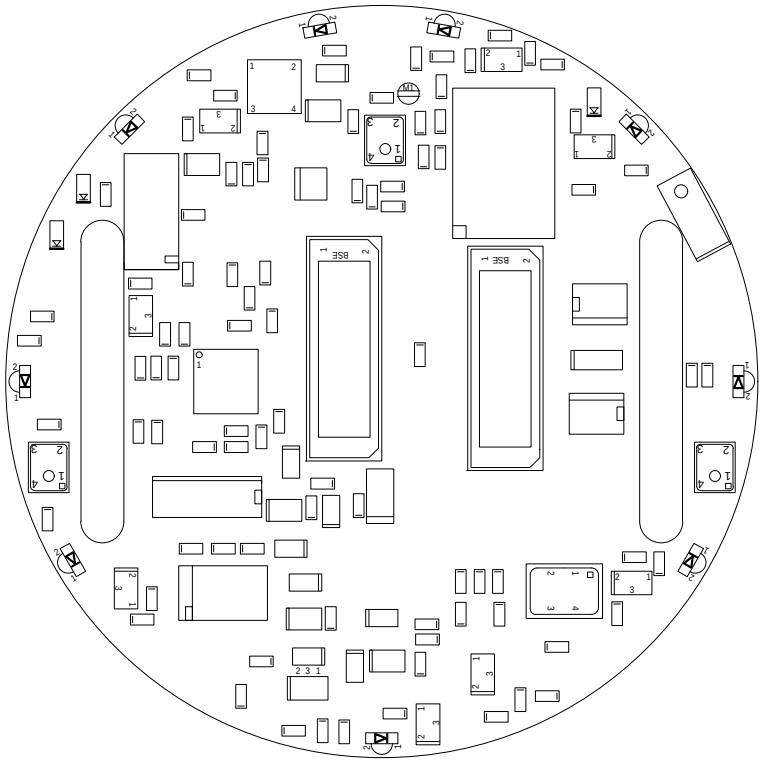
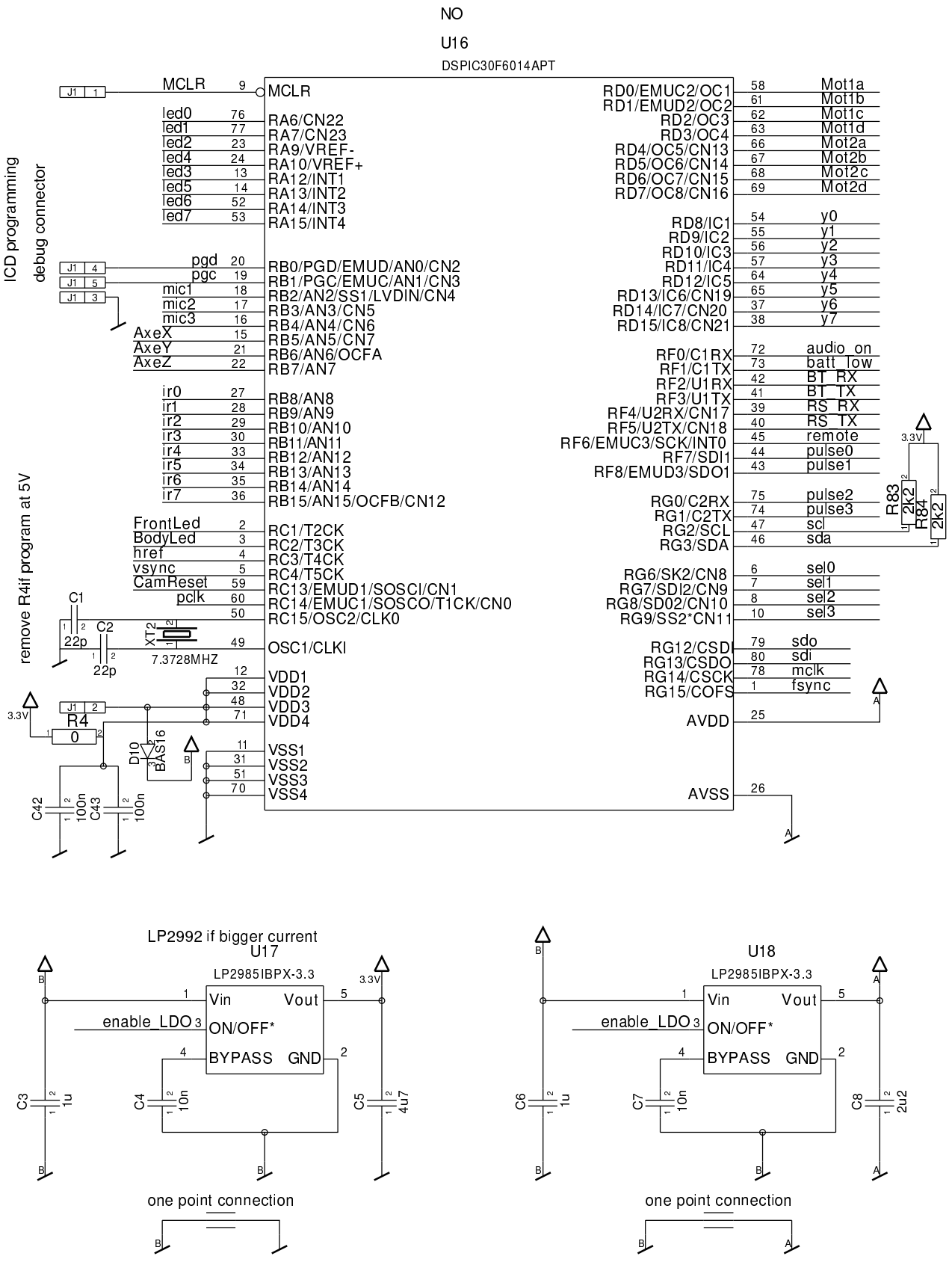
e-Puck Robot Schematics and layout

EPUCKPROD_B

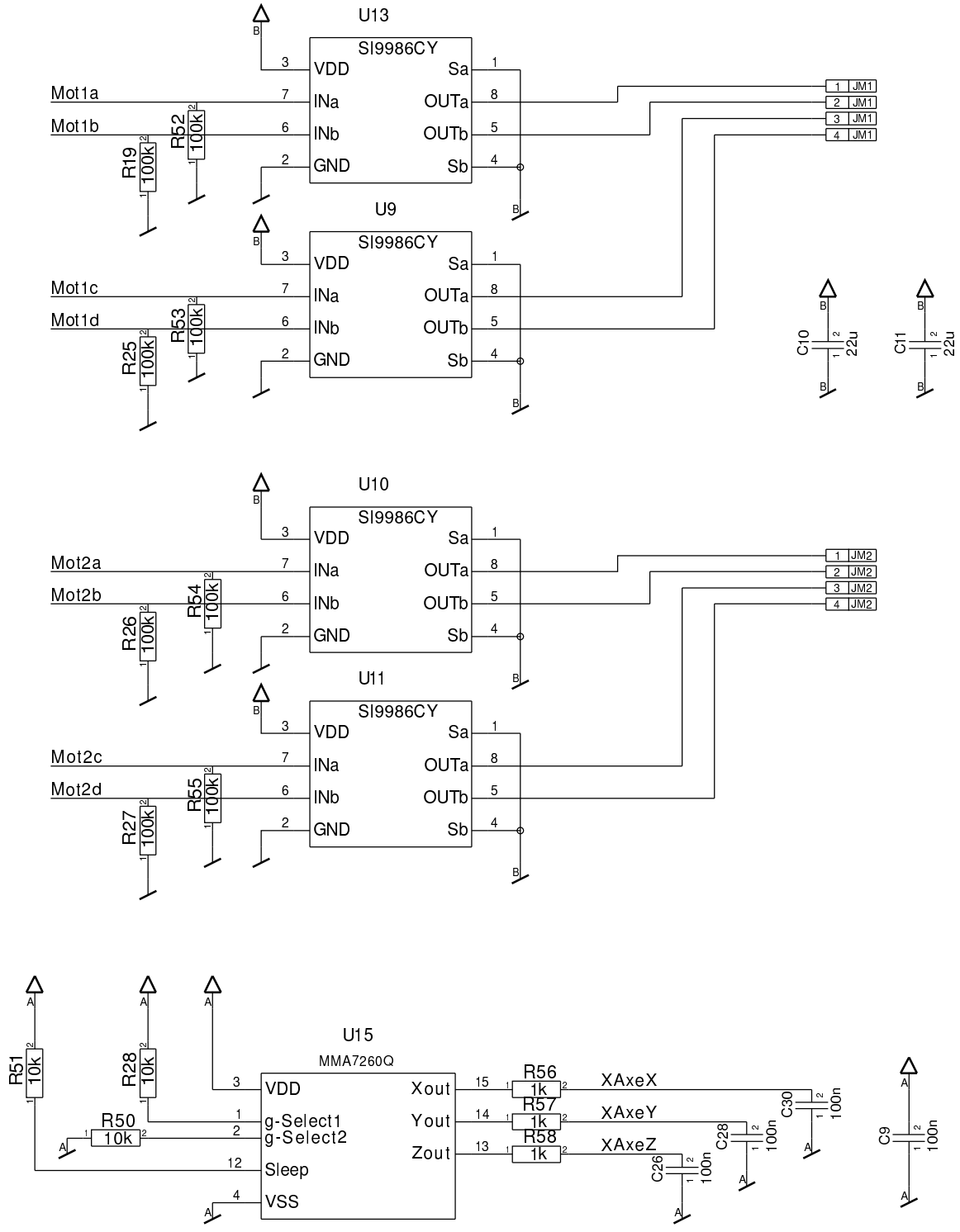
LSA1 F.Mondada
Phone: 37357
Fri Jun 2 17:50:15 MET DST 2006

MFG_DATE: Undefined
QUANTITY: 1
SOLDERMASK: mtop mbot
MATERIAL: FR4 : 1.6 mm

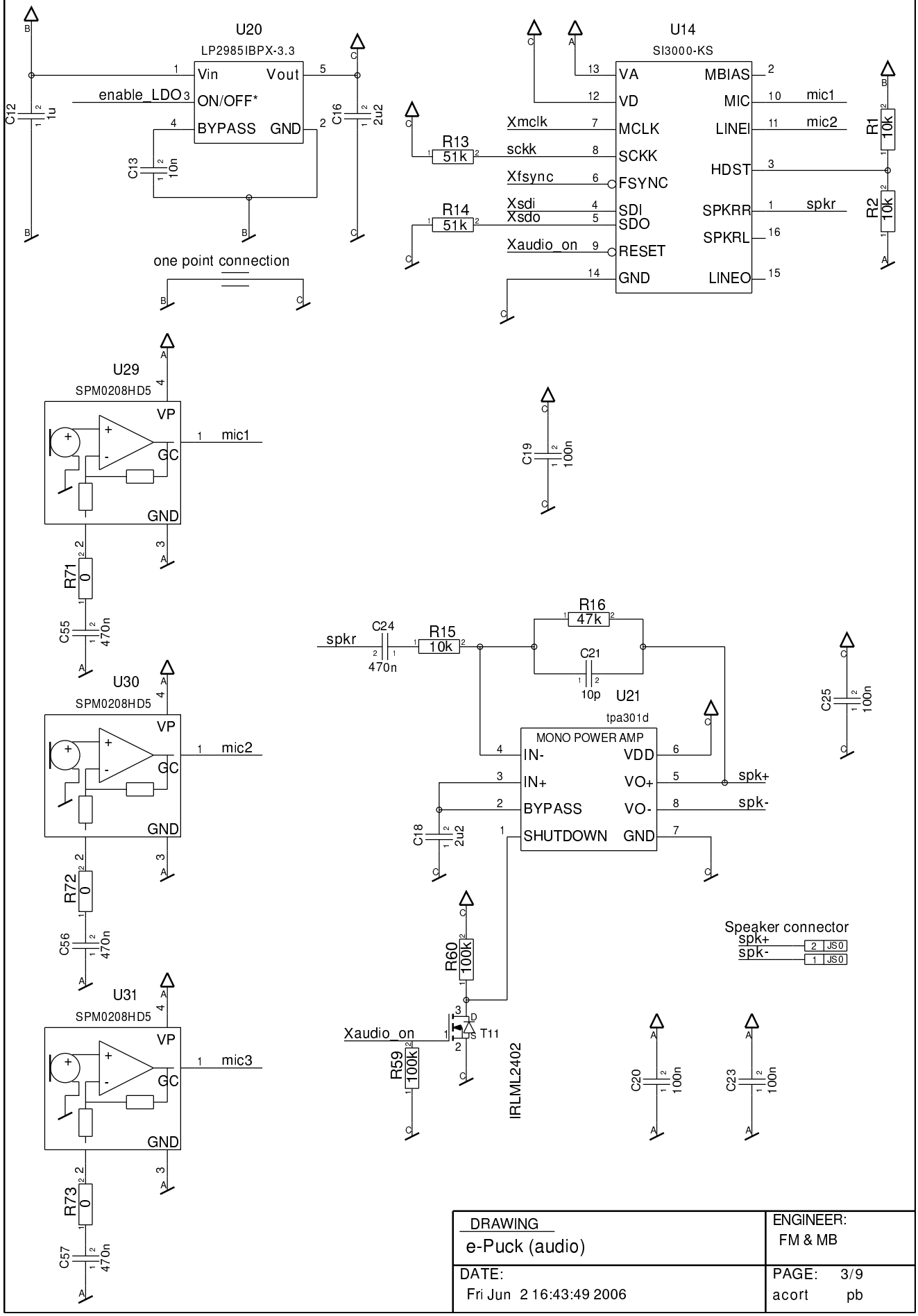




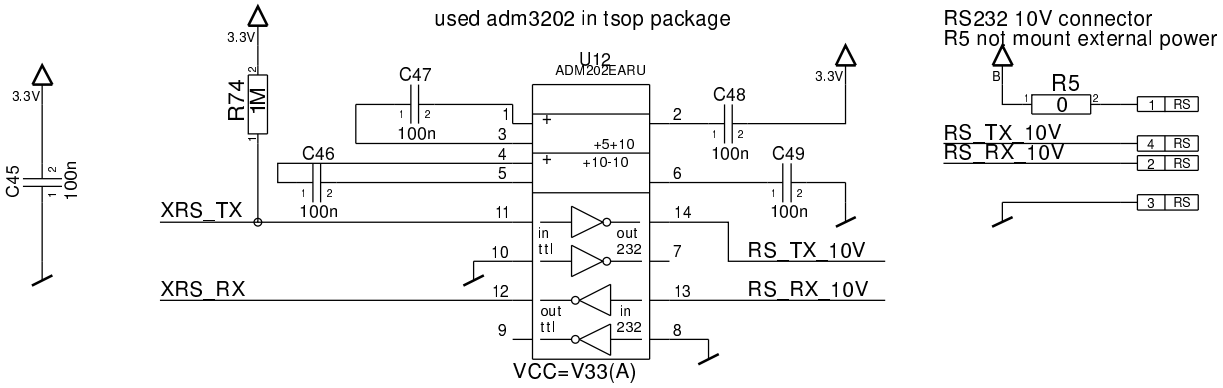
DRAWING e-Puck (processor)	ENGINEER: FM & MB
DATE: Fri Jun 2 16:43:26 2006	PAGE: 1/9 acort pb

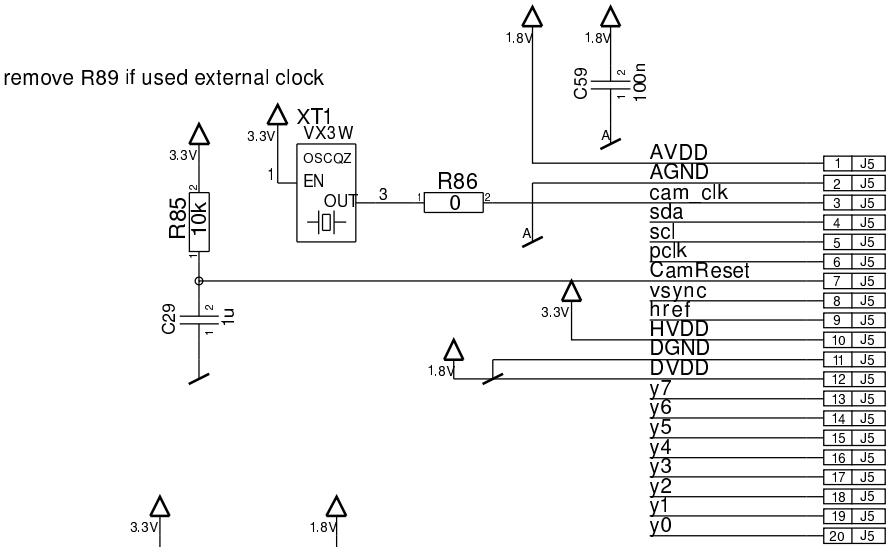


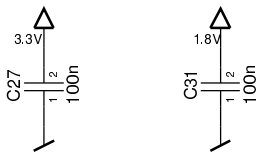
DRAWING e-Puck (motors + acc)	ENGINEER: FM & MB
DATE: Fri Jun 2 16:43:37 2006	PAGE: 2/9 acort pb

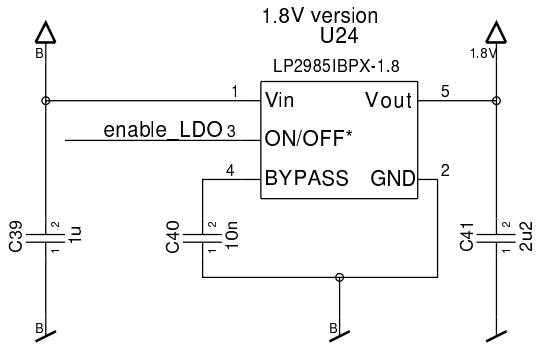


DRAWING e-Puck (audio)	ENGINEER: FM & MB
DATE: Fri Jun 2 16:43:49 2006	PAGE: 3/9 acort pb

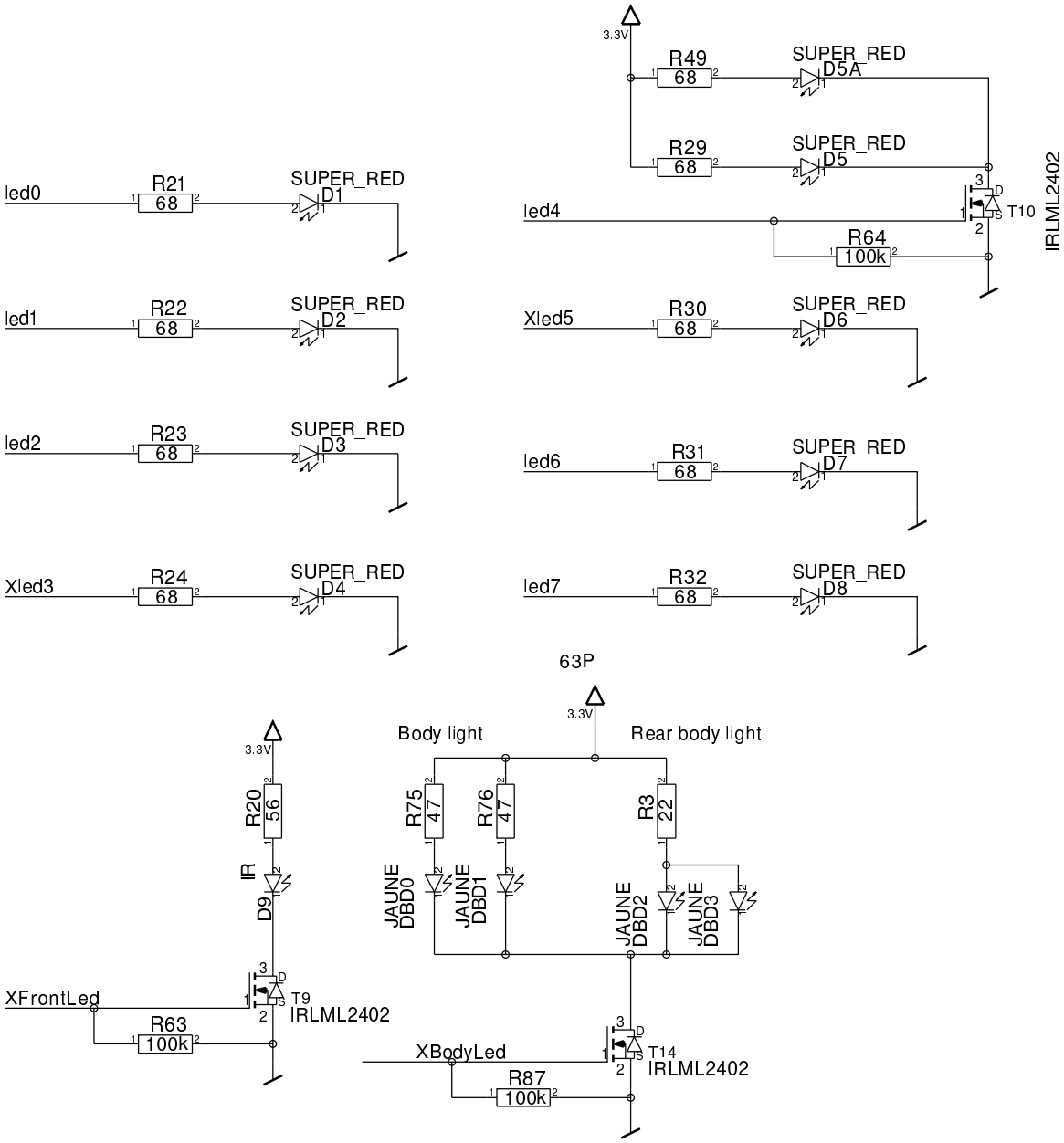




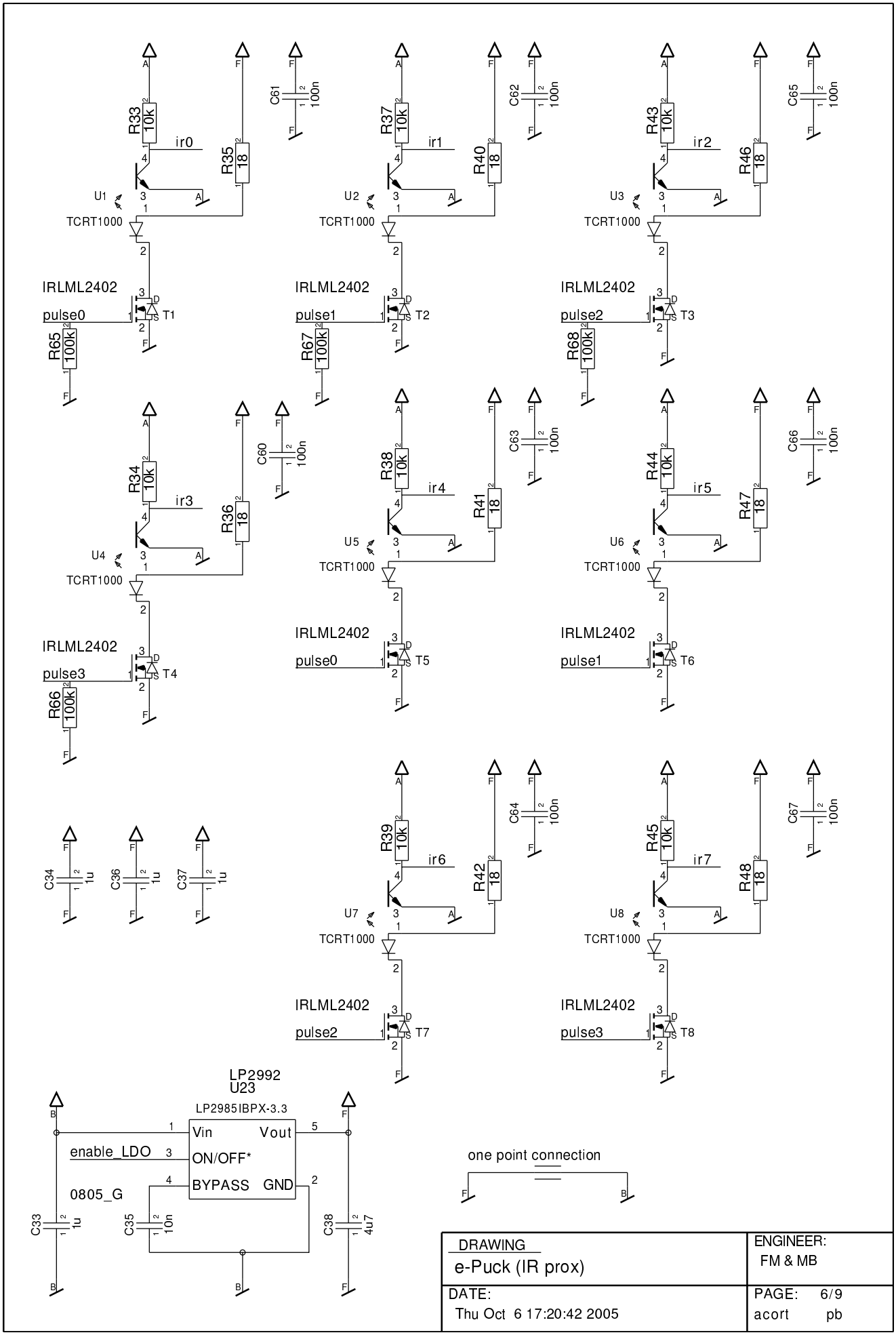




DRAWING e-Puck (RS + camera)	ENGINEER: FM & MB
DATE: Fri Jun 2 16:44:16 2006	PAGE: 4/9 acort pb



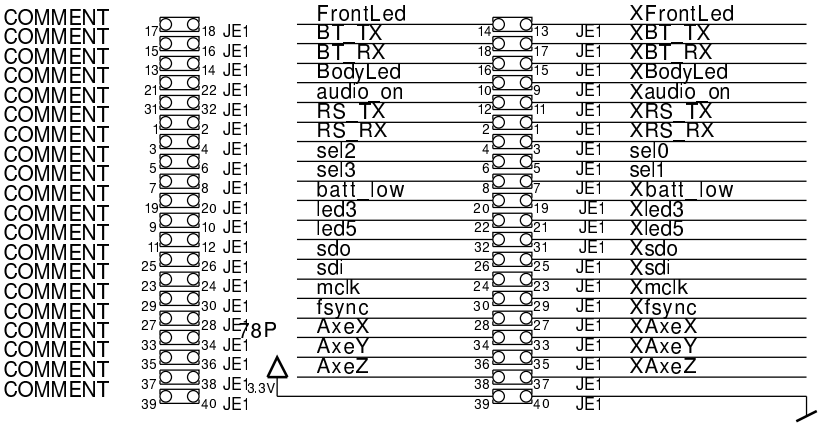
DRAWING e-Puck (leds + BT)	ENGINEER: FM & MB
DATE: Fri Sep 9 10:26:57 2005	PAGE: 5/9 acort pb


R33 10k
ir0
R35 18
C61 100n
U1
TCRT1000
IRLML2402
pulse0
T1
R65 100k
R37 10k
ir1
R40 18
C62 100n
U2
TCRT1000
IRLML2402
pulse1
T2
R67 100k
R43 10k
ir2
R46 18
C65 100n
U3
TCRT1000
IRLML2402
pulse2
T3
R68 100k
R34 10k
ir3
R36 18
C60 100n
U4
TCRT1000
IRLML2402
pulse3
T4
R66 100k
R38 10k
ir4
R41 18
C63 100n
U5
TCRT1000
IRLML2402
pulse0
T5
R44 10k
ir5
R47 18
C66 100n
U6
TCRT1000
IRLML2402
pulse1
T6
C34 1u
C36 1u
C37 1u
R39 10k
ir6
R42 18
C64 100n
U7
TCRT1000
IRLML2402
pulse2
T7
R45 10k
ir7
R48 18
C67 100n
U8
TCRT1000
IRLML2402
pulse3
T8
LP2992
U23
LP2985IBPX-3.3
Vin
Vout
enable_LDO
ON/OFF*
BYPASS
GND
0805_G
C33 1u
C35 10n
C38 4u7
one point connection
DRAWING
e-Puck (IR prox)
ENGINEER:
FM & MB
DATE:
Thu Oct 6 17:20:42 2005
PAGE: 6/9
acort pb

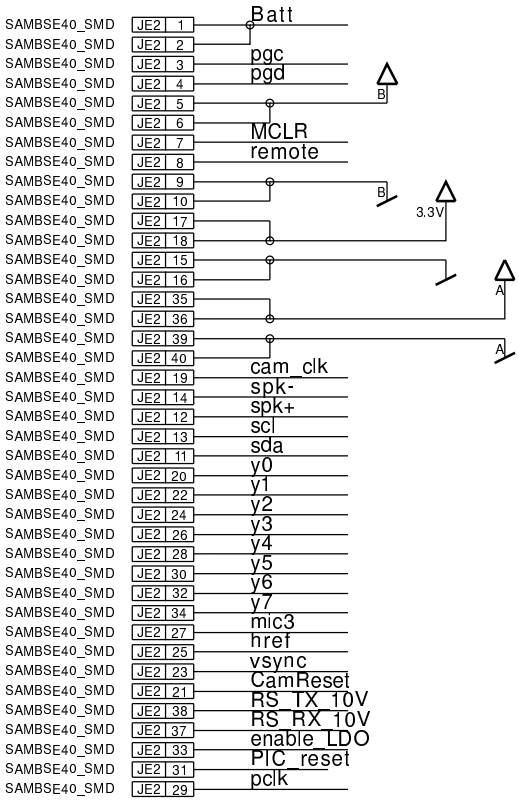
to be jumped by a connector with shorts 1-2 3-4 etc

excepted 5-6 7-8 39-40

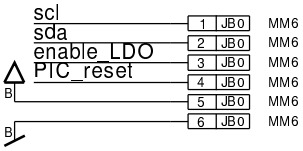
SAMBSE40_SMD



Extension connector

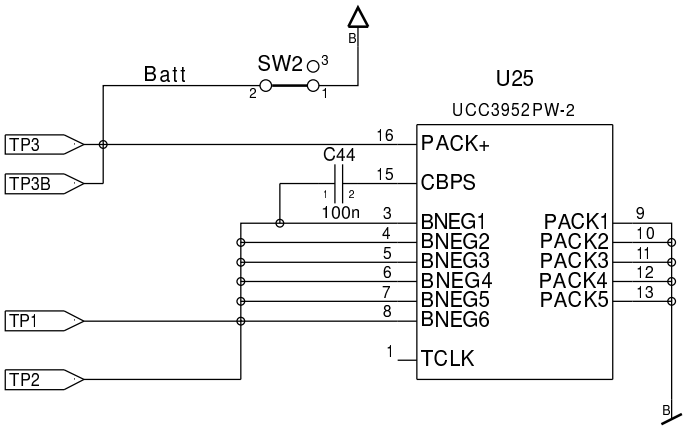


Bottom connector

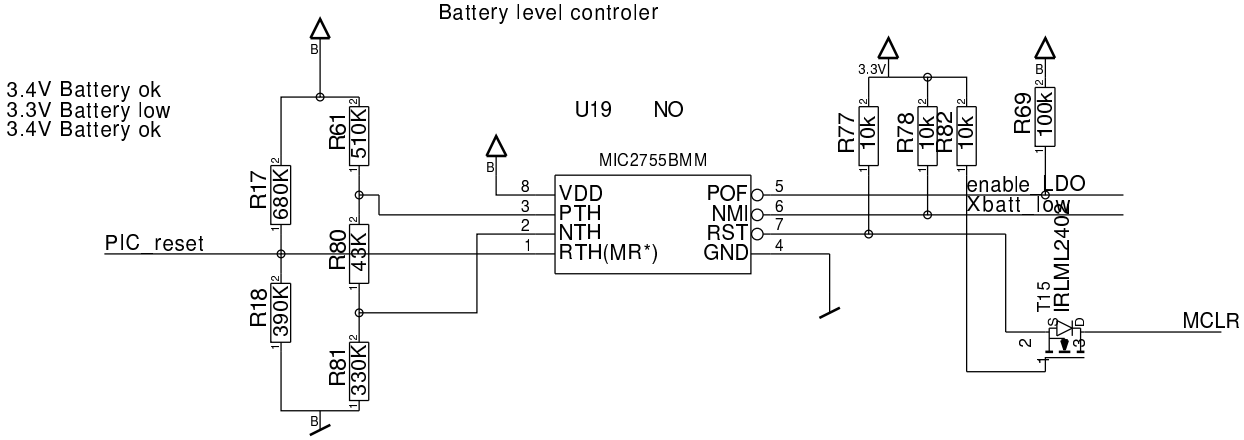


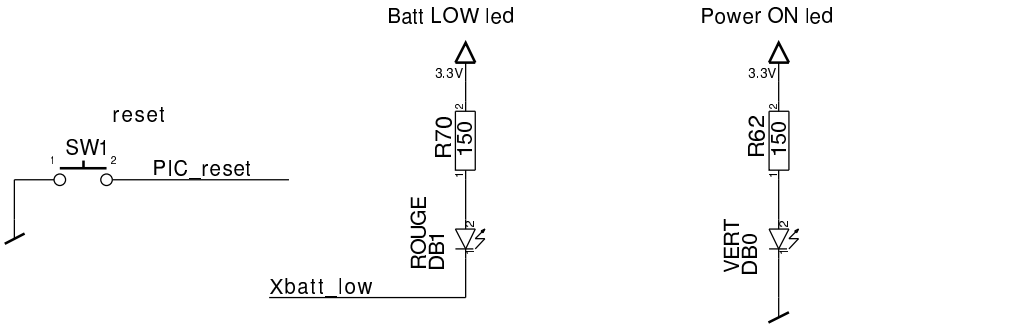
DRAWING e-Puck (ext conn)	ENGINEER: FM & MB
DATE: Fri Oct 7 13:57:14 2005	PAGE: 7/9 acort pb

Battery protection

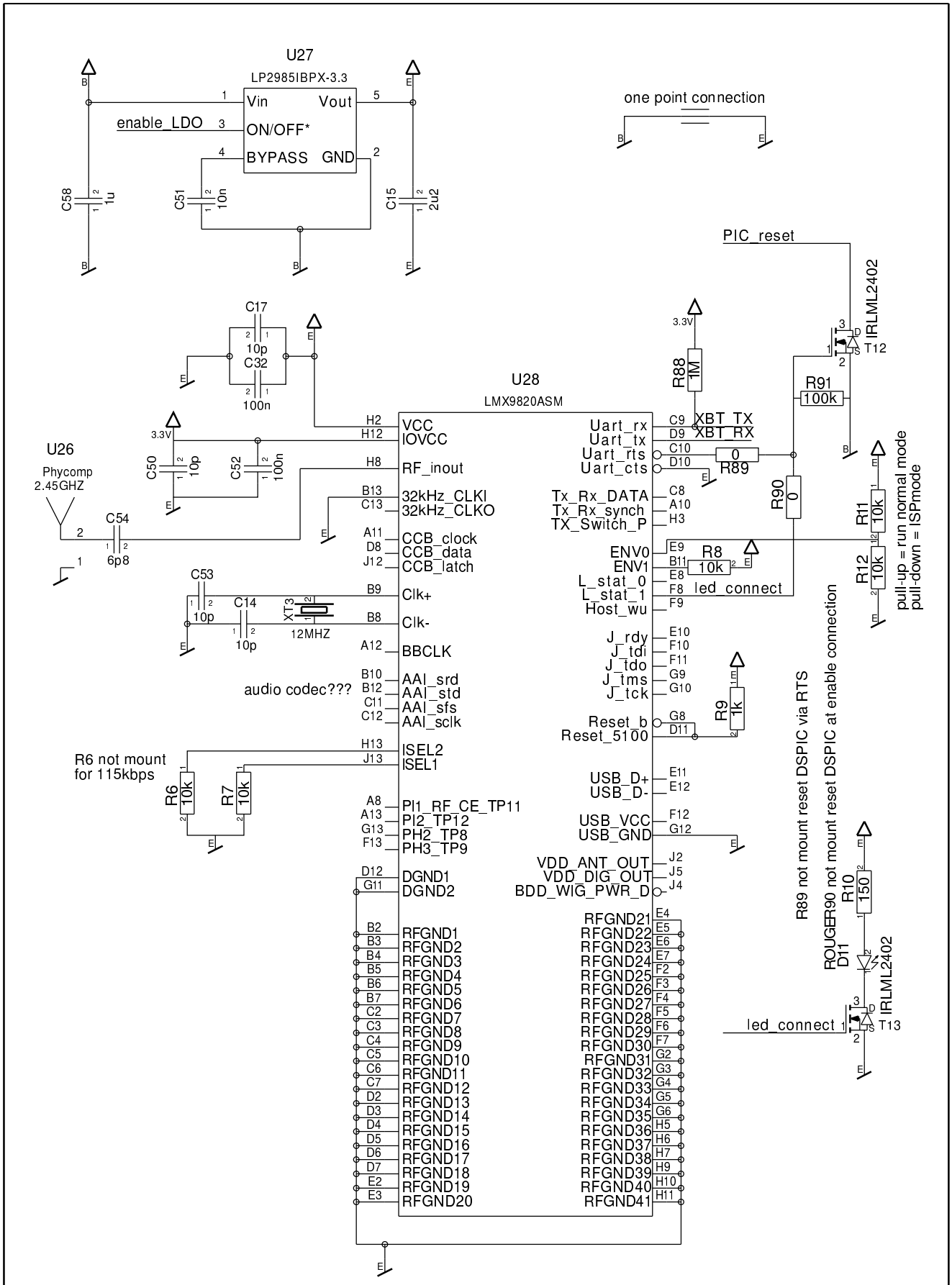


Battery level controler





e-Puck (power managment)	ENGINEER: FM & MB
DATE:	PAGE: 8/9



e-Puck(Bluetooth)	ENGINEER:
DATE:	PAGE: 9/9

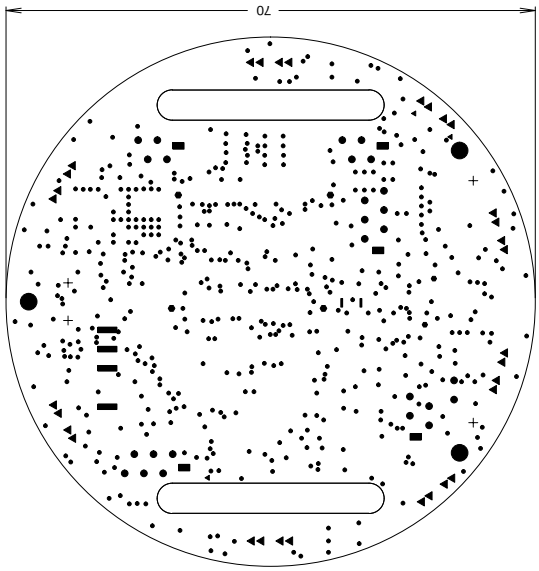
Signal Page Ref EPUCKPROD_B

epufl Fri Jun 2 17:50:17 MET DST 2006

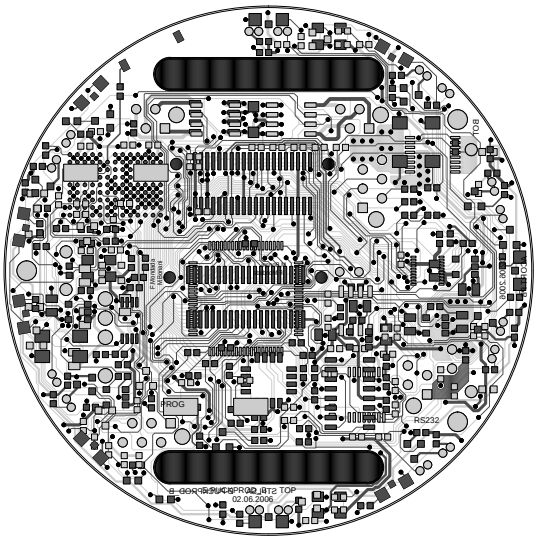
Ref Des	Pages
AGND	4
audio_on	1 7
AVDD	4
AxeX	1 7
AxeY	1 7
AxeZ	1 7
Batt	7 8
batt_low	1 7
BodyLed	1 7
BT_RX	1 7
BT_TX	1 7
CamReset	1 4 7
cam_clk	4 7
DGND	4
DVDD	4
enable_LDO	1 1 3 4 6 7 7 8 9
FrontLed	1 7
fsync	1 7
href	1 4 7
HVDD	4
ir0	1 6
ir1	1 6
ir2	1 6
ir3	1 6
ir4	1 6
ir5	1 6
ir6	1 6
ir7	1 6
led0	1 5
led1	1 5
led2	1 5
led3	1 7
led4	1 5
led5	1 7
led6	1 5
led7	1 5
led_connect	9 9
mclk	1 7
MCLR	1 7 8
mic1	1 3 3
mic2	1 3 3
mic3	1 3 7
Mot1a	1 2
Mot1b	1 2
Mot1c	1 2
Mot1d	1 2
Mot2a	1 2
Mot2b	1 2
Mot2c	1 2
Mot2d	1 2
pclk	1 4 7
pgc	1 7
pgd	1 7
PIC_reset	7 7 8 8 9
pulse0	1 6 6
pulse1	1 6 6
pulse2	1 6 6
pulse3	1 6 6

Ref Des	Pages
remote	1 7
RS_RX	1 7
RS_RX_10V	4 4 7
RS_TX	1 7
RS_TX_10V	4 4 7
sckk	3
scl	1 4 7 7
sda	1 4 7 7
sdi	1 7
sdo	1 7
sel0	1 7
sel1	1 7
sel2	1 7
sel3	1 7
spk+	3 3 7
spk-	3 3 7
spkr	3 3
vsync	1 4 7
Xaudio_on	3 3 7
XAxeX	2 7
XAxeY	2 7
XAxeZ	2 7
Xbatt_low	7 8 8
XBodyLed	5 7
XBT_RX	7 9
XBT_TX	7 9
XFrontLed	5 7
Xfsync	3 7
Xled3	5 7
Xled5	5 7
Xmclk	3 7
XRS_RX	4 7
XRS_TX	4 7
Xsdi	3 7
Xsdo	3 7
y0	1 4 7
y1	1 4 7
y2	1 4 7
y3	1 4 7
y4	1 4 7
y5	1 4 7
y6	1 4 7
y7	1 4 7
Total Signals count 101	

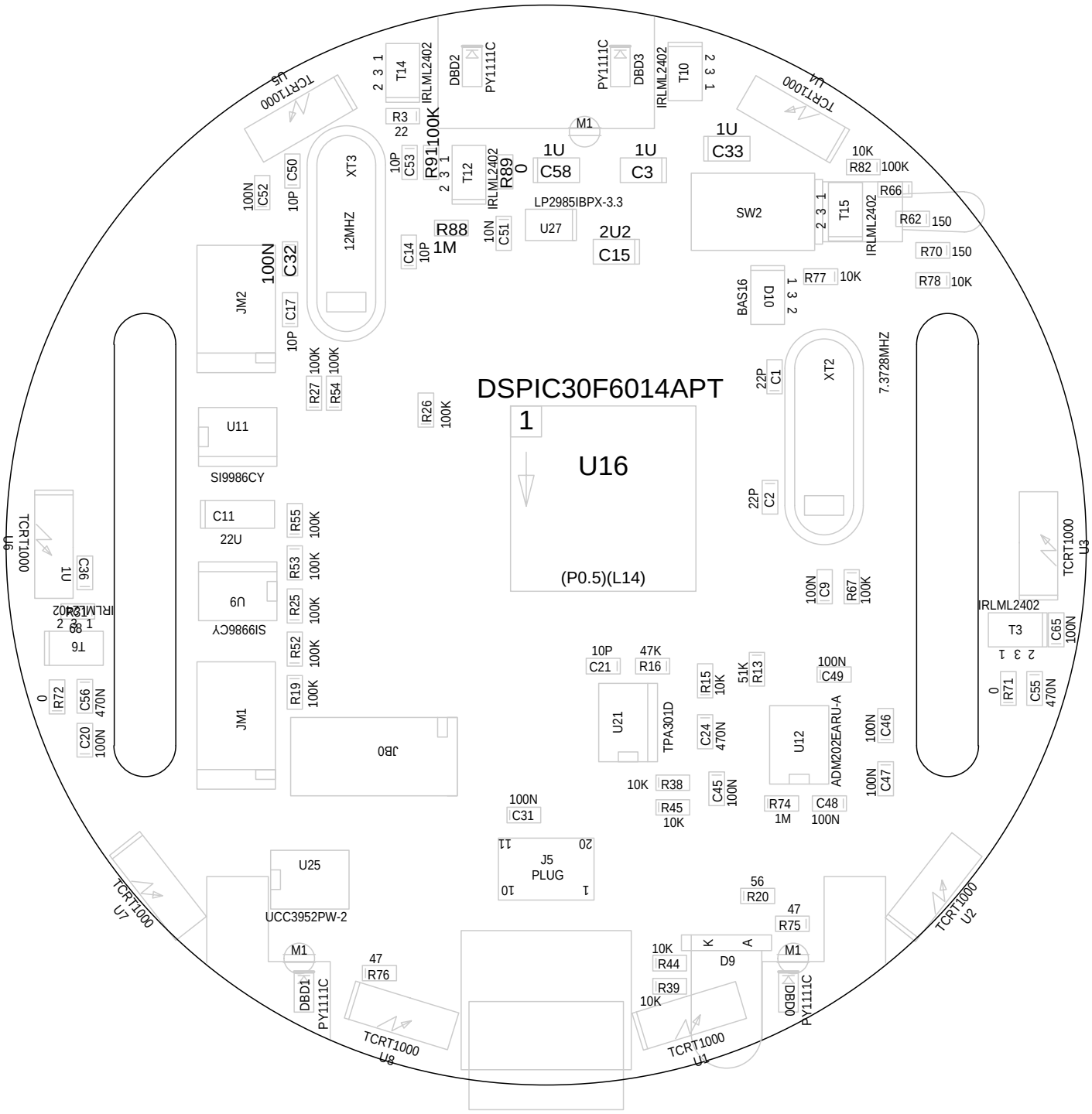
DRILL CHART			
FIGURE	SIZE	PLATED	QTY
·	0.203	PLATED	3
·	0.25	PLATED	525
■	0.711	PLATED	2
◂	0.75	PLATED	32
●	0.787	PLATED	26
■	1.1	PLATED	4
+	1.2	PLATED	4
■ ●	1.5	PLATED	5
●	2.2	PLATED	3
•	0.7	NOT PLATED	2
•	0.9	NOT PLATED	4



TITRE:EPUCK_D	LABORATOIRE:STI-LSA2	DATE:9.11.2004
	ENGINEER:F.Mondada M.Bonani	EPFL-ACORT-PB



TITRE:EPUCK_D	LABORATOIRE:STI-LSA2	DATE:9.11.2004
	ENGINEER:F.Mondada M.Bonani	EPFL-ACORT-PB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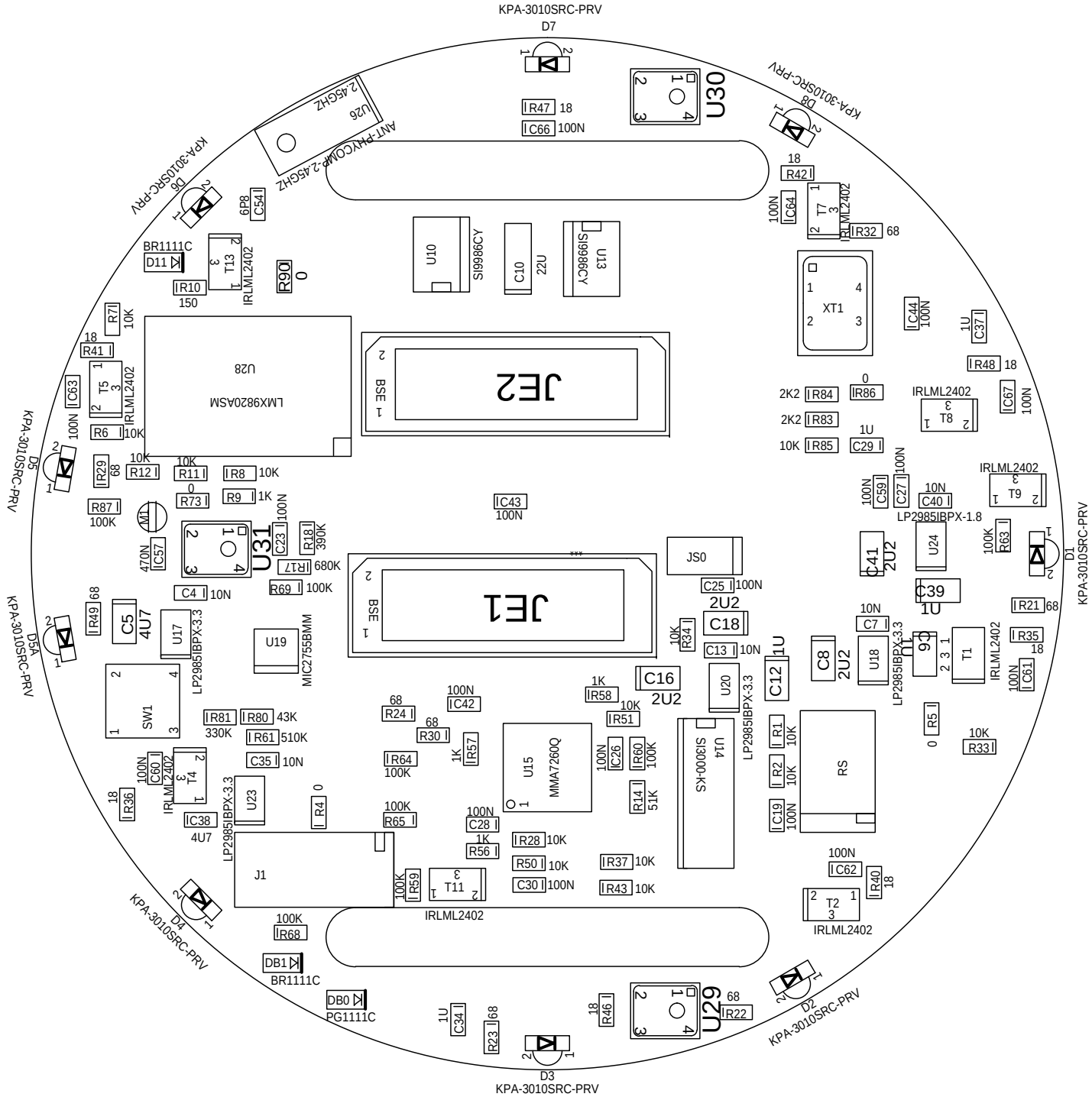
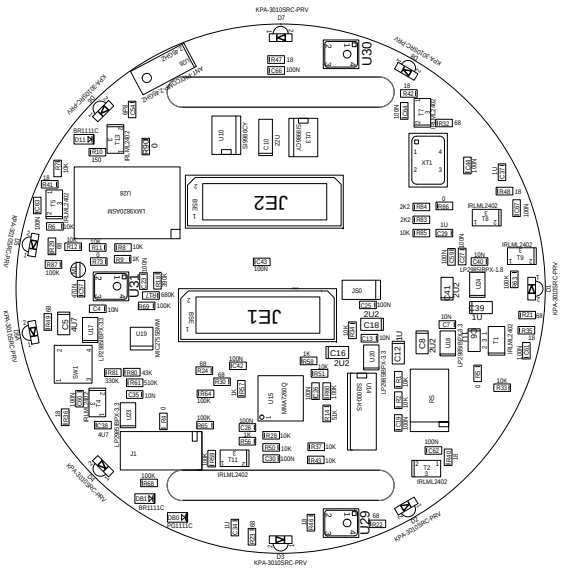
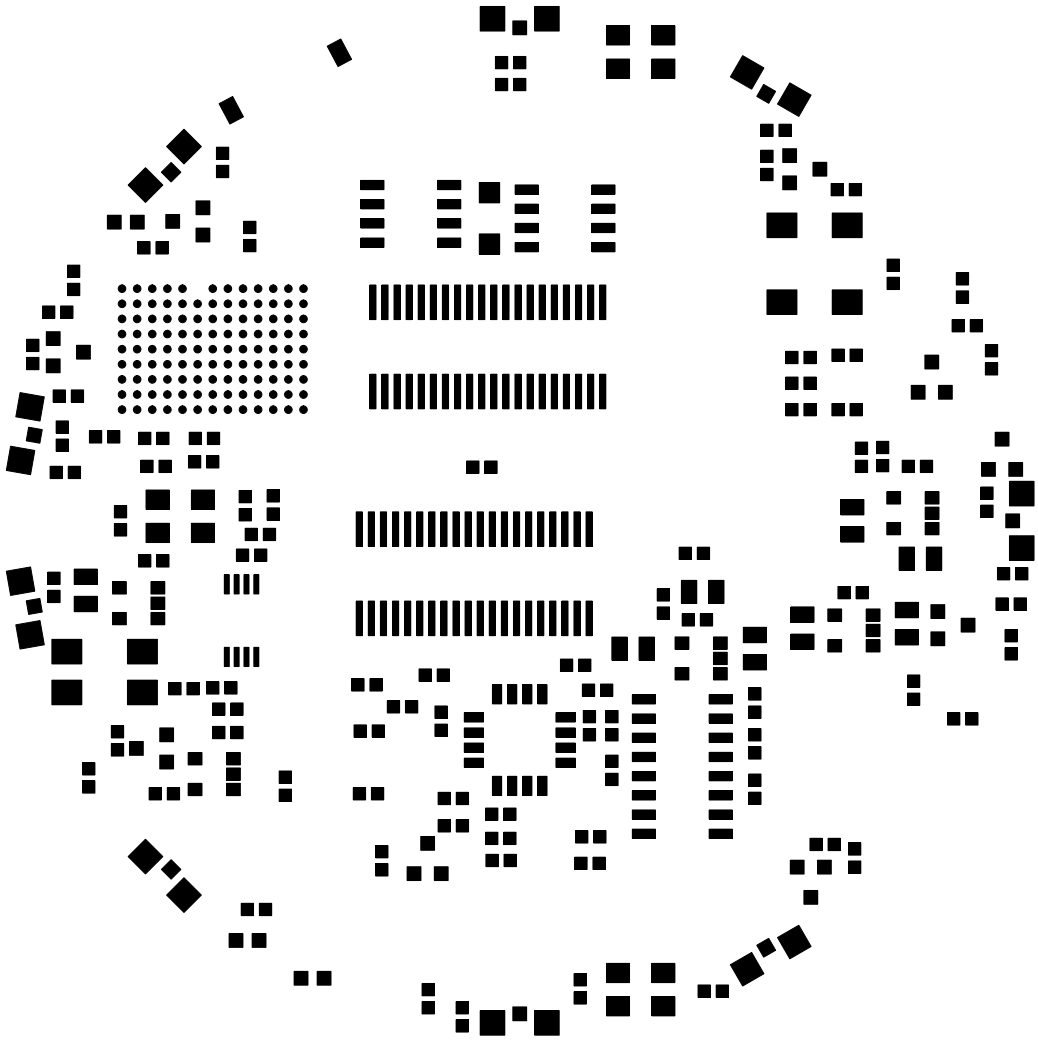
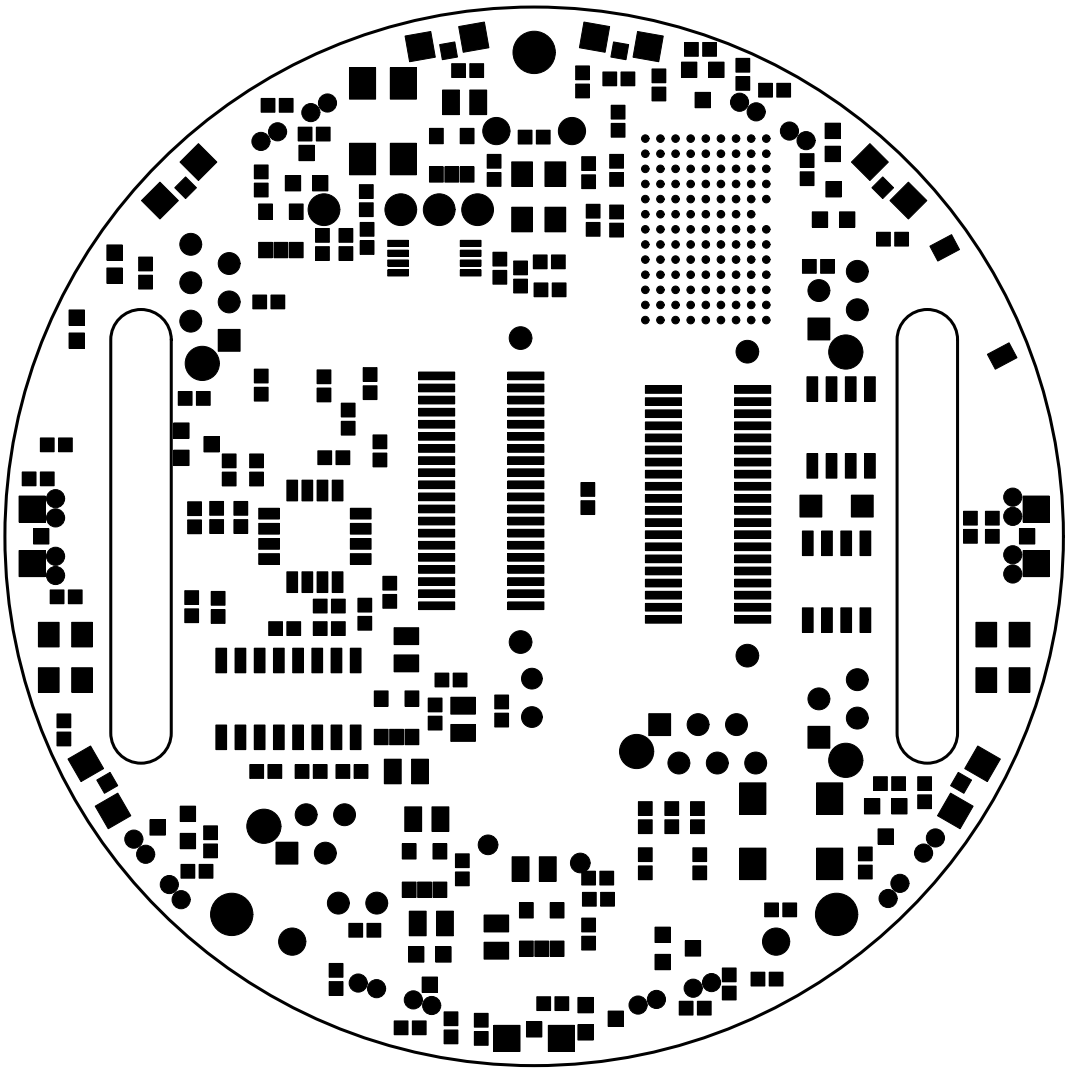
U16
(P0.5)(L14)
1
XT2
7.3728MHZ
22P
C1
22P
C2
XT3
12MHZ
100N
C32
JM2
JM1
JB0
U11
SI9986CY
C11
22U
U9
SI9986CY
U25
UCC3952PW-2
LP2985IBPX-3.3
U27
2U2
C15
1U
C58
1U
C3
1U
C33
R91100K
R89
0
R88
1M
SW2
T15
IRLML2402
T14
IRLML2402
T12
IRLML2402
T10
IRLML2402
T6
IRLML2402
T3
IRLML2402
DBD2
PY1111C
DBD3
PY1111C
DBD1
PY1111C
DBD0
PY1111C
D10
BAS16
D9
U21
TPA301D
U12
ADM202EARU-A
J5
PLUG
TCRT1000
U1
TCRT1000
U2
TCRT1000
U3
TCRT1000
U4
TCRT1000
U5
TCRT1000
U6
TCRT1000
U7
TCRT1000
U8
R3
22
R82
100K
R66
R62
150
R70
150
R78
10K
R77
10K
R26
100K
R27
100K
R54
100K
R55
100K
R53
100K
R25
100K
R52
100K
R19
100K
R72
0
R56
470N
R20
56
R75
47
R76
47
R44
10K
R39
10K
R38
10K
R45
10K
R74
1M
R16
47K
R15
10K
R13
51K
R67
100K
R71
0
R55
470N
C65
100N
C9
100N
C49
100N
C46
100N
C47
100N
C48
100N
C45
100N
C31
100N
C21
10P
C24
470N
C20
100N
C50
10P
C52
100N
C53
10P
C14
10P
C51
10N
C17
10P
C36
1U

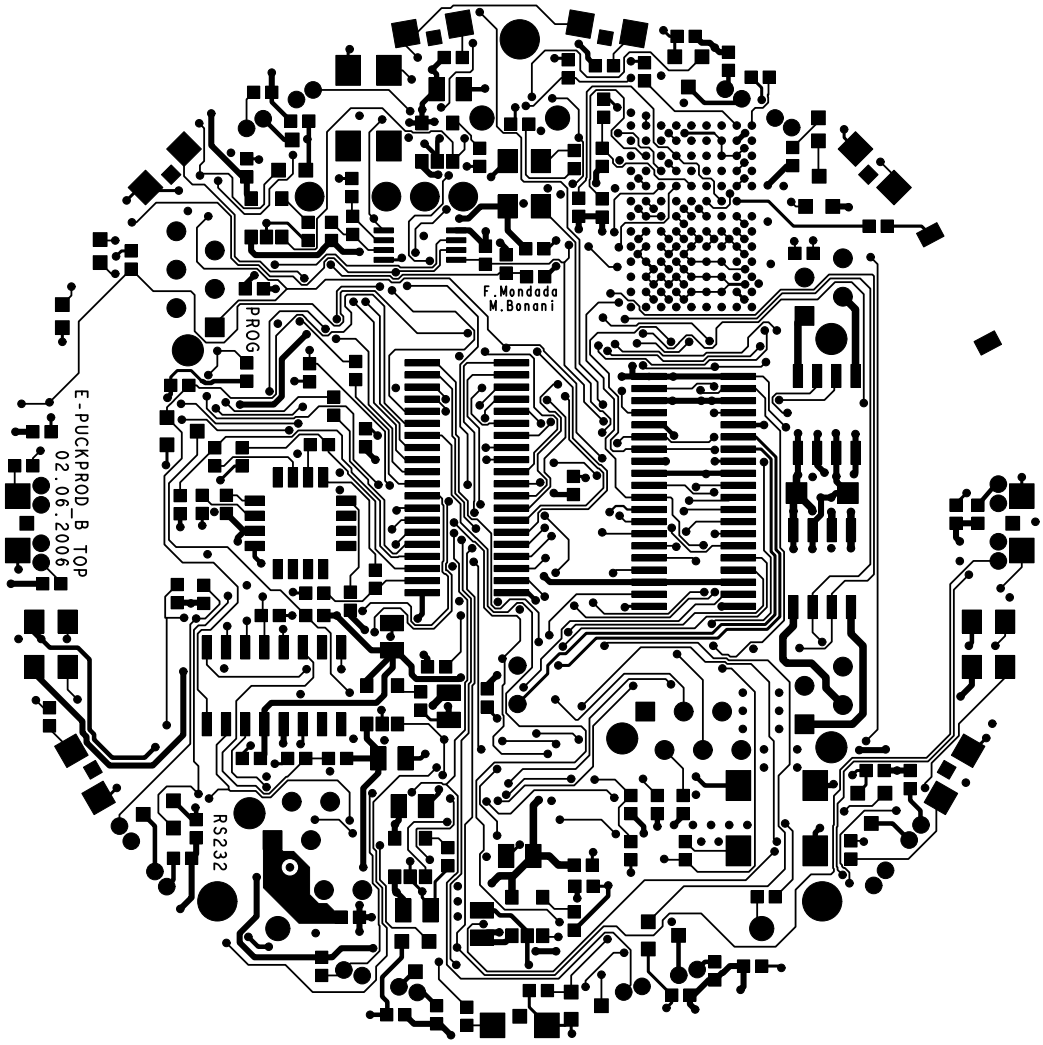

KPA-3010SRC-PRV
D7
U30
R47 18
C66 100N
KPA-3010SRC-PRV
D8
R42 18
C64 100N
T7
IRLML2402
R32 68
ANT-PHYCOMP-2.45GHZ
U26
2.45GHZ
KPA-3010SRC-PRV
D6
6P8 C54
U10
SI9986CY
C10 22U
U13
SI9986CY
BR1111C
D11
T13
IRLML2402
R10 150
R90 0
XT1
C44 100N
1U C37
R48 18
R7 10K
18 R41
T5
IRLML2402
C63 100N
R6 10K
LMX9820ASM
U28
JE2
BSE
2K2 R84
0 R86
IRLML2402
T8
C67 100N
2K2 R83
10K R85
1U C29
KPA-3010SRC-PRV
D5
R29 68
10K R12
10K R11
R8 10K
0 R73
R9 1K
C43 100N
IRLML2402
T9
100N C59
C27 100N
10N C40
LP2985IBPX-1.8
R87 100K
470N C57
C23 100N
R18 390K
U31
R17 680K
JS0
C25 100N
2U2 C41
U24
100K R63
D1
KPA-3010SRC-PRV
C4 10N
R69 100K
JE1
BSE
2U2 C39
1U
R21 68
R49 68
KPA-3010SRC-PRV
D5A
C5 4U7
U17
LP2985IBPX-3.3
U19
MIC2755BMM
10K R34
C18
10N C7
LP2985IBPX-3.3
U18
C8 2U2
C13 10N
C12 1U
U20
LP2985IBPX-3.3
T1
IRLML2402
R35 18
100N C61
C16 2U2
1K R58
10K R51
R24 68
R30 68
100N C42
R64 100K
1K R57
U15
MMA7260Q
100N C26
R60 100K
R14 51K
SI9000-KS
U14
R1 10K
R2 10K
C19 100N
RS
R5 0
10K R33
SW1
R81 330K
R80 43K
R61 510K
C35 10N
100N C60
T4
IRLML2402
18 R36
IC38 4U7
U23
LP2985IBPX-3.3
R4 0
100K R65
100N C28
1K R56
R28 10K
R50 10K
R37 10K
C30 100N
R43 10K
J1
100K R59
T11
IRLML2402
100N C62
R40 18
T2
IRLML2402
KPA-3010SRC-PRV
D4
100K R68
DB1
BR1111C
DB0
PG1111C
1U C34
R23 68
18 R46
U26
68 R22
KPA-3010SRC-PRV
D2
D3
KPA-3010SRC-PRV

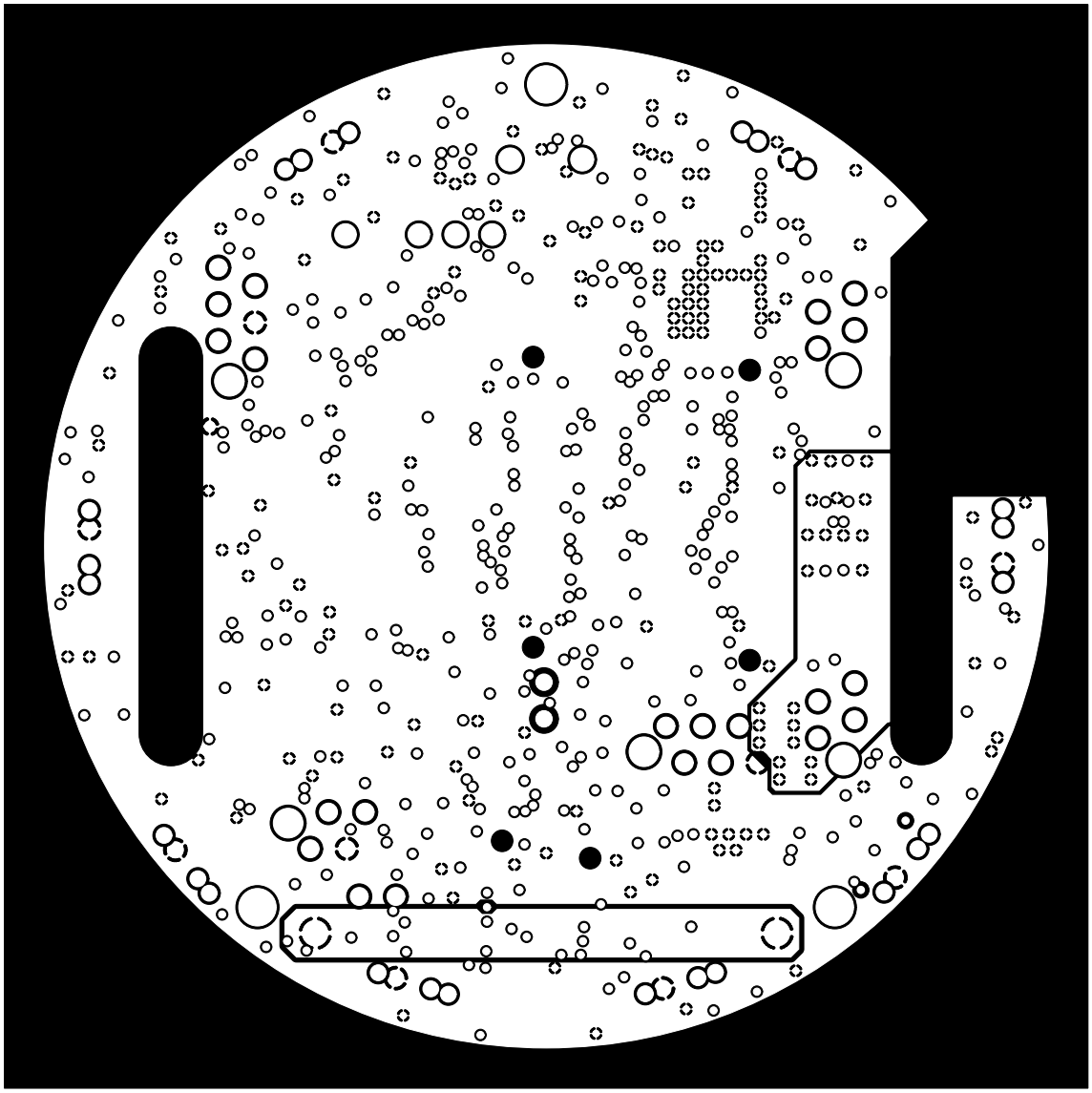


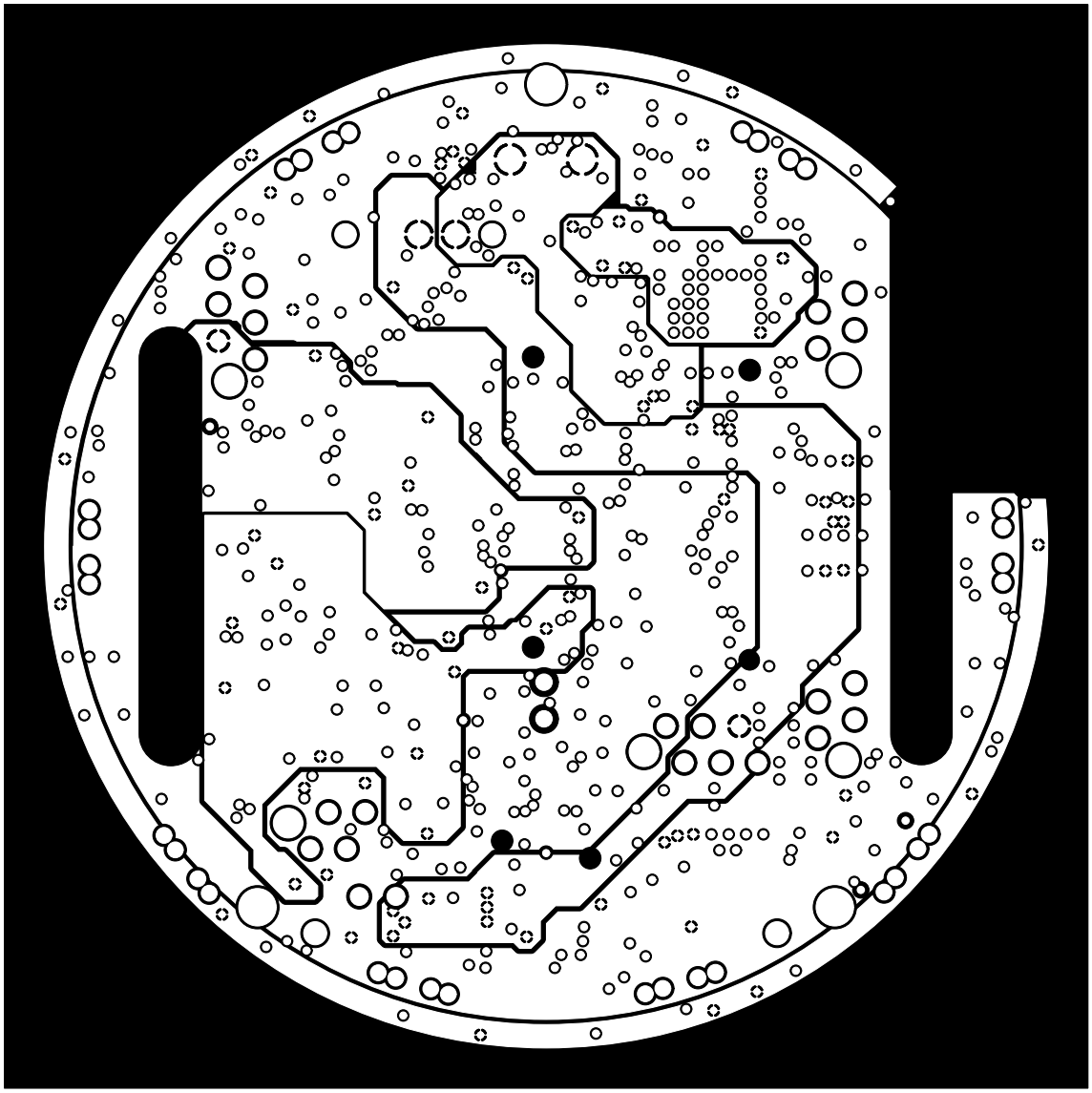
TITRE:EPUCK_D	LABORATOIRE:STI-LSA2	DATE:9.11.2004
	ENGINEER:F.Mondada M.Bonani	EPFL-ACORT-PB

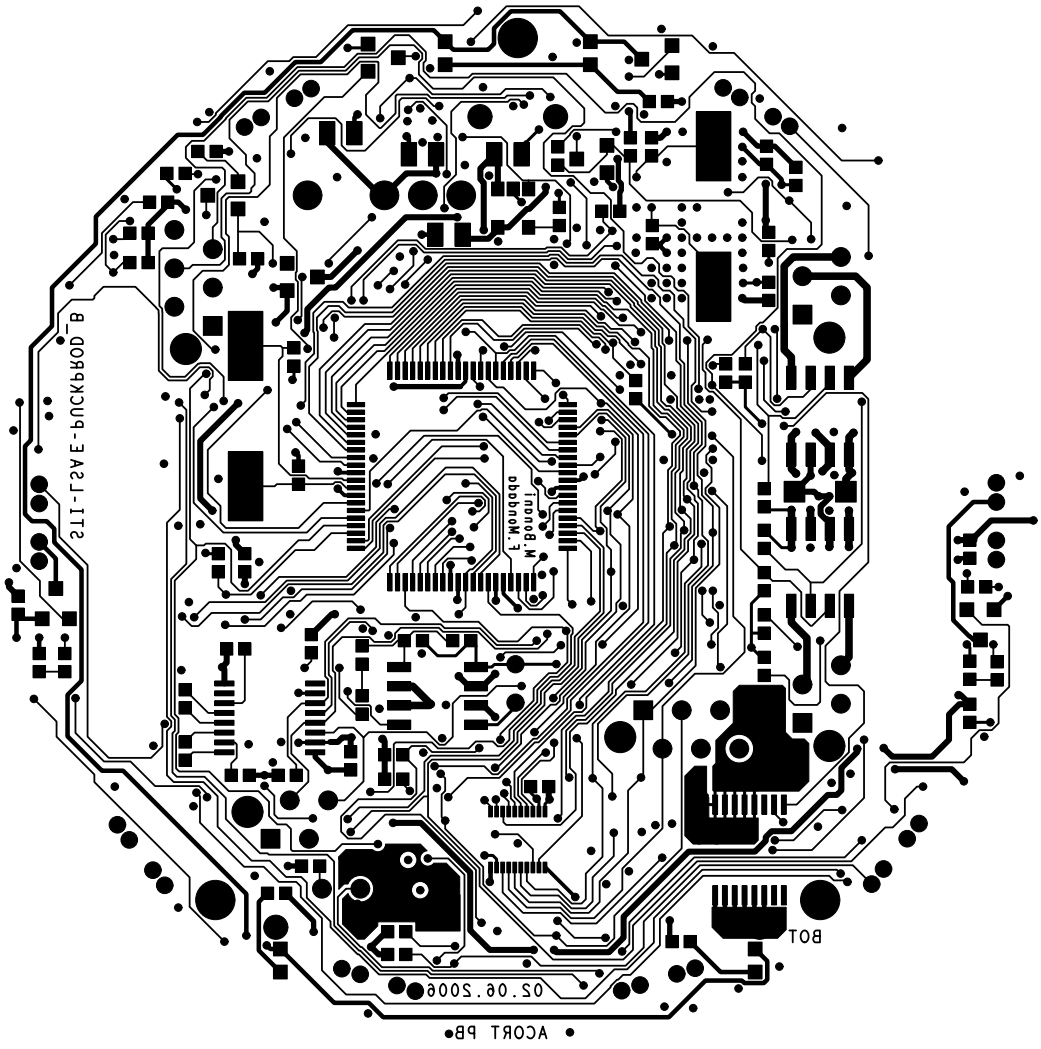


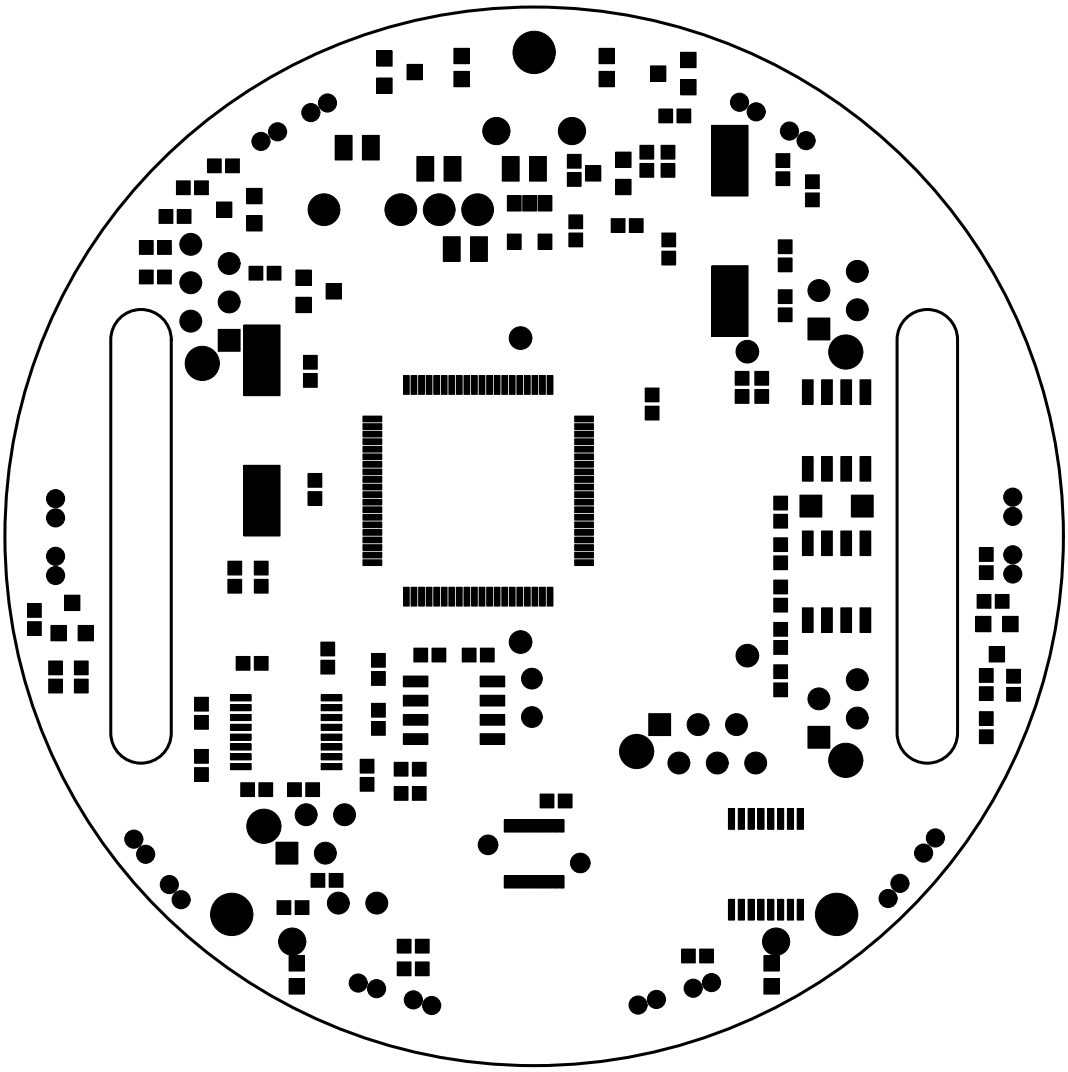


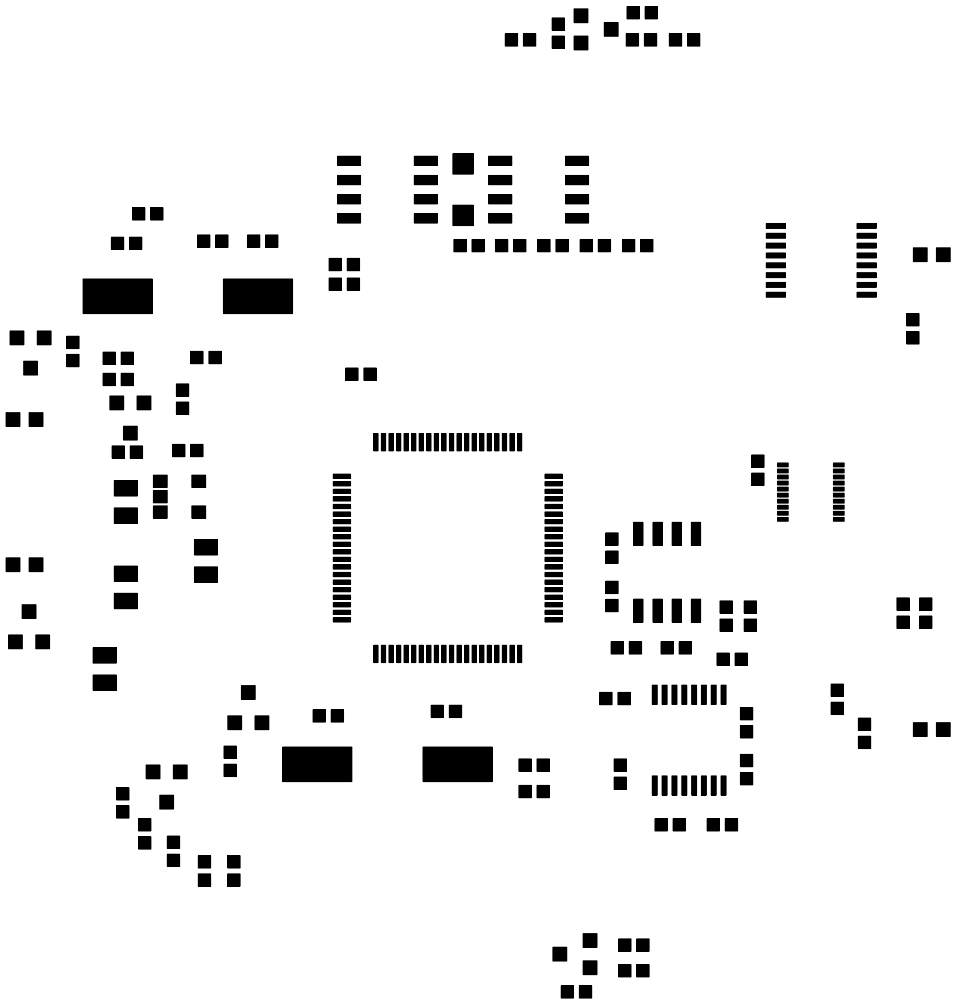

F.Mondada
M.Bonani
PROG
RS232
E-PUCKPROD_B TOP
02.06.2006



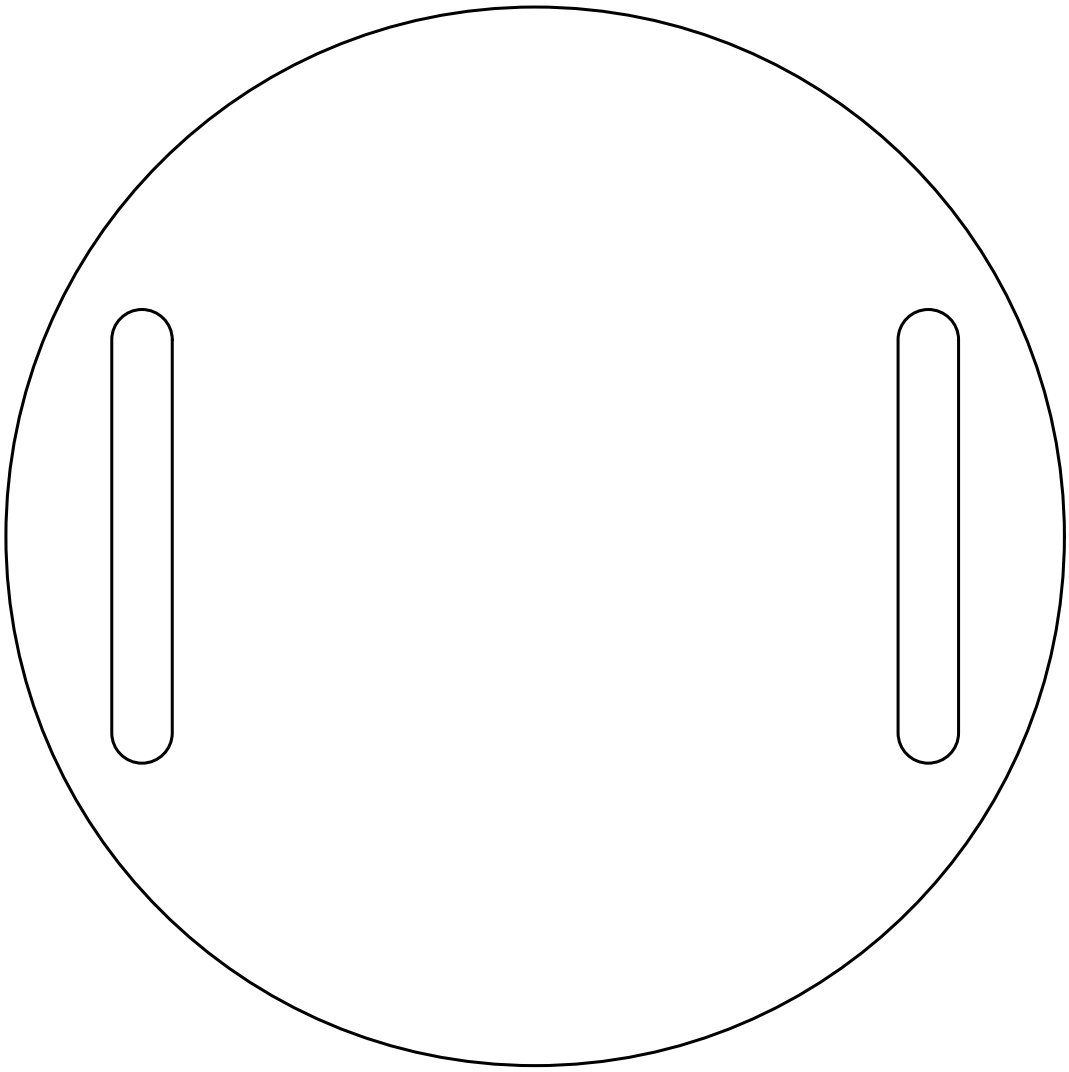



BOT
02.06.2006
ACORT PB





EPFL ACORT Fri Jun 2 17:50:04 2006 Project = epuckprod_b File = epuck_gloss,pbot Scale = 2 0.5 cm =



EPFL ACORT Fri Jun 2 17:50:04 2006 Project = epuckprod_b File = epuck_gloss,cont Scale = 2 0.5 cm =

Component Report EPUCKPROD_B

epuck_gloss Fri Jun 2 17:50:17 MET DST 2006

Ref Des	Device Type	Value	Package Type	x	y	ang	Mir	Remark
C1	0603	22P	0603_G	-14.800	10.910	180.000	YES	
C2	0603	22P	0603_G	-14.500	3.100	0.000	YES	
C3	0805	1U	0805_G	-6.300	24.300	90.000	YES	
C4	0603	10N	0603_G	-2.650	24.200	180.000	NO	
C5	0805	4U7	0805_G	-4.600	28.700	270.000	NO	
C6	0805	1U	0805_G	-6.800	-25.600	270.000	NO	
C7	0603	10N	0603_G	-4.750	-22.050	180.000	NO	
C8	0805	2U2	0805_G	-7.100	-18.700	270.000	NO	
C9	0603	100N	0603_G	-18.050	-2.700	180.000	YES	
C10	1206	22U	1206	20.000	2.000	90.000	NO	
C11	1206	22U	1206	20.000	2.000	270.000	YES	
C12	0805	1U	0805_G	-8.450	-15.550	270.000	NO	
C13	0603	10N	0603_G	-6.550	-11.750	180.000	NO	
C14	0603	10P	0603_G	8.900	19.000	180.000	YES	
C15	0805	2U2	0805_G	-4.550	19.000	90.000	YES	
C16	0805	2U2	0805_G	-8.450	-7.500	0.000	NO	
C17	0603	10P	0603_G	16.600	15.250	180.000	YES	
C18	0805	2U2	0805_G	-4.700	-12.100	180.000	NO	
C19	0603	100N	0603_G	-17.750	-15.550	90.000	NO	
C20	0603	100N	0603_G	29.900	-12.650	180.000	YES	
C21	0603	10P	0603_G	-3.700	-7.850	90.000	YES	
C23	0603	100N	0603_G	1.000	18.150	270.000	NO	
C24	0603	470N	0603_G	-10.300	-12.100	0.000	YES	
C25	0603	100N	0603_G	-2.150	-11.550	180.000	NO	
C26	0603	100N	0603_G	-13.550	-4.610	90.000	NO	
C27	0603	100N	0603_G	4.250	-24.000	270.000	NO	
C28	0603	100N	0603_G	-18.360	4.390	180.000	NO	
C29	0603	1U	0603_G	7.350	-21.650	180.000	NO	
C30	0603	100N	0603_G	-22.460	1.230	180.000	NO	
C31	0603	100N	0603_G	1.450	-17.500	270.000	YES	
C32	0603	100N	0603_G	16.600	18.550	0.000	YES	
C33	0805	1U	0805_G	-11.700	25.700	270.000	YES	
C34	0603	1U	0603_G	-31.600	6.050	270.000	NO	
C35	0603	10N	0603_G	-14.000	19.300	180.000	NO	
C36	0603	1U	0603_G	29.900	-1.800	180.000	YES	
C37	0603	1U	0603_G	15.400	-29.278	270.000	NO	
C38	0603	4U7	0603_G	-18.050	23.500	0.000	NO	
C39	0805	1U	0805_G	-2.500	-26.500	0.000	NO	
C40	0603	10N	0603_G	3.600	-26.300	180.000	NO	
C41	0805	2U2	0805_G	0.000	-22.000	90.000	NO	
C42	0603	100N	0603_G	-10.200	5.650	0.000	NO	
C43	0603	100N	0603_G	3.550	2.500	0.000	NO	
C44	0603	100N	0603_G	16.300	-24.700	90.000	NO	
C45	0603	100N	0603_G	-11.050	-15.800	0.000	YES	
C46	0603	100N	0603_G	-22.000	-11.700	180.000	YES	
C47	0603	100N	0603_G	-22.000	-15.150	0.000	YES	
C48	0603	100N	0603_G	-18.350	-16.750	90.000	YES	
C49	0603	100N	0603_G	-18.650	-8.400	270.000	YES	
C50	0603	10P	0603_G	16.450	24.250	180.000	YES	
C51	0603	10N	0603_G	2.750	20.200	0.000	YES	
C52	0603	100N	0603_G	18.400	22.850	180.000	YES	
C53	0603	10P	0603_G	8.850	24.800	0.000	YES	
C54	0603	6P8	0603_G	23.700	19.650	270.000	NO	
C55	0603	470N	0603_G	-31.650	-9.300	0.000	YES	
C56	0603	470N	0603_G	29.900	-9.800	0.000	YES	
C57	0603	470N	0603_G	0.000	26.400	90.000	NO	
C58	0805	1U	0805_G	-0.650	24.300	270.000	YES	
C59	0603	100N	0603_G	4.200	-22.600	270.000	NO	

Component Report EPUCKPROD_B

epuck_gloss Fri Jun 2 17:50:17 MET DST 2006

Ref Des	Device Type	Value	Package Type	x	y	ang	Mir	Remark
C60	0603	100N	0603_G	-14.550	26.600	270.000	NO	
C61	0603	100N	0603_G	-8.200	-32.500	90.000	NO	
C62	0603	100N	0603_G	-21.400	-20.200	0.000	NO	
C63	0603	100N	0603_G	11.000	32.200	90.000	NO	
C64	0603	100N	0603_G	23.500	-16.350	90.000	NO	
C65	0603	100N	0603_G	-33.050	-5.500	180.000	YES	
C66	0603	100N	0603_G	28.850	0.600	0.000	NO	
C67	0603	100N	0603_G	10.650	-31.200	90.000	NO	
D1	KPA	KPA-3010SRC-PRV	SMDLED_3	0.000	-33.200	90.000	NO	
D2	KPA	KPA-3010SRC-PRV	SMDLED_3	-28.752	-16.600	30.000	NO	
D3	KPA	KPA-3010SRC-PRV	SMDLED_3	-33.200	0.000	0.000	NO	
D4	KPA	KPA-3010SRC-PRV	SMDLED_3	-23.476	23.476	315.000	NO	
D5	KPA	KPA-3010SRC-PRV	SMDLED_3	5.765	32.696	260.000	NO	
D6	KPA	KPA-3010SRC-PRV	SMDLED_3	23.476	23.476	225.000	NO	
D7	KPA	KPA-3010SRC-PRV	SMDLED_3	33.200	0.000	180.000	NO	
D8	KPA	KPA-3010SRC-PRV	SMDLED_3	28.752	-16.600	150.000	NO	
D9	LD271	LD271	LED4_90_1MM	-11.680	-24.253	0.000	YES	
D10	BAS16	BAS16	SOT23	-14.250	16.200	180.000	YES	
D11	BR1101H	BR1111C	SMDLED_MINI	19.750	26.050	180.000	NO	
D5A	KPA	KPA-3010SRC-PRV	SMDLED_3	-5.765	32.696	280.000	NO	
DB0	PG1111C	PG1111C	SMDLED_MINI	-30.250	13.700	180.000	NO	
DB1	BR1101H	BR1111C	SMDLED_MINI	-27.750	18.000	180.000	NO	
DBD0	PY1111C	PY1111C	SMDLED_MINI	-15.700	-29.000	0.000	YES	
DBD1	PY1111C	PY1111C	SMDLED_MINI	15.700	-29.000	0.000	YES	
DBD2	PY1111C	PY1111C	SMDLED_MINI	4.800	31.000	0.000	YES	
DBD3	PY1111C	PY1111C	SMDLED_MINI	-4.800	31.000	0.000	YES	
J1	CO7		MM6	-20.170	12.960	90.000	NO	
J5	CO20		ELCO5602M20	0.000	-21.000	180.000	YES	
JB0	CO6		MM6	8.300	-12.450	180.000	YES	
JE1	JUMP2		SAMBSE40_SMD_08MM	-3.500	3.010	90.000	NO	
JE2	CO40		SAMBSE40_SMD_08MM	11.500	2.110	90.000	NO	
JM1	CO5		MM4	18.830	-13.288	270.000	YES	
JM2	CO5		MM4	18.830	13.712	270.000	YES	
JS0	CO2		SIL2	-0.150	-11.950	90.000	NO	
R1	R	10K	0603_G	-12.050	-15.550	90.000	NO	
R2	R	10K	0603_G	-14.750	-15.550	90.000	NO	
R3	R	22	0603_G	9.300	27.800	90.000	YES	
R4	R	0	0603_G	-17.550	15.500	90.000	NO	
R5	R	0	0603_G	-11.200	-26.050	270.000	NO	
R6	R	10K	0603_G	8.250	29.850	180.000	NO	
R7	R	10K	0603_G	15.900	29.500	270.000	NO	
R8	R	10K	0603_G	5.450	20.850	0.000	NO	
R9	R	1K	0603_G	3.900	20.900	180.000	NO	
R10	R	150	0603_G	18.050	24.250	0.000	NO	
R11	R	10K	0603_G	5.450	24.200	180.000	NO	
R12	R	10K	0603_G	5.550	27.450	180.000	NO	
R13	R	51K	0603_G	-13.650	-8.050	0.000	YES	
R14	R	51K	0603_G	-16.500	-6.100	270.000	NO	
R15	R	10K	0603_G	-10.300	-8.800	180.000	YES	
R16	R	47K	0603_G	-6.900	-7.850	90.000	YES	
R17	R	680K	0603_G	-0.900	17.150	180.000	NO	
R18	R	390K	0603_G	1.050	16.300	270.000	NO	
R19	R	100K	0603_G	16.300	-9.550	0.000	YES	
R20	R	56	0603_G	-13.700	-22.750	270.000	YES	
R21	R	68	0603_G	-3.500	-32.600	0.000	NO	
R22	R	68	0603_G	-31.100	-12.800	0.000	NO	
R23	R	68	0603_G	-32.800	3.800	270.000	NO	
R24	R	68	0603_G	-10.850	10.100	180.000	NO	

Component Report EPUCKPROD_B

epuck_gloss Fri Jun 2 17:50:17 MET DST 2006

Ref Des	Device Type	Value	Package Type	x	y	ang	Mir	Remark
R25	R	100K	0603_G	16.300	-3.950	180.000	YES	
R26	R	100K	0603_G	7.800	8.750	180.000	YES	
R27	R	100K	0603_G	15.050	9.850	180.000	YES	
R28	R	10K	0603_G	-19.400	1.250	0.000	NO	
R29	R	68	0603_G	5.600	30.250	90.000	NO	
R30	R	68	0603_G	-12.300	7.750	180.000	NO	
R31	R	68	0603_G	30.350	-4.300	90.000	YES	
R32	R	68	0603_G	21.900	-21.600	0.000	NO	
R33	R	10K	0603_G	-13.100	-29.300	180.000	NO	
R34	R	10K	0603_G	-5.500	-9.500	270.000	NO	
R35	R	18	0603_G	-5.500	-32.500	0.000	NO	
R36	R	18	0603_G	-17.000	28.500	90.000	NO	
R37	R	10K	0603_G	-20.900	-4.700	0.000	NO	
R38	R	10K	0603_G	-8.200	-15.400	270.000	YES	
R39	R	10K	0603_G	-8.000	-28.600	270.000	YES	
R40	R	18	0603_G	-22.300	-22.150	90.000	NO	
R41	R	18	0603_G	13.800	30.550	180.000	NO	
R42	R	18	0603_G	25.820	-16.950	180.000	NO	
R43	R	10K	0603_G	-22.650	-4.650	0.000	NO	
R44	R	10K	0603_G	-8.000	-27.100	270.000	YES	
R45	R	10K	0603_G	-8.200	-17.000	270.000	YES	
R46	R	18	0603_G	-30.950	-4.000	270.000	NO	
R47	R	18	0603_G	30.300	0.600	0.000	NO	
R48	R	18	0603_G	12.900	-29.600	0.000	NO	
R49	R	68	0603_G	-4.400	30.800	90.000	NO	
R50	R	10K	0603_G	-21.000	1.250	180.000	NO	
R51	R	10K	0603_G	-11.200	-5.150	0.000	NO	
R52	R	100K	0603_G	16.300	-6.750	180.000	YES	
R53	R	100K	0603_G	16.300	-1.150	0.000	YES	
R54	R	100K	0603_G	13.750	9.850	180.000	YES	
R55	R	100K	0603_G	16.300	1.600	180.000	YES	
R56	R	1K	0603_G	-20.170	4.390	180.000	NO	
R57	R	1K	0603_G	-13.250	5.200	90.000	NO	
R58	R	1K	0603_G	-9.550	-3.700	0.000	NO	
R59	R	100K	0603_G	-22.480	9.120	90.000	NO	
R60	R	100K	0603_G	-13.550	-6.100	90.000	NO	
R61	R	510K	0603_G	-12.450	19.300	0.000	NO	
R62	R	150	0603_G	-23.750	21.150	90.000	YES	
R63	R	100K	0603_G	1.230	-30.900	270.000	NO	
R64	R	100K	0603_G	-13.900	9.950	0.000	NO	
R65	R	100K	0603_G	-18.050	10.000	180.000	NO	
R66	R	100K	0603_G	-22.600	23.050	90.000	YES	
R67	R	100K	0603_G	-19.800	-2.700	0.000	YES	
R68	R	100K	0603_G	-25.700	17.410	0.000	NO	
R69	R	100K	0603_G	-2.270	17.730	180.000	NO	
R70	R	150	0603_G	-25.050	19.100	90.000	YES	
R71	R	0	0603_G	-29.950	-9.300	180.000	YES	
R72	R	0	0603_G	31.700	-9.850	180.000	YES	
R73	R	0	0603_G	3.600	24.050	180.000	NO	
R74	R	1M	0603_G	-15.250	-16.750	270.000	YES	
R75	R	47	0603_G	-15.950	-24.550	90.000	YES	
R76	R	47	0603_G	10.800	-27.750	270.000	YES	
R77	R	10K	0603_G	-17.800	17.400	90.000	YES	
R78	R	10K	0603_G	-25.050	17.150	90.000	YES	
R80	R	43K	0603_G	-11.050	19.700	0.000	NO	
R81	R	330K	0603_G	-11.100	22.200	0.000	NO	
R82	R	10K	0603_G	-20.550	24.500	90.000	YES	
R83	R	2K2	0603_G	9.100	-18.600	0.000	NO	

Component Report EPUCKPROD_B

epuck_gloss Fri Jun 2 17:50:17 MET DST 2006

Ref Des	Device Type	Value	Package Type	x	y	ang	Mir	Remark
R84	R	2K2	0603_G	10.800	-18.600	0.000	NO	
R85	R	10K	0603_G	7.350	-18.600	0.000	NO	
R86	R	0	0603_G	10.950	-21.650	0.000	NO	
R87	R	100K	0603_G	3.200	30.050	180.000	NO	
R88	R	1M	0603_G	6.150	20.550	270.000	YES	
R89	R	0	0603_G	2.650	24.200	180.000	YES	
R90	R	0	0603_G	18.800	17.850	270.000	NO	
R91	R	100K	0603_G	7.450	24.800	0.000	YES	
RS	CO5		MM4	-16.350	-20.950	0.000	NO	
SW1	SWPOU_4A		POUSMD4	-10.000	27.450	0.000	NO	
SW2	SWCOM		APEM_TL4	-17.400	21.600	90.000	YES	
T1	IRLML2402	IRLML2402	SOT23_2	-6.900	-28.650	270.000	NO	
T2	IRLML2402	IRLML2402	SOT23_2	-23.900	-19.250	180.000	NO	
T3	IRLML2402	IRLML2402	SOT23_2	-30.550	-5.400	270.000	YES	
T4	IRLML2402	IRLML2402	SOT23_2	-15.050	24.350	90.000	NO	
T5	IRLML2402	IRLML2402	SOT23_2	11.150	29.850	270.000	NO	
T6	IRLML2402	IRLML2402	SOT23_2	30.600	-6.800	90.000	YES	
T7	IRLML2402	IRLML2402	SOT23_2	23.250	-18.850	270.000	NO	
T8	IRLML2402	IRLML2402	SOT23_2	9.500	-27.250	0.000	NO	
T9	IRLML2402	IRLML2402	SOT23_2	4.400	-31.900	0.000	NO	
T10	IRLML2402	IRLML2402	SOT23_2	-8.900	30.700	180.000	YES	
T11	IRLML2402	IRLML2402	SOT23_2	-22.330	6.090	0.000	NO	
T12	IRLML2402	IRLML2402	SOT23_2	4.900	24.000	0.000	YES	
T13	IRLML2402	IRLML2402	SOT23_2	19.800	21.950	90.000	NO	
T14	IRLML2402	IRLML2402	SOT23_2	9.200	30.600	0.000	YES	
T15	IRLML2402	IRLML2402	SOT23_2	-19.500	21.600	0.000	YES	
TP1	VIS1		VIS1	-16.000	-26.800	0.000	YES	
TP2	VIS1		VIS1	16.000	-26.800	0.000	YES	
TP3	VIS1		VIS1	-2.500	26.800	0.000	YES	
TP3B	VIS1		VIS1	2.500	26.800	0.000	NO	
U1	TCRT1000	TCRT1000	TCRT1000	-9.206	-30.282	343.000	YES	
U2	TCRT1000	TCRT1000	TCRT1000	-24.910	-22.025	308.000	YES	
U3	TCRT1000	TCRT1000	TCRT1000	-31.650	-0.050	270.000	YES	
U4	TCRT1000	TCRT1000	TCRT1000	-15.868	27.385	210.000	YES	
U5	TCRT1000	TCRT1000	TCRT1000	15.782	27.435	150.000	YES	
U6	TCRT1000	TCRT1000	TCRT1000	31.650	0.050	90.000	YES	
U7	TCRT1000	TCRT1000	TCRT1000	24.971	-21.946	52.000	YES	
U8	TCRT1000	TCRT1000	TCRT1000	9.301	-30.252	17.000	YES	
U9	SI9986CY		SO8	20.000	-3.000	90.000	YES	
U10	SI9986CY		SO8	20.300	7.200	90.000	NO	
U11	SI9986CY		SO8	20.000	7.000	270.000	YES	
U12	ADM202EARU		TSSOP16	-16.400	-12.950	180.000	YES	
U13	SI9986CY		SO8	20.000	-3.000	270.000	NO	
U14	SI3000		SO16	-16.250	-10.750	270.000	NO	
U15	MMA7260Q		QFN6X6_16	-14.500	0.000	0.000	NO	
U16	DSPIC30F6014APT		TQFP80	-3.700	3.010	0.000	YES	
U17	LP2985IBPX	LP2985IBPX-3.3	SOT23_5G	-5.450	25.200	90.000	NO	
U18	LP2985IBPX	LP2985IBPX-3.3	SOT23_5G	-7.250	-22.100	90.000	NO	
U19	MIC2755BMM		MSO8	-6.600	18.400	0.000	NO	
U20	LP2985IBPX	LP2985IBPX-3.3	SOT23_5G	-9.100	-12.000	90.000	NO	
U21	TPA301D		SO8	-5.300	-11.500	180.000	YES	
U23	LP2985IBPX	LP2985IBPX-3.3	SOT23_5G	-16.750	20.200	90.000	NO	
U24	LP2985IBPX	LP2985IBPX-1.8	SOT23_5G	0.500	-26.000	90.000	NO	
U25	UCC3952PW		TSSOP16	15.320	-21.690	270.000	YES	
U26	ANT	2.45GHZ	ANT_BLUETOOTH	29.050	15.500	118.000	NO	
U27	LP2985IBPX	LP2985IBPX-3.3	SOT23_5G	-0.300	20.750	90.000	YES	
U28	LMX9820ASM		BGA116_10X14MM	11.350	20.300	90.000	NO	
U29	SPM0208HD5		SISONIC4_SMALL	-31.000	-8.000	180.000	NO	

Component Report EPUCKPROD_B

epuck_gloss Fri Jun 2 17:50:17 MET DST 2006

Ref Des	Device Type	Value	Package Type	x	y	ang	Mir	Remark
U30	SPM0208HD5		SISONIC4_SMALL	31.000	-8.000	180.000	NO	
U31	SPM0208HD5		SISONIC4_SMALL	0.300	22.450	180.000	NO	
XT1	VX3W		HXO4	17.000	-19.500	270.000	NO	
XT2	XTAL	7.3728MHZ	HC49US	-18.000	7.000	270.000	YES	
XT3	XTAL	12MHZ	HC49US	12.950	20.200	270.000	YES	

Total Component count 237

BOM Report EPUCKPROD_B

epuck_gloss — Fri Jun 2 17:50:18 MET DST 2006

Device	Package	Value	Nb	Reference Designators					Remark
0603-1-100N	0603_G	100N	29	C9	C19	C20	C23	C25	
				C26	C27	C28	C30	C31	
				C32	C42	C43	C44	C45	
				C46	C47	C48	C49	C52	
				C59	C60	C61	C62	C63	
				C64	C65	C66	C67		
0603-1-10N	0603_G	10N	6	C4	C7	C13	C35	C40	
				C51					
0603-1-10P	0603_G	10P	5	C14	C17	C21	C50	C53	
0603-1-1U	0603_G	1U	4	C29	C34	C36	C37		
0603-1-22P	0603_G	22P	2	C1	C2				
0603-1-470N	0603_G	470N	4	C24	C55	C56	C57		
0603-1-4U7	0603_G	4U7	1	C38					
0603-1-6P8	0603_G	6P8	1	C54					
0805-1-1U	0805_G	1U	6	C3	C6	C12	C33	C39	
				C58					
0805-1-2U2	0805_G	2U2	5	C8	C15	C16	C18	C41	
0805-1-4U7	0805_G	4U7	1	C5					
1206-22U	1206	22U	2	C10	C11				
ADM202EARU-A	TSSOP16		1	U12					
ANT-PHYCOMP-2.45GHZ	ANT_BLUETOOTH	2.45GHZ	1	U26					
BAS16-BAS16	SOT23	BAS16	1	D10					
BR1101H	SMDLED_MINI	BR1111C	2	D11	DB1				
CO2-5	SIL2		1	JS0					
CO20-ELCO5602M20	ELCO5602M20		1	J5					
CO40-30	SAMBSE40_SMD_08MM		1	JE2					
CO5-14	MM4		3	JM1	JM2	RS			
CO6-MM6	MM6		1	JB0					
CO7-MM6	MM6		1	J1					
DSPIC30F6014APT	TQFP80		1	U16					
IRLML2402	SOT23_2	IRLML2402	15	T1	T2	T3	T4	T5	
				T6	T7	T8	T9	T10	
				T11	T12	T13	T14	T15	
JUMP2-SAM40SE	SAMBSE40_SMD_08MM		1	JE1					
KPA-3010SRC-PRV	SMDLED_3	KPA-3010SRC-PRV	9	D1	D2	D3	D4	D5	
				D6	D7	D8	D5A		
LD271	LED4_90_1MM	LD271	1	D9					
LMX9820ASM	BGA116_10X14MM		1	U28					
LP2985IBPX-1.8-OBSOL	SOT23_5G	LP2985IBPX-1.8	1	U24					
LP2985IBPX-3.3-OBSOL	SOT23_5G	LP2985IBPX-3.3	5	U17	U18	U20	U23	U27	
MIC2755BMM	MSO8		1	U19					
MMA7260Q	QFN6X6_16		1	U15					
PG1111C	SMDLED_MINI	PG1111C	1	DB0					
PY1111C	SMDLED_MINI	PY1111C	4	DBD0	DBD1	DBD2	DBD3		
R-23-0	0603_G	0	8	R4	R5	R71	R72	R73	
				R86	R89	R90			
R-23-100K	0603_G	100K	19	R19	R25	R26	R27	R52	
				R53	R54	R55	R59	R60	
				R63	R64	R65	R66	R67	
				R68	R69	R87	R91		
R-23-10K	0603_G	10K	23	R1	R2	R6	R7	R8	
				R11	R12	R15	R28	R33	
				R34	R37	R38	R39	R43	
				R44	R45	R50	R51	R77	
				R78	R82	R85			
R-23-150	0603_G	150	3	R10	R62	R70			
R-23-18	0603_G	18	8	R35	R36	R40	R41	R42	
				R46	R47	R48			

BOM Report EPUCKPROD_B

epuck_gloss — Fri Jun 2 17:50:18 MET DST 2006

Device	Package	Value	Nb	Reference Designators	Remark
R-23-1K	0603_G	1K	4	R9 R56 R57 R58	
R-23-1M	0603_G	1M	2	R74 R88	
R-23-22	0603_G	22	1	R3	
R-23-2K2	0603_G	2K2	2	R83 R84	
R-23-330K	0603_G	330K	1	R81	
R-23-390K	0603_G	390K	1	R18	
R-23-43K	0603_G	43K	1	R80	
R-23-47	0603_G	47	2	R75 R76	
R-23-47K	0603_G	47K	1	R16	
R-23-510K	0603_G	510K	1	R61	
R-23-51K	0603_G	51K	2	R13 R14	
R-23-56	0603_G	56	1	R20	
R-23-68	0603_G	68	9	R21 R22 R23 R24 R29 R30 R31 R32 R49	
R-23-680K	0603_G	680K	1	R17	
SI3000-KS	SO16		1	U14	
SI9986CY	SO8		4	U9 U10 U11 U13	
SPM0208HD5	SISONIC4_SMALL		3	U29 U30 U31	
SWCOM-TL36WW00050	APEM_TL4		1	SW2	
SWPOU_4A	POUSMD4		1	SW1	
TCRT1000	TCRT1000	TCRT1000	8	U1 U2 U3 U4 U5 U6 U7 U8	
TPA301D	SO8		1	U21	
UCC3952PW-2	TSSOP16		1	U25	
VIS1	VIS1		4	TP1 TP2 TP3 TP3B	
VX3W	HXO4		1	XT1	
XTAL-HC49US-12MHZ	HC49US	12MHZ	1	XT3	
XTAL-HC49US-7.3728MH	HC49US	7.3728MHZ	1	XT2	

Total Component count 237

NC Pins Report EPUCKPROD_B

epuck_gloss — Fri Jun 2 17:50:19 MET DST 2006

Ref Des	Device	Nb	Not Connected Pins										Remark
J1	CO7-MM6	2	6	7									
JM1	CO5-14	1	5										
JM2	CO5-14	1	5										
RS	CO5-14	1	5										
SW2	SWCOM-TL36WW00050	1	3										
U12	ADM202EARU-A	2	7	9									
U14	SI3000-KS	3	2	15	16								
U25	UCC3952PW-2	1	1										
U26	ANT-PHYCOMP-2.45GHZ	1	1										
U28	LMX9820ASM	29	A8	A10	A11	A12	A13	B10	B12	C8	C11	C12	
			C13	D8	E8	E10	E11	E12	F9	F10	F11	F12	
			F13	G9	G10	G13	H3	J2	J4	J5	J12		

Total count 42

Power Pins Report EPUCKPROD_B

epuck_gloss — Fri Jun 2 17:50:19 MET DST 2006

Ref Des	Device	Name	Power Pins	Remark
D1	KPA-3010SRC-PRV	GND	1	
D2	KPA-3010SRC-PRV	GND	1	
D3	KPA-3010SRC-PRV	GND	1	
D4	KPA-3010SRC-PRV	GND	1	
D6	KPA-3010SRC-PRV	GND	1	
D7	KPA-3010SRC-PRV	GND	1	
D8	KPA-3010SRC-PRV	GND	1	
D10	BAS16-BAS16	VCCB	3	
DB0	PG1111C	GND	1	
J1	CO7-MM6	GND	3	
J5	CO20-ELCO5602M20	GND	2 11	
		V1_8	1 12	
		V33	10	
JB0	CO6-MM6	GND	6	
		VCCB	5	
JE1	JUMP2-SAM40SE	GND	40	
		V33	39	
JE2	CO40-30	GND	9 10 15 16 39 40	
		V33	17 18	
		VCCA	35 36	
		VCCB	5 6	
RS	CO5-14	GND	3	
SW1	SWPOU_4A	GND	1	
SW2	SWCOM-TL36WW00050	VCCB	1	
T1	IRLML2402	GND	2	
T2	IRLML2402	GND	2	
T3	IRLML2402	GND	2	
T4	IRLML2402	GND	2	
T5	IRLML2402	GND	2	
T6	IRLML2402	GND	2	
T7	IRLML2402	GND	2	
T8	IRLML2402	GND	2	
T9	IRLML2402	GND	2	
T10	IRLML2402	GND	2	
T11	IRLML2402	GND	2	
T12	IRLML2402	GND	2	
T13	IRLML2402	GND	2	
T14	IRLML2402	GND	2	
U1	TCRT1000	GND	3	
U2	TCRT1000	GND	3	
U3	TCRT1000	GND	3	
U4	TCRT1000	GND	3	
U5	TCRT1000	GND	3	
U6	TCRT1000	GND	3	
U7	TCRT1000	GND	3	
U8	TCRT1000	GND	3	
U9	SI9986CY	GND	1 2 4	
		VCCB	3	
U10	SI9986CY	GND	1 2 4	
		VCCB	3	
U11	SI9986CY	GND	1 2 4	
		VCCB	3	
U12	ADM202EARU-A	GND	8 10 15	
		V33	16	
U13	SI9986CY	GND	1 2 4	
		VCCB	3	
U14	SI3000-KS	GND	14	

Power Pins Report EPUCKPROD_B

epuck_gloss — Fri Jun 2 17:50:19 MET DST 2006

Ref Des	Device	Name	Power Pins	Remark
		VCCA	13	
		VCCC	12	
U15	MMA7260Q	GND	4	
		VCCA	3	
U16	DSPIC30F6014APT	GND	11 26 31 51 70	
		VCCA	25	
U17	LP2985IBPX-3.3-OBSOL	GND	2	
		V33	5	
		VCCB	1	
U18	LP2985IBPX-3.3-OBSOL	GND	2	
		VCCA	5	
		VCCB	1	
U19	MIC2755BMM	GND	4	
		VCCB	8	
U20	LP2985IBPX-3.3-OBSOL	GND	2	
		VCCB	1	
		VCCC	5	
U21	TPA301D	GND	7	
		VCCC	6	
U23	LP2985IBPX-3.3-OBSOL	GND	2	
		VCCB	1	
		VCCF	5	
U24	LP2985IBPX-1.8-OBSOL	GND	2	
		V1_8	5	
		VCCB	1	
U25	UCC3952PW-2	GND	9 10 11 12 13	
U27	LP2985IBPX-3.3-OBSOL	GND	2	
		VCCB	1	
		VCCE	5	
U28	LMX9820ASM	GND	B2 B3 B4 B5 B6 B7 B13 C2 C3 C4 C5 C6 C7 D2 D3 D4 D5 D6 D7 D10 D12 E2 E3 E4 E5 E6 E7 F2 F3 F4 F5 F6 F7 G2 G3 G4 G5 G6 G11 G12 H5 H6 H7 H9 H10 H11	
		V33	H12	
		VCCE	H2	
U29	SPM0208HD5	GND	3	
		VCCA	4	
U30	SPM0208HD5	GND	3	
		VCCA	4	
U31	SPM0208HD5	GND	3	
		VCCA	4	
XT1	VX3W	GND	2	
		V33	1 4	

Total count 61

Single Node Nets Report EPUCKPROD_B

epuck_gloss Fri Jun 2 17:50:20 MET DST 2006

Netname	Node	Device	Remark

Total Nets count 0