## **Component list**

**Top Level Schematics** 

Source Data From: Project: Variant: SAMR21\_Xplained\_Pro.PrjPCB SAMR21\_Xplained\_Pro.PrjPCB

Default\_assembly



	Report Date:	25.02.2014	11:08:31		=	
	Print Date:	25.02.2014	11:08:29			
Fitted	Designator	Quantity	Value	Manufacturer	MPN	Description
Fitted	A600	1	2450AT18D0100	Johanson Technology	2450AT18D0100	2.45 GHz Ceramic Antenna
Fitted Fitted	B600 C100	1	2450BM15A0015E 10u	Johanson Technology	2450BM15A0015E TR3A106K016C1700	Filtered Balun to match AT86RF232/233 (35288)  SMD tantalum capacitor, ESR = 1.7, 3216-18 (EIA) 1206,
Fitted	C100	1	4.7uF	vishay tdk	C1608X5R1A475K	Ceramic capacitor, SMD 0603, X5R, 10V, 10% (de31036)
Fitted	C102, C103, C303, C304, C307,	9	100n	Kemet	C0402C104K4RACTU	Ceramic capacitor, SMD 0402, X7R, 16V, +/-10%
	C308, C311, C312, C314					
Fitted	C300, C305 C301, C404, C410, C411, C412,	2	10p 100n	Kemet	C0402C104K4RACTU	Ceramic capacitor, SMD 0402, NP0, 50V, +/-5%  Ceramic capacitor, SMD 0402, X7R, 16V, +/-10%
ritted	C413		10011	Kellet	00402010414144010	Ceramo capacitor, Sivio 6402, XTTQ 10V, 17-1076
Fitted	C306	1	10uF/16V	Taiyo Yuden	EMK107BBJ106MA-T	Ceramic capacitor, SMD 0603, X5R, 16V, 10UF ± 20% (High Density)
Fitted	C309, C310	2	8.2p			Ceramic capacitor, SMD 0402, NP0, 50V, +/-5%
Fitted Fitted	C400, C401 C402	2	22p 10p			Ceramic capacitor, SMD 0402, NP0, 50V, +/-5% 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	1 nF C0G	Murata	GRM1555C1H102JA01D	Ceramic capacitor, SMD 0402, C0G, 50V, +/-5%
Fitted	C600	1	1.2pF			Ceramic Capacitor, SMD 0201, 25V, NP0, 1.2pF
Fitted	C602, C603, C604 C605, C606	3	22pF	Johanson Technology	250R05L220JV4T	Ceramic Capacitor, SMD 0201, 25V, NP0, 22PF  Ceramic capacitor, SMD 0402, NP0, 50V, +/-5%
Fitted Fitted	D300, D402	2	22p PRTR5V0U2X	Philips	PRTR5V0U2X	Double rail-to-rail USB ESD protection diode
Fitted	D301, D401	2	EL17-21UYC/A2	Everlight	17-21UYC/S530-A3/TR8	LED, Yellow , Wave length=591nm, SMD 0805, ±70°
Fitted	D400	1	EL17-21SYGC	Everlight	EL17-21SYGC	LED, Green, Wave length=575nm, SMD 0805, ±70°
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	ATMEL		EDBG secured firmware
Fitted	J100	1	P101-2*02RGF-139-ND		P101-2*02RGF-139-ND	Pin header, 2x2, Right Angle, 2.54mm, THT, Pin In Paste
Fitted	J101	1	Pin header 1x2 right angle	Pro-data International Corp	2213R-2G	1x2 pin header, right angle, 2.54 mm pitch, through-hole
Fitted	J200, J202	2	P101-2*10RGF-139-ND	E2	P101-2*10RGF-139-ND 10104111-0001LF	Pin header, 2x10, Right Angle, 2.54mm, THM, Pin In Paste
Fitted	J300, J400 J600	2	10104111-0001LF 19-46-1-TGG	FCI Multicomp	10104111-0001LF 19-46-1-TGG	Micro USB AB Connector SMA PCB mounted connector 500hm (de19205)
Fitted	JS100	1	SNT-100-BK-G	SAMTEC	SNT-100-BK-G	Jumper cap for 2.54mm pinheader
Fitted	L300	1	BLM18PG471SN1	Murata	BLM18PG471SN1	SMD RF inductor 0603. Z=470Ohm (@100MHz), Max R(dc)=0.65Ohm, Max current=1A
Fitted	L401, L402	2	BLM18PG471SN1	Murata	BLM18PG471SN1	SMD RF inductor 0603. Z=4700hm (@100MHz), Max R(dc)=0.650hm, Max current=1A
Fitted	L600	1	1.8nH	Johanson Technology	L-05B1N8SV6T	ceramic chip inductor, 1.8nH,0201
Fitted	LABEL1	1	Label PCBA with MAC64, FCC ID and IC ID	ACT Logimark AS	505462	Label for use on wireless PCBA that needs 64 bit MAC, FCC ID and IC ID
Fitted	POB1	1	SAMR21 Xplained Pro PCB	ATMEL		SAMR21 Xplained Pro PCBA documentation
- Fru 1	20042004		documentation	17.5		011001711 10 0001
Fitted	PCBADOC1 Q100, Q101	2	A09-2127 PCBA Files IRLML6402PBF	ATMEL International Rectifier	IRLML6402PBF	SAMR21 Xplained Pro PCBA documentation  P-ch. MOSFET30V, -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) = 3.8Ohm@VGS=4.5V, VGS(th)<-2.5V
Fitted	Q400	1	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 30k			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R102 R103, R107, R300	1	30k 100k			Thick film resistor, SMD 0402, 1/16W, 1%  Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R106	1	390R			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R108, R301, R306, R307, R308, R309, R310, R311, R312, R313, R314, R315, R316, R317, R318, R319, R320, R321, R322, R323,	25	0R			Thick film resistor, SMD 0402, 1/16W, 11%, RES 0.0 OHM 1/16W 0402 SMD, RES 0.0 OHM 1/1
	R324, R325, R329, R332, R425					OHM 1/16W 0402 SMD, RES 0.0 OH
Fitted	R109, R110, R328, R330	4	47k			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R302, R304, R331, R421, R422	5	39R			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R303, R411, R412, R414, R416, R417, R418, R419, R420	9	330R			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R417, R416, R419, R420 R326, R327	2	4.7k			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R401, R409	2	1k			Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R423	1	6.81k	AL TO	OKDA CICTORIO	Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	SW300, SW301 TEST1	2	SKRAAKE010 SAMR21 Xplained Pro test	ALPS ATMEL	SKRAAKE010	6.2x6.2 mm SMD tact switch, same as A08-0091 but less force is needed  Fixture test for SAMR21 Xplained Pro
Fitted	TESTDOC1	1	SAMR21 Xplained Pro test	ATMEL		SAMR21 Xplained Pro test Instructions
			Instructions			
Fitted Fitted	U100 U101	1	SPX3819R2-L/TR TPS2113PWR	Exar Texas Instruments	SPX3819R2-L/TR TPS2113PWR	500mA LDO, ADJ, low noise, 8-DFN package Autoswitching 2:1 Power Mux
Fitted	U1U1 U300	1	SAMR21G18A	Texas Instruments  ATMEL	SAMR21G18A-MUT	Autoswitching 2:1 Power Mux  Atmel 32-bit Cortex M0+ MCU with RF233 SIP.
Fitted	U400	1	AT32UC3A4256J-C1UR	ATMEL	AT32UC3A4256J-C1UR	AVR 32-bit RISC MCU
Fitted	U600	1	AS222-92LF	SKYWORKS SOLUTIONS	AS222-92LF	PHEMT SPDT Analog SWITCH, 0,1-3 GHz
Fitted	XC300	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	XC301	1	32.768kHz +/-20PPM 7pF SMD	Micro Crystal	MS1V-T1K 32.768kHz 7pF +/-20PPM TA	32k768 crystal, +-20ppm, CL=7pF, max ESR 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	C302, C403	0	4.7n			Ceramic capacitor, SMD 0402, X7R, 25V, +/-10%
Fitted Not	C601	0	22pF	Johanson Technology	250R05L220JV4T	Ceramic Capacitor, SMD 0201, 25V, NP0, 22PF
Fitted						
Not Fitted	J303	0	PIN HEADER 2x5	Garry	STL21-0730 G TT-10U	2x5 pin header, 1.27mm pitch, THM
Not Fitted	J304	0	HMTSW-103-23-F-S-237	KC+	DICTALINETTENANTE	1x3 pin header, 2.54mm pitch, Pin-in-Paste THM, 1mm hole
Not Fitted	R305, R424	0	1M	KOA	RK73H1ETTP1004F	Thick film resistor, SMD 0402, 1/16W, 1%
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Approve	ed		Notes			