CRYPTUS

MOTHERBOARD

REV. 1-A

COMMENT LEGEND

General Notes

Assembly, Part Locations, Fabrication, Debug Information etc.

Revisions

With author and date
To be kept on schematic for a single revision

Datasheet info

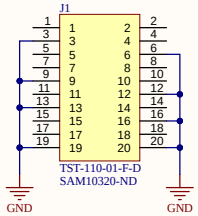
Part information, addresses, registers, pull-up/pull-downs, exerpts & tables etc.

Calculations

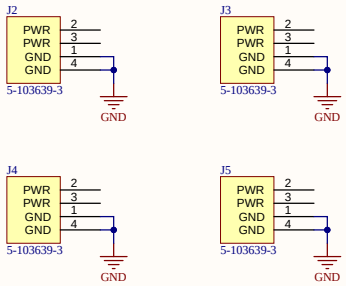
Values, tensions & currents, passives, etc.

	PROJECT: CryptUS_Motherboard
*	TITLE: *
*	
*	SIZE: A3 / DWG NO. / REV
*	FILE NAME: Title.SchDoc / SHEET 1 OF 7

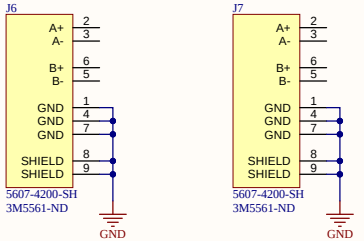
MAIN 20-PIN CONNECTOR



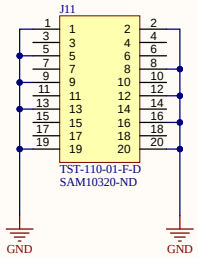
4-PIN POWER CONNECTORS



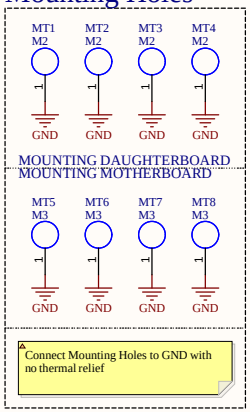
SATA CONNECTORS



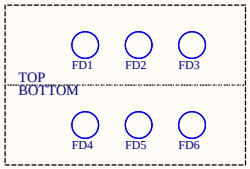
ADC 20-PIN CONNECTOR



Mounting Holes

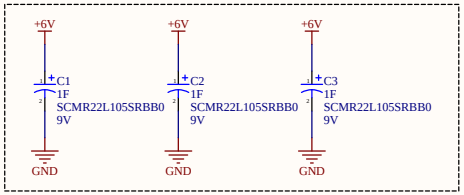


Fiducials

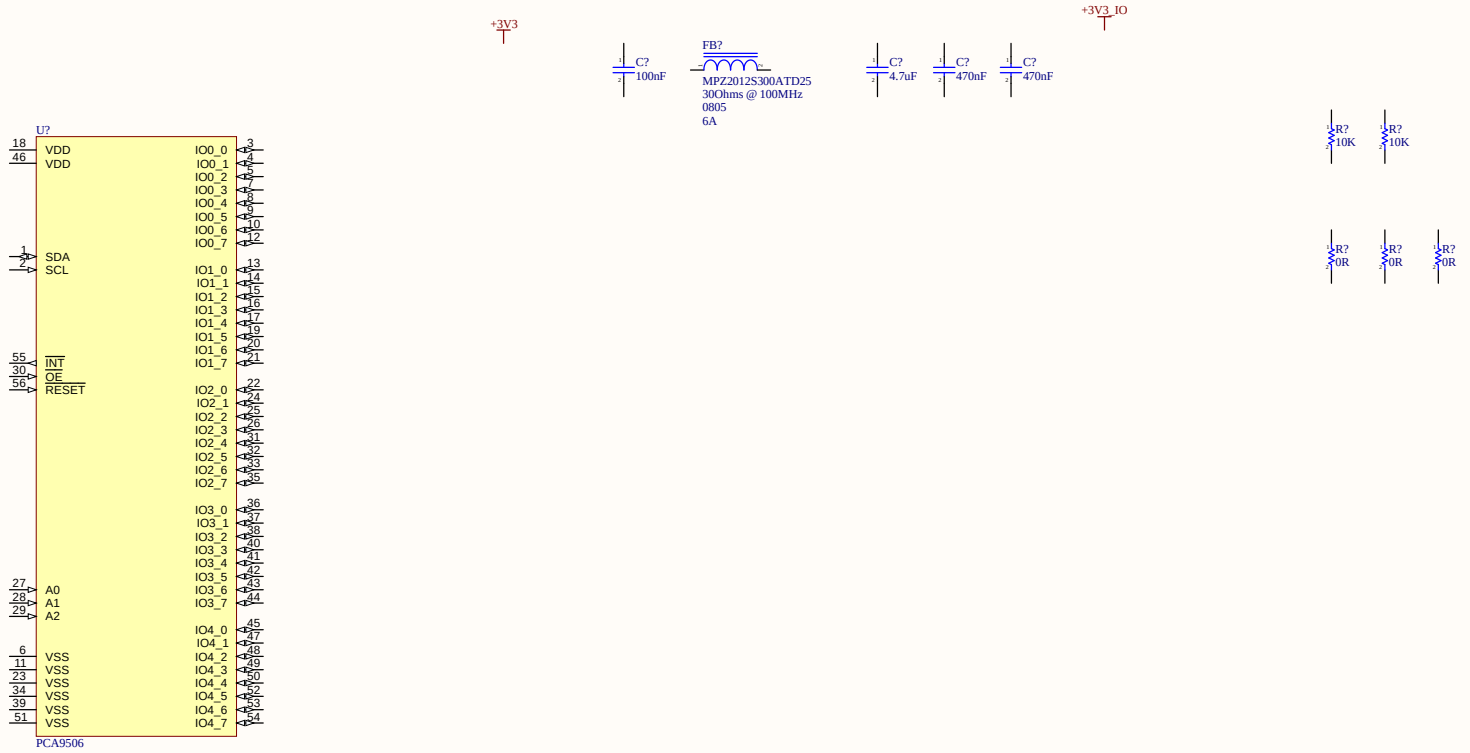


	PROJECT: CryptUS_Motherboard	
CryptUS	TITLE: Mechanical and Interconnect	
Pascal-Emmanuel Lachance	SIZE: A3 / DWG NO.	REV
Benjamin Gélinas	FILE NAME: Mechanical and Interconnect.SchDoc	SHEET 2 OF 7

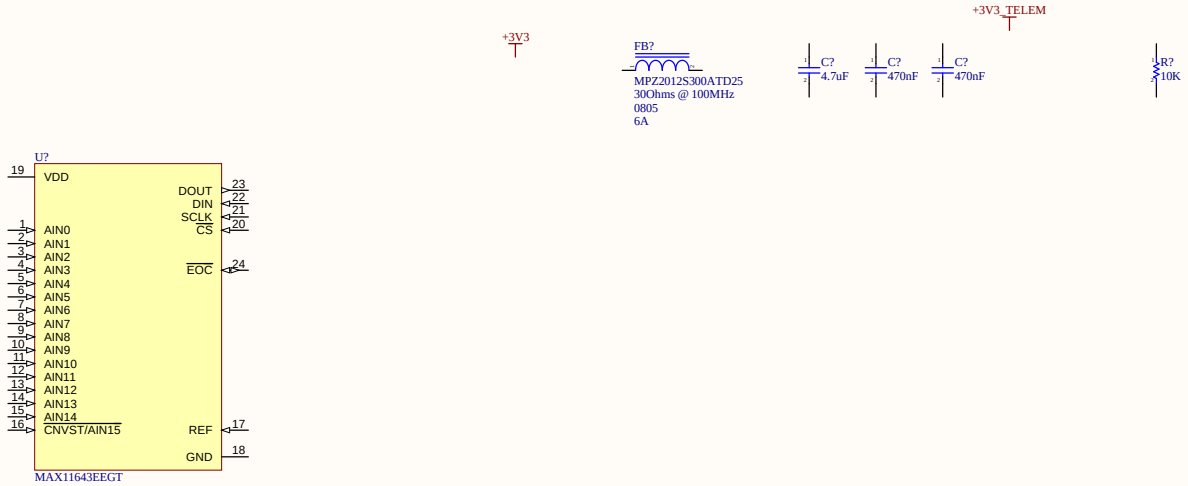
SUPERCAPACITORS



	PROJECT: CryptUS_Motherboard
	TITLE: *
SIZE: A3	DWG NO.
FILE NAME: Power.SchDoc	SHEET 3 OF 7



	PROJECT	CryptUS_Motherboard
*	TITLE	*
*	SIZE A3	DWG NO.
*	FILE NAME	IO Extender.SchDoc
	SHEET	4 OF 7



PROJECT	CryptUS_Motherboard
TITLE	*
SIZE	A3
DWG NO.	
REV	
FILE NAME	Telemetry.SchDoc
SHEET	5 OF 7

	PROJECT	CryptUS_Motherboard			
*	TITLE	*			
*	SIZE	DWG NO.		REV	
*	A3				
*	FILE NAME	QRNG.SchDoc	SHEET	6	OF 7

	PROJECT	CryptUS_Motherboard			
*	TITLE	*			
*	SIZE	DWG NO.		REV	
*	A3				
	FILE NAME	Debug.SchDoc	SHEET	7 OF	7

FILE LIST:

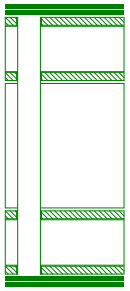
.gtp - Top Solder Paste
.gts - Top Soldermask

.gtl - Top Copper (Layer 1)
.g1 - Inner Copper (Layer 2)
.g2 - Inner Copper (Layer 3)
.gbl - Bottom Copper (Layer 4)

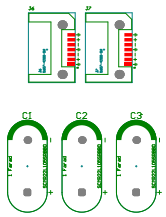
.gbs - Bottom Soldermask
.gbo - Bottom Silkscreen
.gbp - Bottom Solder Paste

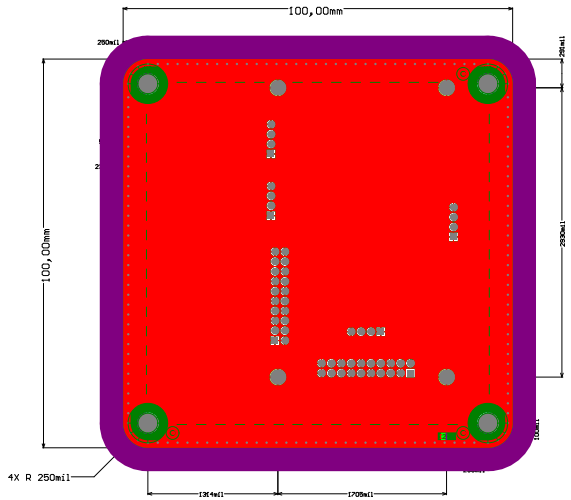
.gm1 - Board Outline
.gm2 - Top Assembly
.gm3 - Bottom Assembly
.gm13 - Dimensions
.gm14 - Assembly Notes
.gm15 - Manufacturing Notes
.gm16 - Title Block

.gd1 - Drill Drawing
.gg1 - Drill Guide



Layer	Name	Material	Thickness	Constant	Gerber
	Top Overlay				GTO
	Top Solder	Solder Resist	0,40mil	3.5	GTS
1	POWER		2,76mil		GTL
	Dielectric 1	PP-006	8,00mil	4.1	
2	GND		2,76mil		G1
	Dielectric1	FR-4	39,00mil	4.8	
3	HIGH-SPEED		2,76mil		G2
	Dielectric 2	PP-006	8,00mil	4.1	
4	LOW-SPEED		2,76mil		GBL
	Bottom Solder	Solder Resist	0,40mil	3.5	GBS
	Bottom Overlay				GBO
Total board thickness:			66,82mil		





FABRICATION NOTES:

[1] FABRICATE TO IPC CLASS 2 STANDARD.
[2] ADD MANUFACTURING MARKING (LOGO / DATE / UL MARKING / RoHS) ON SILKSCREEN BOTTOM SIDE OF PCB.
(I.gbo), IN AREA MARKED #2 IN MANUFACTURING NOTES LAYER [M15])
[3] FABRICATE PCB USING ONLY RoHS COMPLIANT MATERIALS.
FINAL PRODUCT SHALL BE ACCEPTABLE TO USE IN RoHS ASSEMBLY.
[4] MATERIAL SHALL MEET UL 94V-0 FAMMABILITY RATING.
[5] DO NOT APPLY SILKSCREEN OVER EXPOSED COPPER.
CLIP SILKSCREEN AROUND EXPOSED COPPER.
[6] DO NOT FILL VIAS OR PLATE OVER.
TREAT VIA-IN-PAD AS NORMAL PTH VIAS.
[7] TENT VIAS WITH SOLDERMASK ACCORDING TO SOLDERMASK LAYERS.
[8] DIAMETERS IN HOLE TABLE ARE FINISHED SIZES.
[9] APPLY GREEN HIGHLY TRANSPARENT SOLDERMASK OVER BARE COPPER ACCORDING TO SOLDERMASKS LAYERS.
[10] APPLY NON-CONDUCTIVE WHITE INK AFTER SOLDERMASK ACCORDING TO SILKSCREEN LAYERS.
[11] APPLY ENIG OR ENEPIG SURFACE FINISH ON ALL EXPOSED COPPER
[12] BOW AND TWIST SHALL NOT EXCEED 0.01 INCH PER INCH.
[13] ALL SPECIFICATIONS REFERENCED SHALL BE OF THE LATEST REVISION.
ALL DESIGN MODIFICATIONS MUST BE APPROVED BY CUSTOMER.
[14] BOARD IS VIEWED FROM PRIMARY SIDE (LAYER 1 - TOP).
THE STACKUP (SEE STACKUP DETAILS ON MANUFACTURING NOTES [M15]) HAS 4 CONDUCTIVE LAYERS.
ALL CONDUCTIVE LAYERS ARE 2OZ/INCH THICK +/- 10%
[16] MINIMUM TRACE WIDTH AND CLEARANCE ARE 8MILS / 8MILS
[17] MINIMUM HOLE SIZE AFTER PLATING IS 10MILS. REFER TO DRILL TABLE FOR TOLERANCES.
[18] APPLY SOLDER RESIST BETWEEN ALL SMT PADS.

PASCAL-EMMANUEL LACHANCE	TITLE: CRYPTUS MOTHERBOARD	
BENJAMIN GaLINAS		
DATE: 2025-05-12	PART NO.:	REV: 1_A
FILE NAME: Motherboard_Rev1_A.PcbDoc	DWG NO:	SCALE:

Comment	Description	Designator	Footprint	LibRef	Quantity
1F	CAP 1F -10%+30% 9V T/H	C1, C2, C3	SCMR22L105SRBB0	CAP_SCMR22L105SRBB0	3
4.7uF	Generic SMT Ceramic Capacitor	C?	CAP_0805	CAP_CER	2
100nF	Generic SMT Ceramic Capacitor	C?	CAP_0402	CAP_CER	1
470nF	Generic SMT Ceramic Capacitor	C?	CAP_0402	CAP_CER	4
MPZ2012S300ATD25	30 Ohms @100 MHz 1 Power Line Ferrite Bead 0805 (2012 Metric) 6A 10mOhm	FB?	IND_0805	IND_MPZ2012S300ATD25	2
FIDUCIAL		FD1, FD2, FD3, FD4, FD5, FD6	FIDUCIAL	FIDUCIAL	6
TST-110-01-F-D	CONN HEADER VERT 20POS 2.54MM	J1, J11	TST-110-01-F-D	CONN_TST-100-01-F-D	2
5-103639-3	CONN HEADER VERT 4POS 2.54MM	J2, J3, J4, J5	5-103639-3	CONN_5-103639-3	4
5607-4200-SH	7 Position SATA Plug Connector Solder Surface Mount, Right Angle	J6, J7	5607-4200-SH	CONN_5607-4200-SH	2
M2		MT1, MT2, MT3, MT4	MTH_M2	MOUNTING_HOLE	4
M3		MT5, MT6, MT7, MT8	MTH_M3	MOUNTING_HOLE	4
0R	Resistor	R?	RES_0603	RESISTOR	3
10K	Resistor	R?	RES_0603	RESISTOR	3
MAX11643EEGT	8 Bit Analog to Digital Converter 16 Input 1 SAR 24-QSOP	U?	MAX11643EEG+	IC_MAX11643EEGT	1
PCA9506	I/O Expander 40 pins I2C TSSOP-56	U?	PCA9506	IC_PCA9506	1