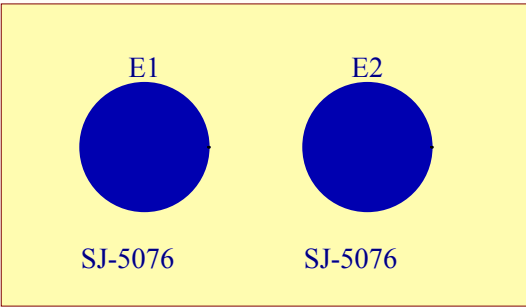
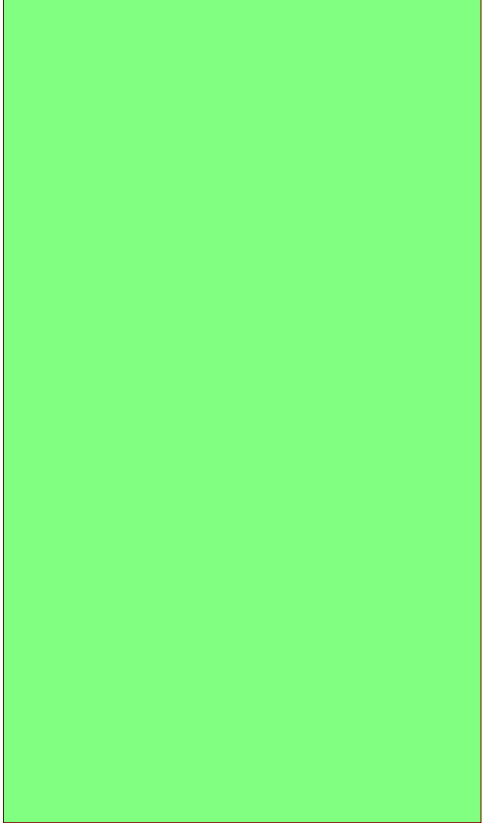



Ethernet\_Xplained\_Pro\_Connector  
Ethernet\_Xplained\_Pro\_Connector.SchDoc



LABEL1

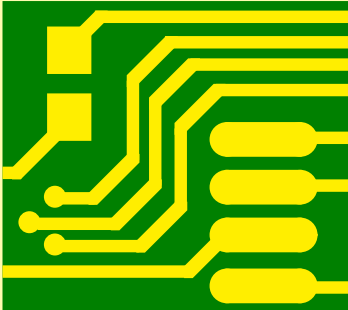


Product number/revision  
Serial number

Label PCBA with one MAC48 address

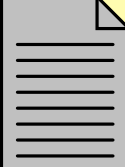
Place PCB component here

PCB1



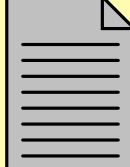
A08-2004  
XPRO Ethernet1 Extension PCB

Place PCBA documentation component here



DOC1

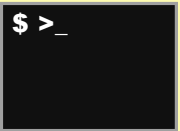
A12-0859




TESTDOC1

A12-0860

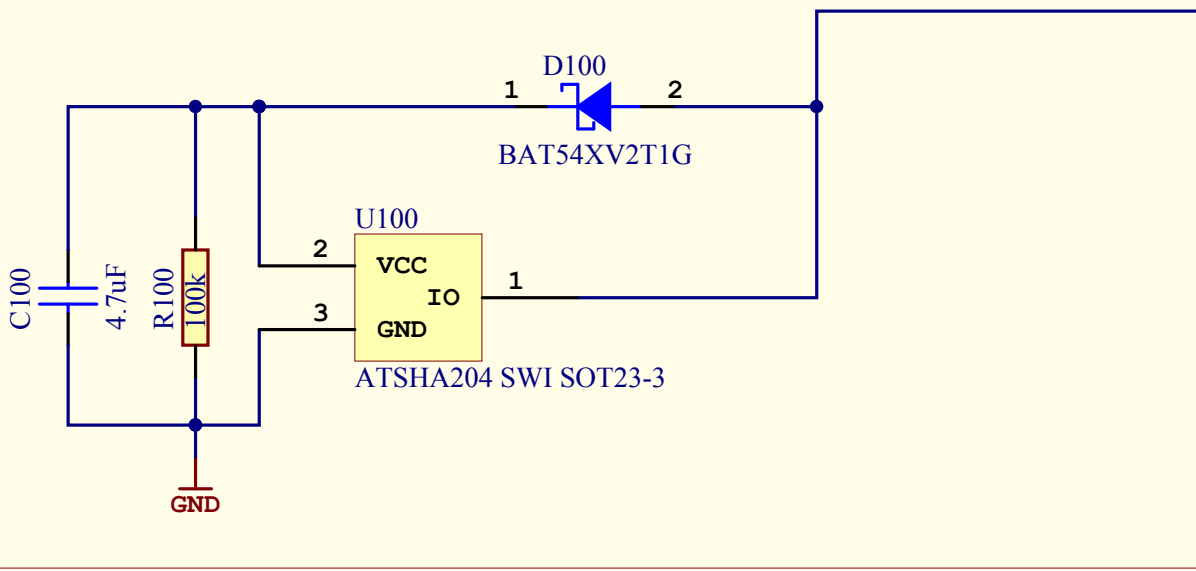
TEST1



A11-0254

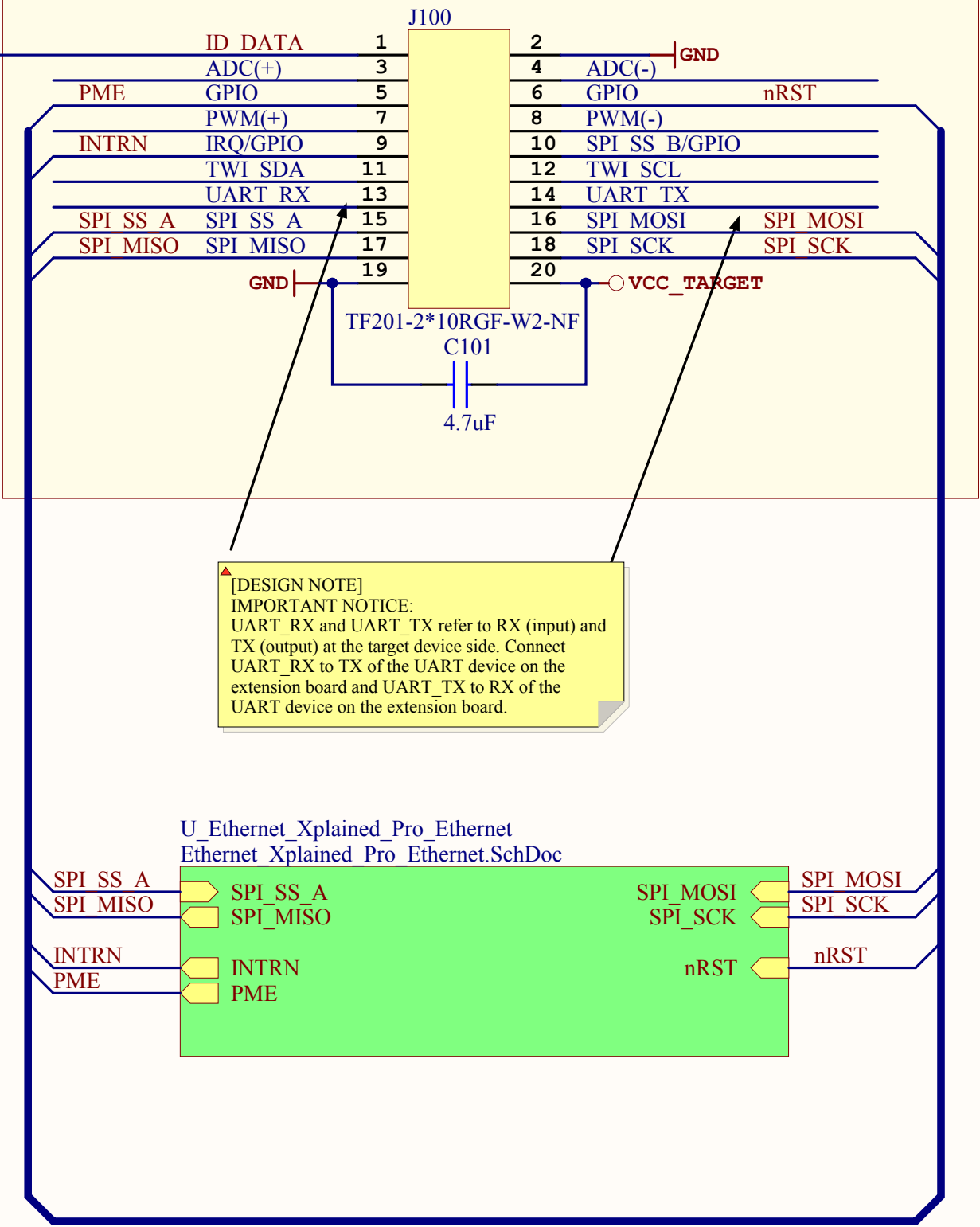
ATMEL Norway	*				
Vestre Rosten 79	*				
N-7075 TILLER	*				
NORWAY					
Date:	8/25/2014	9:27:02 PM	PAGE:	1 of 3	
Document number:	A09-2258		Revision	3	
TITLE: Ethernet1 Xplained Pro					
Ethernet_Xplained_Pro_TopLevel.SchDoc					

Extension Identification



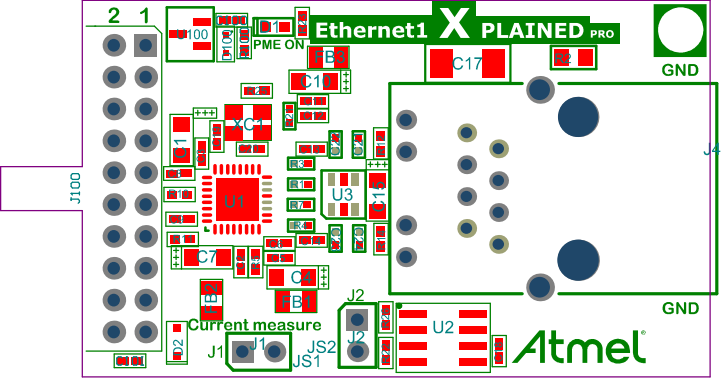
[DESIGN NOTE]  
The ATSHA204 is powered through an IO Pin from the EDBG on an MCU board.  
R100 is present to drain the capacitor C100 when power is removed from an MCU board.

Standard Extension Header (Female)



[DESIGN NOTE]  
IMPORTANT NOTICE:  
UART\_RX and UART\_TX refer to RX (input) and TX (output) at the target device side. Connect UART\_RX to TX of the UART device on the extension board and UART\_TX to RX of the UART device on the extension board.





E1

PCB LABEL  
A08-2004 Rev 2

Atmel Corp © 2013

E2



2 1

U400  
C100  
D100  
R100

D1  
PME ON

Ethernet1 X PLAINED PRO



GND

FB3

C17

R21

R25

C10  
C11  
C12

X1

C20

C21  
C22

C43

C21  
R22

C1  
C8  
C9

C8

R40

C9

R41

R3

R1

R7

R4

U3

C15

C6

C14

C23  
C24

R44

G7

G5

E4

FB2

FB1

J2

R46

U2

C48

Atmel

Current measure

D4

J1

J1

JS1

J2

R42

GND

J100

J4

⌘

PCB LABEL  
A08-2004 Rev 2

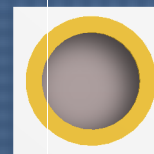
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⌘



2 1

Ethernet1 X PLAINED PRO



GND

PME ON

20.0 RG

QFN32

Current measure

J1

J2

GND

Atmel®





PCBA LABEL  
A08-2004 Rev 2

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2

4

6

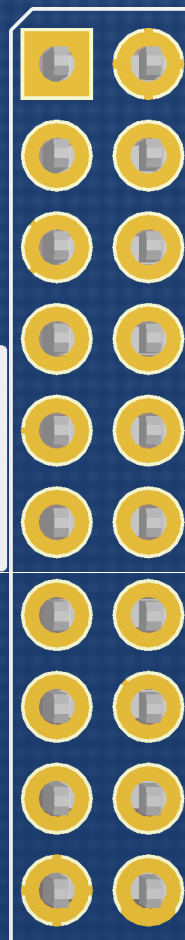
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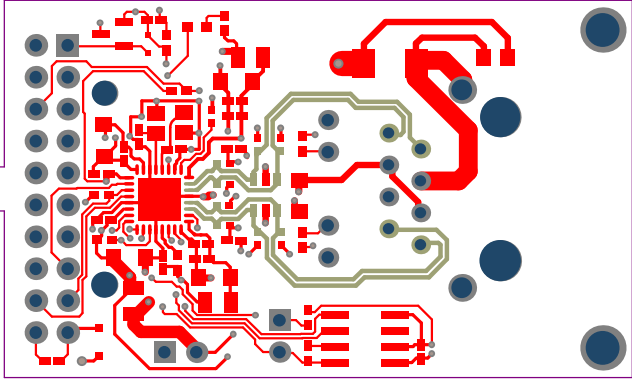
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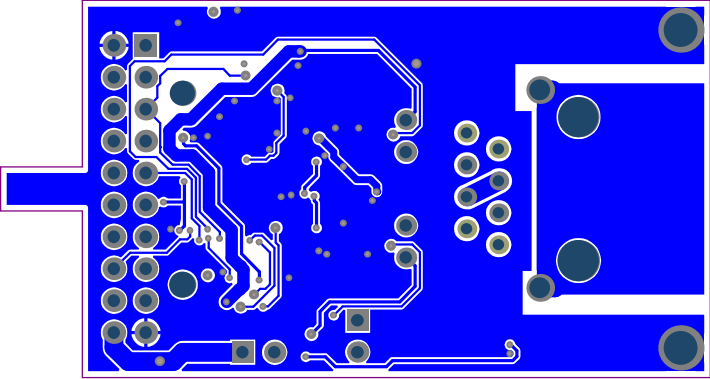
3

5

7







# Component list

Ethernet1 Xplained Pro

Source Data From:

Ethernet\_Xplained\_Pro.PrjPCB

Project:

Ethernet\_Xplained\_Pro.PrjPCB

Variant:

Default\_assembly



Report Date: 8/25/2014 9:27:13 PM

Print Date: 8/25/2014 9:27:11 PM

#	Designator	Quantity	Value	Manufacturer	MPN	Description
1	C1, C4, C7, C10	4	4.7uF/10V			SMD tantalum capacitor, ESR = 5, 3216-18 (EIA) 1206, polarized, high density
2	C2, C3, C5, C8, C9, C11, C13, C14, C18	9	100n	Kemet	C0402C104K4RACTU	Ceramic capacitor, SMD 0402, X7R, 16V, +/-10%
3	C6, C12	2	10n			Ceramic capacitor, SMD 0402, X7R, 25V, +/-10%
4	C15	1	10uF/16V			SMD tantalum capacitor, ESR = 3 Ohm, 3216-18 (EIA) 1206
5	C17	1	1000pF/2KV	Kemet	C1808C102KGRAC7800	Ceramic capacitor, SMD 1808, X7R, 2kV, +/-10 %
6	C19, C20	2	22p			Ceramic capacitor, SMD 0402, NP0, 50V, +/-5%
7	C21, C22, C23, C24	4	12pF	Kyocera-elco	CM05CG120J50AH	Ceramic capacitor, SMD 0402, NP0, 50V, +/-5% (de19819)
8	C100, C101	2	4.7uF	Murata	GRM155R60J475ME87D	Ceramic capacitor, SMD 0402, X5R, 6.3V, +/-20% (de33687)
9	D1	1	SML-310MTT86N	ROHM	SML-310MTT86N	LED, Green, 570nm, SMD 0603
10	D2	1	MM3Z3V9ST1G			3.3V zener diode
11	D100	1	BAT54XV2T1G	ON Semiconductor	BAT54XV2T1G	Schottky diode, If:200mA, Vf:0.35V, Vrrm:30V, SOD-523
12	DOC1	1	ETHERNET1-XPRO PCBA documentation			ETHERNET1-XPRO PCBA documentation
13	E1, E2	2	SJ-5076	3M	SJ-5076	2.8mm adhesive feet, diam 8.0mm
14	FB1, FB2, FB3	3	BLM21PG121SN1D	Murata	BLM21PG121SN1D	SMD EMI FERRITE 0805, Z=120 ohm(@100MHz), Max R(dc)=0.03 ohm, Max current=3A
15	J1, J2	2	HMTSW-102-23-F-S-237	SAMTEC	HMTSW-102-23-F-S-237	1x2 pin header, 2.54mm pitch, Pin-in-Paste THM
16	J4	1	J1011F01PNL	Pulse	J1011F01PNL	100 Base-TX (Fast Ethernet), RJ45 1x1 Tab-UP with LEDs(g/y), integrated magnetics connector (DigiKey:553-1350-ND)
17	J100	1	TF201-2*10RGF-W2-NF	Pro-data International Corp	F201-2*10RGF-W2-NF	2x10, female pin header receptable, right-angled, 2.54mm pitch, THM, Pin In Paste
18	JS1, JS2	2	SNT-100-BK-G	SAMTEC	SNT-100-BK-G	Jumper cap for 2.54mm pinheader
19	LABEL1	1	Label PCBA with one MAC48 address	ACT Logimark AS	505462	PCBA label PP Top White Gloss with one 48bit MAC address
20	PCB1	1	XPRO Ethernet1 Extension PCB			XPRO Ethernet1 Extension PCB, 2 layer, 30mm x 50 mm
21	R1, R3, R4, R7	4	49.9R			Thick film resistor, SMD 0402, 1/10W, 1%, High density
22	R2	1	1M			Thick film resistor, SMD 0805, 0.125W, 1%
23	R5, R22	2	0R			Thick film resistor, SMD 0402, 1/16W, 1%
24	R10, R11, R26	3	4.7k			Thick film resistor, SMD 0402, 1/16W, 1%
25	R12, R14, R23	3	220R			Thick film resistor, SMD 0402, 1/16W, 1%
26	R21	1	3.01k			Thick film resistor, SMD 0402, 1/16W, 1%, high density, (DigiKey:311-3.01KLRT-R-ND)
27	R25	1	10k			Thick film resistor, SMD 0402, 1/16W, 1%
28	R100	1	100k			Thick film resistor, SMD 0402, 1/16W, 1%
29	TEST1	1	ETHERNET1-XPRO test software			ETHERNET1-XPRO test software
30	TESTDOC1	1	ETHERNET1-XPRO test instructions			ETHERNET1-XPRO test instructions
31	U1	1	KSZ8851SNLI	MICREL SEMICONDUCTOR	KSZ8851SNLI	Single-Port Ethernet Controller with SPI Interface, Integrated MAC and PHY Ethernet Controller fully compliant with IEEE 802.3/802.3u standards, Supports 10BASE-T/100BASE-TX&#65292; QFN-32, 5x5mm, 0.5mm Pitch
32	U2	1	AT93C46DN-SH	ATMEL	AT93C46DN-SH	1Kb Microwire-compatible 3-wire Automotive Temperature Serial EEPROM, SOIC8 (Element14:1455086)
33	U3	1	SRV05-4.TCT	Semtech Corporation	SRV05-4.TCT	RailClamp?Low-Capacitance TVS Diode Array(Element14:1456415)
34	U100	1	ATSHA204 SWI SOT23-3	ATMEL	ATSHA204-TSU-T	ATSHA204 with 1-wire interface and SOT23-3 package
35	XC1	1	FA-238 25MHz	Epson Toyocom	FA-238 25.0000MB-C3	25MHz uXtal, 3.2 x 2.5 mm SMD, CL=18pF, 30PPM, ESR=50ohm(Max.) Digi-Key:SER3691TR-ND

65

Approved

Notes