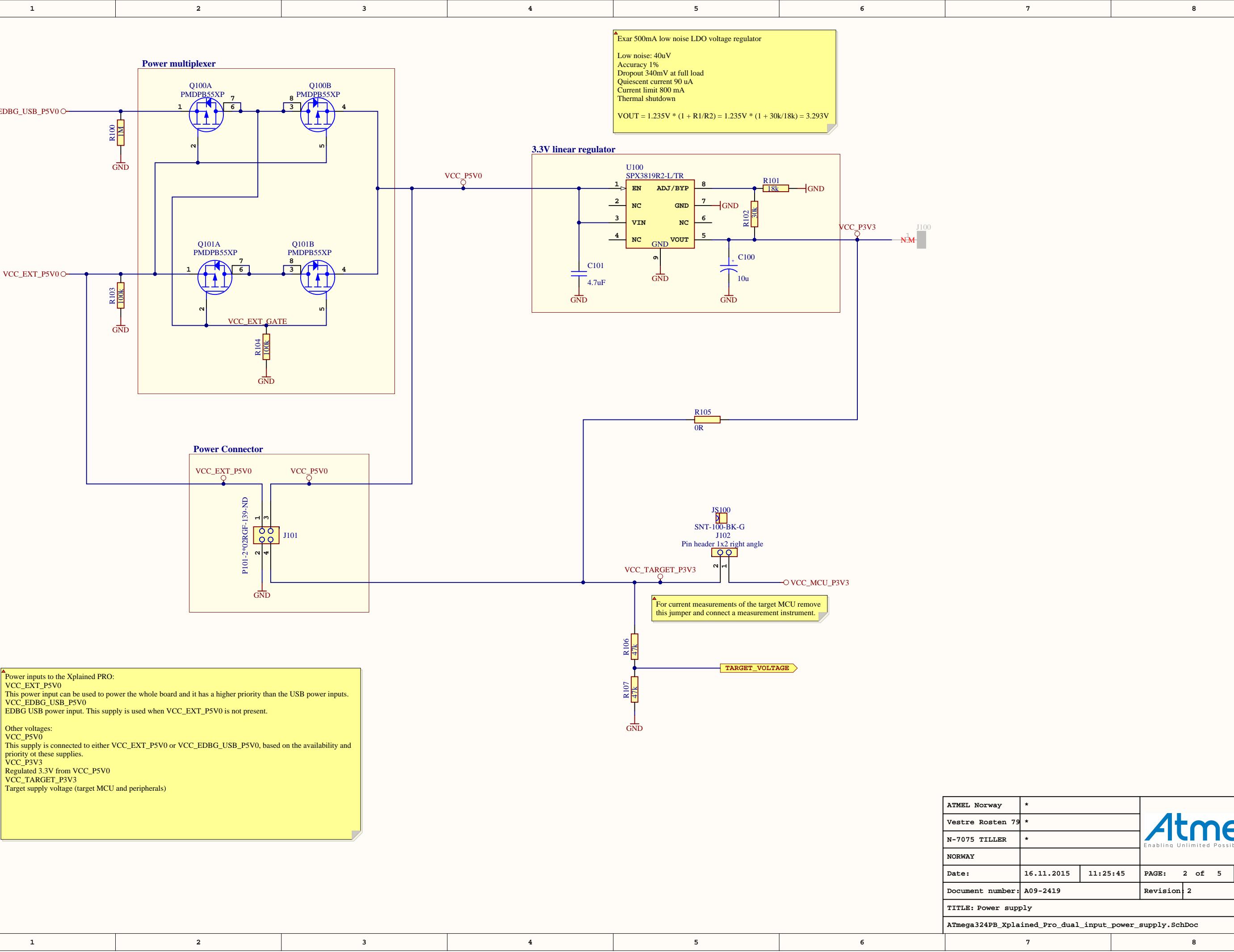
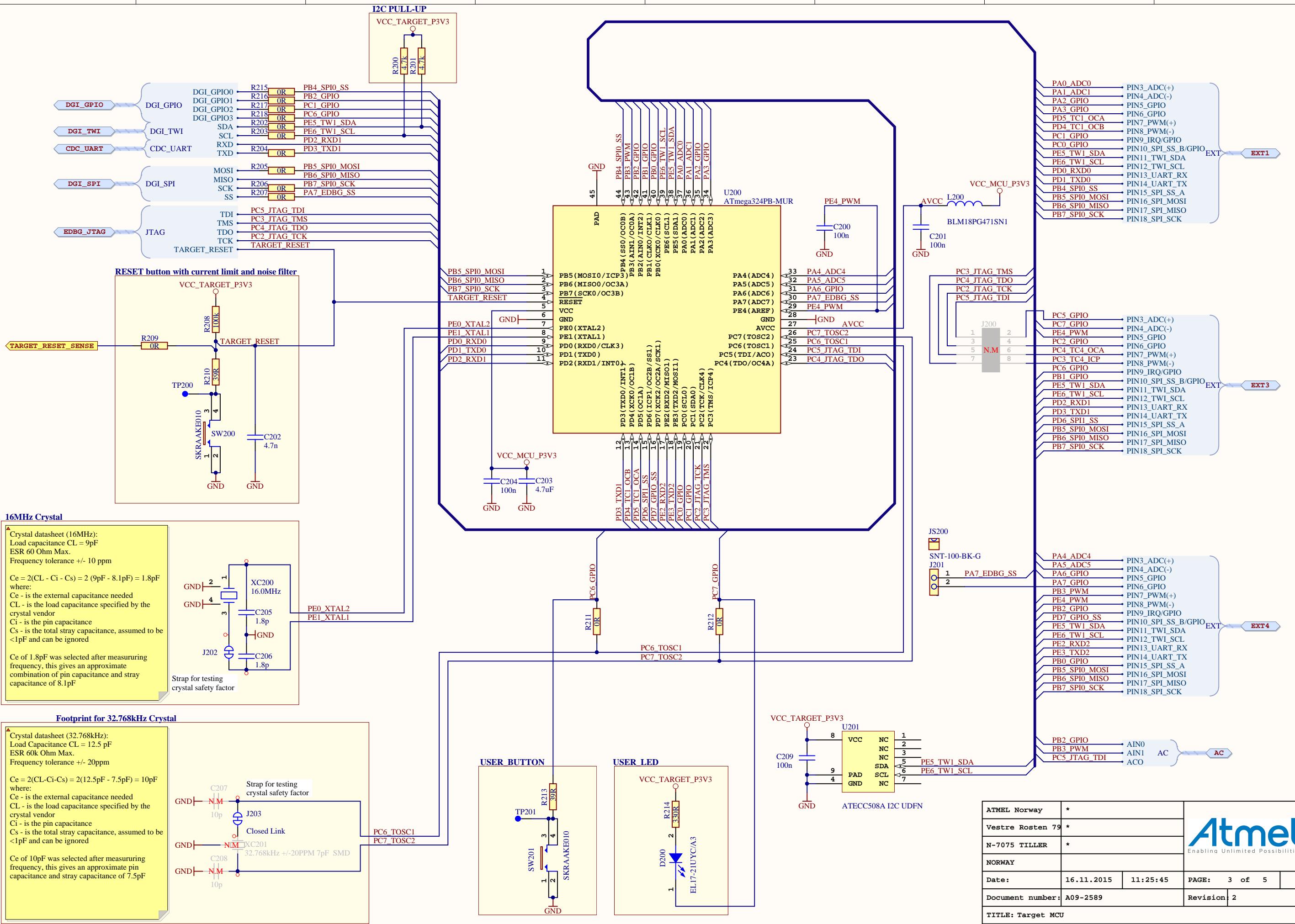
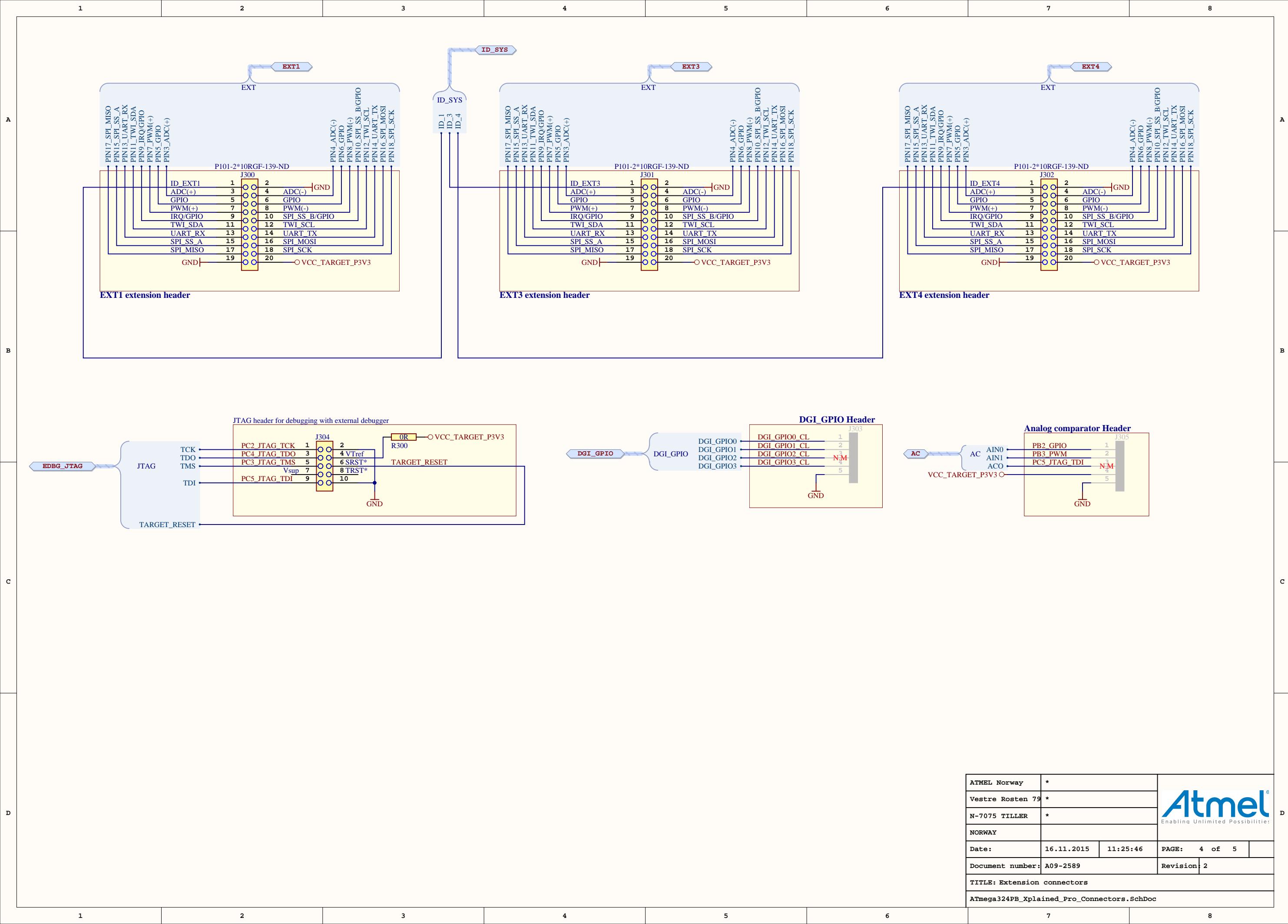
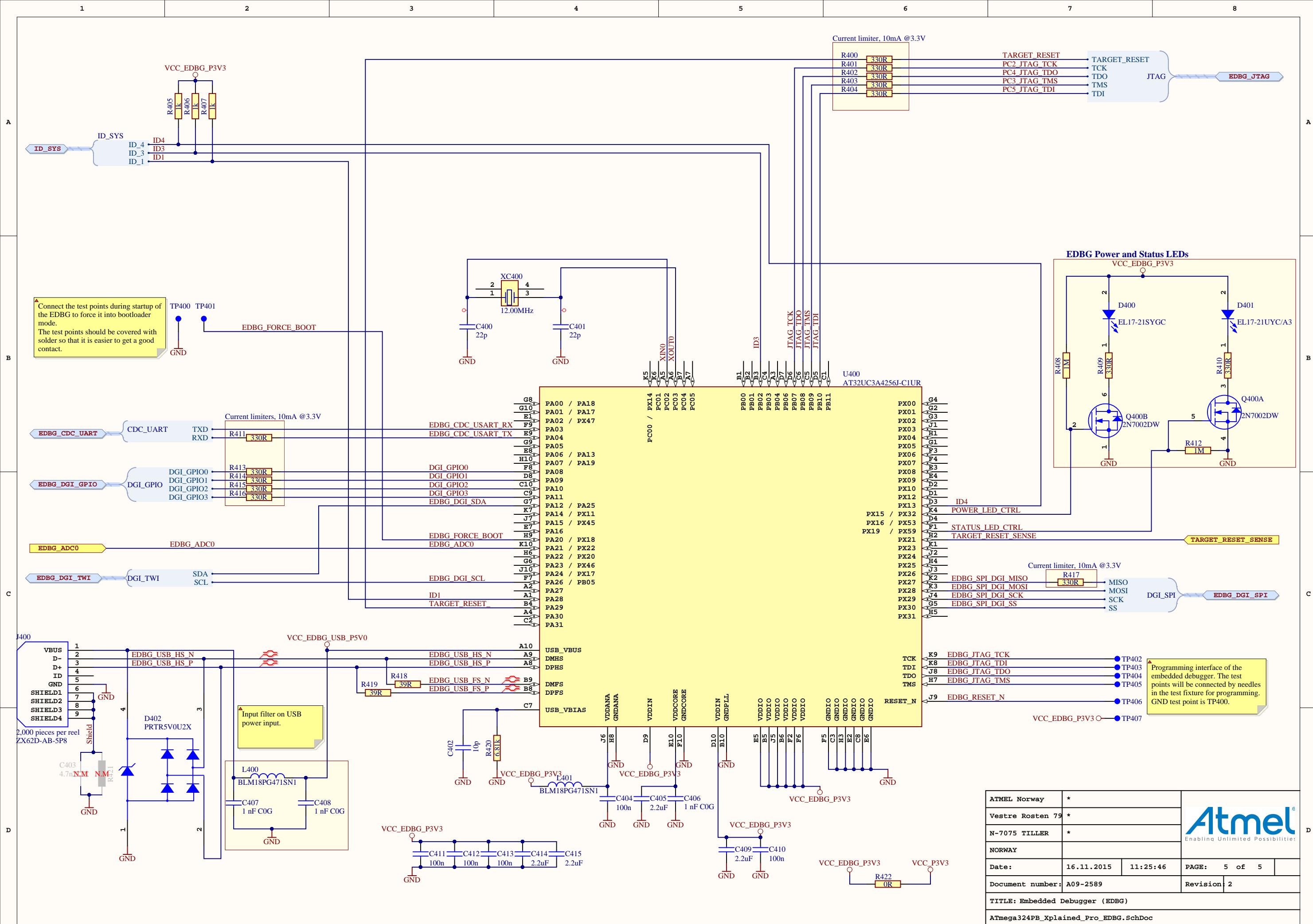


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Vestre Rosten 79	*				
N-7075 TILLER	*				
NORWAY					
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Document number:	A09-2589		Revision	2	
TITLE: Top Level Schematics					
ATmega324PB_Xplained_Pro_TopLevel.SchDoc					

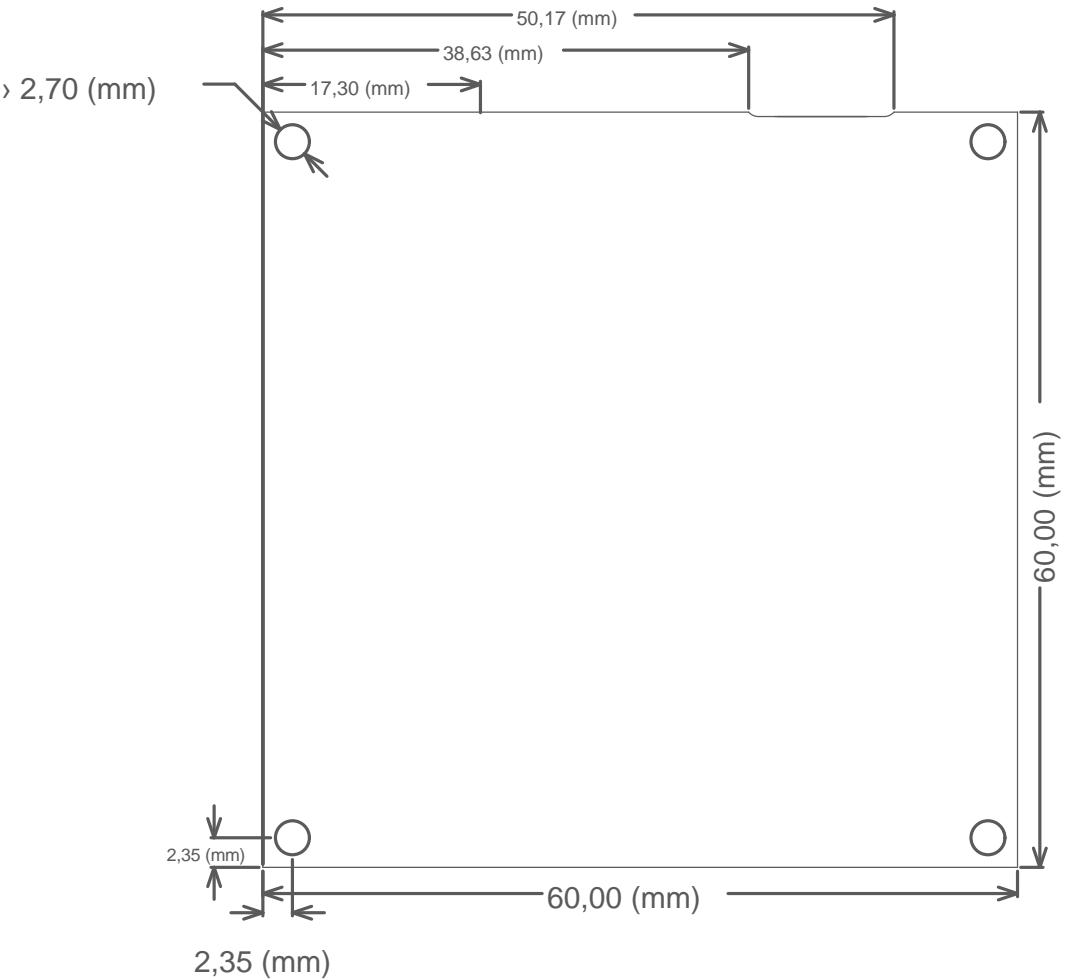




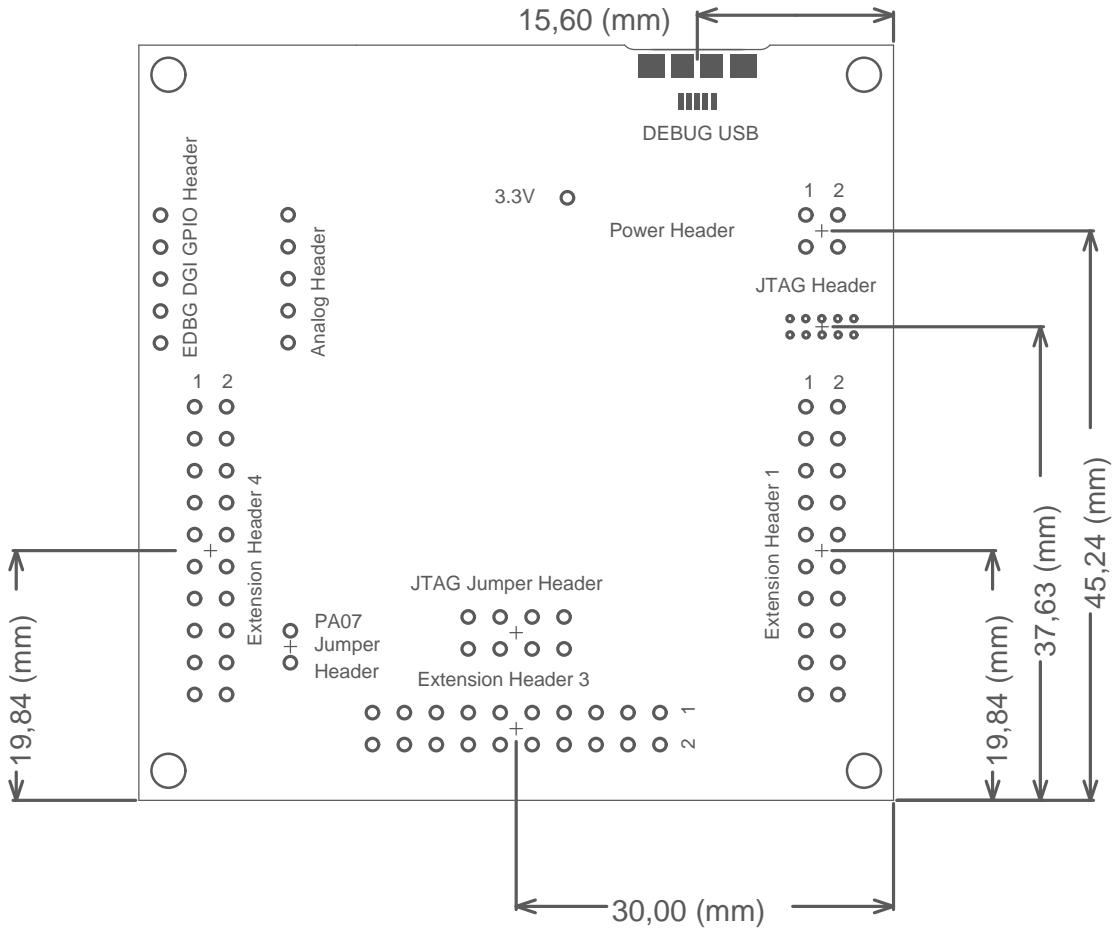


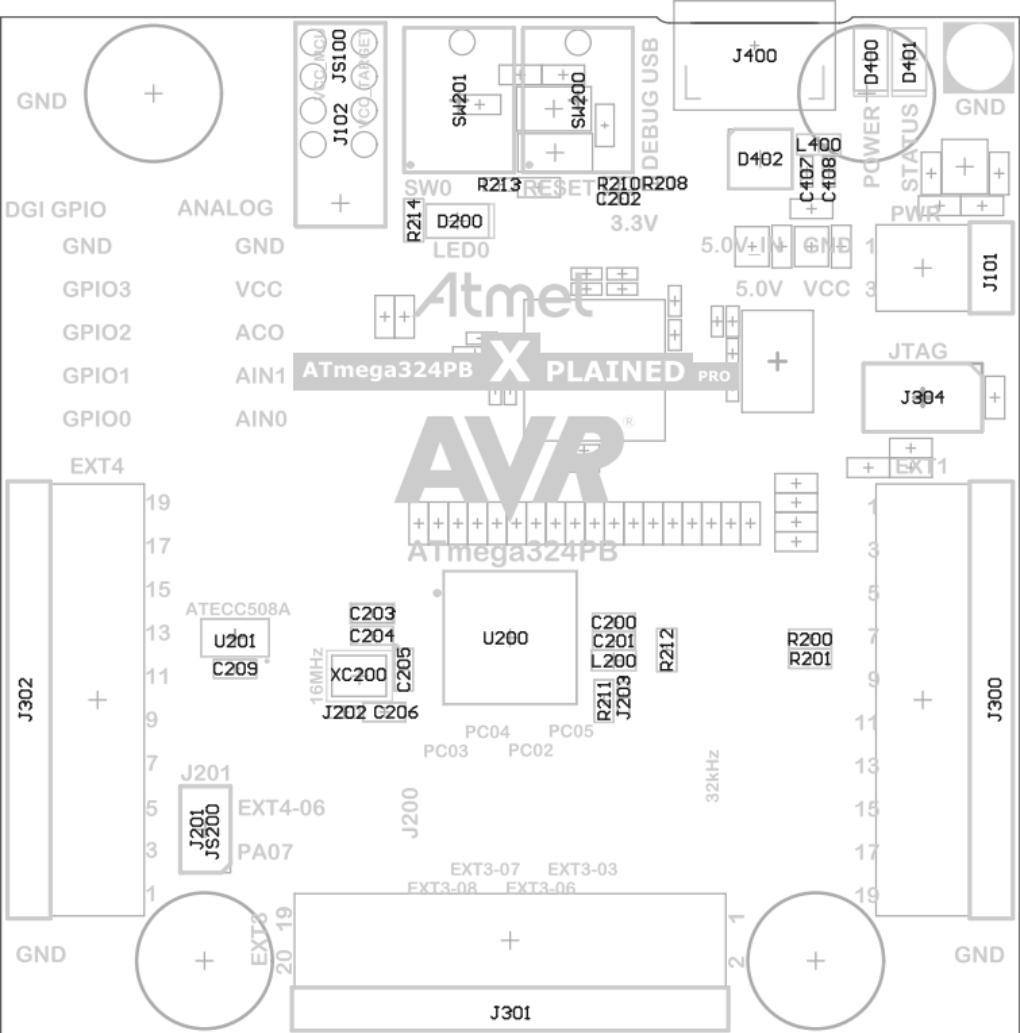


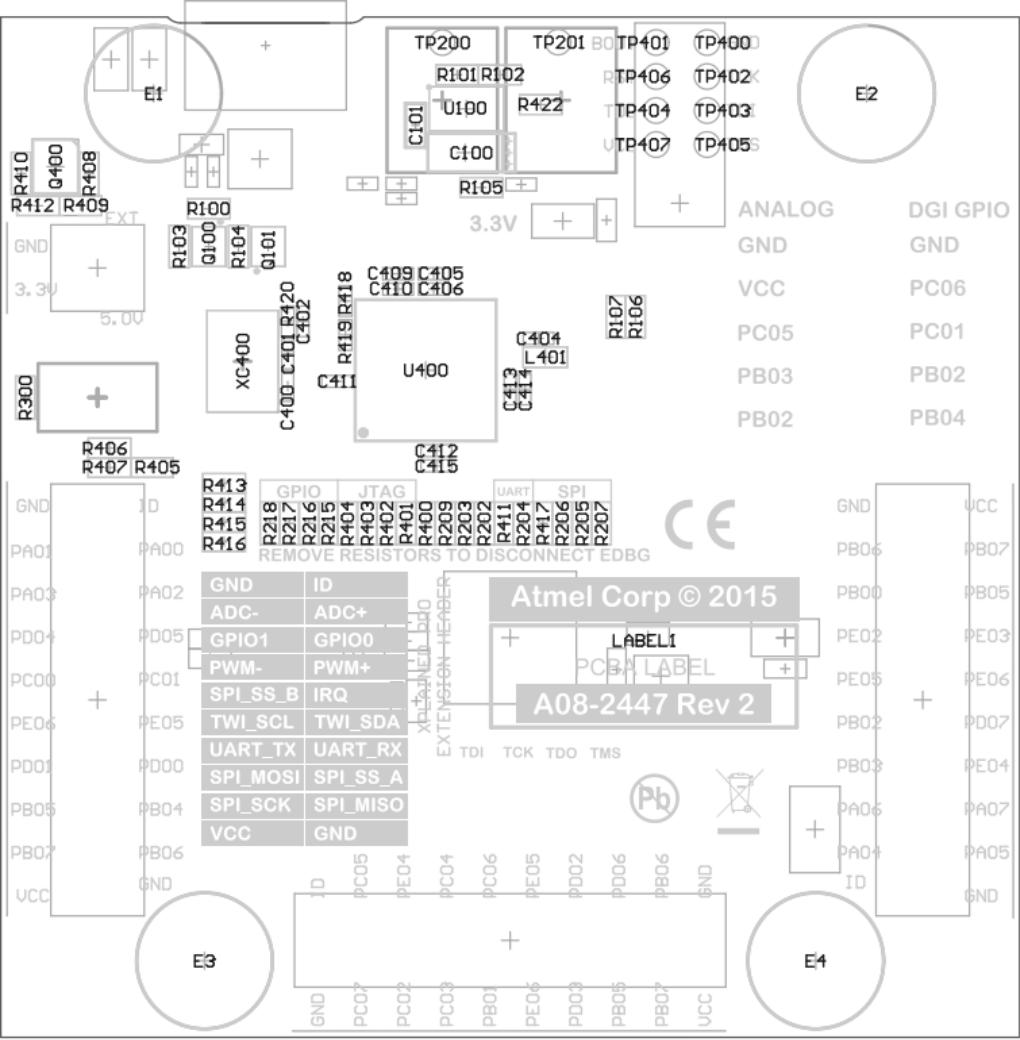
Small MCU Mechanical Dimensions

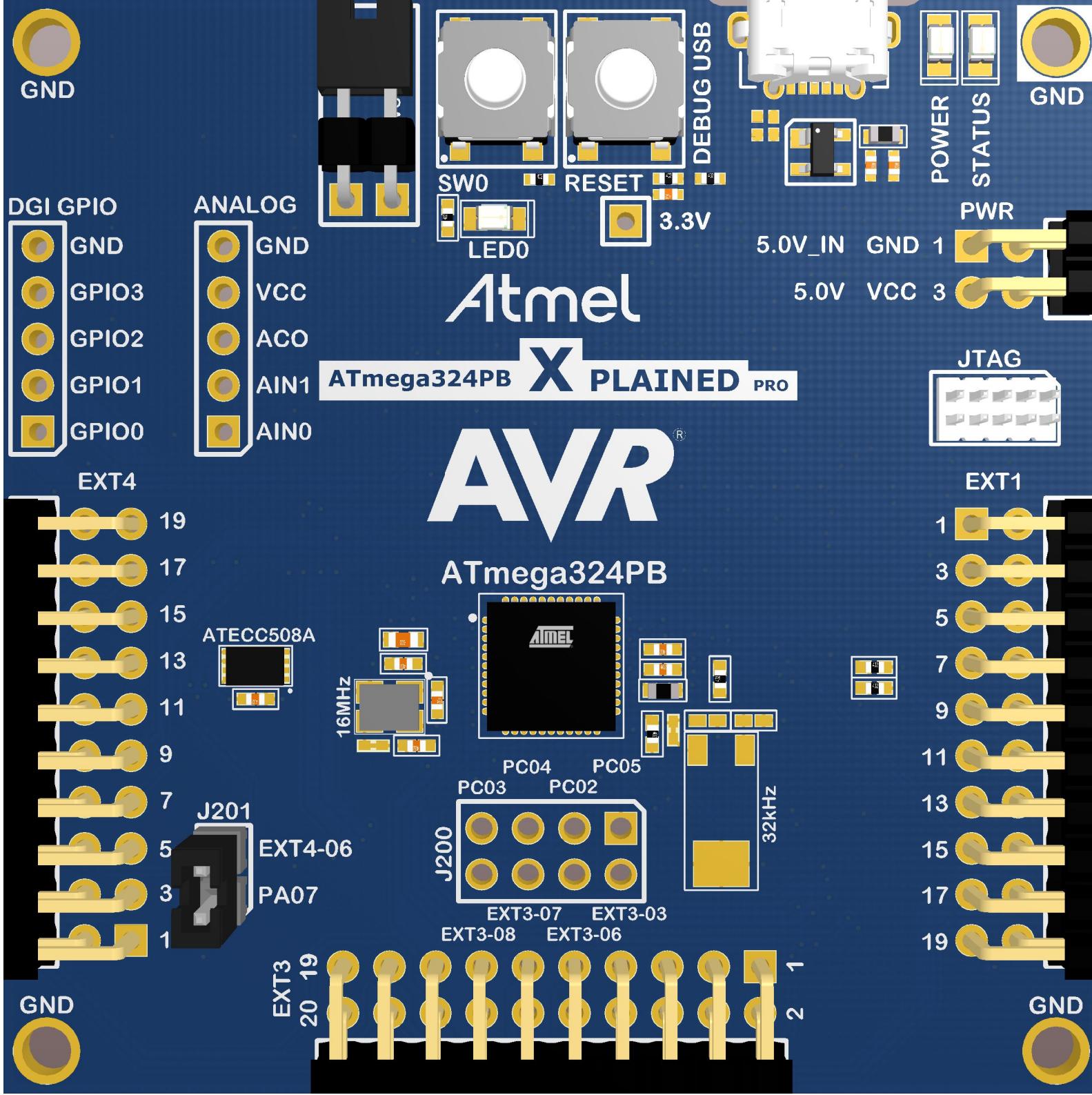


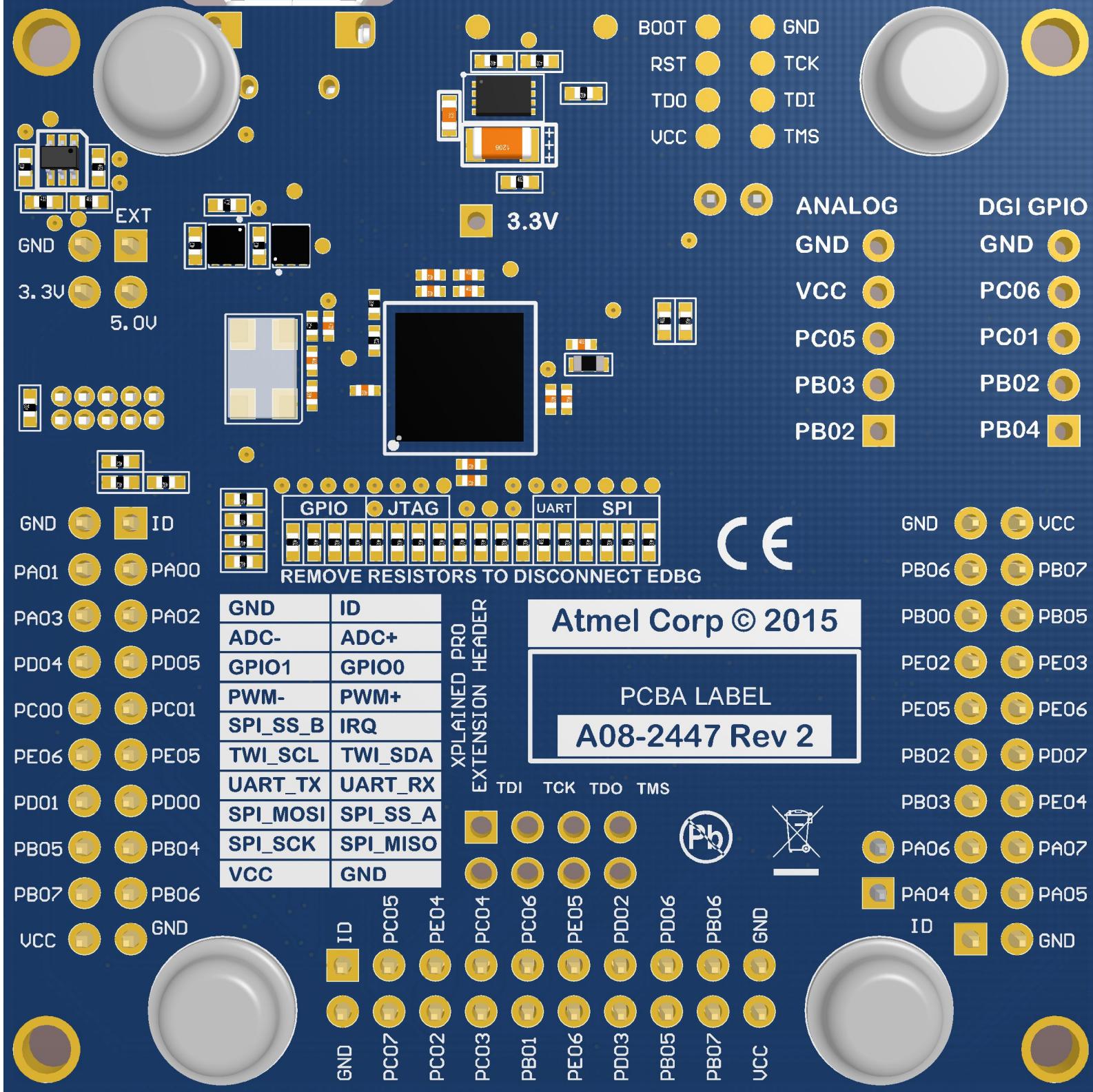
Small MCU Connector Placement

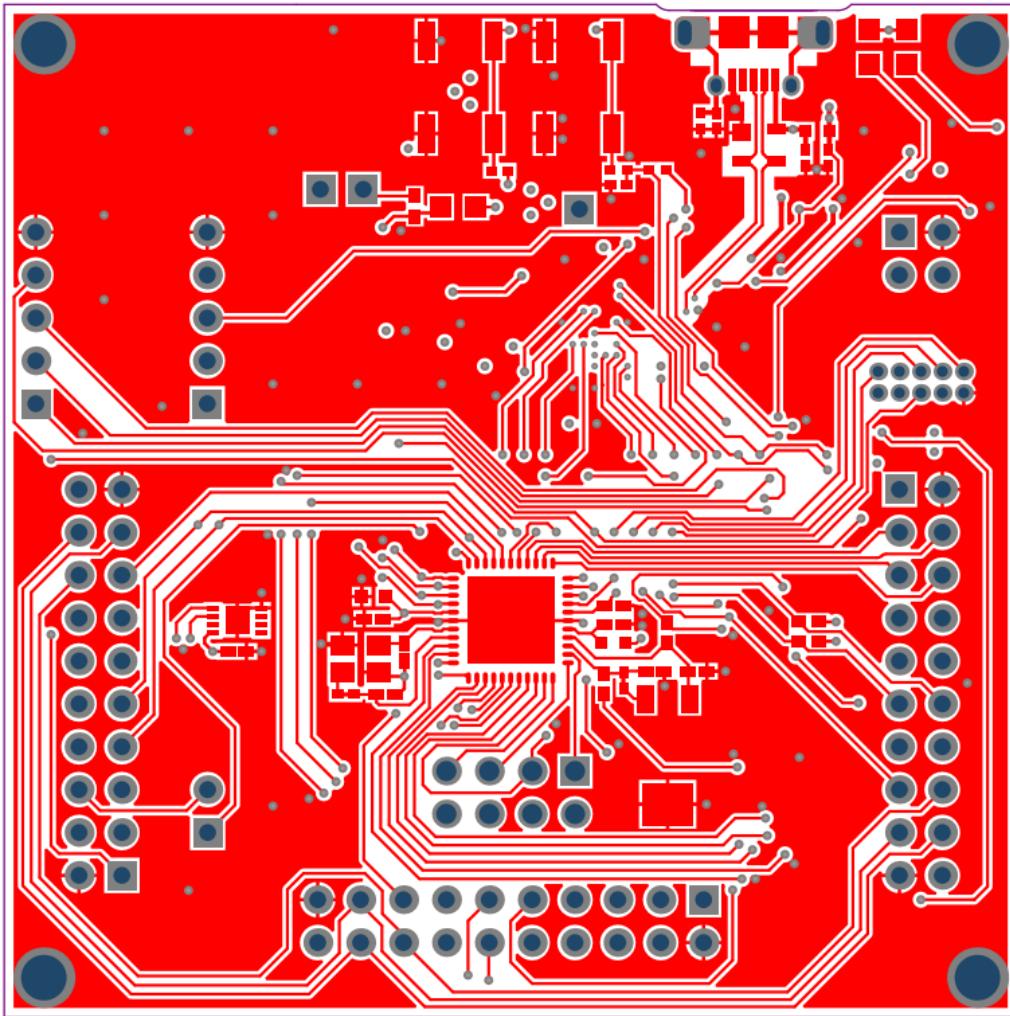


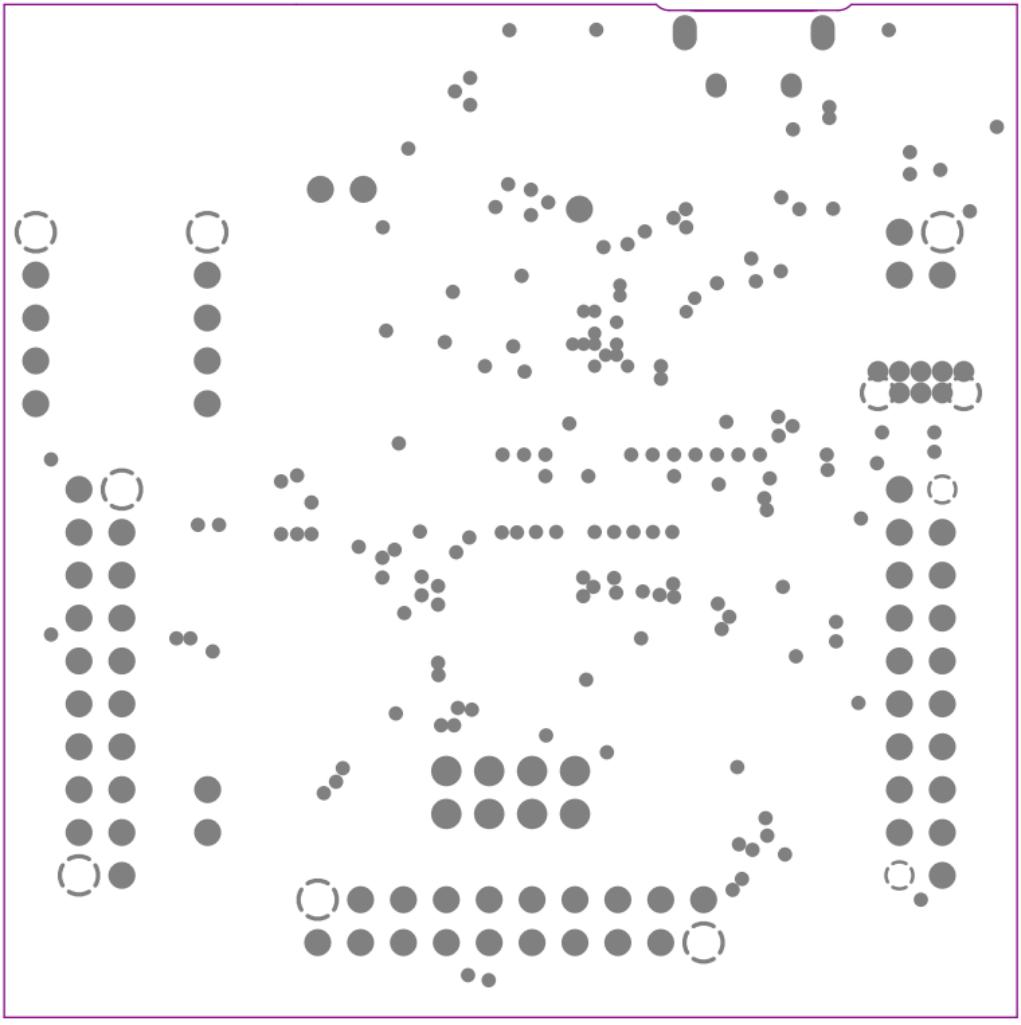


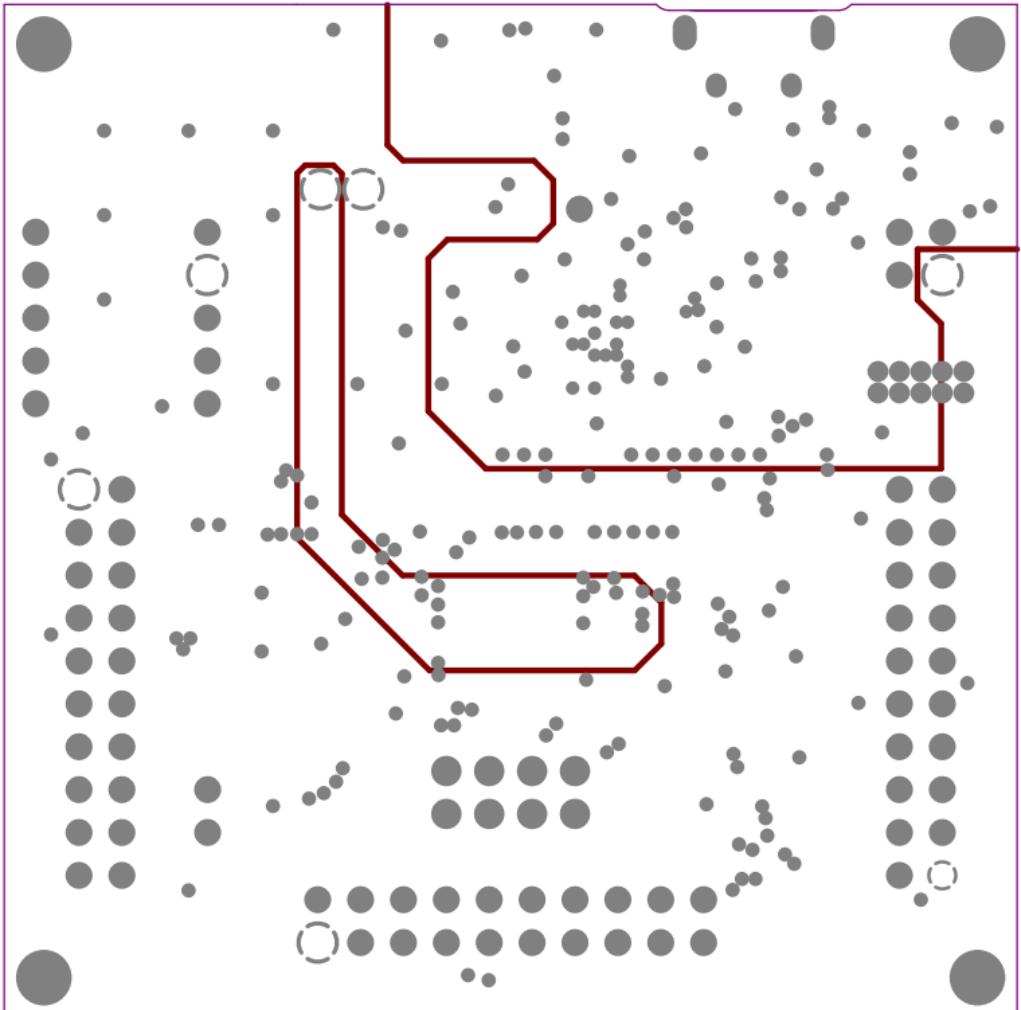


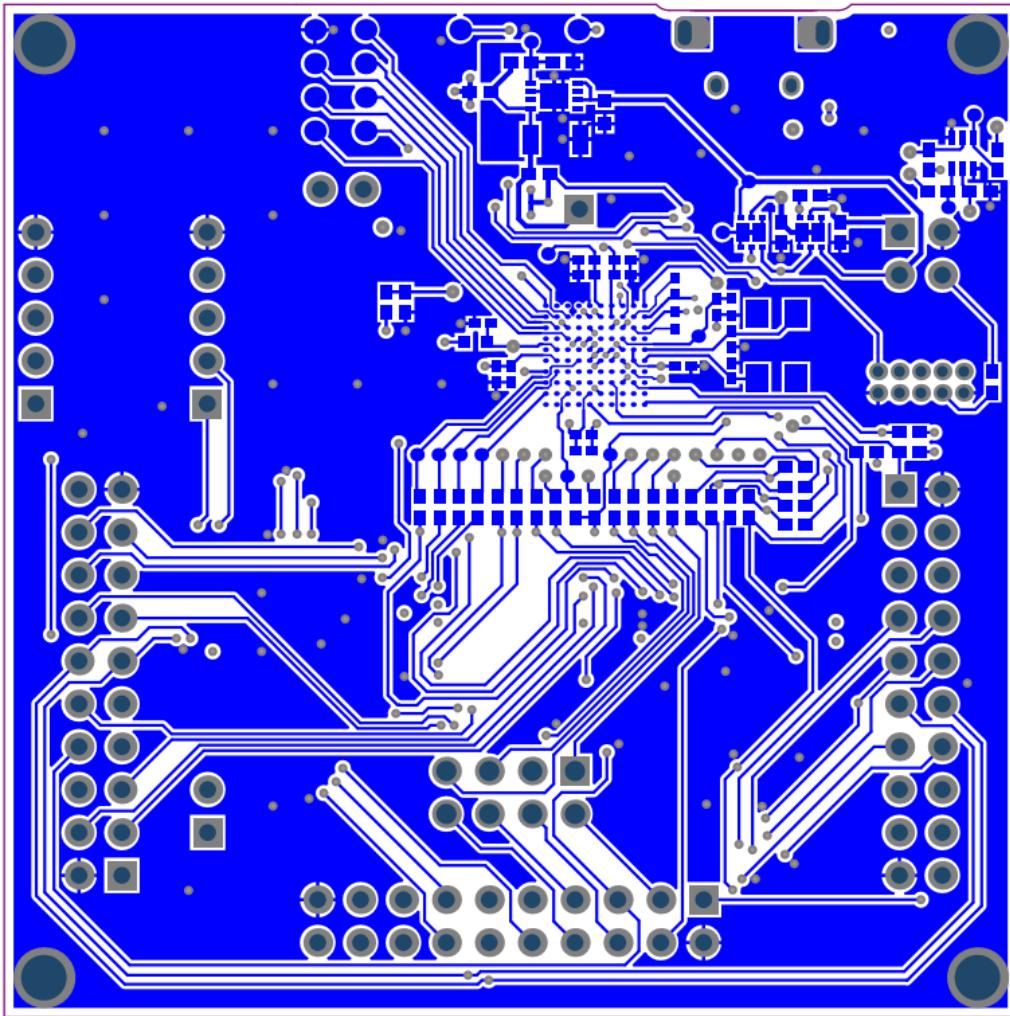












Component list

Top Level Schematics

Source Data From:

[ATmega324PB_Xplained_Pro.PnjPCB](#)

Project:

[ATmega324PB_Xplained_Pro.PnjPCB](#)

Variant:

[Default_assembly](#)

Report Date: 16.11.2015 11:26:04

Print Date: 16.11.2015 11:25:03



Fitted	Designator	Quantity	Value	Manufacturer	MPN	Description
Fitted	C100	1	10u	vishay	TR3A106K016C1700	SMD tantalum capacitor, ESR = 1.7, 3216-18 (BA) 1206,
Fitted	C101, C203	2	4.7uF	tdk	C1608X5R1A475K	Ceramic capacitor, SMD 0603, X5R, 10V, 10% (de31036)
Fitted	C200, C201, C204, C209	4	100n	Kemet	C0402C104K4RACTU	Ceramic capacitor, SMD 0402, X7R, +/-10%
Fitted	C202	1	4.7n			Ceramic capacitor, SMD 0402, X7R, 25V, +/-10% (de35287)
Fitted	C205, C206	2	1.8p			Ceramic capacitor, SMD 0402, NP0, 50V, +/-0.25ppm
Fitted	C400, C401	2	22p			Ceramic capacitor, SMD 0402, NP0, 50V, +/-5%
Fitted	C402	1	10p			Ceramic capacitor, SMD 0402, NP0, 50V, +/-5%
Fitted	C404, C410, C411, C412, C413	5	100n	Kemet	C0402C104K4RACTU	Ceramic capacitor, SMD 0402, X7R, +/-10%
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	GRM1555C1H102JA01D	Ceramic capacitor, SMD 0402, C0G, 50V, +/-5%
Fitted	D200, D401	2	EL17-21UY/G/A3	Everlight	17-21UY/GSS30-A3/T8	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	D402	1	PRT85V0U2X	NXP	PRT85V0U2X	Double rail-to-rail USB ESD protection diode
Fitted	E1, E2, E3, E4	4	SJ-5076	3M	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 firmware			EDBG secured firmware
Fitted	J101	1	P101-2*02RGF-139-ND	Pro-data International Corp	P101-2*02RGF-139-ND	Pin header, 2x2, Right Angle, 2.54mm, THT, Pin In Paste
Fitted	J102	1	Pin header 1x2 right angle	Pro-data International Corp	2213R-2G	1x2 pin header, right angle, 2.54 mm pitch, through-hole
Fitted	J201	1	HMTSW-102-23-F-S-237	SAMTEC	HMTSW-102-23-F-S-237	1x2 pin header, 2.54mm pitch, Pin-in-Paste THM
Fitted	J300, J301, J302	3	P101-2*10RGF-139-ND	Pro-data International Corp	P101-2*10RGF-139-ND	Pin header, 2x10, Right Angle, 2.54mm, THM, Pin In Paste
Fitted	J304	1	PIN HEADER 2x5	Garry	176-2-010-0-T-XS0-0730	2x5 pin header, 2.54mm pitch, Pin-in-Paste THM
Fitted	J400	1	ZX62D-AB-5P8	HIROSE	ZX62D-AB-5P8	Micro USB AB Connector, Standard SMT + DIP
Fitted	JS100, JS200	2	SNT-100-BK-G	SAMTEC	SNT-100-BK-G	Jumper cap for 2.54mm pinheader
Fitted	L200, L400, L401	3	BLM18PG471SN1	Murata	BLM18PG471SN1	SMD RF inductor 0603, Z=470Ohm (@100MHz), Max R(d)=0.65Ohm, Max current=1A
Fitted	LABEL1	1	PCBA Label	ACT Logimark AS	505462	PCBA identification label PP Top White Gloss
Fitted	PCB1	1	ATmega324PB_Xplained_Pro PCB documentation			ATmega324PB_Xplained_Pro PCB documentation
Fitted	PCBADOC1	1	A09-2589 PCB Files			ATmega324PB Xplained Pro PCB documentation
Fitted	Q100, Q101	2	PMDPB55XP	NXP	PMDPB55XP	Dual P-Channel MOSFET, -20V, RDSS(ON) < 55 mOhm @-3.4A @-4.5V
Fitted	Q400	1	2N7002DW	Fairchild	2N7002DW	Dual N-Channel MOSFET, 60V, 115mA cont, RDSS(ON) < 7.5 Ohm @50mA @5V, SOT-363
Fitted	R100, R408, R412	3	1M			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R101	1	1k			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R102	1	30k			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R103, R104	2	100k			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R105, R202, R203, R204, R205, R206, R207, R209, R211, R212, R215, R216, R217, R218, R300, R422	16	0R	(n/a)	RMOF0402ZT0R00	RES 0.0 OHM 1/16W 0402 SMD, Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R106, R107	2	47k			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R200, R201	2	4.7k			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R208	1	100k			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R210, R213, R214, R419	4	39R			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R214, R400, R401, R402, R403, R404, R409, R410, R411, R413, R414, R415, R416, R417	14	330R			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R405, R406, R407	3	1k			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R420	1	6.81k			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	SV200, SW201	2	SKRAAKE010	ALPS	SKRAAKE010	6.2x6.2 mm SMD tact switch, same as A08-0091 but less force is needed
Fitted	TEST1	1	ATmega324PB_Xplained_Pro test			Fixture test for ATmega324PB Xplained Pro
Fitted	TESTDOC1	1	ATmega324PB_Xplained_Pro Test Instructions			ATmega324PB Xplained Pro Test Instructions
Fitted	U100	1	SPX3819K2-L/TR	Exar	SPX3819R2-L/TR	500mA LDO, ADJ, low noise, 8-DFN package
Fitted	U200	1	ATmega324PB-MUR	ATMEL	ATmega324PB-MUR	AVR 8-bit RISC/MCU
Fitted	U201	1	ATECC508A I2C UDFN	ATMEL	ATECC508A-MA-HDA-T	ATECC508A with an I2C interface and a 8 Pin UDFN Package with Paddle
Fitted	U400	1	AT32UC3A4256J-C1UR	ATMEL	AT32UC3A4256J-C1UR	AVR 32-bit RISC/MCU
Fitted	XC200	1	16.0MHz	Epson Toyocom	TSX-3225 16.0000MF09Z-AC3	16MHz uXtal, 3.2 x 2.5 mm SMD, CL=9pF, 15PPM, ESR=80ohm/Max.
Fitted	XC400	1	12.00MHz	Fox Electronics	FQ5032B-12.00	Fox FQ5032B 12.00MHz SMD crystal 738B-12
Not Fitted	C207, C208	0	10p			Ceramic capacitor, SMD 0402, NP0, 50V, +/-5%
Not Fitted	C403	0	4.7n			Ceramic capacitor, SMD 0402, X7R, 25V, +/-10%
Not Fitted	J100	0	HMTSW-101-23-F-S-237	SAMTEC	HMTSW-101-23-F-S-237	1x1 pin header, 2.54mm pitch, Pin-in-Paste THM
Not Fitted	J200	0	HMTSW-104-23-F-D-237	SAMTEC	HMTSW-104-23-F-D-237	2x4 pin header, 2.54 mm pitch, Pin-in-Paste THM
Not Fitted	J303, J305	0	HMTSW-105-23-F-S-237	SAMTEC	HMTSW-105-23-F-S-237	1x5 pin header, 2.54mm pitch, Pin-in-Paste THM
Not Fitted	R421	0	1M			Thick film resistor, SMD 0402, 1/16W, 1%
Not Fitted	XC201	0	32.768kHz +/-20PPM 7pF SMD	Micro Crystal	MS1V-T1K 32.768kHz 7pF +/-20PPM TA	32k768 crystal, +/-20ppm, CL=7pF, max ESR 60kOhm, SMD