PCB Specification (Draft)

Date:	6th September 2010		
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Board name: **ROACH 2**

Revision: **0**

PCB Details

Finished Board Size:	12 x 9.6 inches [305x244 mm]
PCB Type:	Multi-layer
Layer Count:	16
Dielectric:	All dielectric layers to be Isola 370HR high temperature laminate
Nominal board Thickness:	93 mil (2.13 mm)
Finish:	ENIG
Soldermask:	Green
Silkscreen:	White
Minimum clearance:	4 mil

PCB Stackup

Layer	#	Copper (oz)	Dieletric (mil)**	Filename
Pastemask Top		-	-	roach2.GTP
Silkscreen Top		-	-	roach2.GTO
Soldermask Top		-	-	roach2.GTS
Signal Top	1	0.5		roach2.GTL
			3mil	
Ground 1	2	0.5		roach2.GP1
			5mil	
Signal 1	3	0.5		roach2.G1
			5mil	
Ground 2	4	0.5		roach2.GP2
			5mil	
Signal 2	5	0.5		roach2.G2
			5mil	
Power 1	6	1		roach2.GP3
			**	
Ground 3	7	1		roach2.GP4
			4mil	
Signal 3	8	0.5		roach2.G3
			4mil	
Signal 4	9	0.5		roach2.G4
			4mil	
Power 2	10	1		roach2.GP5
			**	
Power 3	11	1		roach2.GP6
			5mil	
Signal 5	12	0.5		roach2.G5
			5mil	
Power 4	13	0.5		roach2.GP7
			5mil	
Signal 6	14	0.5		roach2.G6
			5mil	
Ground 4	15	0.5		roach2.GP8
			3mil	
Signal Bottom	16	0.5		roach2.GBL
Soldermask Bottom		-	-	roach2.GBS
Silkscreen Bottom		-	-	roach2.GBO
Pastemask Bottom		-	-	roach2.GBP

* Thickness may be adjusted to achieve nominal total thickness of 93 mil, to satisfy impedance targets and to accommodate manufacturing processes.

Impedance Controlled Traces

All impedance matching to +/- 10%

Microstrip

Layers:	Signal Top (#1), Signal Bottom (#16)
Target Impedance:	50 ohm
Trace thickness:	5 mil (127um)

Stripline

Layers:	Layers: Signal 1 (#3), Signal 2 (#5), Signal 5 (#12), Signal 6 (#14)
Target Impedance:	50 ohm
Trace thickness:	3.8 mil (96.52 um)

Asymmetrical Stripline

Layers:	Signal 3 (#9), Signal 4 (#10)
Target Impedance:	50 ohm
Trace thickness:	3.8 mil (96.52 um)