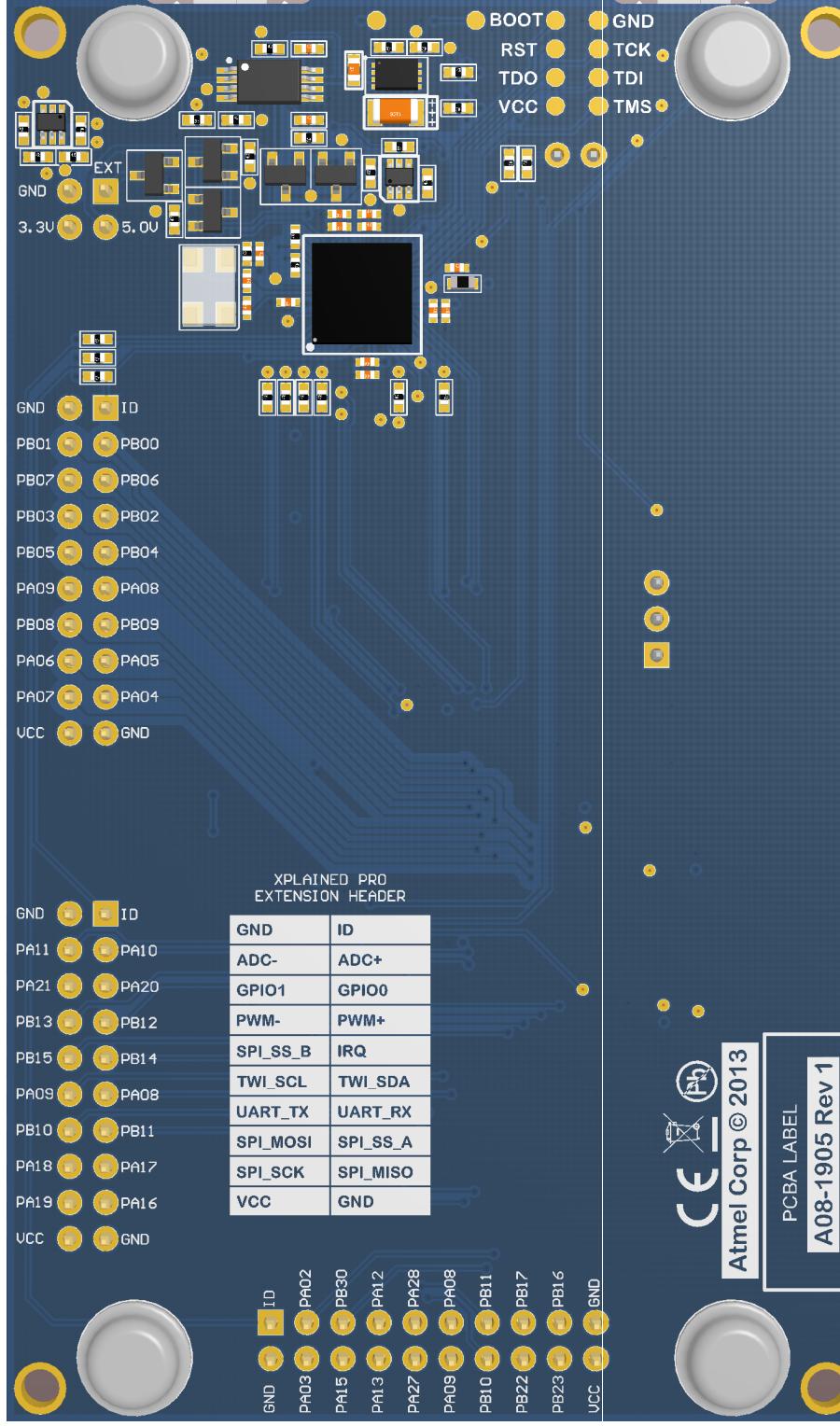
Medium MCU Connector Placement

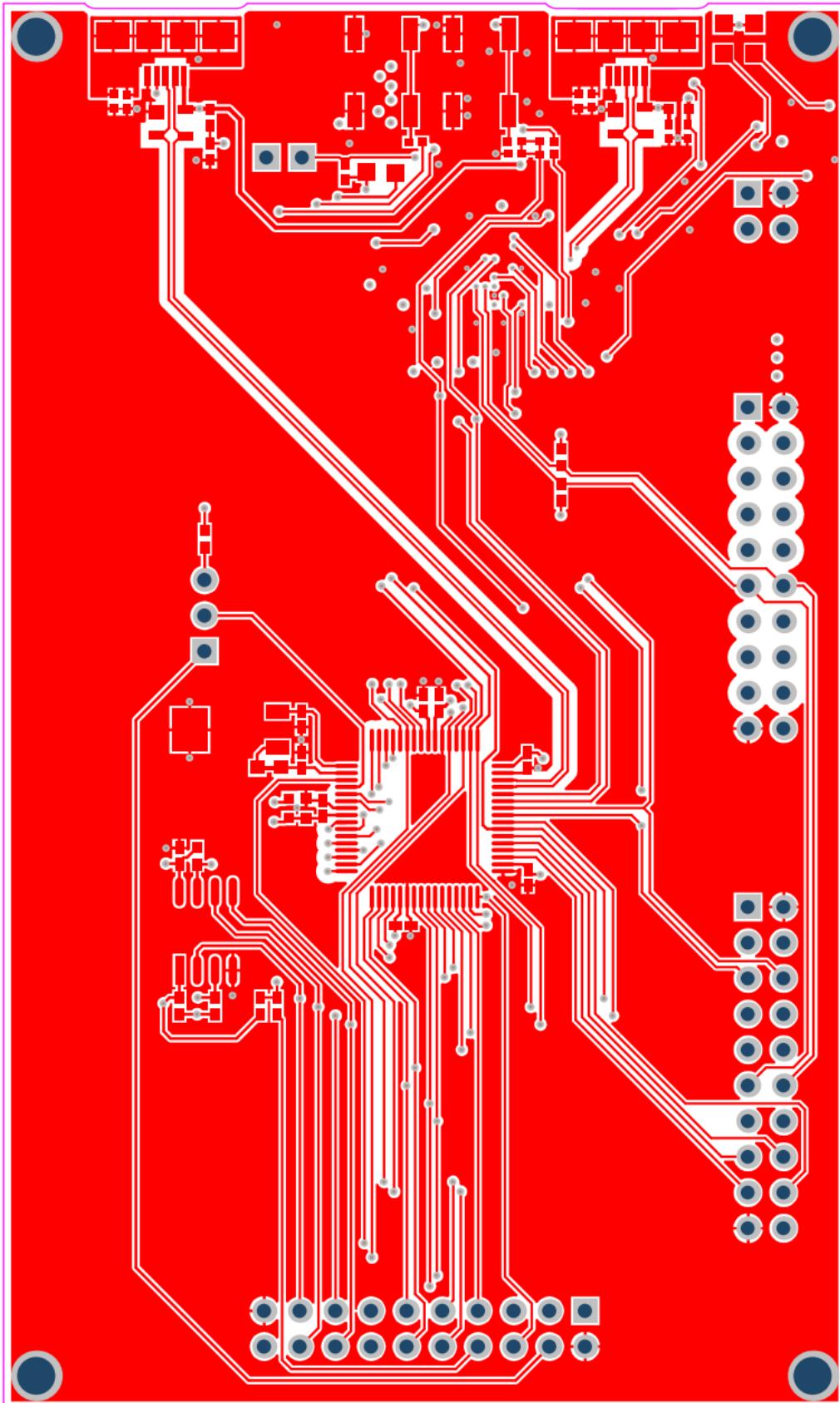


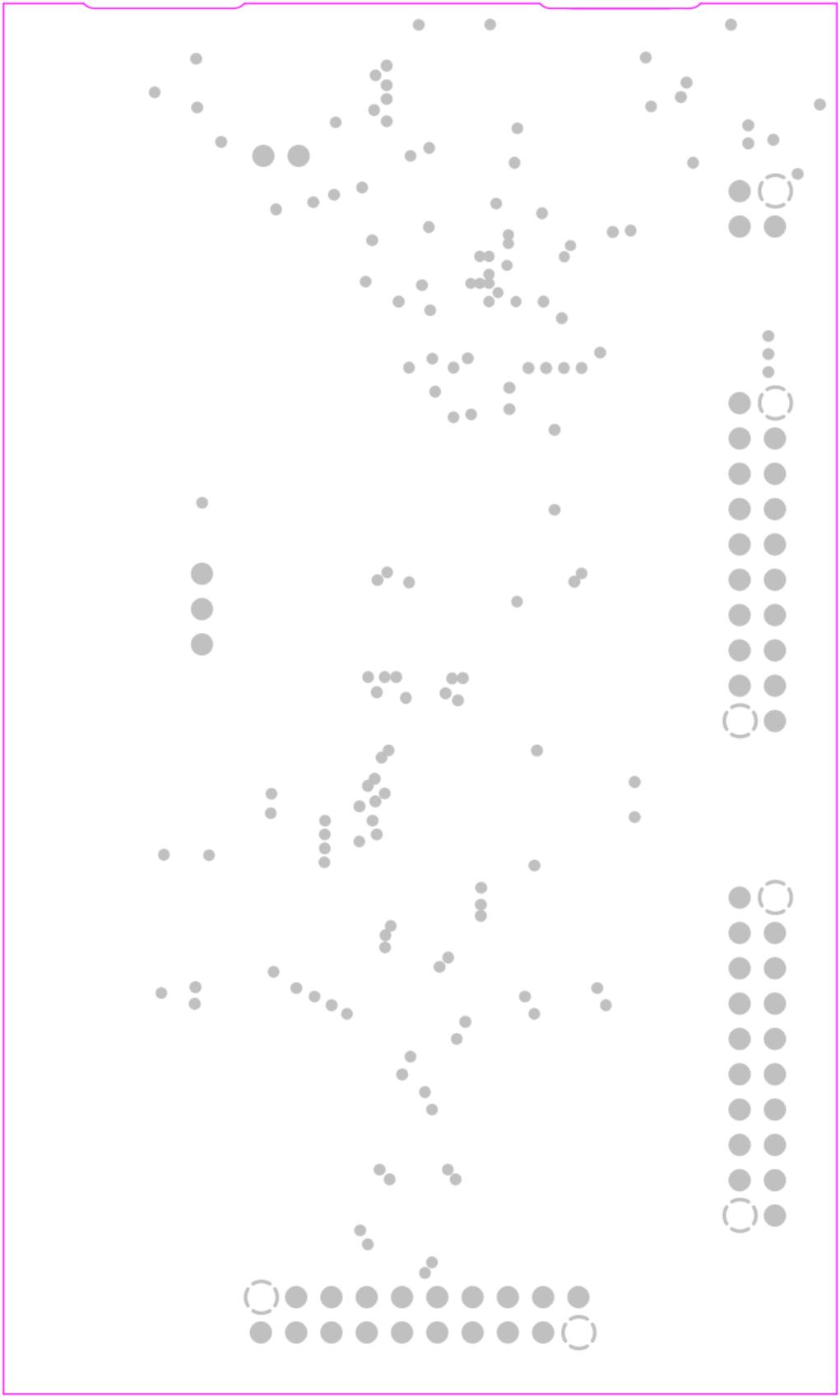


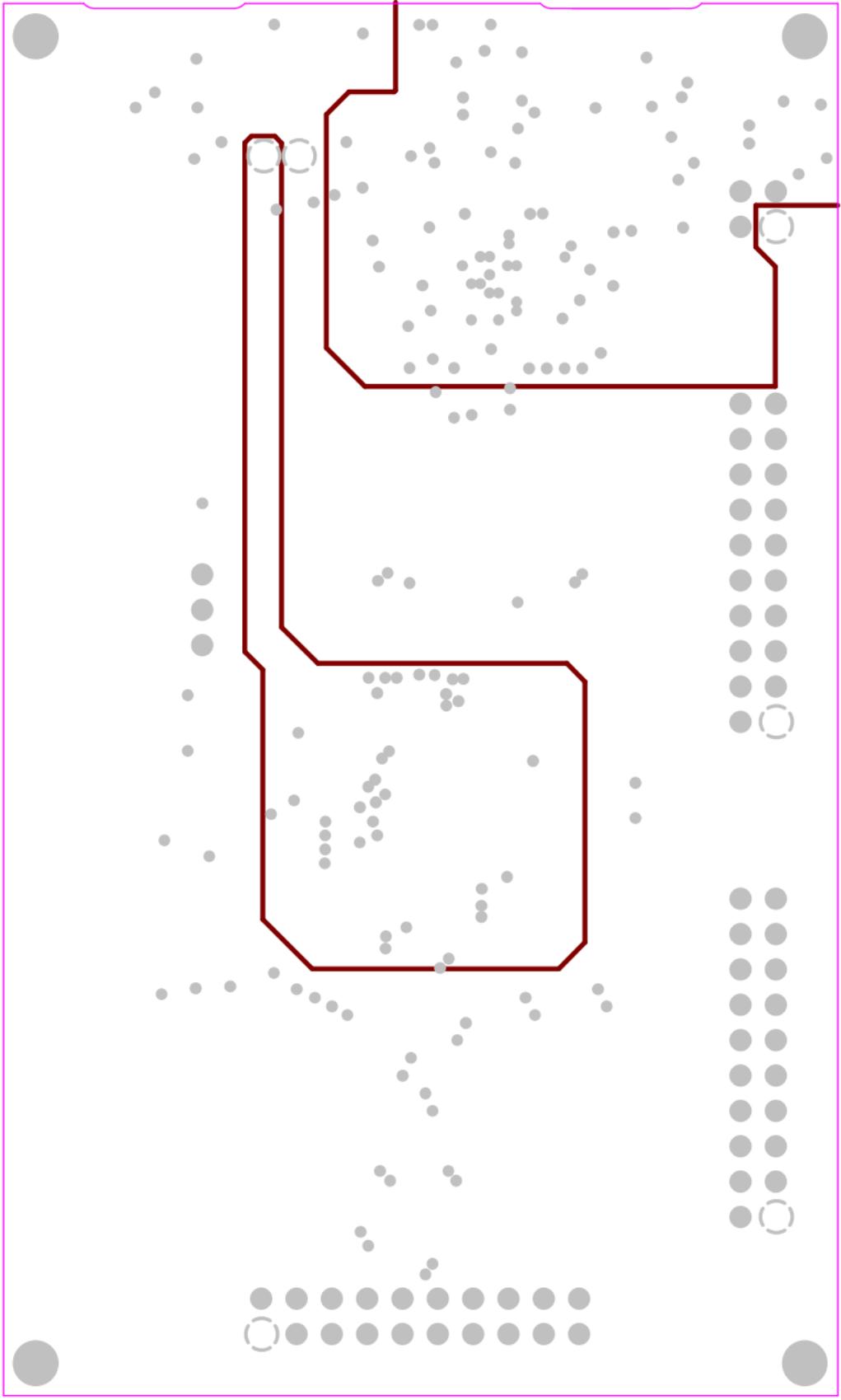


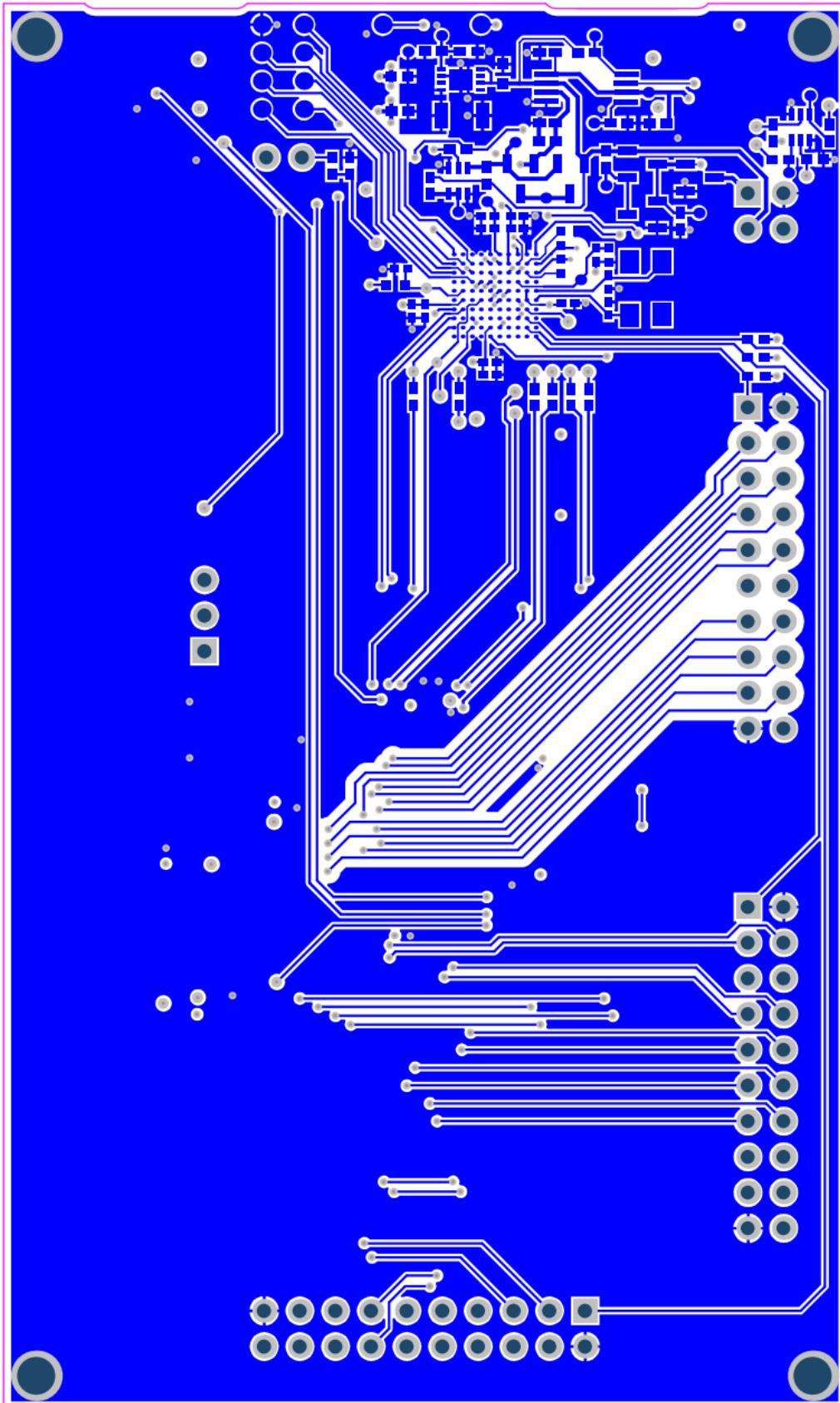












Component list

Bill of Materials Fitted For Variant [Default_assembly] of Project [SAMD21_Xplained_Pro.PrjPCB] (No PCB Document Selected)



Source Data From: SAMD21_Xplained_Pro.PrjPCB
 Project: SAMD21_Xplained_Pro.PrjPCB
 Variant: Default_assembly

Report Date: 09.12.2013 12:59:10
 Print Date: 09.12.2013 12:59:07

Fitted	Designator	Quantity	Value	Manufacturer	MPN	Description
Fitted	C100	1	10u	vishay	TR3A106K016C1700	SMD tantalum capacitor, ESR = 1.3, 3216-18 (BA) 1206,
Fitted	C101	1	4.7uF	tdk	C1608X5R1A475K	Ceramic capacitor, SMD 0603, X5R, 10V, 10% (de31036)
Fitted	C102, C103, C304, C305, C306, C307, C310	7	100n	Kemet	C0402C104K4RACTU	Ceramic capacitor, SMD 0402, X7R, 16V, +/-10%
Fitted	C301, C404, C410, C411, C412, C413	6	100n	Kemet	C0402C104K4RACTU	Ceramic capacitor, SMD 0402, X7R, 16V, +/-10%
Fitted	C302, C303	2	6.8p			Ceramic capacitor, SMD 0402, NP0, 50V, +/-5%
Fitted	C308	1	1u	Kemet	C0402C105K9PAC	Ceramic capacitor, SMD 0402, X5R, 6.3V, +/-10% (de26942)
Fitted	C309	1	10uF16V	Taiyo Yuden	EMK107B16J106MA-T	Ceramic capacitor, SMD 0603, X5R, 16V, 10uF +/- 20% (High Density)
Fitted	C311	1	100n	Kemet	C0402C104K4RACTU	Ceramic capacitor, SMD 0402, X7R, 16V, +/-10%
Fitted	C400, C401	2	22p			Ceramic capacitor, SMD 0402, NP0, 50V, +/-5%
Fitted	C402	1	10p			Ceramic capacitor, SMD 0402, NP0, 50V, +/-5%
Fitted	C405, C409, C414, C415	4	2.2uF	Kemet	C0402C225M9PAC	Ceramic capacitor, SMD 0402, X5R, 6.3V, +/-20%
Fitted	C406, C407, C408	3	1nF-C0G	Murata	GRM155C1H102JA01D	Ceramic capacitor, SMD 0402, C0G, 50V, +/-5%
Fitted	D300, D402	2	PRT5V50U2X	Philips	PRT5V50U2X	Double rail-to-rail USB ESD protection diode
Fitted	D301, D401	2	EL17-21UY/C2/A2	Everlight	17-21UY/C5S30-A3/TR	LED, Yellow, Wave length=591nm, SMD 0805, +/-70°
Fitted	D400	1	EL17-21SY/GC	Everlight	EL17-21SY/GC	LED, Green, Wave length=575nm, SMD 0805, +/-70°
Fitted	E1, E2, E3, E4	4	SJ-5076		SJ-5076	2.8mm adhesive feet, diam 8.0mm
Fitted	Fixture1	1	Xplained PRO MCU board Jupiter Test Fixture	ESCATEC	Xplained PRO MCU board Jupiter Test Fixture	Xplained PRO MCU board Jupiter Test Fixture
Fitted	FW1	1	EDBG secured firmw are	ATMEL		EDBG secured firmw are
Fitted	J100	1	P101-202RGF-139-ND		P101-202RGF-139-ND	
Fitted	J101	1	Pin header 2x2 right angle	Pro-data International Corp	2213R-2G	Pin header, 2x2, Right Angle, 2.54mm, THT, Pin In Paste
Fitted	J200, J201, J202	3	P101-210RGF-139-ND		P101-210RGF-139-ND	1x2 pin header, right angle, 2.54 mm pitch, through-hole
Fitted	J300, J400	2	10104111-0001LF	FCI	10104111-0001LF	Pin header, 2x10, Right Angle, 2.54mm, THM, Pin In Paste
Fitted	J307	1	HMTSW-103-23-F-S-237	SAMTEC	HMTSW-103-23-F-S-237	1x3 pin header, 2.54mm pitch, Pin-in Paste THM, 1mm hole
Fitted	J5100, JS300	2	SNT-100-BK-G	SAMTEC	SNT-100-BK-G	Jumpcap for 2.54mm pinheader
Fitted	L300, L401, L402	3	BLM18PG471SN1	Murata	BLM18PG471SN1	SMD RF inductor 0603, Z=4700ohm (@100MHz), Max R(d)=0.65Ohm, Max current=1A
Fitted	LABEL1	1	Label PCB	ACT Logmark AS	505462	PCBA identification label PTP Top White Gloss
Fitted	POB1	1	SAMD21 Xplained Pro POB			SAMD21 Xplained Pro POB, 4 layer, 60mm x 100mm
Fitted	POBADOC1	1	A09-2130 PCBA Files	ATMEL		SAMD21 Xplained Pro POBA documentation
Fitted	Q100, Q101, Q103, Q104	4	IRLML6402PBF	International Rectifier	IRLML6402PBF	P-ch. MOSFET, -30V, -3.7A continuous RDS(ON)=0.05Ohm@VGS=-4.5V, RDS(ON)=0.08Ohm@VGS=-2.5V
Fitted	Q102	1	2N7002,215	NXP	2N7002,215	N-Channel MOSFET, 60V, 0.300A continuous, 1.2A Peak, RDS(ON) = 3.80hm@VGS=4.5V, VGS(th)<2.5V
Fitted	Q105, Q400	2	2N7002DW	Fairchild	2N7002DW	Dual N-Channel MOSFET, 60V, 115mA cont,RDS(ON) < 7.5 Ohm @50mA@5V, SOT-363
Fitted	R100	1	18k			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R101, R104, R105, R410, R413	5	1M			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R102, R307	2	30k			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R103, R107, R111, R112, R310, R311, R312	7	100k			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R106	1	390R			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R108, R314, R425	3	0R			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R109, R110, R113, R308	4	47k			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R300	1	100k			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R302, R304, R315, R421, R422	5	39R			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R303, R309, R411, R412, R414, R416, R417, R418, R419, R420	10	330R			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R305, R306	2	4.7k			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R401, R402, R409	3	1k			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R423	1	6.81k			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	SW300, SW301	2	SKRAAKED10	ALPS	SKRAAKED10	6.2x6.2 mm SMD tact switch, same as A08-0091 but less force is needed
Fitted	TEST1	1	SAMD21 Xplained Pro test	ATMEL		Fixture egg test for SAMD21 Xplained Pro
Fitted	TESTDOC1	1	SAMD21 Xplained Pro Test Instructions	ATMEL		SAMD21 Xplained Pro Test Instructions
Fitted	U100	1	SPX3819R2-L/T/R	Exar	SPX3819R2-L/T/R	500mA LDO, ADJ, low noise, 8-DFN package
Fitted	U101	1	TPS2113PWR	Texas Instruments	TPS2113PWR	Autoswitching 2:1 Power Mux
Fitted	U300	1	SAMD21J18A-AUT	ATMEL	SAMD21J18A-AUT	Atmel 32-bit RISC MCU 64pin
Fitted	U301	1	AT25DF081A-SSH-T	Adesto Technologies	AT25DF081A-SSH-T	8Mbit SPI serial flash memory
Fitted	U400	1	AT32UC3A4256J-C1UR	ATMEL	AT32UC3A4256J-C1UR	AVR 32-bit RISC MCU
Fitted	XC300	1	32.768kHz +/-20ppm 7pF SMD	Micro Crystal	MS1V-T1K 32.768kHz 7pF +/-20ppm TA	32k768 crystal, +/-20ppm, CL=7pF, max 60kOhm, SMD
Fitted	XC400	1	12.0MHz	Fox Electronics	FQ5032B-12-C-C-C-200-1	Fox FQ5032B 12.0MHz SMD crystal 738B-12
Not Fitted	C300, C403	0	4.7n			Ceramic capacitor, SMD 0402, X7R, 25V, +/-10%
Not Fitted	R301, R424	0	1M	KOA	RK73H1ETTP1004F	Thick film resistor, SMD 0402, 1/16W, 1%
Not Fitted	R313	0	0R		RMCF0402ZT0RQ0	RES 0.0 OHM 1/16W 0402 SMD
		120				

Approved

Notes