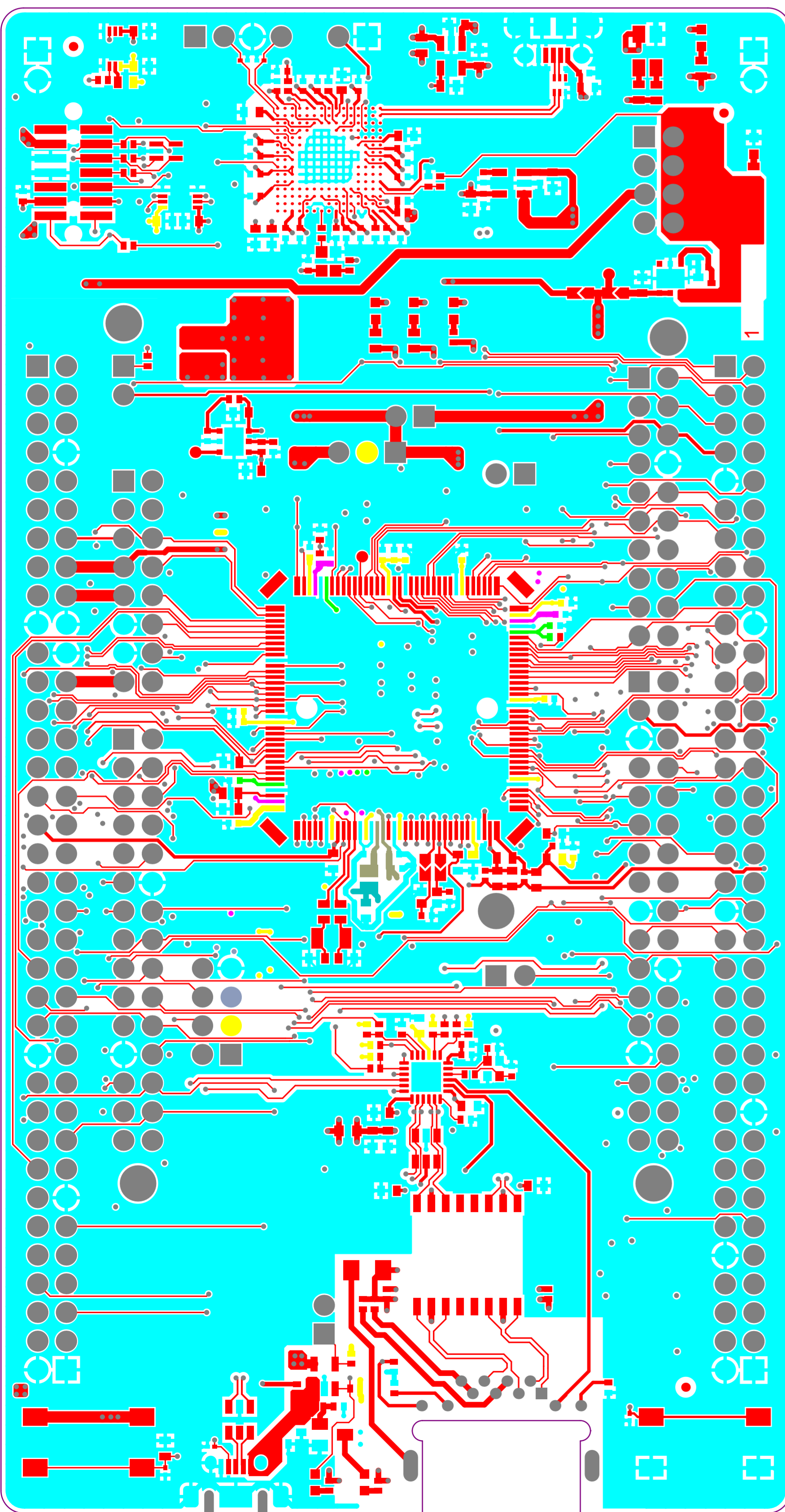


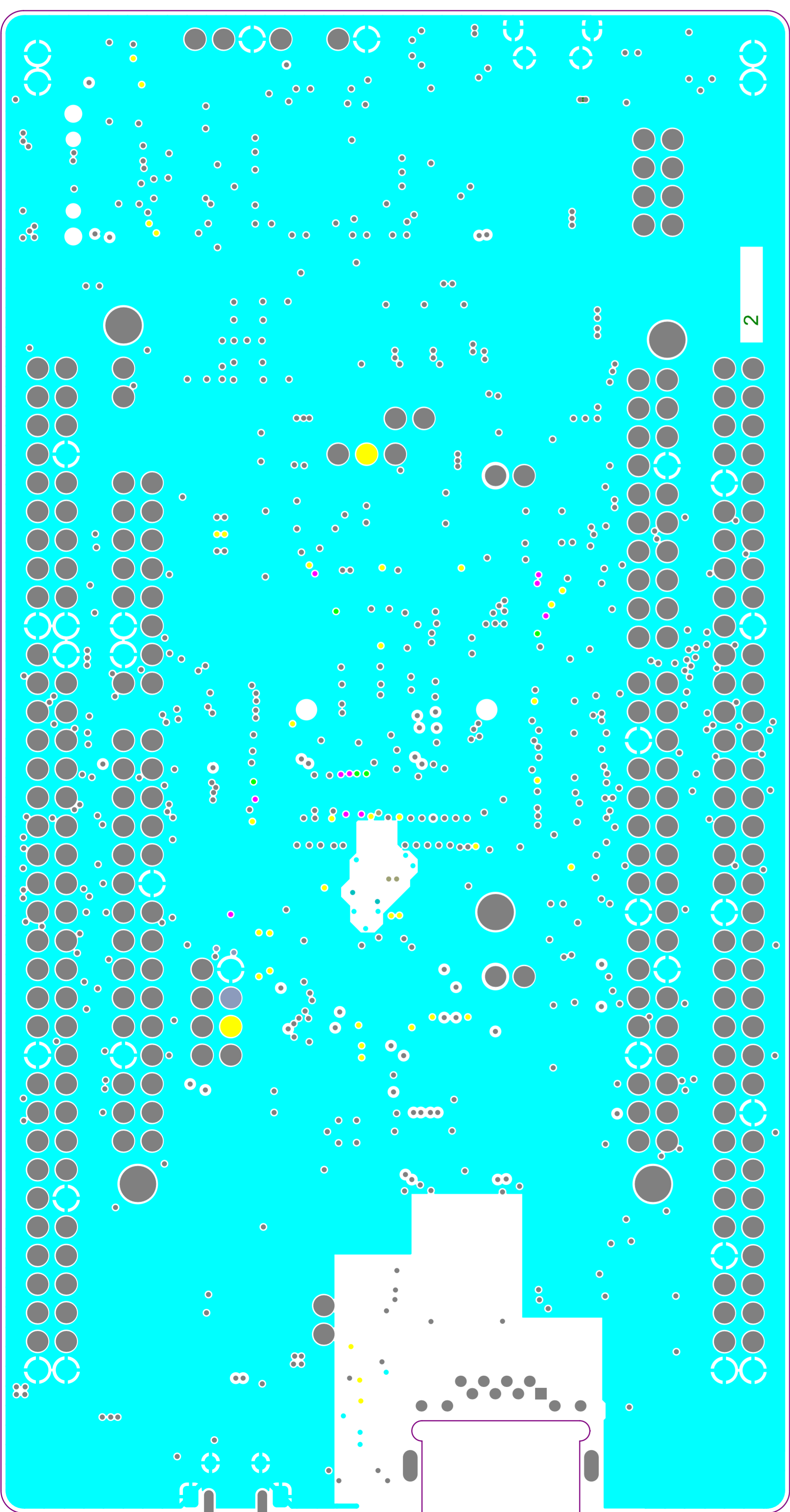
Top Solder

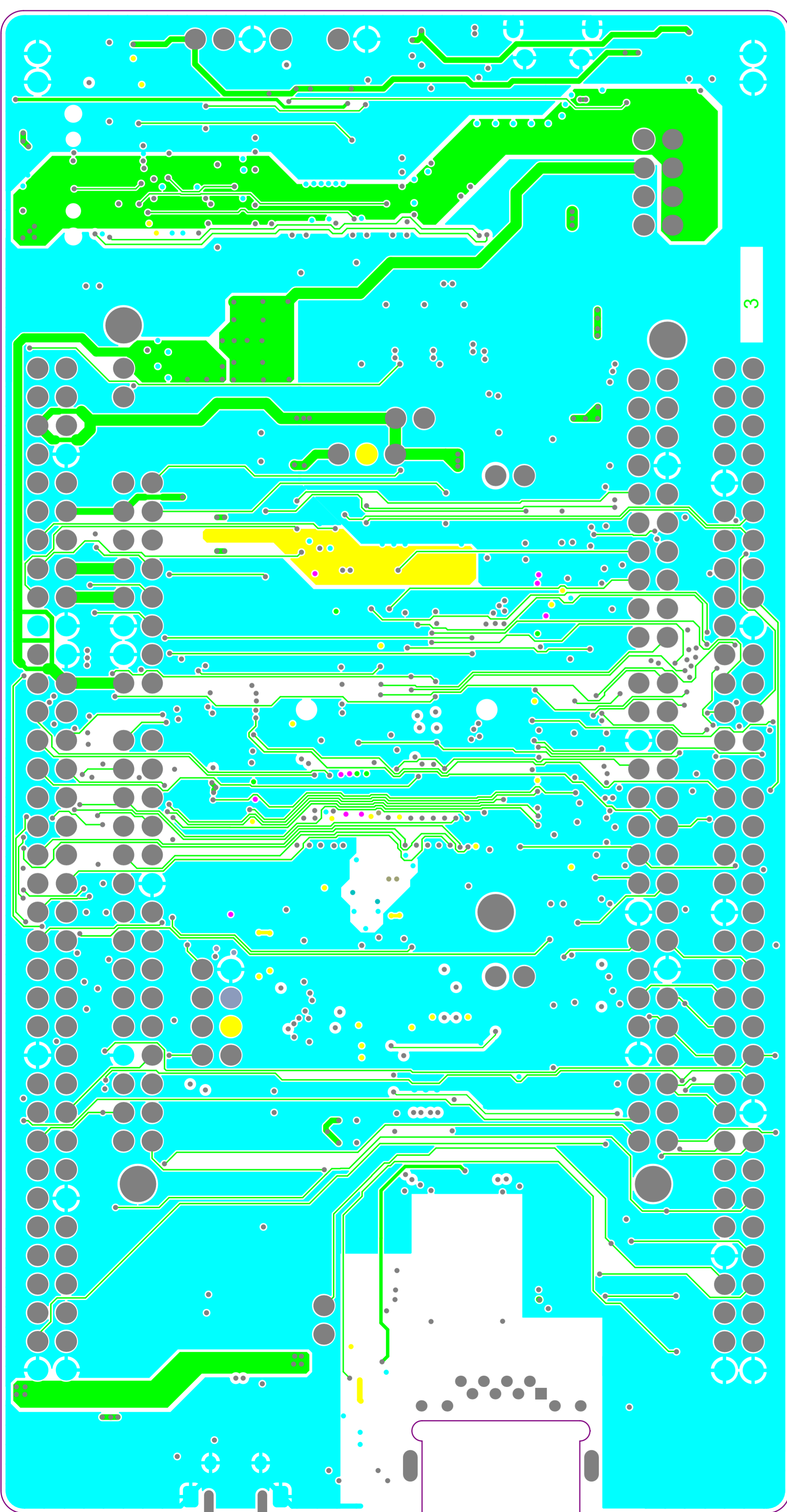
.GTS

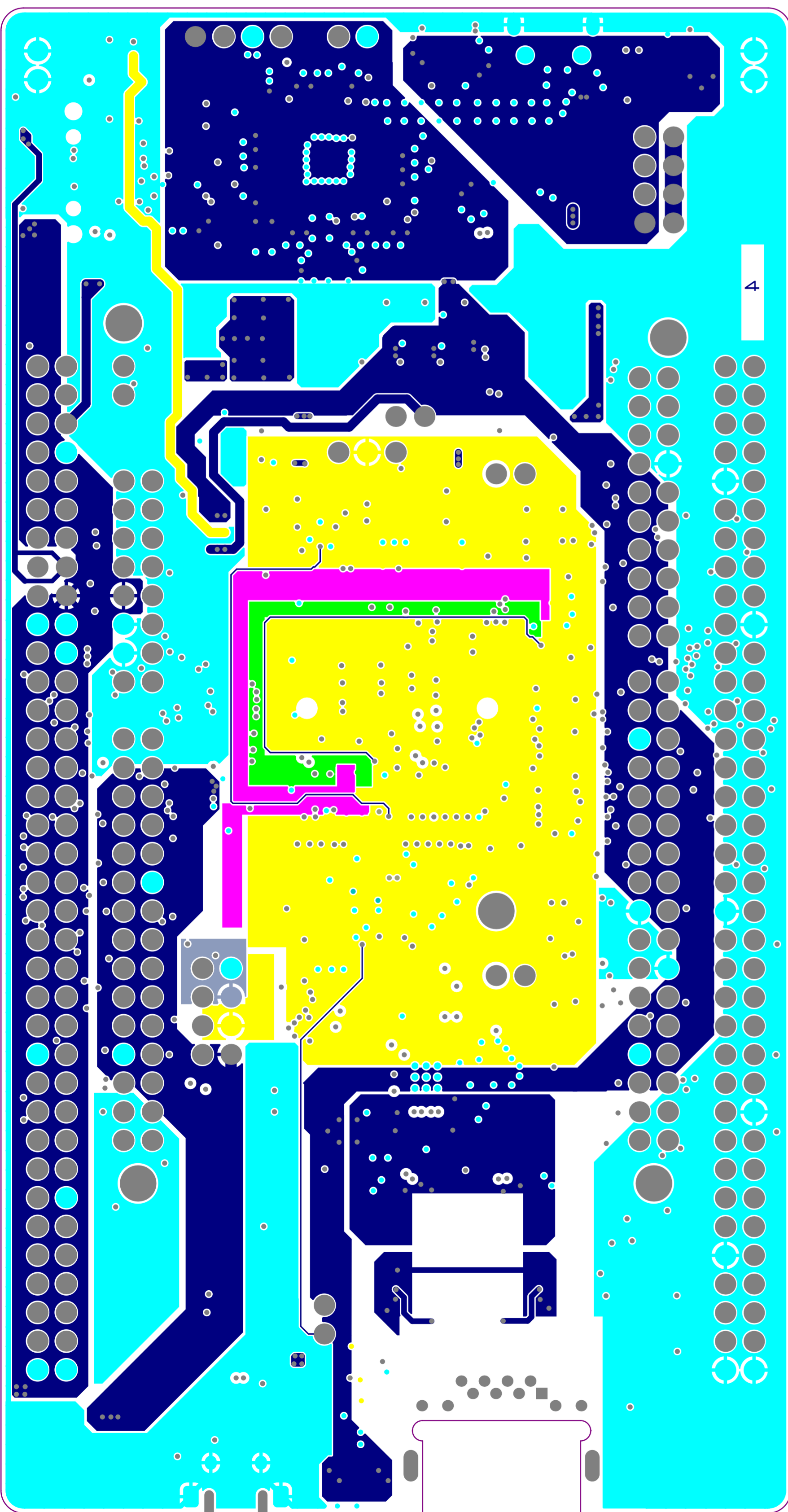


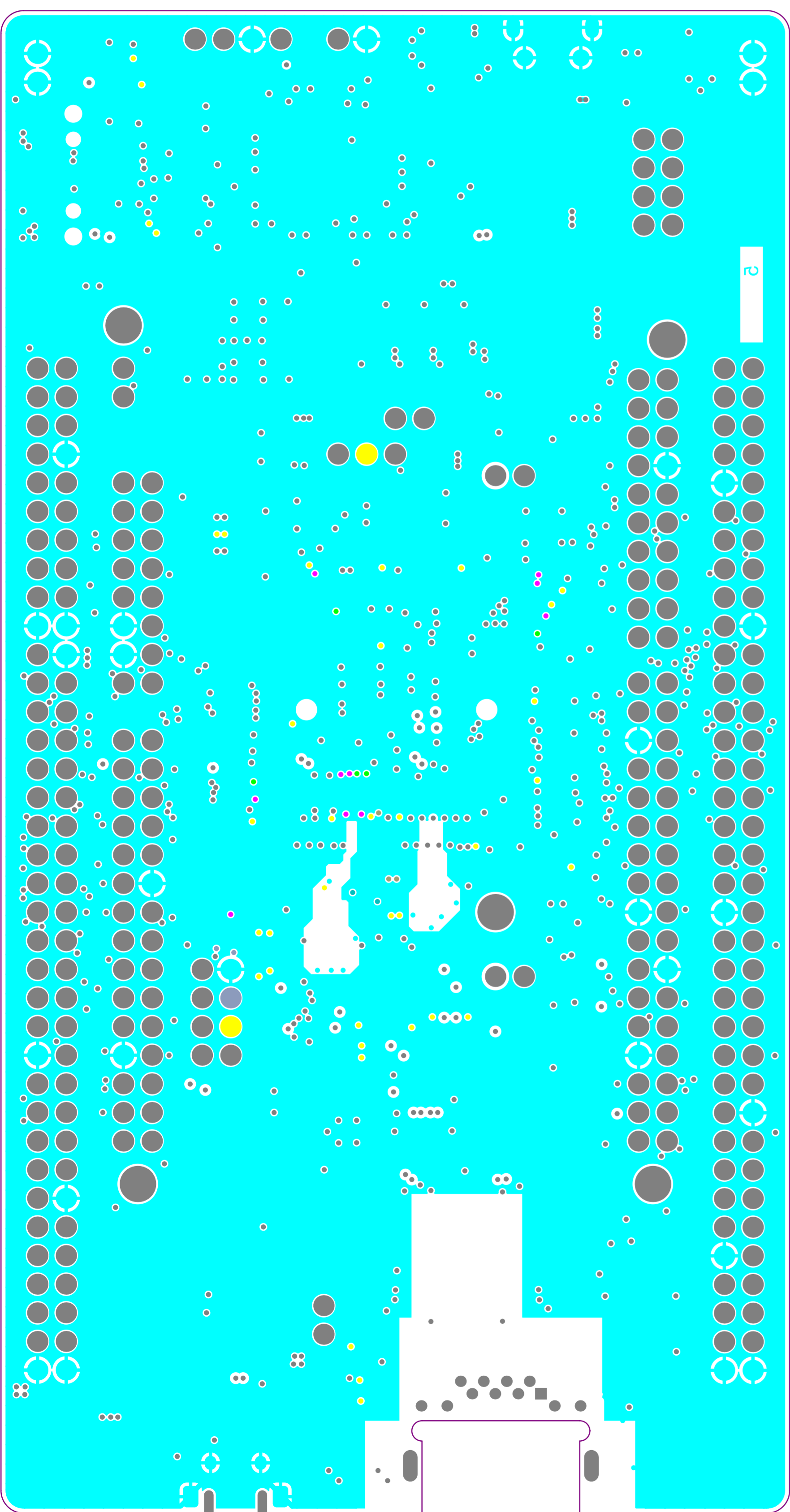
Top Layer

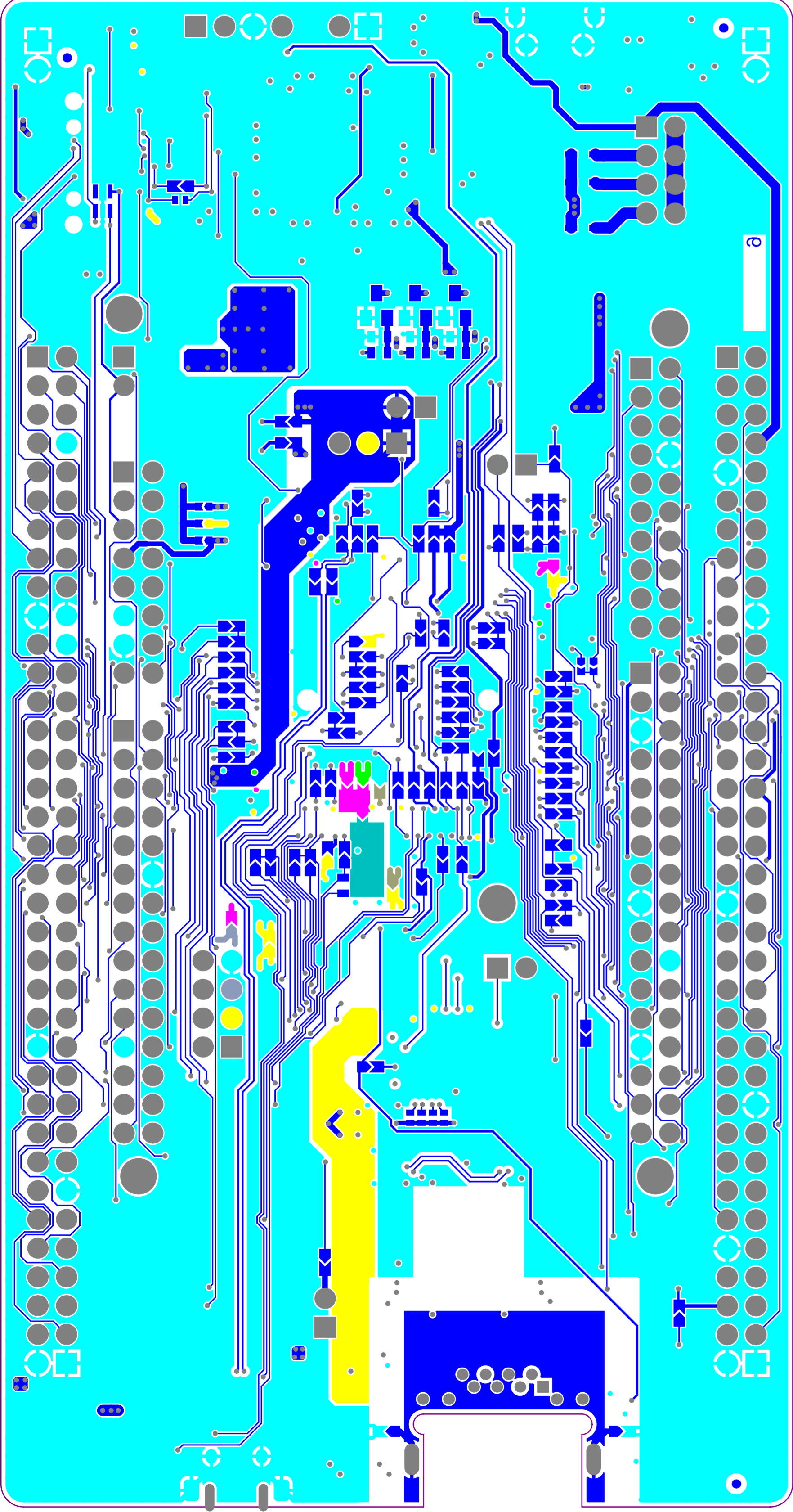
.GTL









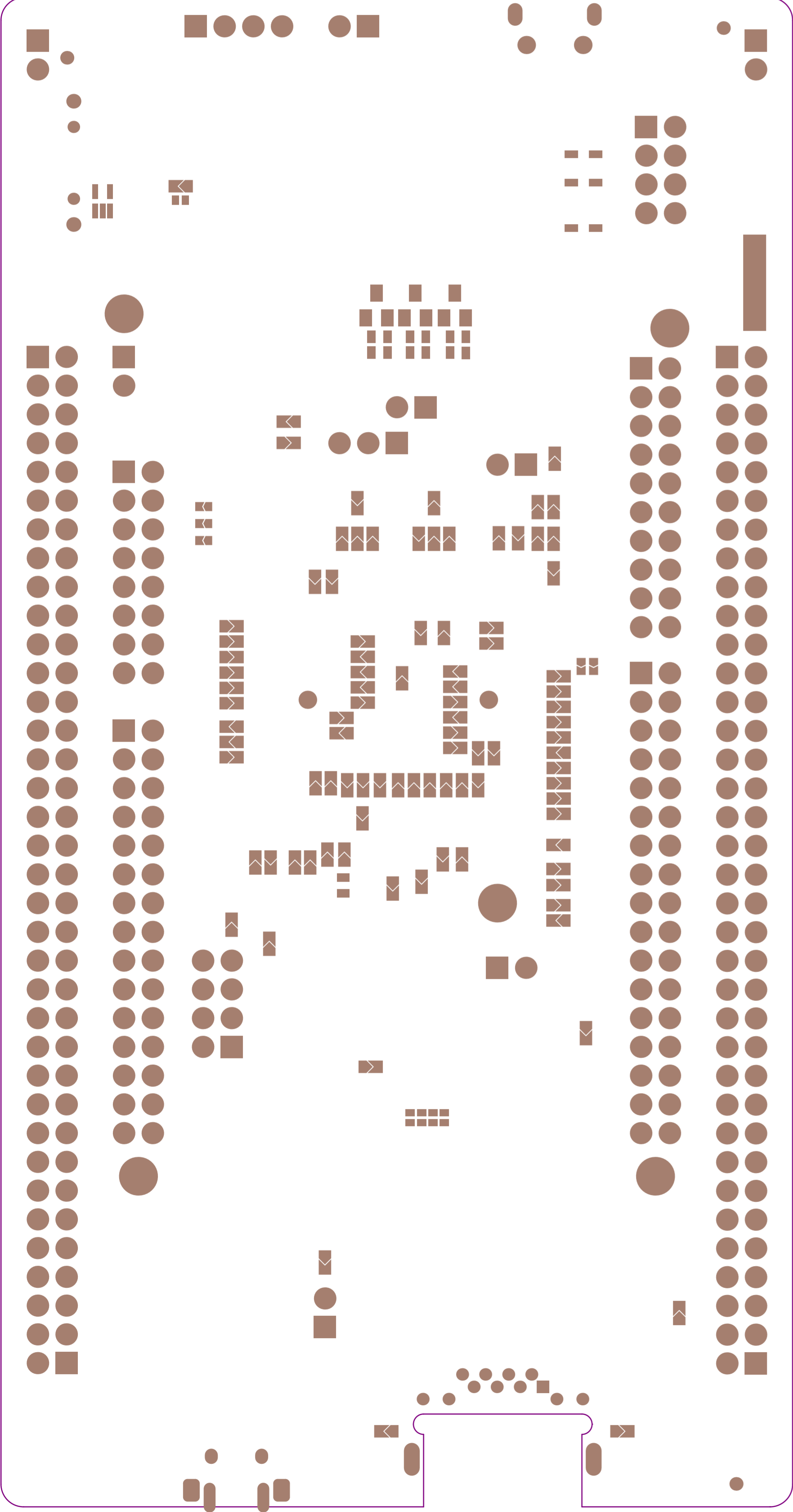


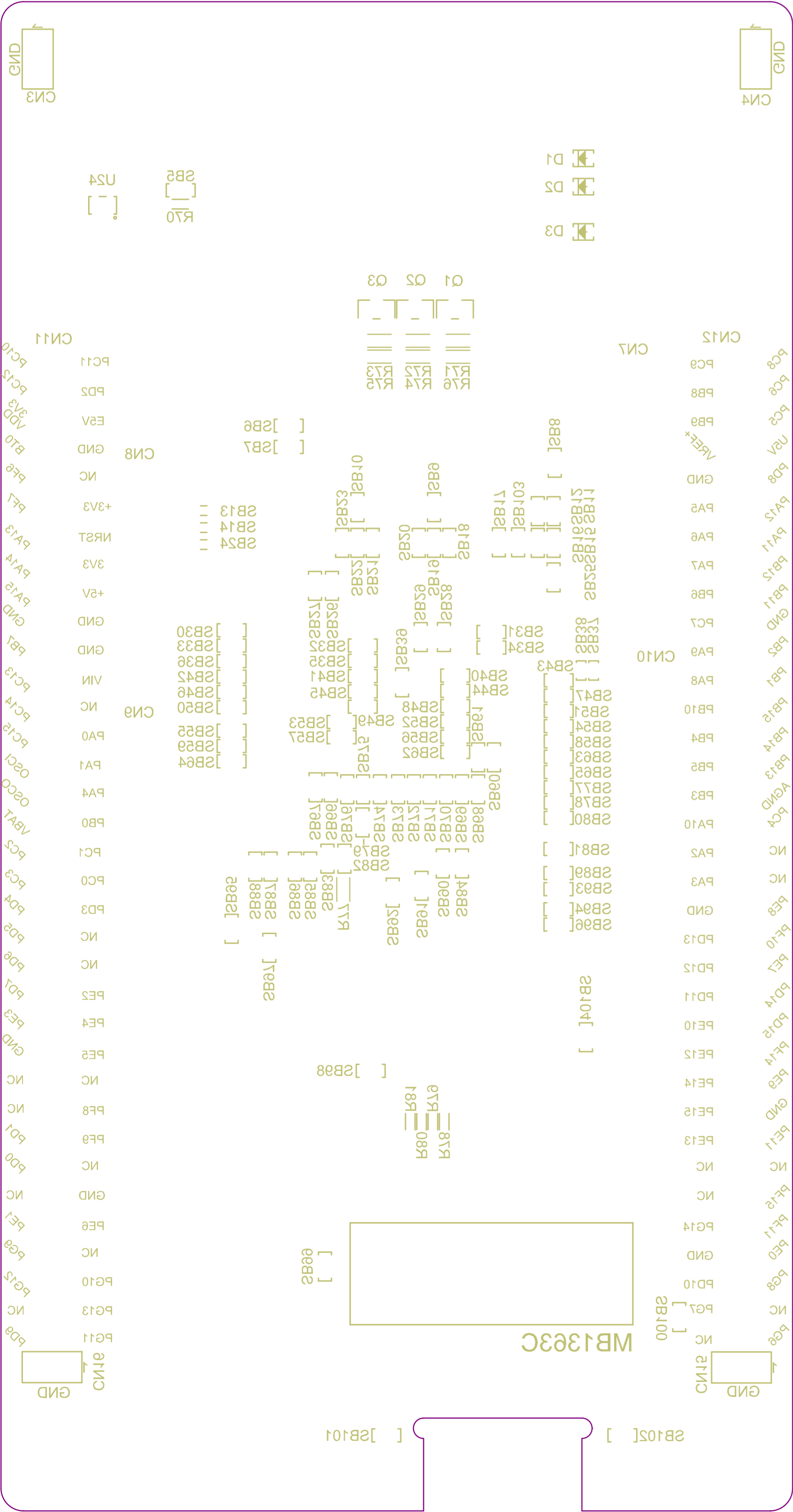
.GBL

Bottom Layer

.GBS

Bottom Soler





PCB SPECIFICATIONS :

A. MATERIAL :

B. MATERIAL FAMILY :

C. SOLDERMASK COLOR :

D. SILKSCREEN COLOR :

E. SURFACE FINISH :

F. IMPEDANCE CONTROL :

G. THROUGH VIA :

H. STACK-UP :

FR-4

N/A

☐ GREEN

☒ WHITE

☐ HASL

☐ NO

☐ TG-170

☒ TG-150

☐ YES (SEE IMPEDANCE TABLE FOR DETAIL INFORMATION)

☐ TG-140

☐ RED

☐ BLACK

☒ Blue ink PANTONE 2955

☐ IMMERSION SILVER

☐ IMMERSION TIN

☐ GOLDEN FINGER

PLUG THE VIAS WHICH ARE COVERED WITH SOLDERMASK ONE OR TWO SIDE.

PLUG MATERIAL : ☒ SOLDERMASK ☐ NON-CONDUCTIVE EPOXY.

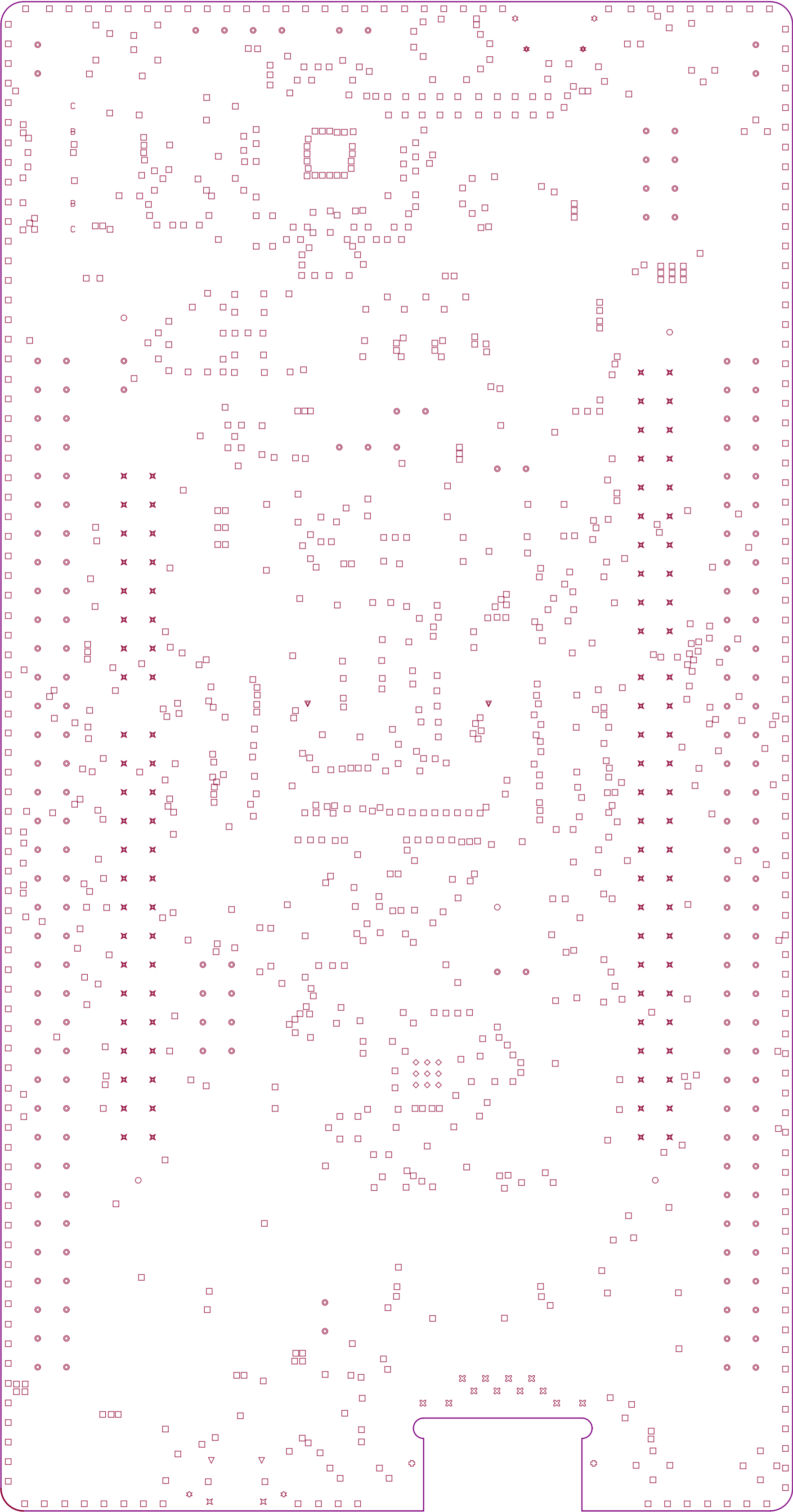
SEE LAYER STACK-UP SEQUENCE FOR OVERALL THICKNESS.

PCB : TYPE 3

ASPECT-RATIO, AXE Z :  
6:1 to 8:1  
LEVEL "B"

MINIMUM PARAMETERS

DEFAULT  
TRACKS : 0.120mm  
GAPS : 0.120mm

















Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0,015mm	3,5	
3	Top Layer	Copper	0,042mm		
4	Dielectric 1	FR-4	0,099mm	4,2	
5	Signal Layer 1	Copper	0,035mm		
6	Dielectric 2		0,102mm	4,2	
7	Signal Layer 2	Copper	0,035mm		
8	Dielectric 3		0,946mm	4,2	
9	Signal Layer 3	Copper	0,035mm		
10	Dielectric 4		0,102mm	4,2	
11	Signal Layer 4	Copper	0,035mm		
12	Dielectric 5		0,099mm	4,2	
13	Bottom Layer	Copper	0,042mm		
14	Bottom Solder	Solder Resist	0,015mm	3,5	
15	Bottom Overlay				

IMPEDANCE TABLE    RMII					
LAYER	TRACE (mm)	SPACING (mm)	IMPEDANCE (Single ended)	IMPEDANCE (Differential)	TOL.
TOP/BOTTOM	0.127	n/a	50 ohm	n/a	+/- 15%
LAYER 3	0.102	n/a	50 ohm	n/a	+/- 15%

IMPEDANCE TABLE    RD / RX / TD / TX					
LAYER	TRACE (mm)	SPACING (mm)	IMPEDANCE (Single ended)	IMPEDANCE (Differential)	TOL.
TOP/BOTTOM	0.130	0.251	n/a	100 ohm	+/- 15%
LAYER 3	0.104	0.277	n/a	100 ohm	+/- 15%

IMPEDANCE TABLE    USB FS, USB HS USER, USB HS STLINK					
LAYER	TRACE (mm)	SPACING (mm)	IMPEDANCE (Single ended)	IMPEDANCE (Differential)	TOL.
TOP/BOTTOM	0.155	0.226	n/a	90 ohm	+/- 15%
LAYER 3	0.130	0.251	n/a	90 ohm	+/- 15%

Symbol	Count	Hole Size	Plated	Hole Type	Drill Layer Pair	Hole Length	Routed Path Length
	1098	0,200mm (7,87mil)	PTH	Round	Top Layer - Bottom Layer	-	-
	9	0,300mm (11,81mil)	PTH	Round	Top Layer - Bottom Layer	-	-
	4	0,600mm (23,62mil)	PTH	Slot	Top Layer - Bottom Layer	1,300mm (51,18mil)	0,700mm (27,56mil)
	2	0,650mm (25,59mil)	PTH	Slot	Top Layer - Bottom Layer	0,850mm (33,47mil)	0,200mm (7,88mil)
	12	0,700mm (27,56mil)	PTH	Round	Top Layer - Bottom Layer	-	-
	2	0,700mm (27,56mil)	PTH	Slot	Top Layer - Bottom Layer	2,200mm (86,61mil)	1,500mm (59,06mil)
	2	0,850mm (33,47mil)	NPTH	Slot	Top Layer - Bottom Layer	2,425mm (95,47mil)	1,575mm (62,01mil)
	2	0,900mm (35,43mil)	PTH	Round	Top Layer - Bottom Layer	-	-
	2	0,970mm (38,19mil)	NPTH	Round	Top Layer - Bottom Layer	-	-
	183	1,000mm (39,37mil)	PTH	Round	Top Layer - Bottom Layer	-	-
	100	1,100mm (43,31mil)	PTH	Round	Top Layer - Bottom Layer	-	-
	2	1,190mm (46,85mil)	NPTH	Round	Top Layer - Bottom Layer	-	-
	2	1,500mm (59,06mil)	NPTH	Round	Top Layer - Bottom Layer	-	-
	5	3,200mm (125,98mil)	NPTH	Round	Top Layer - Bottom Layer	-	-
	1425 Total						

Slot definitions :    Routed Path Length    = Calculated from tool start centre position to tool end centre position.  
                                 Hole Length        = Routed Path Length + Tool Size = Slot length as defined in the PCB layout