

<b>Project Name</b>	Trigger Trap Baseblock
<b>Project Number</b>	TRI002
<b>Project File Name</b>	TRI002 Base Unit Issue 4.0.PrjPcb
<b>Project Full Path</b>	G:\Active\Projects\TRI002\TRI002-BaseBlock\Issue 4.0\TRI002 Base U
<b>Variant Name</b>	Var1 of TRI002 Base Unit Issue 4.0

<b>Schematic</b>	
Schematic drawn by	Chase Callender
Schematic/BOM Version	Issue 4.0

<b>PCB</b>	
PCB drawn by	Giles Sanders
PCB Name	TRI002 Baseblock
PCB Version	Issue 4.0

<b>Report Date &amp; Time</b>	20/10/2014 18:41:10
<b>Print Date:</b>	20-Oct-14
<b>Print Time:</b>	6:41:14 PM

	1	2	3	4	5	6	7	8
A	PCB CHECKLIST							
	Test rig fixing holes	NA						
	BOARD MARKER	NA						
	TRACE LABEL							
	FIDUCIALS							
B	PCB THICKNESS [x] mm	1.0mm						
	PCB DIMENSIONS [x] mm X [x] mm	TRI002_BasePCB_assy_14dec2013_MOD_PCB.DXF						
	SCOPE GROUND POINT [NET]							
	ENCLOSURE	TRI002_BasePCB_assy_14dec2013_MOD_PCB.DXF						
	Mounting holes							
C	PCB Clearances	NA						
	PCB outline ref doc	TRI002_BasePCB_assy_14dec2013_MOD_PCB.DXF						
	Logo on silkscreen	NA						
D								

U\_TRI002 Base Block Microcontroller Issue 1  
TRI002 Base Block Microcontroller Issue 4.0.SchDoc

FTDI\_TXD

FTDI\_RTS

MIC

TRIGGER1

TRIGGER2

TRIGGER3

TRIGGER4

TRIGGER5

TRIGGER6

FTDI\_RXD

FTDI\_CTS

RESET#

STACK\_PWR

SHDN

Audio\_L

Audio\_R

STACK\_IN

CBUS0

CBUS1

CBUS2

CBUS3

D+

D-

U\_TRI002 Base Block PSU and Connectors Issue 1  
TRI002 Base Block PSU and Connectors Issue 4.0.SchDoc

TRIGGER1

TRIGGER2

TRIGGER3

TRIGGER4

TRIGGER5

TRIGGER6

FTDI\_RXD

FTDI\_CTS

RESET#

STACK\_PWR

SHDN

Audio\_L

Audio\_R

STACK\_IN

CBUS0

CBUS1

CBUS2

CBUS3

D+

D-

FTDI\_TXD

FTDI\_RTS

MIC

U\_TRI002 Base Block Daughter Board  
TRI002 Base Block Daughter Board 4.0.SchDoc

NOTES

N.B. LED Cathodes are identified, assembler to refer to part datasheet for correct orientation

Project Number: TRI002

Project Name: Trigger Trap Baseblock

Title:

Version: Issue 4.0

Size: A3

Number: 1

Drawn by: Chase Callender

Date: 20/10/2014

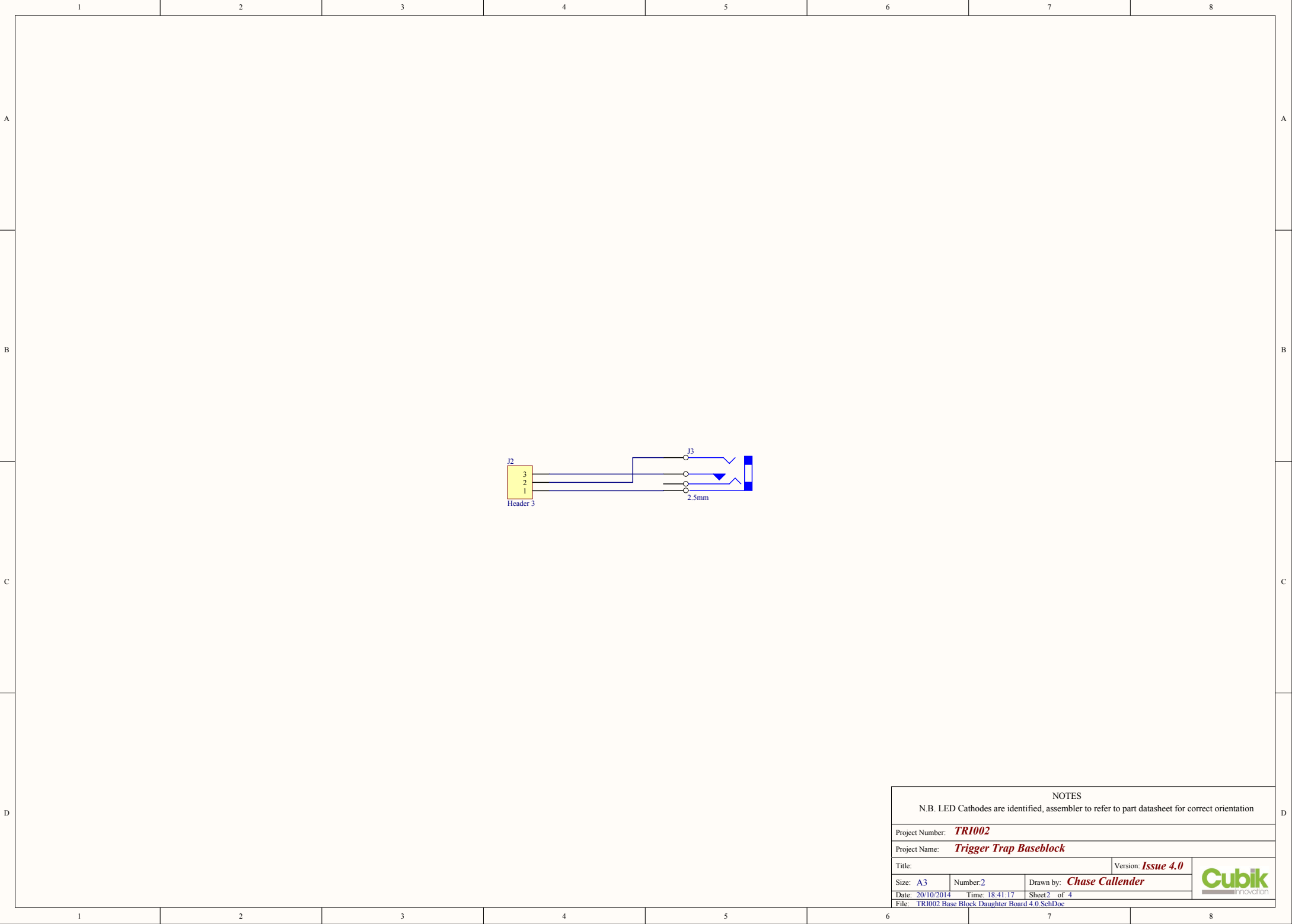
Time: 18:41:17

Sheet 1 of 4


File: TRI002 Base Block Cover sheet Issue 4.0.SchDoc

Cubik

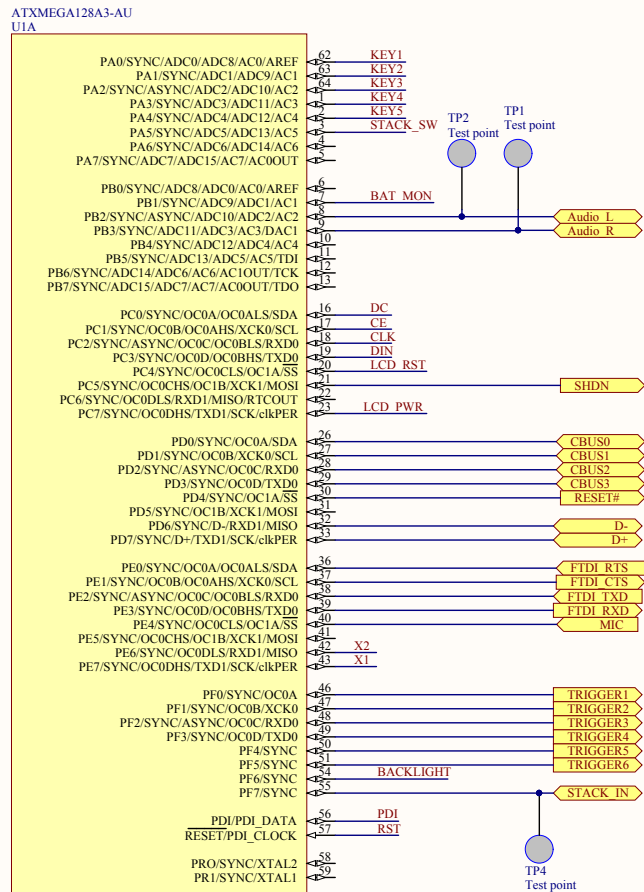
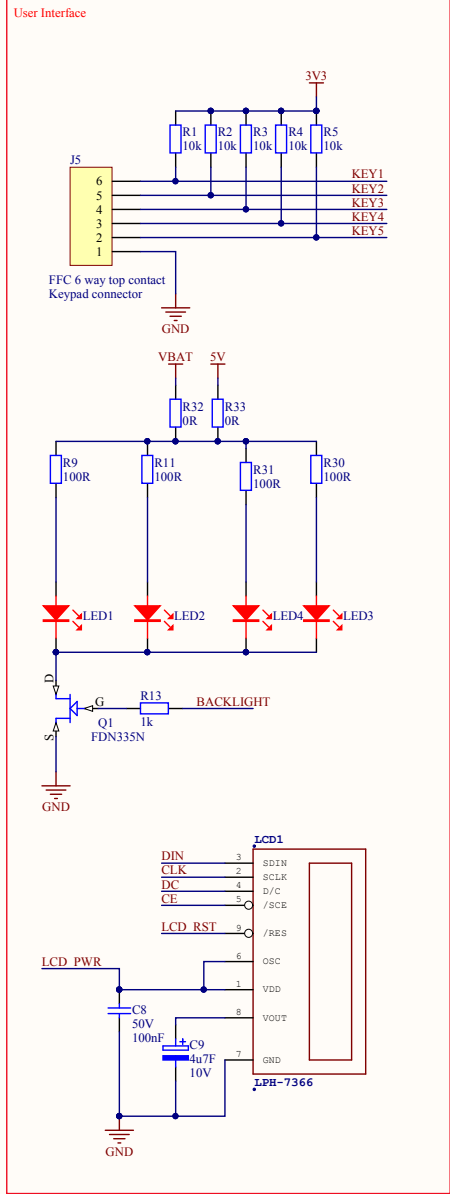
innovation



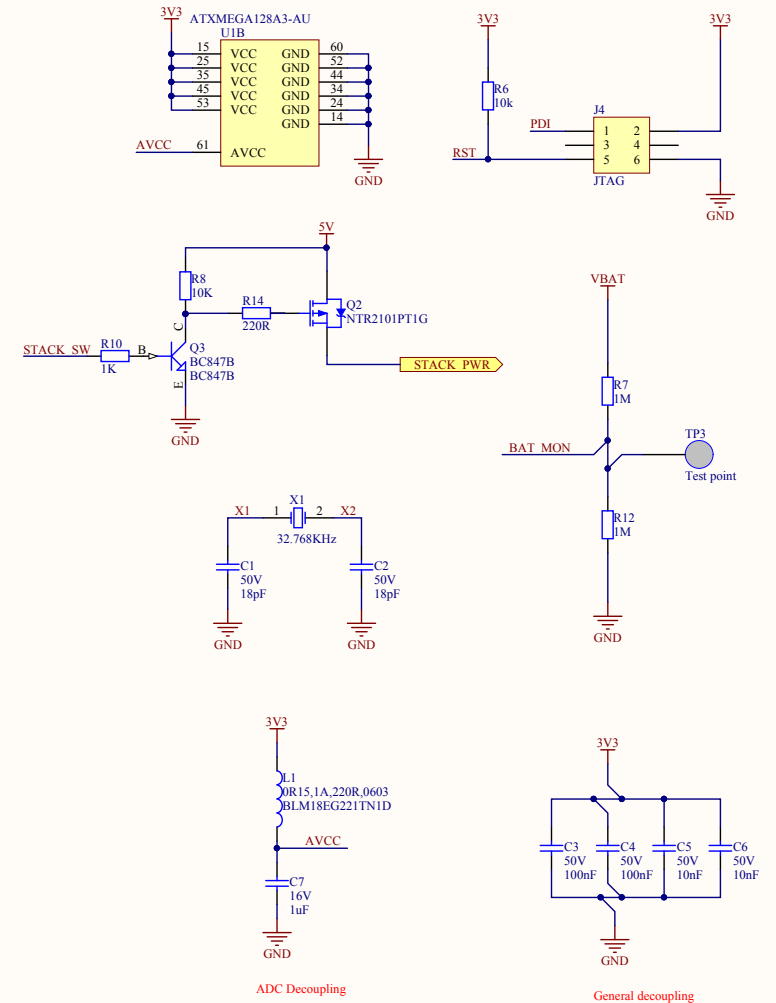
NOTES			
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Project Number: <b>TRI002</b>			
Project Name: <b>Trigger Trap Baseblock</b>			
Title:			Version: <b>Issue 4.0</b>
Size: <b>A3</b>	Number: <b>2</b>	Drawn by: <b>Chase Callender</b>	
Date: <b>20/10/2014</b>	Time: <b>18:41:17</b>	Sheet <b>2</b> of <b>4</b>	
File: <b>TRI002 Base Block Daughter Board 4.0.SchDoc</b>			






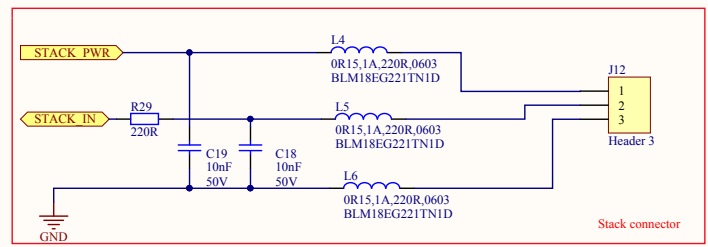
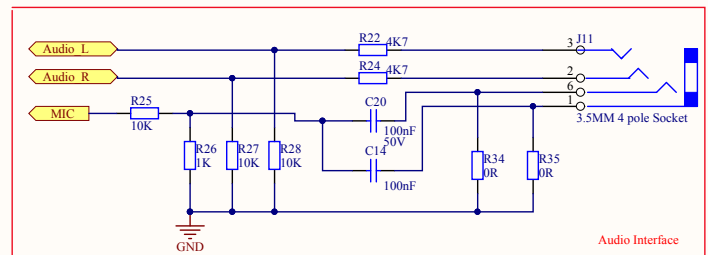
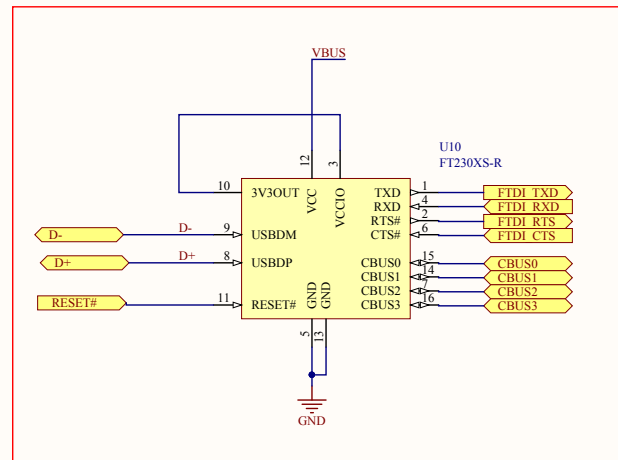
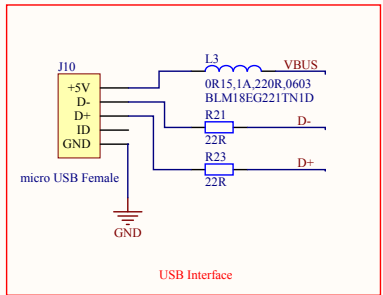
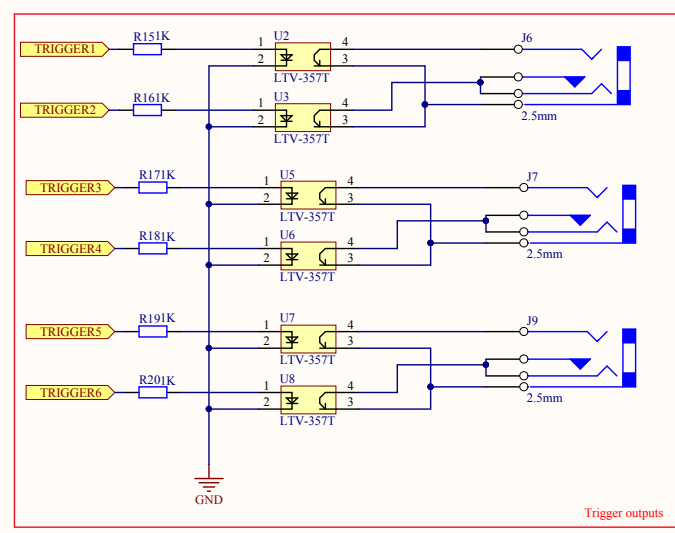
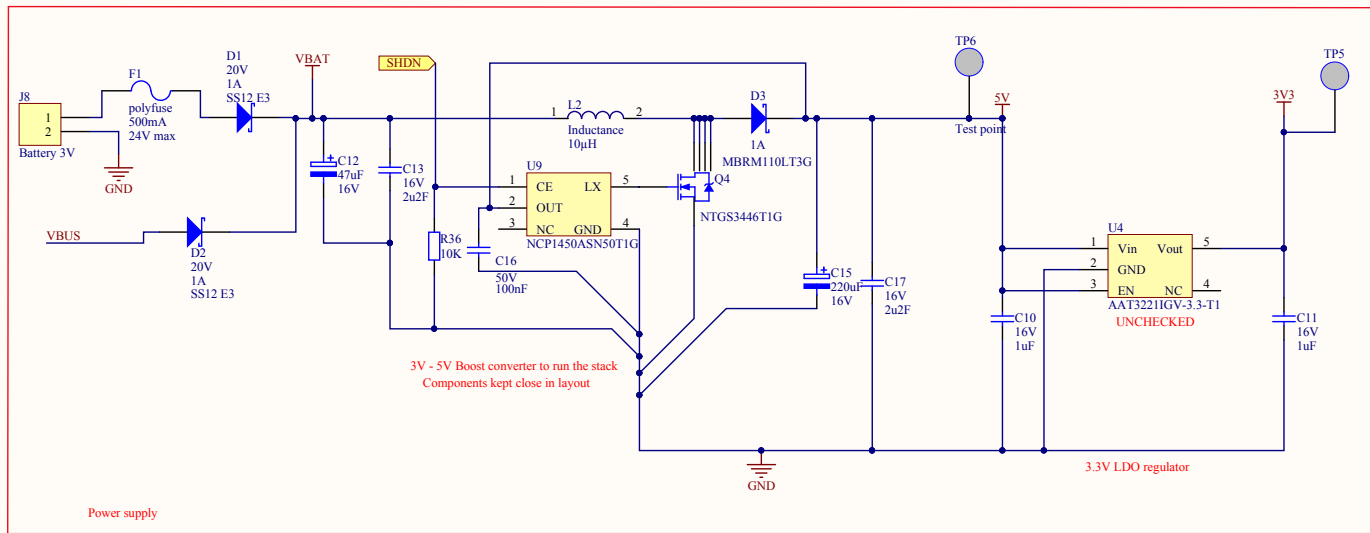


**MICROCONTROLLER**




NOTES			
N.B. LED Cathodes are identified, assembler to refer to part datasheet for correct orientation			
Project Number: <b>TRI002</b>			
Project Name: <b>Trigger Trap Baseblock</b>			
Title:			Version: <b>Issue 4.0</b>
Size: <b>A3</b>	Number: <b>3</b>	Drawn by: <b>Chase Callender</b>	
Date: <b>20/10/2014</b>	Time: <b>18:41:18</b>	Sheet <b>3</b> of <b>4</b>	
File: <b>TRI002 Base Block Microcontroller Issue 4.0 SchDoc</b>			

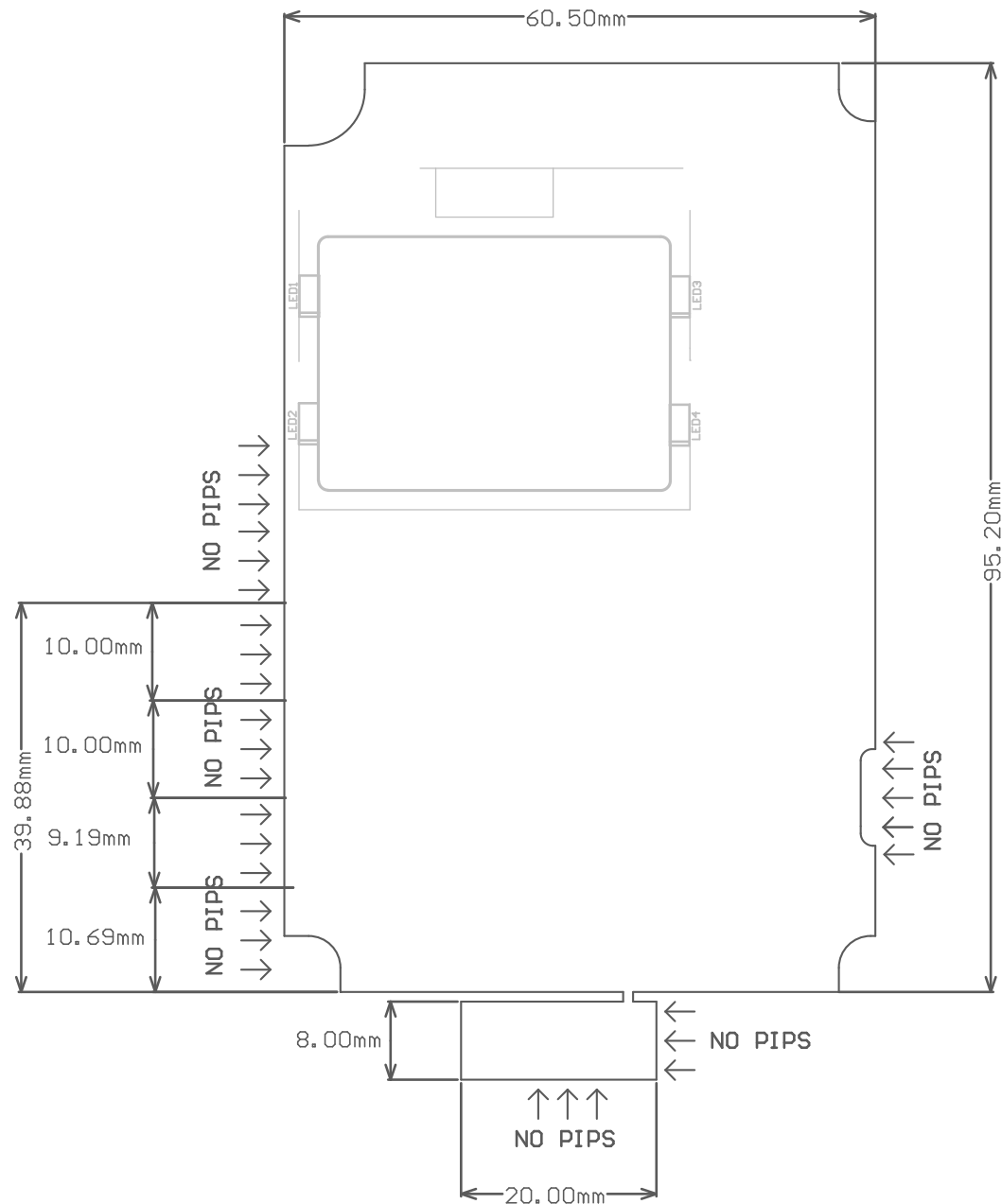




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Project Number: <b>TRI002</b>			
Project Name: <b>Trigger Trap Baseblock</b>			
Title:			Version: <b>Issue 4.0</b>
Size: <b>A3</b>	Number: <b>4</b>	Drawn by: <b>Chase Callender</b>	
Date: <b>20/10/2014</b>	Time: <b>18:41:18</b>	Sheet <b>4</b> of <b>4</b>	
File: <b>TRI002 Base Block PSU and Connectors Issue 4.0.SchDoc</b>			







### Manufacturing Notes

Finished Board Thickness 1mm  
 Board to be FR4 Material  
 Board is 2 layer  
 Double sided resist in GREEN  
 2 Idents  
 Copper weight to be 1 oz finished  
 All Holes PTH  
 Please ignore all items outside MECH 1  
 Finish HASL Lead Free

### Build notes

LED Cathodes are identified, assembler to refer to part datasheet for correct orientation.

Layout by:

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Cubik Innovation  
 Bristol and Bath Science Park  
 Dirac Crescent  
 Bristol BS16 7FR

Tel: 0117 244 3000  
 Email: paul.mullen@cubik-innovation.co.uk

### Layer

Mechanical 1  
 Mechanical 2  
 Top Overlay

Drawn by

Giles Sanders

Date

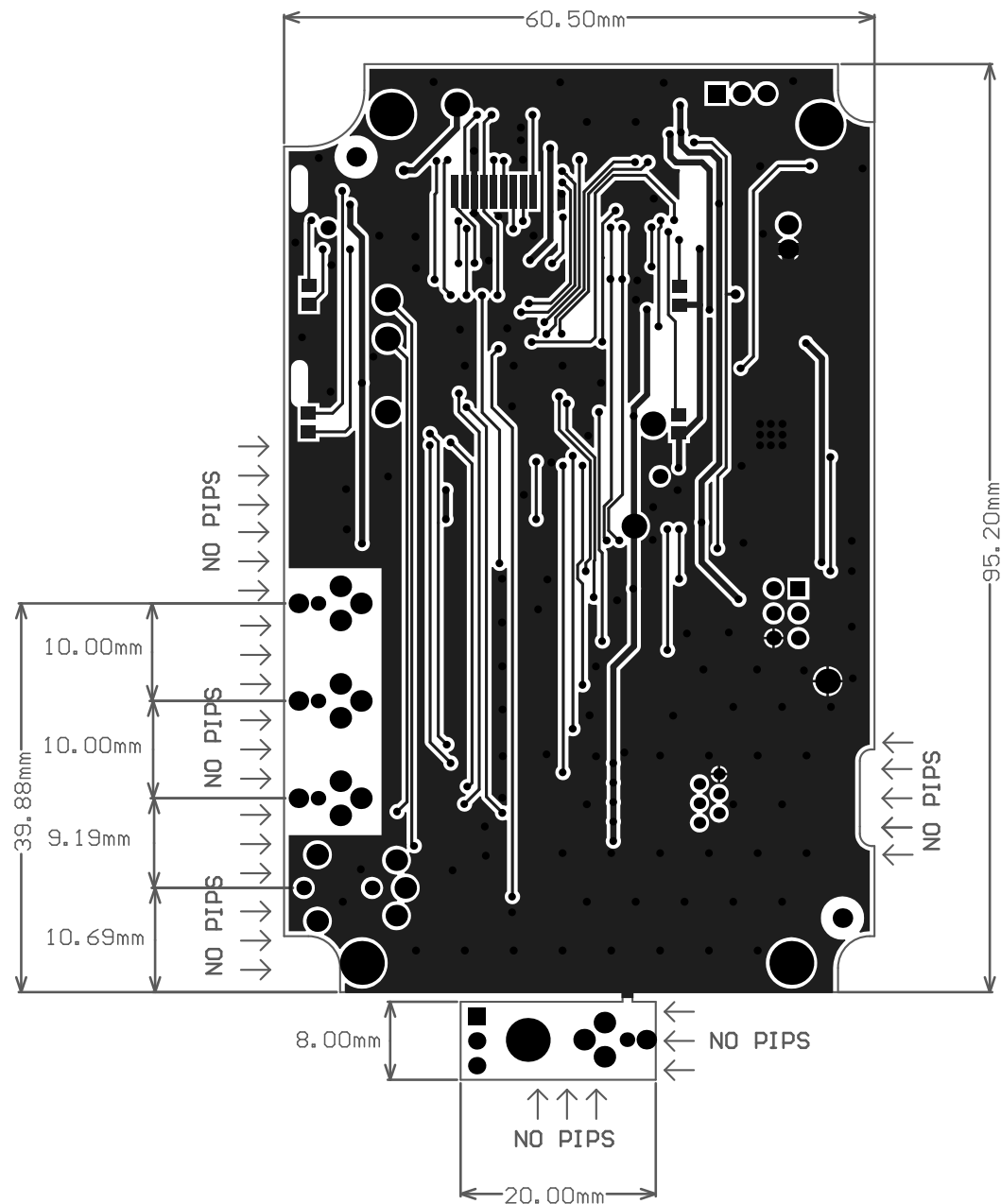
13/10/2014

Issue

Issue 4.0

Document Name

TRI002\_Baseblock\_issue 4.0.PcbDoc



### Manufacturing Notes

Finished Board Thickness 1mm  
 Board to be FR4 Material  
 Board is 2 layer  
 Double sided resist in GREEN  
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### Build notes

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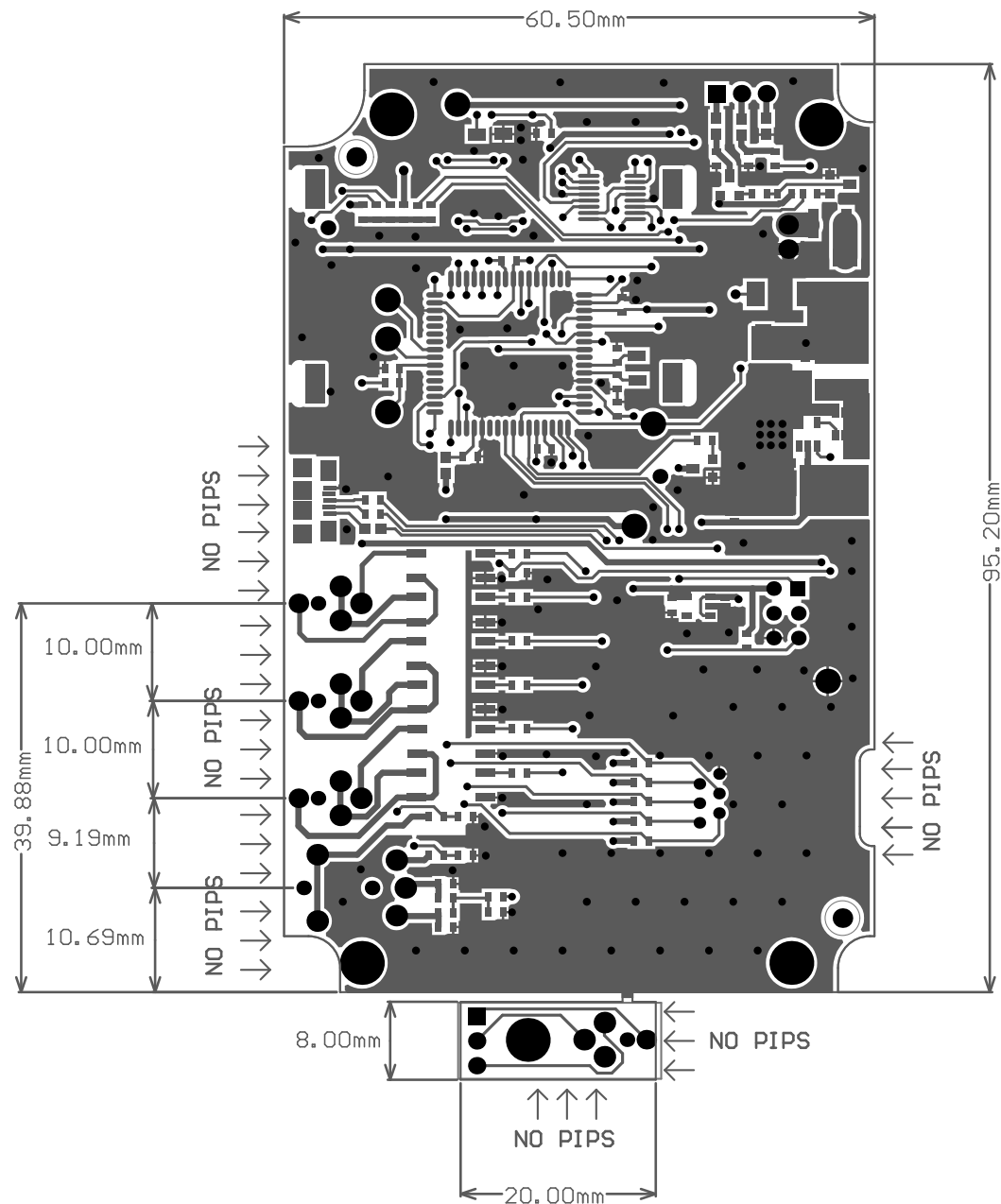
### Layer

Mechanical 1  
 Mechanical 2

Multi-Layer

Top Layer

Drawn by	Giles Sanders
Date	13/10/2014
Issue	Issue 4.0
Document Name	TRI002_Baseblock_issue 4.0.PcbDoc



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## Build notes

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## Layer

Mechanical 1  
 Mechanical 2

Keep-Out Layer

Bottom Layer

Drawn by

Giles Sanders

Date

13/10/2014

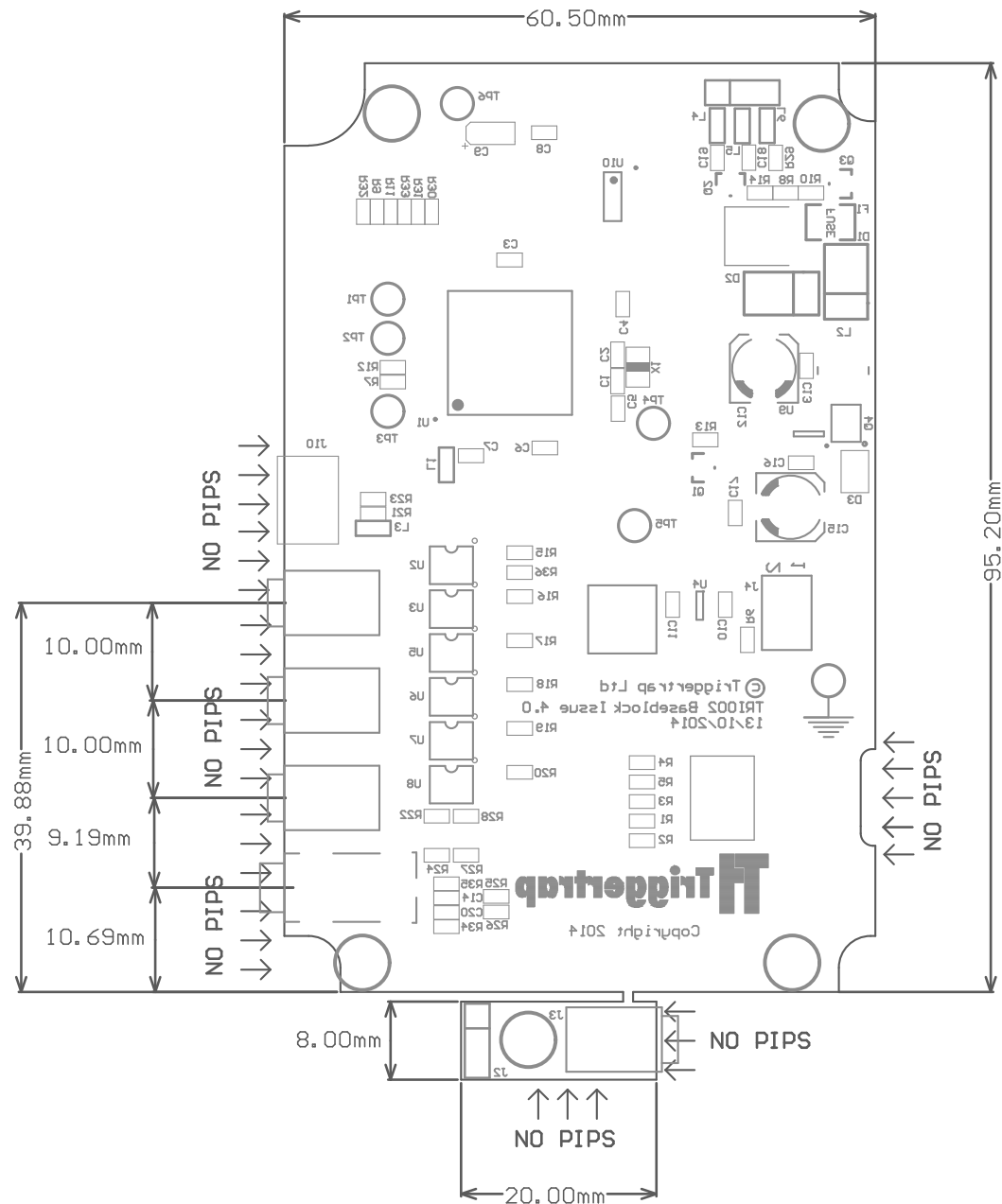
Issue

Issue 4.0

Document Name

TRI002\_Baseblock\_issue 4.0.PcbDoc





## Manufacturing Notes

Finished Board Thickness 1mm  
Board to be FR4 Material  
Board is 2 layer  
Double sided resist in GREEN  
2 Idents  
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All Holes PTH  
Please ignore all items outside MECH 1  
Finish HASL Lead Free

## Build notes

LED Cathodes are identified, assembler to refer to part datasheet for correct orientation.

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## Layer

Mechanical 1  
Mechanical 2

Bottom Overlay

Drawn by	Giles Sanders
Date	13/10/2014
Issue	Issue 4.0
Document Name	TRI002_Baseblock_issue 4.0.PcbDoc



- Electronic Design
- Prototype
- Production

Bristol & Bath Science Park  
Dirac Crescent, Emersons Green  
Bristol BS16 7FR

Tel: 0117 244 3000 Fax: 0117 244 3001  
Web: www.cubik-innovation.co.uk

**Project** TRI002

**Variant:** Var1 of TRI002 Base Unit Issue 4.0

**Creation I** 20/10/2014 18:41:24

**Print Date** 20-Oct-14 6:41:43 PM

**BOM V** Issue 4.0

Designat or	Fitted	Value	Voltage	Footprint	Quantity	Supplier	Part No.	Qty to Ord	Manufactu	Manuf Part #
C1, C2	Fitted	18pF	50V	C0603	2	FEC	1414620		KEMET	C0603C180J5 GAC
C3, C4, C8, C16, C20	Fitted	100nF	50V	C0603	5	Rapid	71-1964		TruCap	U0603R103
C5, C6, C18, C19	Fitted	10nF	50V	C0603	4	Rapid	71-1964		MULTICOM P	MCCA000238
C7, C10, C11	Fitted	1uF	16V	C0603	3	FEC	1288256		KEMET	C0603C105K4 PAC
C9	Fitted	4u7F	10V	KEMET CASE A	1	FEC	1457427		KEMET	T491A475K01 0AT
C12	Fitted	47uF	16V	CAP6.8/6.8	1	FEC	8823200		NICHICON	UUT1C470MCL 1GS
C13, C17	Fitted	2u2F	16V	C0603	2	FEC	1658871		AVX	0603YD225KA T2A
									PANASONIC	EEFEC0001XA

C12	Fitted	47uF	16V	SM16.50.0	1	FEC	0020200		ROHMSON	1GS	
C13, C17	Fitted	2u2F	16V	C0603	2	FEC	1658871		AVX	0603YD225KAT2A	
C15	Fitted	220uF	16V	CAP6.8/6.8	1	FEC	1539479		PANASONIC	EEEFPC221XAP	
D1, D2	Fitted	SS12 E3	20V	DO214-AA	2	Rapid	47-0988		Taiwan Semiconductor	SS12 E3	
D3	Fitted	MBRM110LT3G	?V	POWERMITE	1	FEC	1459062		ON SEMICONDUCTOR	MBRM110LT3G	
F1	Fitted	polyfuse	24V max	1210 FUSE	1	FEC	1822208		LITTELFUSE	1210L050YR	
J2	Fitted	Daughter Board Con		sip3	1						
J3, J6, J7, J9	Fitted	2.5mm		2.5mm socket TRI001	4	FEC	1280745		PRO SIGNAL	PSG01539	
J4	Fitted	JTAG Header		HDR2X3	1	Rapid	22-0500		TruConnect		
J5	Fitted	FFC 6 way top contact		HLW6R-2C7LF	1	MOUSER	649-HLW6R-2C7LF		FCI	HLW6R-2C7LF	
J8	Fitted	22-05-7025		Molex 0022057025	1	FEC	9979670		MOLEX	22-05-7025	
J10	Fitted	micro USB Female		micro usb receptacle	1	MOUSER	649-10118192-0001LF		FCI	10118192-0001LF	
J11	Fitted	3.5MM 4 pole Socket		Cliff 3.5mm 4 pole socket	1	FEC	2309468		CLIFF ELECTRONIC	FC68125	
J12	Fitted	Stack Con		sip3	1						
L1, L3, L4, L5, L6	Fitted	BLM18EG221TN1D		L0603	5	FEC	1515717		MURATA	BLM18EG221TN1D	
L2	Fitted	10uH		WE-PD2_5848	1	FEC	1636014		Würth Elektronik eiSos GmbH	74477410	
LCD1	Fitted	LPH7366-1		LPH-7366	1	www.008620.net	LPH7366-1		Na	na	
LED1, LED2, LED3, LED4	Fitted	MCL-S270SRC		LED, RED, 0805	4	FEC	1581239		MULTICOMP	MCL-S270SRC	
Q1	Fitted	FDN335N		SOT-23	1	FEC	9845348RL		FAIRCHILD SEMICONDUCTOR	FDN335N	
Q2	Fitted		8V	SOT-23 DIODE - duplicate	1	FEC	NTR2101PT1G		ON SEMICONDUCTOR	NTR2101PT1G	
Q3	Fitted	BC847B		SOT-23T	1						
Q4	Fitted	NTGS3446T1G		TSOP6	1	RS	802-4221		ON Semiconductor	NTGS3446T1G	
R1, R2, R3, R4, R5, R6	Fitted	22k		20603	11						

R1, R2, R3, R4, R5, R6, R8, R25, R27, R28, R36	Fitted	10k		R0603	11						
R7, R12	Fitted	1M		R0603	2						
R9, R11, R30, R31	Fitted	100R		R0603	4						
R10, R13, R15, R16, R17, R18, R19, R20, R26	Fitted	1K		R0603	9						
R14, R29	Fitted	220R		R0603	2						
R21, R23	Fitted	22R		R0603	2						
R22, R24	Fitted	4K7		R0603	2						
R32, R35	Fitted	0R		R0603	2						
U1	Fitted	ATXMEGA128A3-AU		64A_N	1	FEC	1748550		ATMEL	ATXMEGA128A3-AU	
U2, U3, U5, U6, U7, U8	Fitted	LTV-357T		SMD-4	6	MOUSER	859-LTV-357T		Lite-on	LTV-357T	
U4	Fitted	AAT3221IGV-3.3-T1		TSOT 5 pin	1	MOUSER	873-AAT3221IGV-33T1		Skyworks Solutions	AAT3221IGV-3.3-T1	
U9	Fitted	NCP1450ASN50T1G		SOT23-5AN	1	FEC	1460676		ON SEMICONDUCTOR	NCP1450ASN50T1G	
U10	Fitted	FT230X		SSOP-16_N	1	MOUSER	895-FT230XS-R		FTDI	FT230XS-R	
X1	Fitted	32.768KHz		FC 13F	1	FEC	1712821		EPSON TOYOCOM	FC-13F,32.768KHZ, 12.5PF	
C14	Not Fitted	100nF	50V	C0603	0	Rapid	71-1964		TruCap	U0603R103	
R33, R34	Not Fitted	0R		R0603	0						