*Please be noted that this sheet is used for final gerber release

Board Information	
1-Board Name:	*Switchboard*
2-Stackup Doc Number:	*R3059-B0001-01-ST*
3-Date:	*3/19/2021*
4-Doc Rev:	*1.1*
5-Designer	*Bob Huang*
6-Reviewer	
7-Total Layers:	*10*
8-Board Thickness:	*2.0 +/- 10% mm*
9-PCB Material:	*S1000-2M / IT-180A /TU-768*
10-Minimum Pitch	*0.8mm BGA*
11-Minimum Finished Via Size	*8 mil*
12-Estimated Via Number	*5000.00*
13-Minimum Trace Width/Spacing	*3.4mil/4.4mil*
14-Pannel Size	*Refer to pannel drawing*
15-Pannel Rotation	*No*
16-Surface Finish:	*OSP*
17-Hole plugging	*Refer to Fab notes if no other specified requirements*
18-Hole Plating Thickness	*Refer to Fab notes if no other specified requirements*
19-Special Requirements	*N/A*
20-PCB outline:	*301.67*427.7mm*
21-Backdrilling	*N/A*
22- UL qualified on All Copper/Core/PP	*Yes*
23-Quotation or Price	*Yes*

Vendor Information	
1-VendorName	founder
2-Date	2021/3/9
3-UL qualified on	yes
4-Panel Size	16.22*20.42
5-UR	
6-Designer	Simon Chen
7-Vendor	founder

Notes from Celestica:

1. For "Neckdown" traces, if the trace width/space you calculate is larger than 4 mil/4 mil, please do not control the impedance but need vendor to calculate the impedance with the fixed trace width/space;if the trace width/space you calculate is less than 4 mil/4 mil, please use the trace width/spacing to control the impedance.
2. Please do not use 1500 series for prepreg and core between signal layer and GND layer.
3. As no Gerber, signal layer copper 30% and GND/VCC layer copper 70% assumed.
4. Please keep no more than one decimal for trace width and spacing.
5. Do not use 7628 and 1500 series for signal layers.
6. Do not use 106 and 1080 prepreg and core for signal layers, but can be used for VCC layers.
7. Copper finish is HVLP
8. Impedance tolerance is ±10%
9. Board thickness tolerance is ±10%.

Stackup Control Table

---	*Structure*		*Material*					*Vendor proposed*				*Celestica Proposed*				*Vendor Proposed*			
Layer	Type	Thickness (mil)	2-Ply Required	PCB Material	Fibre Type	Copper Weight (oz)	DK (for Simulation)	Fibre Type/Copper Weight (oz)	Thickness (mil)	copper foil type	Dk(@2G)	Impedance spec (Ohms)	Reference layer	Width (/space):mil	Sim Z0	Impedance spec (Ohms)	Reference layer	Width (/space):mil	Sim Z0
	SM	0.50			SM		4.25		0.50										
1	TOP	1.90				0.5 oz + plating (HTE +plating)		0.50	1.90	HTE		S50±10%	2	6.2	50.3	S50±10%	2	6	50.0
												D85±10%	2	6/5.5	85.4	D85±10%	2	6/5.5	85.0
												D92±10%	2	5.2/6	92.1	D92±10%	2	5.2/6	92.0
												D100±10%	2	4.2/6	99.8	D100±10%	2	4.2/6	100.0
												D100±10%Neckdown	2	3.5/4.7	99.8	D100±10%Neckdown	2	3.5/4.7	101.0
	Prepreg	4.00	N	S1000-2 / IT-180A	Vendor Proposal		4.00	2313*1	3.94		4.16								
2	GND1	1.20				1 oz(RTF)		1.20	1.20	HTE									
	Core	6.00	N	S1000-2 / IT-180A	Vendor Proposal		4.00	2116*1	5.12		3.93								
3	SIG1	1.20				1 oz(RTF)		1.20	1.20	HTE		S50±10%	2&4	5	49.73	S50±10%	2&4	4.7	50
												D85±10%	2&4	6/7.5	84.92	D85±10%	2&4	5.7/7.8	85.2
												D92±10%	2&4	5.2/8.4	91.97	D92±10%	2&4	4.9/8.7	92.3
												D100±10%	2&4	4.2/8	99.88	D100±10%	2&4	3.9/8.3	100.3
												D95±10%Neckdown	2&4	3.4/4.4	95.7				
												D100±10%Neckdown	2&4	3.5/5.5	99.83	D100±10%Neckdown	2&4	3.2/5.8	100.4
	Prepreg	6.00	Y	S1000-2 / IT-180A	Vendor Proposal		4.00	2313*2	7.40		4.16								
4	GND2	1.20				1 oz(RTF)		1.20	1.20	HTE									
	Core	8.00	Y	S1000-2 / IT-180A	Vendor Proposal		4.00	2116*2	7.78		4.55								
5	PWR1	1.20				1 oz(RTF)		1.20	1.20	HTE									
	Prepreg	15.00	Y	S1000-2 / IT-180A	Vendor Proposal		4.00	2116*3	15.33		4.18								
6	PWR2	1.20				1 oz(RTF)		1.20	1.20	HTE									
	Core	8.00	Y	S1000-2 / IT-180A	Vendor Proposal		4.00	2116*2	7.78		4.55								
7	GND3	1.20				1 oz(RTF)		1.20	1.20	HTE									
	Prepreg	6.00	Y	S1000-2 / IT-180A	Vendor Proposal		4.00	2313*2	7.40		4.16								
8	SIG2	1.20				1 oz(RTF)		1.20	1.20	HTE		S50±10%	7&9	5	49.73	S50±10%	7&9	4.7	50
												D85±10%	7&9	6/7.5	84.92	D85±10%	7&9	5.7/7.8	85.2
												D92±10%	7&9	5.2/8.4	91.97	D92±10%	7&9	4.9/8.7	92.3
												D100±10%	7&9	4.2/8	99.88	D100±10%	7&9	3.9/8.3	100.3
												D95±10%Neckdown	7&9	3.4/4.4	95.7				
												D100±10%Neckdown	7&9	3.5/5.5	99.83	D100±10%Neckdown	7&9	3.2/5.8	100.4
	Core	6.00	N	S1000-2 / IT-180A	Vendor Proposal		4.00	2116*1	5.12		3.93								
9	GND4	1.20				1 oz(RTF)		1.20	1.20	HTE									
	Prepreg	4.00	N	S1000-2 / IT-180A	Vendor Proposal		4.00	2313*1	3.94		4.16								
10	BOTTOM	1.90				0.5 oz + plating (HTE +plating)		0.50	1.90	HTE		S50±10%	9	6.2	50.3	S50±10%	9	6	50.0
												D85±10%	9	6/5.5	85.4	D85±10%	9	6/5.5	85.0
												D92±10%	9	5.2/6	92.1	D92±10%	9	5.2/6	92.0
												D100±10%	9	4.2/6	99.8	D100±10%	9	4.2/6	100.0
												D100±10%Neckdown	9	3.5/4.7	99.8	D100±10%Neckdown	9	3.5/4.7	101.0
	SM	0.50			SM		4.25												
	Board Thickness:	77.40	mil					Board Thickness:	77.71	mil									
		1.97	mm						1.97	mm									