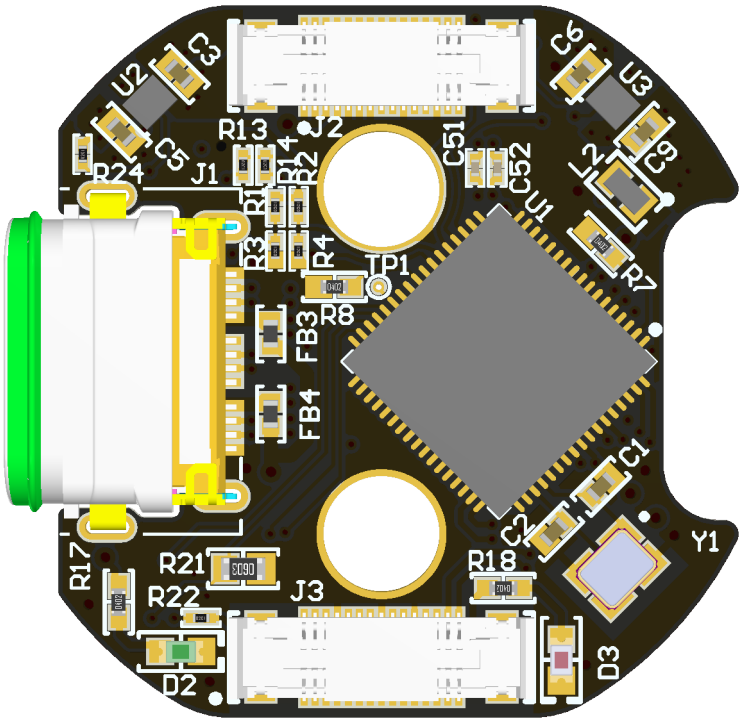
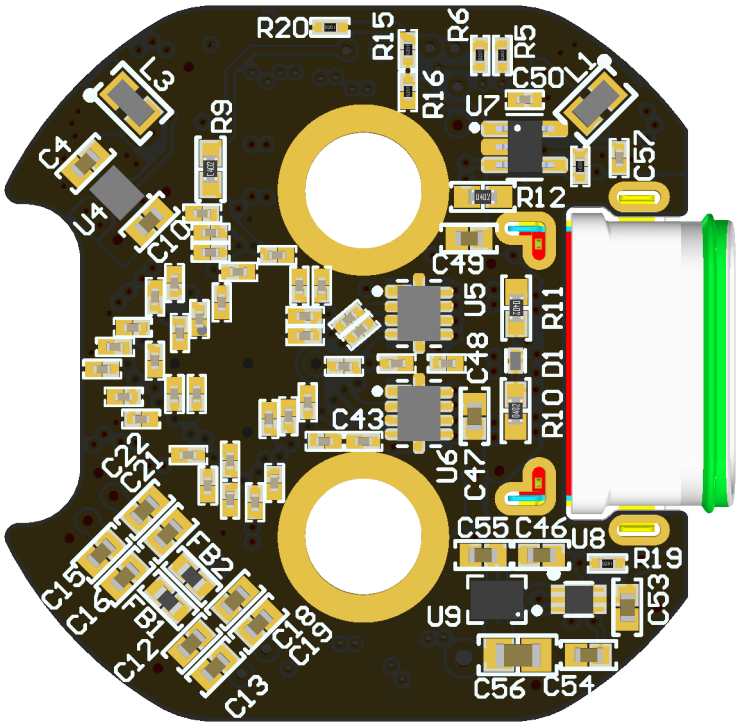
Digit 360 Data USB

Realistic View



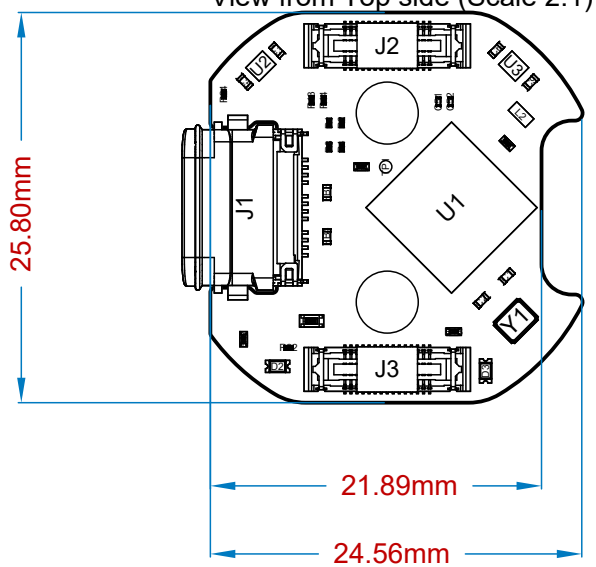
Realistic View



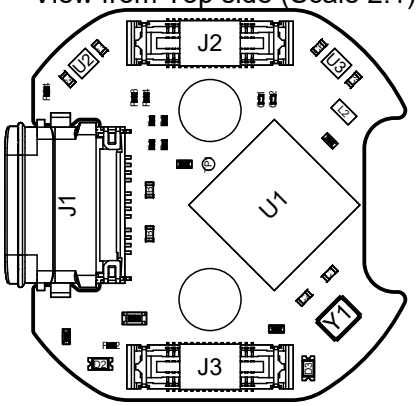
NOTES: UNITS IN MILLIMETERS UNLESS OTHERWISE SPECIFIED

1. INTERPRET THIS DRAWING IN ACCORDANCE WITH IPC-D-325A
2. BOARD FABRICATION AND QUALITY PER IPC-6012, CLASS 2, EXCEPT SPECIFIED HEREIN
3. MUST COMPLY WITH EUROPEAN DIRECTIVE 2002/95/EC (RoHS)
4. DIMENSIONAL LIMITS APPLY AFTER PLATING OR COATING
5. BOW AND TWIST MAXIMUM IS 0.75%
6. MATERIAL: LAMINATE AND PREPREG SHALL BE IN ACCORDANCE WITH IPC-4101/21. 170 DEGREES CELSIUS MINIMUM Tg, UL 94V-0
7. STACKUP SUMMARY:
   A. NUMBER OF COPPER LAYERS: 8
   B. BOARD THICKNESS SHALL BE 62mil +/- 10%
   C. COPPER: See Layer Stack
   D. DEFAULT TRACE/SPACE: 4mil / 4mil
   E. CONDUCTOR WIDTH TOLERANCE = +/- 0.01mm
8. VIPPO (VIA IN PAD PLATED OVER) PER IPC-6012, CURRENT REVISION, CLASS 2, AS STATED IN NOTE 2.
   a. FILL AND CAP All 0.2mm VIA HOLES WITH NON-CONDUCTIVE EPOXY
   b. FILL AND CAP VIAS MUST BE PLANARIZED
9. SURFACE FINISH/PLATING:
   A. BOARD SHALL BE IMMERSION GOLD PLATED (ENIG) ACCORDING TO IPC-4552. THICKNESS SHALL BE A MINIMUM OF 0.05µm GOLD OVER 3-6µm NICKEL
10. SOLDERMASK WITH LIQUID PHOTO IMAGEABLE (LPI) PER IPC-SM-840C, CLASS T. COLOR: MATTE BLACK
11. SILKSCREEN PER SUPPLIED ARTWORK WITH ORGANIC, NON-CONDUCTIVE, EPOXY INK. SILKSCREEN MAY BE TRIMMED OFF ANY SOLDERABLE ENTITY. COLOR: WHITE
12. 100% BARE BOARD ELECTRICAL TEST TO BE DONE WITH REFERENCE TO SUPPLIED NETLIST
13. LOCATE MANUFACTURER'S IDENTIFICATION AND LOT CODE ON PRIMARY SIDE FREE FROM ALL METAL ENTITY RENDERED IN SILKSCREEN.
14. DIFFERENTIAL CONTROLLED IMPEDANCE REQUIRED ON BOARD.
    SEE TABLE : DIFFERENTIAL CONTROLLED IMPEDANCE
    SEE TABLE : SINGLE ENDED CONTROLLED IMPEDANCE
15. DETAILS NOT SPECIFIED ARE AT MANUFACTURER'S OPTION BUT FINAL APPROVAL MUST BE OBTAINED

View from Top side (Scale 2:1)



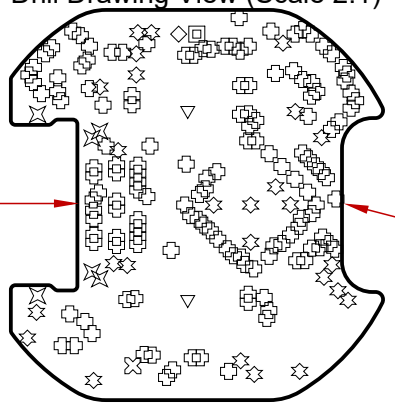
View from Top side (Scale 2:1)



Drill Table

Symbol	Count	Hole Size	Plated	Hole Tolerance
✣	145	0.20mm	Plated	
◇	1	0.33mm	Plated	
⧈	1	0.36mm	Plated	
✡	26	0.38mm	Plated	
✠	6	0.50mm	Plated	
⊠	1	0.64mm	Plated	
▽	2	4.20mm	Plated	
	182 Total			

Drill Drawing View (Scale 2:1)



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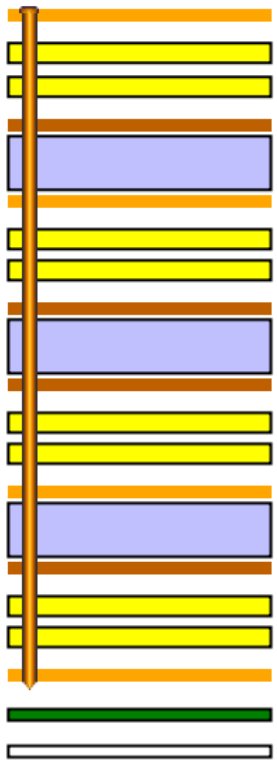
Stack-Up (or similar)

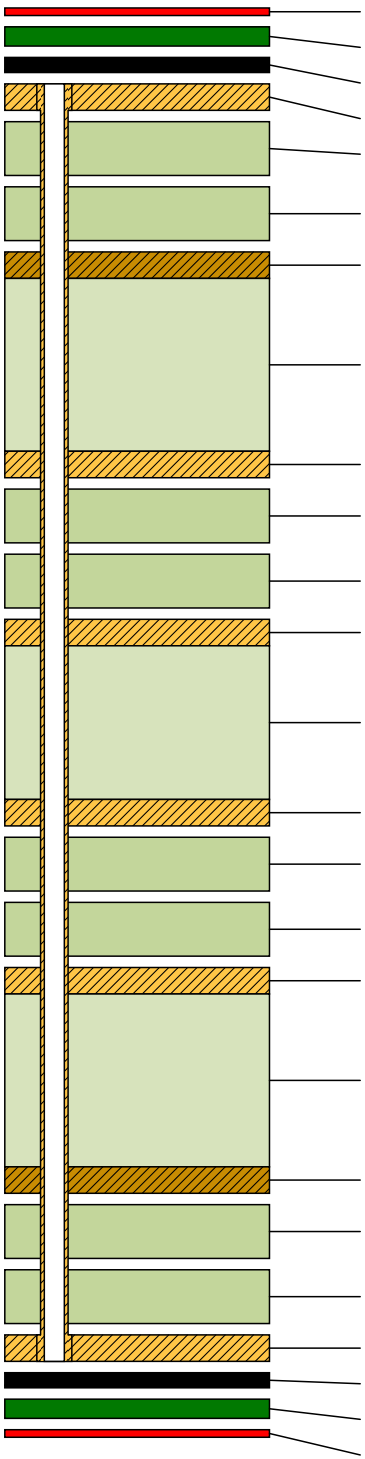
Layer	Base CU / Plt	Thick	Type	Stackup	Subs	Imp	Material	Dk	Df
Silkscreen		0.00					Taiyo-SS - White		
Soldermask		0.60					Taiyo-SM - Green	2.70	0.033
Lyr1	0.5oz / Std	1.80	S						
Prepreg		7.64					370HR - 2x2113	3.99	0.022
Lyr2	1oz	1.20	P						
Core		8.00					370HR - 8.0mils	4.61	0.021
Lyr3	1oz	1.20	S						
Prepreg		6.68					370HR - 2x2113	3.99	0.022
Lyr4	1oz	1.20	P						
Core		8.00					370HR - 8.0mils	4.61	0.021
Lyr5	1oz	1.20	P						
Prepreg		6.68					370HR - 2x2113	3.99	0.022
Lyr6	1oz	1.20	S						
Core		8.00					370HR - 8.0mils	4.61	0.021
Lyr7	1oz	1.20	P						
Prepreg		7.64					370HR - 2x2113	3.99	0.022
Lyr8	0.5oz / Std	1.80	S						
Soldermask		0.60					Taiyo-SM - Green	2.70	0.033
Silkscreen		0.00					Taiyo-SS - White		



Required Thickness

Type	Req. Thick	Tol% +	Tol% -	Act. Thick	Measured
Overall	62.0	10.0	10.0	64.6	
Over lamination	58.4	10.0	10.0	61.0	
Over laminate	57.2	10.0	10.0	59.8	
Over metal	60.8	10.0	10.0	63.4	

Layer Stack Legend



Layer	Type	Gerber
Top Overlay	Legend	GTO
Top Solder	Solder Mask	GTS
Top Surface Finish	Surface Finish	
Top Layer	**Signal**	**GTL**
	Dielectric	
	Dielectric	
Int1 (GND)	**Internal Plane**	**GP1**
	Dielectric	
Int2 (Sign)	**Signal**	**G1**
	Dielectric	
	Dielectric	
Int3 (Sign)	**Signal**	**G2**
	Dielectric	
Int4 (Sign)	**Signal**	**G3**
	Dielectric	
	Dielectric	
Int5 (Sign)	**Signal**	**G4**
	Dielectric	
Int6 (GND)	**Internal Plane**	**GP2**
	Dielectric	
	Dielectric	
Bottom Layer	**Signal**	**GBL**
Bottom Surface Finish	Surface Finish	
Bottom Solder	Solder Mask	GBS
Bottom Overlay	Legend	GBO

Transmission Line Structure Table

Target Impedance	Calculated Impedance	Trace layer	Wide Trace Width	Narrow Trace Width	Gap	Reference layers	Clearance	Target Tolerance
90	90.08	Top Layer	8.00mil	8.00mil	7.00mil	Int1 (GND)	5.00mil	7%
90	89.52	Int2 (Sign)	5.00mil	5.00mil	8.00mil	Int1 (GND),Int3 (Sign)	5.00mil	7%
90	88.34	Int3 (Sign)	5.00mil	5.00mil	8.00mil	Int2 (Sign),Int4 (Sign)	0.00mil	7%
90	88.34	Int4 (Sign)	5.00mil	5.00mil	8.00mil	Int3 (Sign),Int5 (Sign)	0.00mil	7%
90	89.52	Int5 (Sign)	5.00mil	5.00mil	8.00mil	Int4 (Sign),Int6 (GND)	5.00mil	7%
90	90.08	Bottom Layer	8.00mil	8.00mil	7.00mil	Int6 (GND)	5.00mil	7%

Acceptable minimum: 10% target tolerance