

GERBER FILE DESCRIPTIONS:
TOP SILK SCREEN: 10020881rA_SST.art
TOP PASTE MASK: 10020881rA_PMT.art
TOP SOLDER MASK: 10020881rA_SMT.art
TOP CONDUCTOR: 10020881rA_cuTOP.art
GND_1 CONDUCTOR: 10020881rA_cuGND1.art
INROUTE_1 CONDUCTOR: 10020881rA_cuIN1.art
GND_2 CONDUCTOR: 10020881rA_cuGND2.art
POWER CONDUCTOR: 10020881rA_cuPWR.art
INROUTE_2 CONDUCTOR: 10020881rA_cuIN2.art
GND_3 CONDUCTOR: 10020881rA_cuGND3.art
BOTTOM CONDUCTOR: 10020881rA_cuBOT.art
BOTTOM SOLDER MASK: 10020881rA_SMB.art
BOTTOM PASTE MASK: 10020881rA_PMB.art
BOTTOM SILK SCREEN: 10020881rA_SSB.art
DRILL FILE FOR LAYERS 1-3: 10020881rA_LRAUV_MotherBoard-1-3.drl
DRILL FILE FOR LAYERS 1-8: 10020881rA_LRAUV_MotherBoard-1-8.drl
DRILL FILE FOR LAYERS 6-8: 10020881rA_LRAUV_MotherBoard-6-8.drl
IPC-356 E-TEST FILE: 10020881rA_LRAUV_MotherBoard.ipc
FABRICATION DRAWING: 10020881rA_FABRICATION-DWG.pdf



* SOLDERMASK PSR-4000BN (SEMI-GLOSS)
L1: TOP CONDUCTOR - COPPER 1.6 MIL
* 370HR 106 PRE-PREG - FR-4 2.2 MIL
* 370HR 1080 PRE-PREG - FR-4 3 MIL
L2: GND_1 CONDUCTOR - COPPER 0.6 MIL

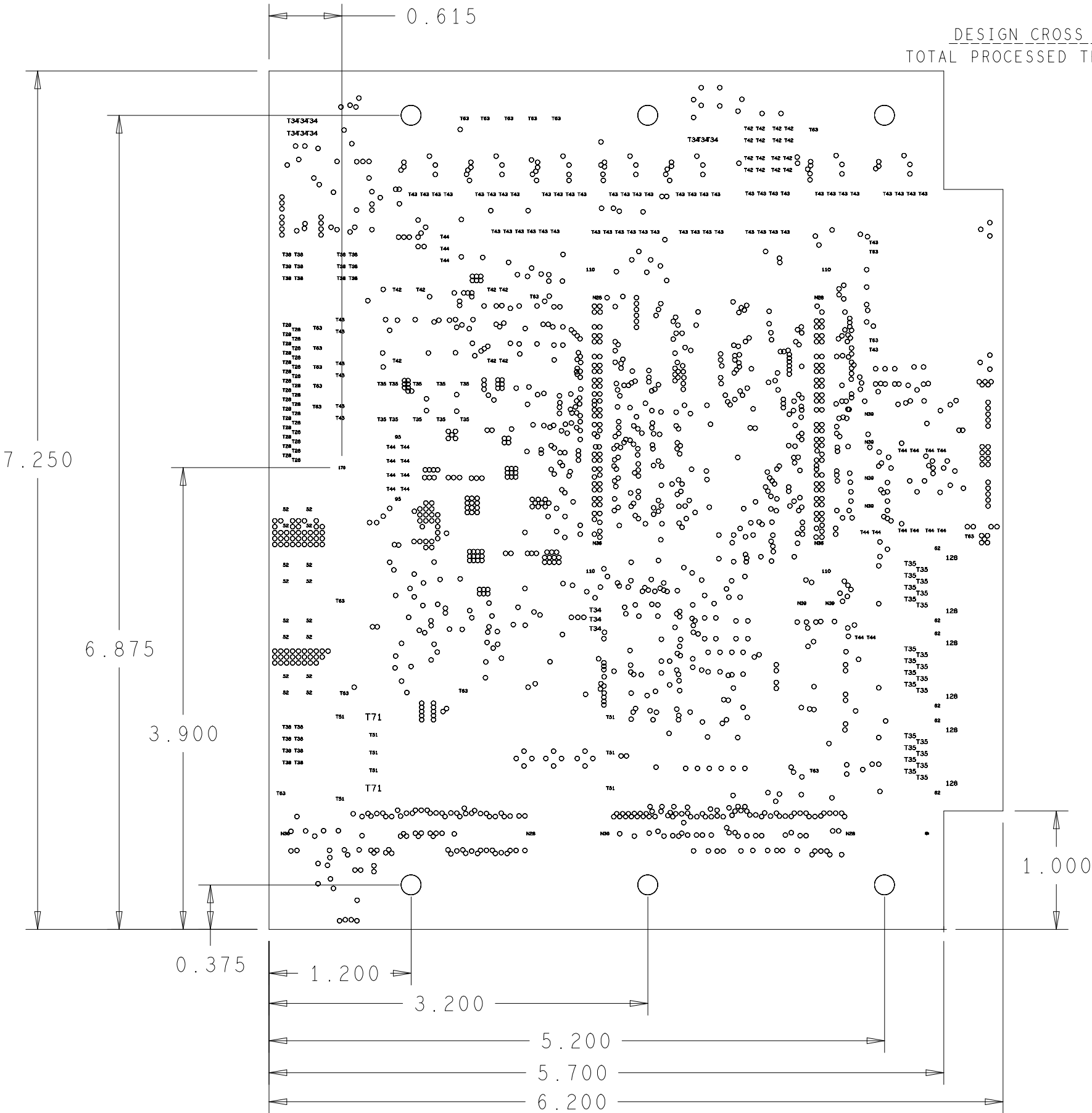
* 370HR 0.1010 H/H CORE - FR-4 10 MIL

L3: INROUTE_1 CONDUCTOR - COPPER 0.6 MIL
* 370HR 2116 PRE-PREG - FR-4 4.4 MIL
* 370HR 2116 PRE-PREG - FR-4 4.4 MIL
L4: GND_2 CONDUCTOR - COPPER 0.6 MIL
* 370HR 0.005 H/H CORE - FR-4 5 MIL
L5: PWR CONDUCTOR - COPPER 0.6 MIL
* 370HR 2116 PRE-PREG - FR-4 4.4 MIL
* 370HR 2116 PRE-PREG - FR-4 4.4 MIL
L6: INROUTE_2 CONDUCTOR - COPPER 0.6 MIL

* 370HR 0.1010 H/H CORE - FR-4 10 MIL

L7: GND_3 CONDUCTOR - COPPER 0.6 MIL
* 370HR 1080 PRE-PREG - FR-4 3 MIL
* 370HR 106 PRE-PREG - FR-4 2.2 MIL
L8: BOTTOM CONDUCTOR - COPPER 1.6 MIL
* SOLDERMASK PSR-4000BN (SEMI-GLOSS)

DESIGN CROSS SECTION CHART
TOTAL PROCESSED THICKNESS 59.82 MIL



DRILL CHART: INROUTE_2 to BOTTOM			
ALL UNITS ARE IN MILS			
FIGURE	SIZE	PLATED	QTY
°	10.0	PLATED	92

DRILL CHART: TOP to INROUTE_1			
ALL UNITS ARE IN MILS			
FIGURE	SIZE	PLATED	QTY
°	10.0	PLATED	290

DRILL CHART: TOP to BOTTOM			
ALL UNITS ARE IN MILS			
FIGURE	SIZE	PLATED	QTY
°	10.0	PLATED	1148
128	28.0	PLATED	30
134	34.0	PLATED	12
135	35.0	PLATED	10
135	35.0	PLATED	24
138	38.0	PLATED	20
142	42.0	PLATED	23
143	43.0	PLATED	60
144	44.0	PLATED	23
151	51.0	PLATED	8
52	52.0	PLATED	16
62	62.0	PLATED	6
163	63.0	PLATED	20
T71	71.0	PLATED	2
95	95.0	PLATED	2
110	110.0	PLATED	8
128	128.0	PLATED	6
○	169.3	PLATED	6
170	170.0	PLATED	1
128	28.0	NON-PLATED	6
128	36.0	NON-PLATED	6
128	39.0	NON-PLATED	6
•	102.0	NON-PLATED	1

CLASS II FABRICATION NOTES: (UNLESS OTHERWISE SPECIFIED)

- BOARDS SHALL BE 100% NET LIST TESTED FOR OPENS AND SHORTS PER PROVIDED IPC-D-356 NETLIST.
- THIS BOARD SHALL BE MANUFACTURED IN ACCORDANCE WITH IPC-6012A CLASS II SPECIFICATIONS AND MEET IPC-600 CLASS II ACCEPTABILITY STANDARDS.
- MATERIAL:
 - FR4 PER IPC 4101B/24, /26, OR /28
 - OUTER LAYERS TO BE 1.0 OZ. FINISHED COPPER.
 - INNER LAYERS TO BE 0.5 OZ BASE COPPER
 - OVERALL THICKNESS TO BE 0.062" +/- 10%
- LEGEND:
 - WHITE NON-CONDUCTIVE EPOXY INK BOTH SIDES.
- SOLDERMASK:
 - APPLY LIQUID PHOTO-IMAGABLE (LPI) SOLDER MASK OVER BARE COPPER PER IPC-SM-840 CLASS H, COLOR GREEN, BOTH SIDES.
- PLATING FINISH:
 - HOT AIR SOLDER LEVELING (HASL) SN63A SnPb SOLDER.
 - IMMERSION SILVER PLATING
- PROCESS ALLOWANCES:
 - MAXIMUM BOW AND TWIST ACROSS DIAGONAL CORNERS OF THE BOARD SHALL NOT EXCEED 0.75%
 - HOLE DIMENSIONS APPLY AFTER PLATING.
 - ALL HOLES SHALL BE LOCATED WITHIN 0.003" DIAMETER OF TRUE POSITION
 - LAYER TO LAYER REGISTRATION SHALL BE WITHIN 0.003"
 - CONDUCTOR WIDTHS AND SPACING SHALL BE WITHIN +/- 0.002"
 - REMOVE ALL BURRS AND BREAK SHARP EDGES 0/015" MAX.
 - CUT OUTSIDE OF 0.001" BOARD OUTLINE.

UNLESS OTHERWISE SPECIFIED	SIGNATURES	DATE	LONG RANGE AUV MOTHERBOARD			
			MONTEREY BAY AQUARIUM RESEARCH INSTITUTE 7700 SANDHOLDT ROAD MOSS LANDING, CA			
	DESIGNED BY: MARK CHAFFEY		SIZE C	RELEASE A	DWG NO 10020881	
	LAYOUT BY: JOSE ROSAL		SCALE 1-1		SHEET	1-1