

ASSEMBLY TOP



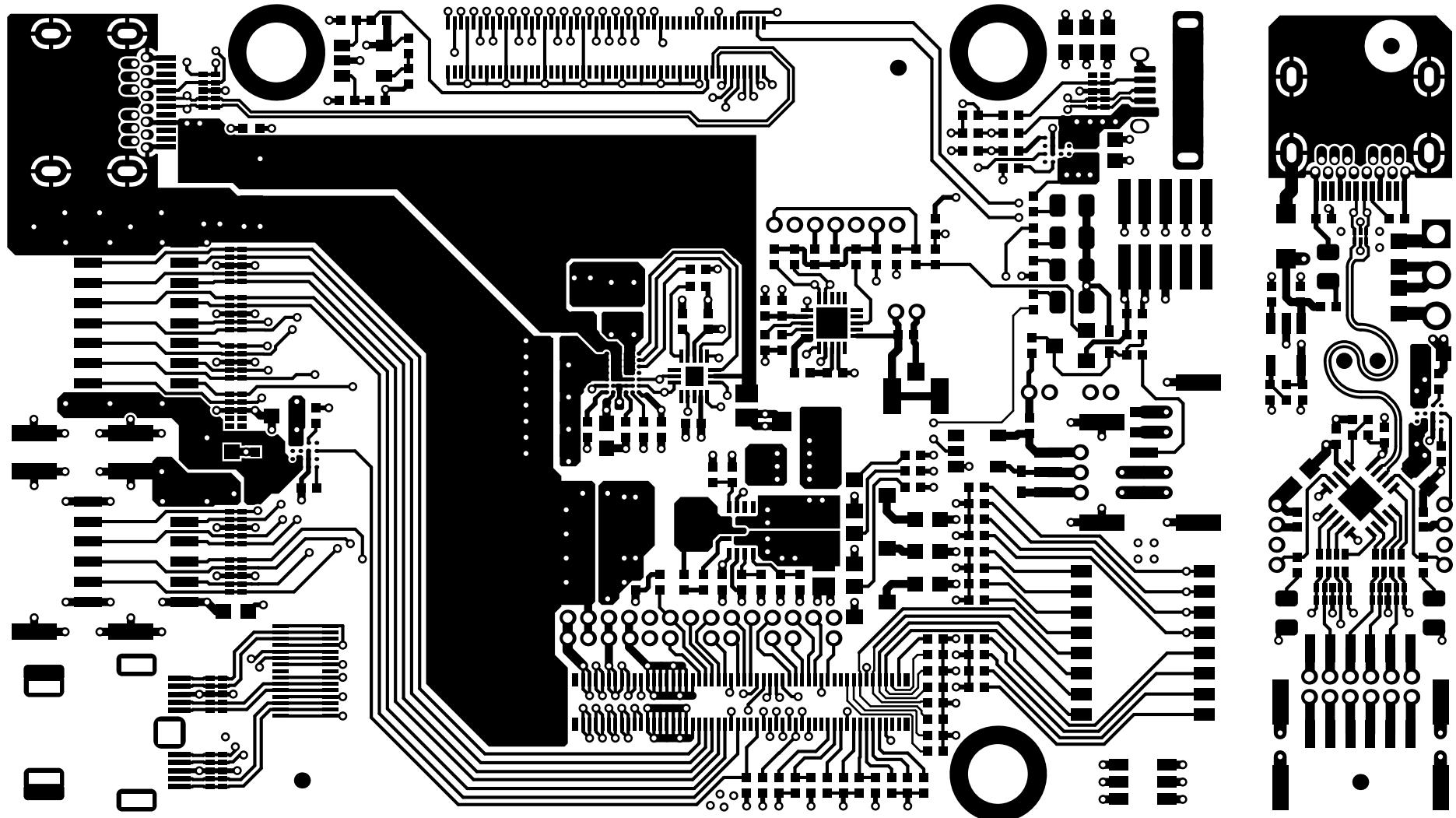
ASSEMBLY BOTTOM (MIRRORED)

TF42

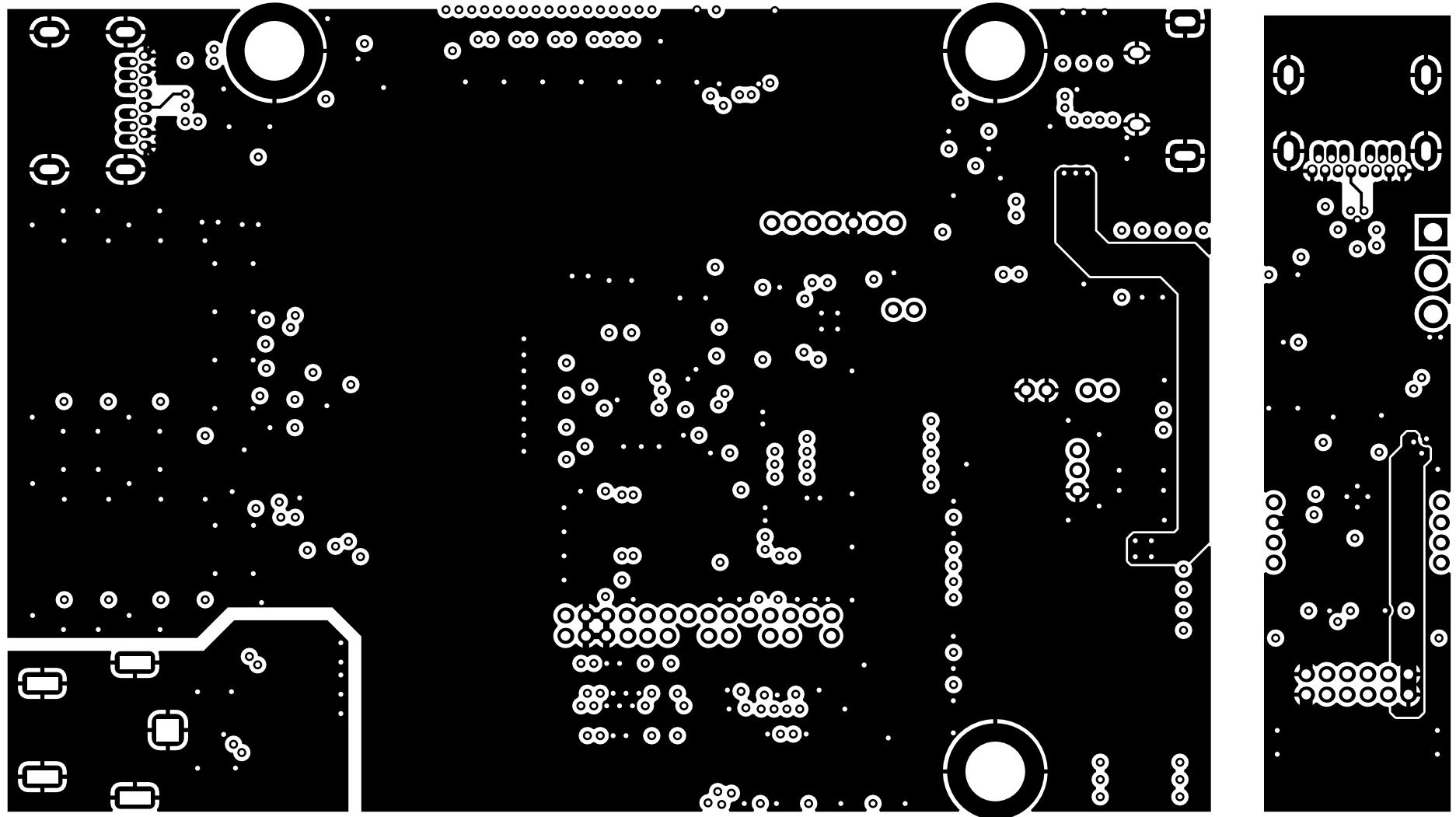
TF43

TF44

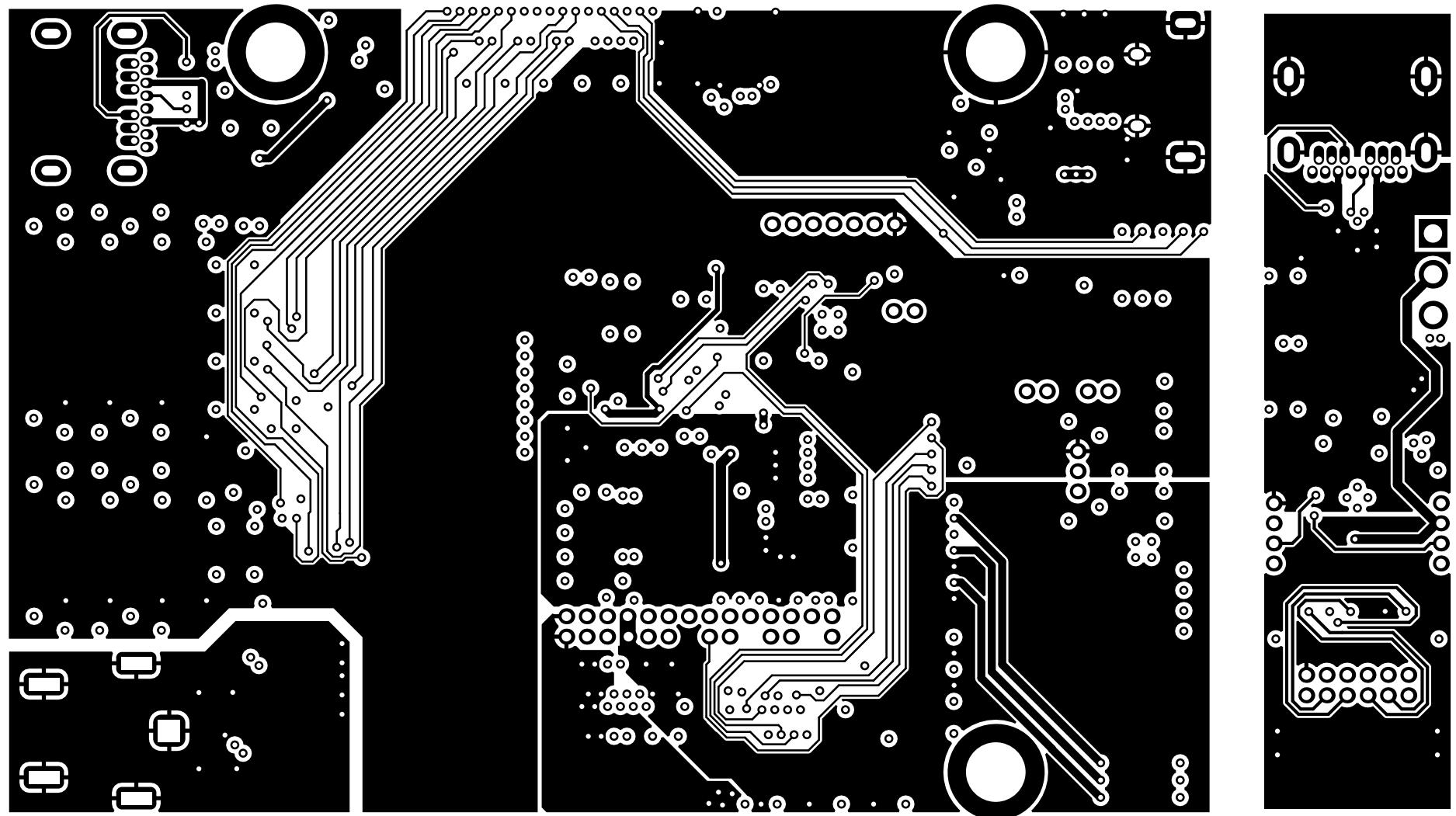
TF45



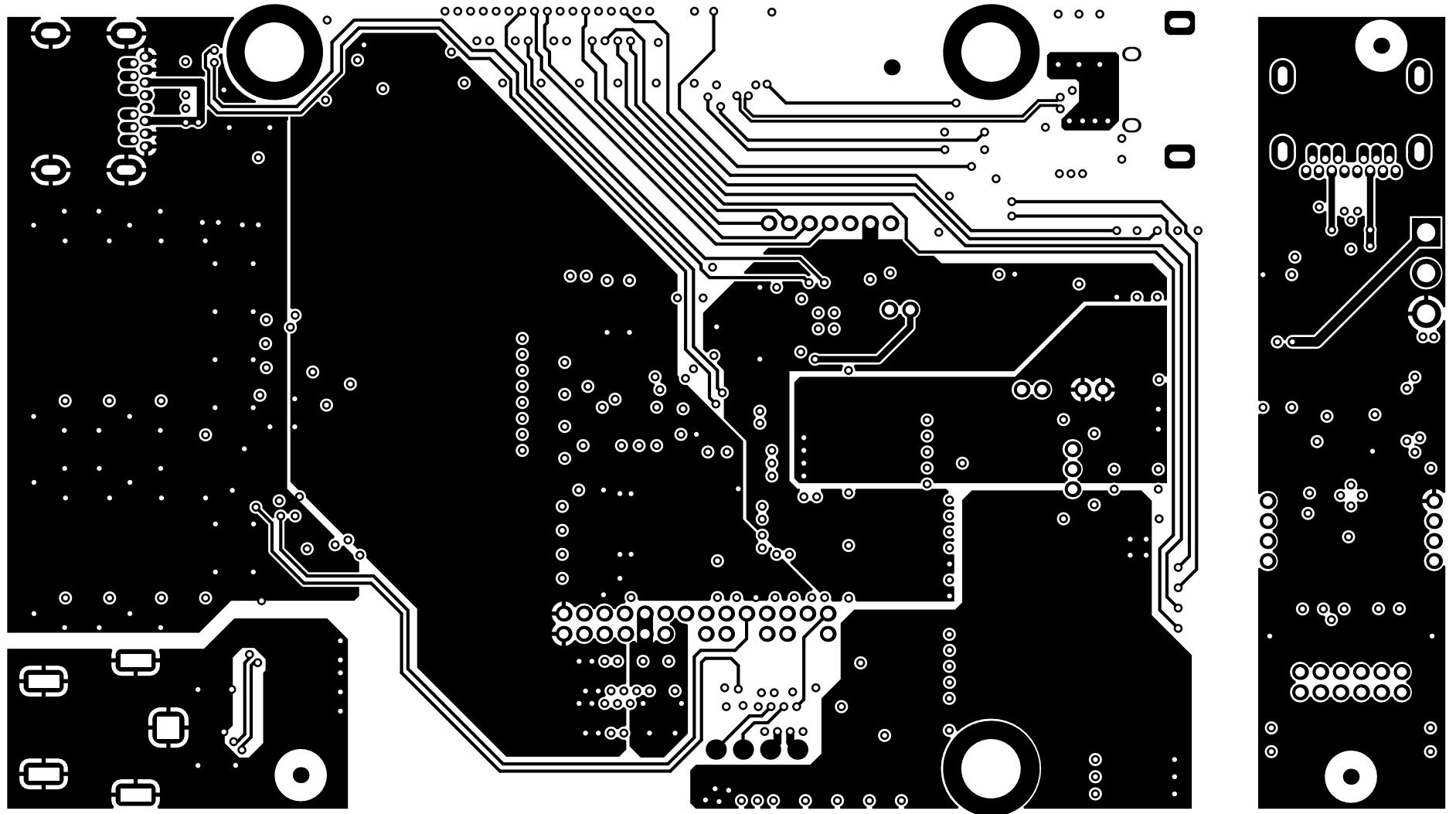
LAYER1 - TOP



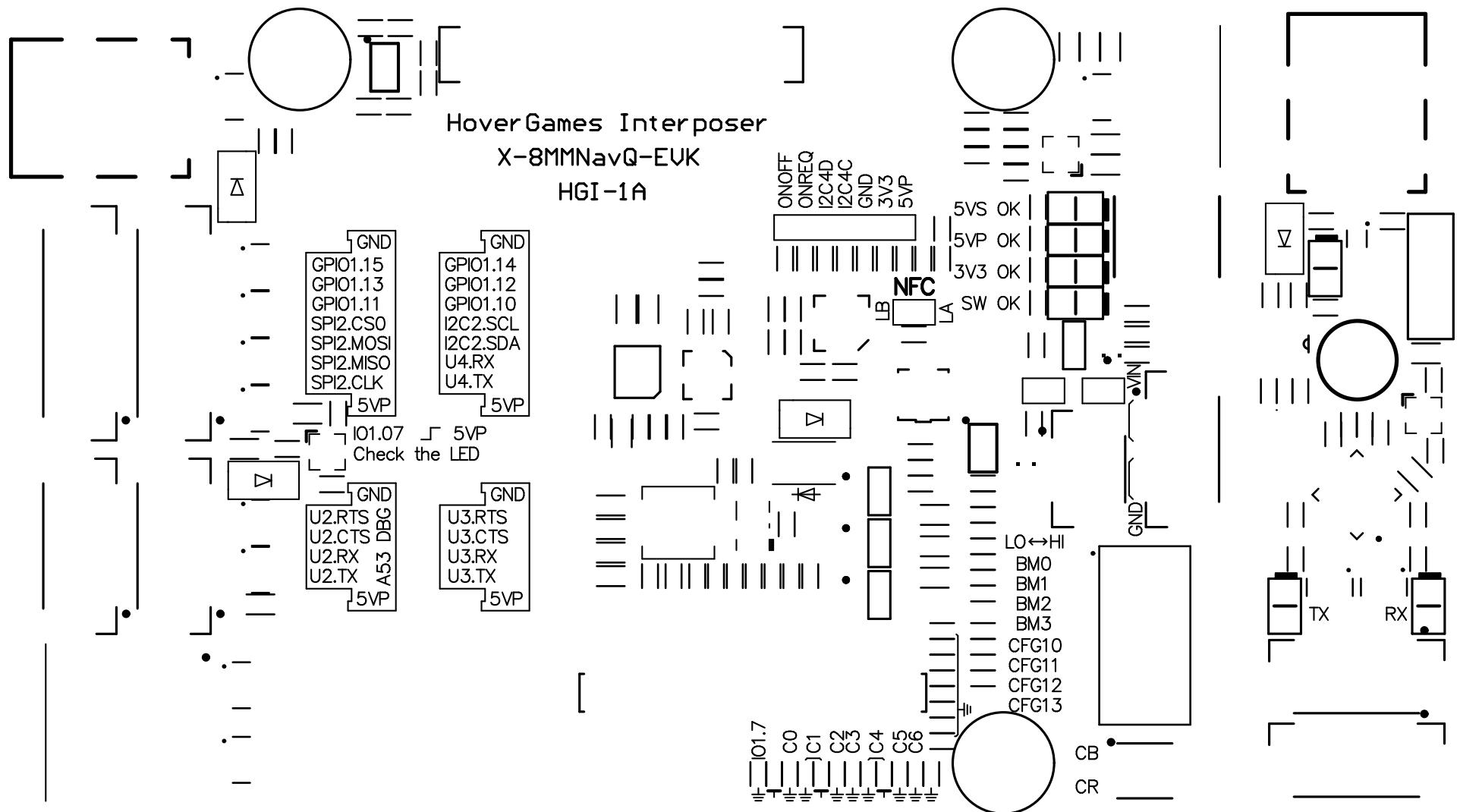
LAYER 2 - GROUND PLANE



LAYER 3 - POWER PLANE



LAYER 4 - BOTTOM LAYER



SILKSCREEN TOP

SILKSCREEN BOTTOM

USB IN

SPI

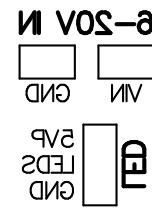
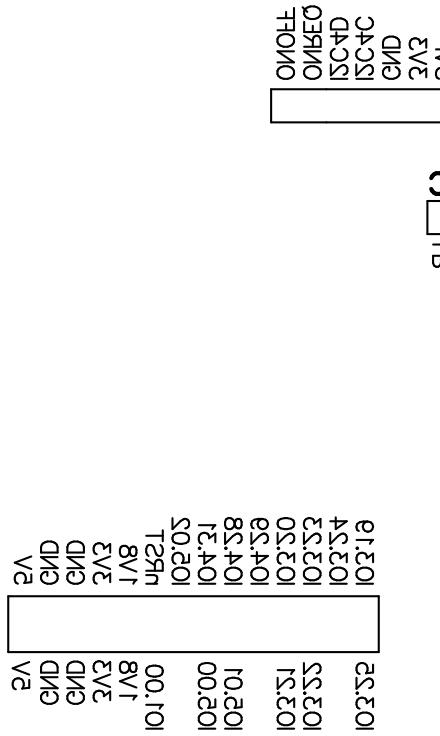
UART

Ethernet

UART

SPI

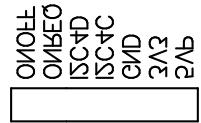
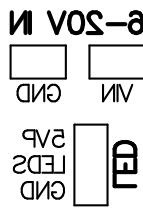
USB IN



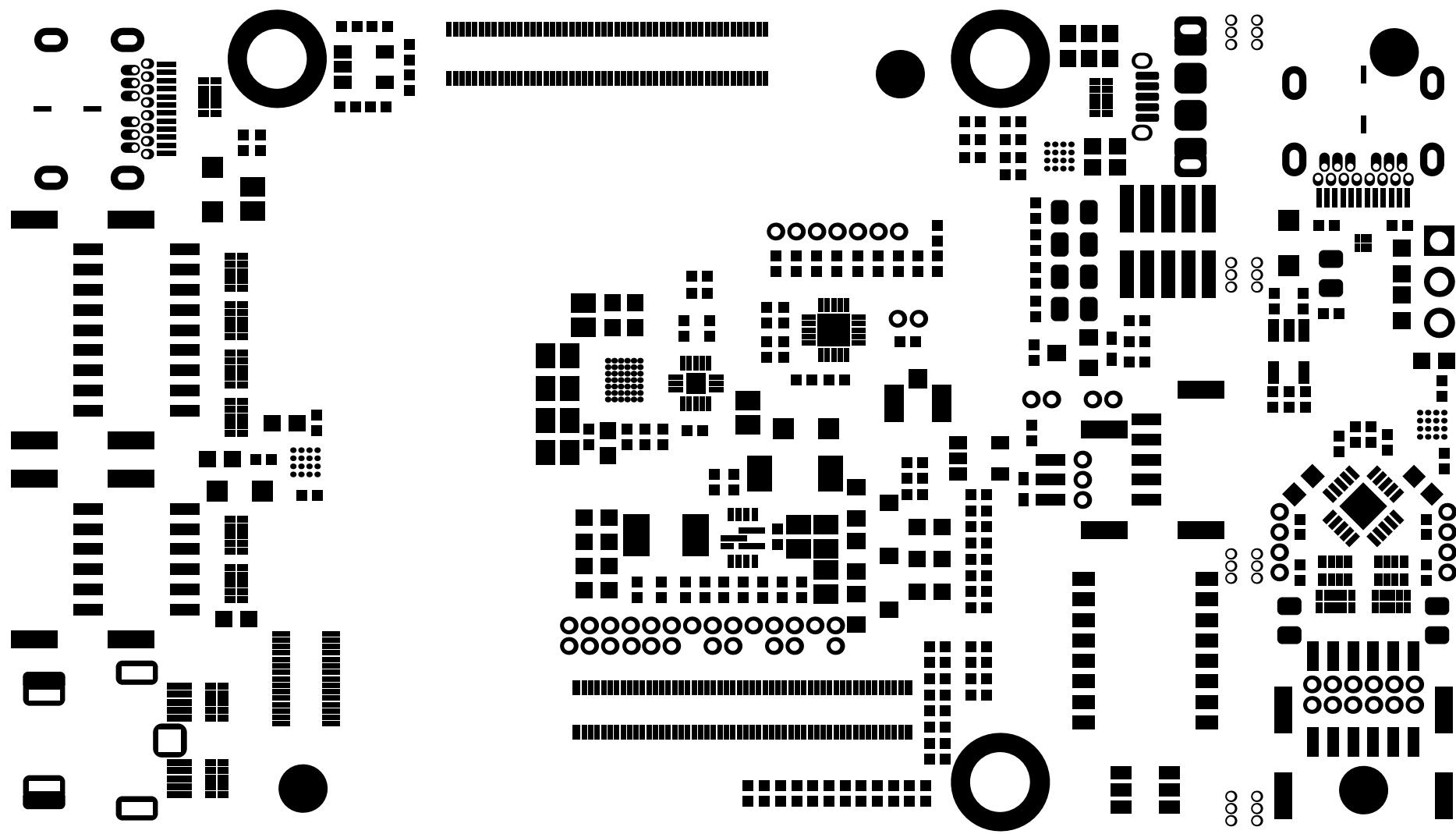
USB

JTAG

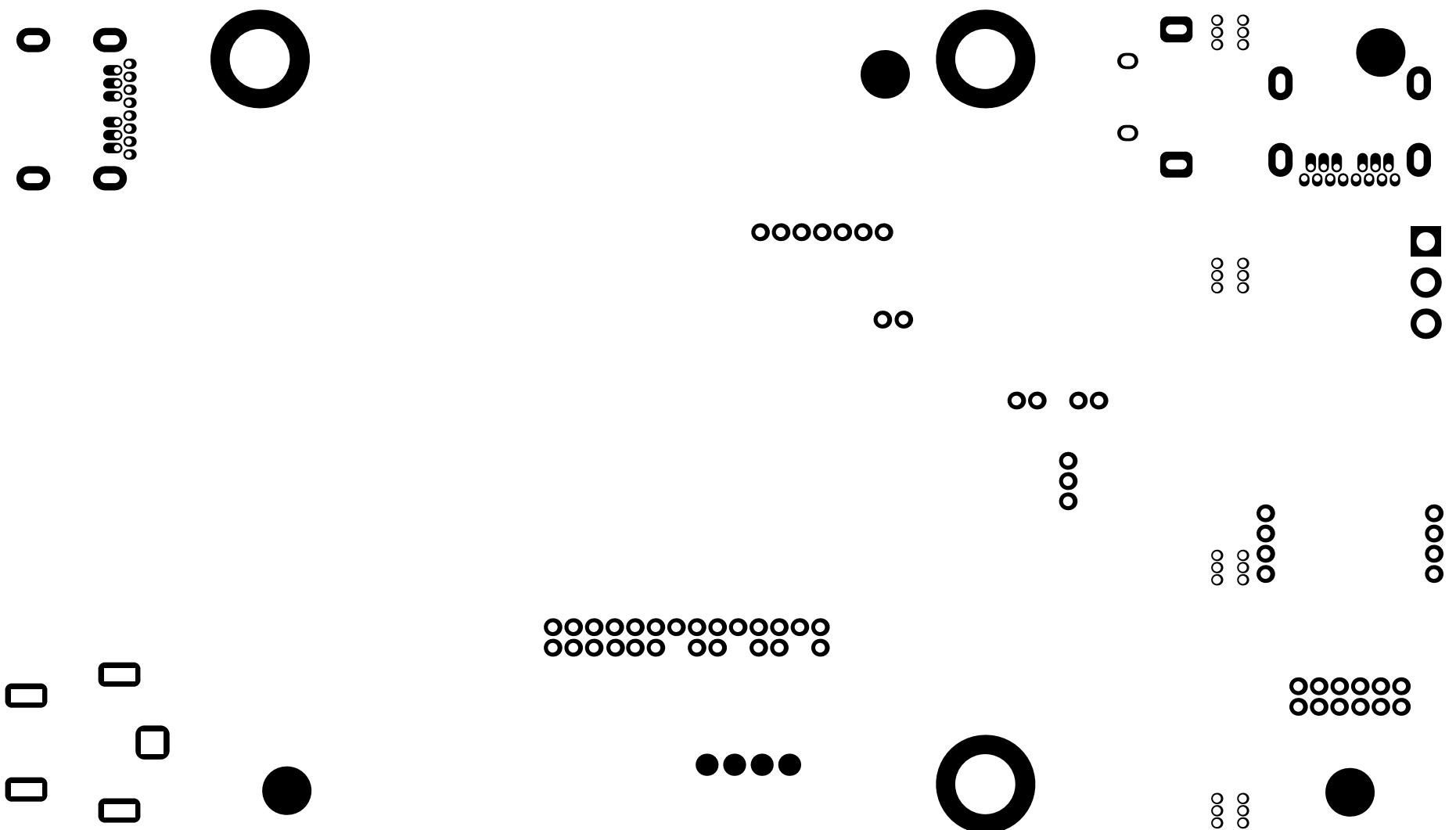
RESET MODE BOOT



3V3 GND
CBUS2 GND
CBUS3 GND
IO GND
1V8 GND
3V3 V_C
CMD RxD TxD SxD RxD TxD SxD
C12 RxD TxD SxD RxD TxD SxD
GND RxD TxD SxD RxD TxD SxD



MASK TOP



MASK BOTTOM

Description	Quantity	ManType	Manufacturer	Designator	Notes
RND STANDOFF M2.5X0.45 STEEL 3MM	3	9774030151R	Würth Elektronik	BH1, BH2, BH3	
CAP CER 10UF 6.3V X5R 0603	17	885012106006	Würth Elektronik	C1, C2, C3, C6, C8, C11, C12, C22, C24, C30, C33, C37, C38, C43, C45, C42, C48	
CAP CER 0.1UF 25V X5R 0402	12	885012105018	Würth Elektronik	C4, C23, C27, C36, C40, C42, C46, C44, C45, C46, CA32, CA33	
CAP CER 1000PF 35V X7R 0402	2	C1005X7R1V103K050BB	TDK Corporation	C5, C25	
CAP CER 1000PF 50V COG/NPO 0402	3	GRM155C1H102J01D	Murata Electronics	C7, C26, C47	
CAP CER 22UF 35V JB 0805	10	C2012B1V226M125AC	TDK Corporation	C9, C10, C17, C18, C20, C21, C29, C34, C35, C39	
CAP CER 2.2UF 10V X5R 0402	3	885012106013	Würth Elektronik	C13, C14, C28	
CAP CER 0.22UF 6.3V X7R 0402	3	CL056224KQ5NNWC	SAMSUNG	C15, C16, C19	
CAP CER 1uf 10% 10V 0402 X5R	2	885012105012	Würth Elektronik	C31, C41	
CAP CER 1000PF 35V X7R 0402	4	C1005X7R1V103K050BB	TDK Corporation	C32, C47, C48, C49	
CAP CER 0.22UF 16V X5R 0402	1	885012105017	Würth Elektronik	C44	
CAP CER 1UF 10V X5R 0402	2	885012105012	Würth Elektronik	CA1, CA3	
CAP CER 12PF 50V 5% NPO 0402	1	CC0402JRNP098N120	Yageo	CP1	
TVS DIODE 20VWM 32.4VC SOD123W	2	PTVS20VS1UR.115	Nexperia USA Inc.	D1, D2	
DIODE SCHOTTKY 60V 3A SOD128	1	PMEG6030EPLX	Nexperia USA Inc.	D3	
TVS DIODE 5V 9.2V CFP3	2	PTV5V051UR.115	Nexperia USA Inc.	D4, DA1	
LED RGB CLEAR 6PLCC SMD	1	150533MT153300	Würth Elektronik	D5	
LED GREEN CLEAR 0805 SMD	4	150080G5T5000	Würth Elektronik	DS1, DS2, DSA1, DSA3	
LED RED CLEAR 0805 SMD	2	150080R5T5000	Würth Elektronik	DS3, DSA2	
LED BLUE CLEAR 0805 SMD	1	150080B5T5000	Würth Elektronik	DS4	
	8			FID1, FID2, FID3, FID4, FID5, FID6, FID7, FID8	DNP
CONN RCPT 100POS SMD GOLD	1	DF40HC(3.0)-100DS-0.4V(58)	Hirose Electric Co Ltd	J1	
CONN RCP USB3.1 TYPEC 24P SMD RA	2	632723300011	Würth Elektronik	J2, JA1	
CONN HEADER SMD 9POS 1.25MM	2	BM098-GHS-TBT(LF)(SN)(N)	JST Sales America Inc.	J3, J4	
CONN U.FL RCPT STR 50 OHM SMD	1	U.FL-R-SMT-1(10)	Hirose Electric Co Ltd	J5	
CONN HEADER SMD 5POS 1.25MM	1	BM05B-GHS-TBT(LF)(SN)(N)	JST Sales America Inc.	J6	
CONN HEADER SMD 6POS 1.25MM	1	BM05B-GHS-TBT(LF)(SN)(N)	JST Sales America Inc.	J7	
CONN HEADER SMD 6POS 1.25MM	3	BM06B-GHS-TBT(LF)(SN)(N)	JST Sales America Inc.	J8, J9, JA3	
CONN RCPT 30POS SMD GOLD	1	DF40HC(3.0)-30DS-0.4V(51)	Hirose Electric Co Ltd	J10	
HARTING IX INDUSTRIAL JACK, 10P1	1	109452812560	HARTING	J11	
CON 2X50 PLUG SHRD SMT 0.4MM SP 51H AU	1	DF40C-100DP-0.4V(51)	Hirose	J12	
CONN HEADER VERT 3POS 2.54MM	1	61300311121	Würth Elektronik	JA2	DNP
FERRITE BEAD 120 OHM 0603 1LN	1	SM06B-GHS-TB(LF)(SN)	JST Sales America Inc.	JA4	
FIXED IND 1.5UH 4.9A 46 MOHM	1	1742792625	Würth Elektronik	L1	
FERRITE BEAD 120 OHM 0402 1LN	1	7427927311	Würth Elektronik	L36, L37	
FERRITE BEAD 120 OHM 0603 1LN	1	1742792625	Würth Elektronik	LA1	DNP
FERRITE BEAD 120 OHM 0603 1LN	1	1742792625	Würth Elektronik	LA2	
Conn Micro USB Type AB RCP 5 POS 0.65mm Solder RA SMD 5 Terminal 1 Port T/R	1	1629105150921	Würth Elektronik	P1	
CONN HEADER 10POS DUAL VERT	1	FTSH-105-01-F-DV-K	Samtec	P2	DNP
MOSEFT N-CH 40V 360mA TO-236AB	4	BS5138P215	Nexperia USA Inc.	Q1, Q2, Q3, Q4	
RES SMD 19.6K OHM 1% 1/16W 0402	6	RC0402FR-0719K6L	Yageo	R1, R7, R9, R12, R23, RA5	
RES SMD 10K OHM 0.5% 1/16W 0402	4	RR0510P-103-D	Susumu	R2, R8, R10, R39	
RES SMD 1.2M OHM 1% 1/16W 0402	1	RMCO402FT1M20	Stackpole Electronics Inc.	R3	
RES SMD 249K OHM 1% 1/16W 0402	2	RC0402FR-07249KL	Yageo	R4, R6	
RES SMD 1M OHM 1% 1/16W 0402	1	RC0402FR-071ML	Yageo	R5	
RES SMD 19.6K OHM 1% 1/16W 0402	1	RC0402FR-0719K6L	Yageo	R11	DNP
RES 5.1K OHM 1% 1/16W 0402	9	RMCF0402FT5K10	Stackpole Electronics Inc.	R13, R14, R20, R22, RA1, RA2, RA4, RA9, RA10	
RES 10K OHM 1/16W 5% 0402	25	RMCF0402JT10K0	Stackpole Electronics Inc	R15, R16, R17, R18, R24, R36, R37, R43, R44, R46, R48, R50, R52, R57, R58, R61, R65, R69, R70, R72, R88, R89, RA3, RA8	
RES 10K OHM 1/16W 5% 0402	1	RMCF0402JT10K0	Stackpole Electronics Inc	R21	DNP
RES SMD 24 OHM 1% 1/16W 0402	3	RC0402FR-0724RL	Yageo	R25, R28, R29	
RES SMD 100K OHM 1% 1/10W 0402	2	ERJ-2RKF1003X	Panasonic Electronic Components	R26, R41	
RES SMD 100K OHM 1% 1/10W 0402	1	ERJ-2RKF1003X	Panasonic Electronic Components	R27	DNP
RES, 100K, 1%, 1/10W, 0402	20	ERJ-2RKF1003X	Panasonic Electronic Components	R30, R31, R33, R34, R45, R47, R49, R51, R53, R54, R55, R56, R59, R60, R62, R63, R64, R66, R67, R68	
Res Thick Film 0603 150 Ohm 1%	3	CRCW0603150RFKEAC	Vishay Dale	R32, R35, R42	
Res. 0402, 1%, 10R, 1/16W	1	RC0402JR-0710RL	Yageo	R38	
RES SMD 75K OHM 0.5% 1/16W 0402	1	RT0402DR075KU	Yageo	R40	
RESISTOR TF 270 OHM 1% 0.0625W 0402	2	RMCF0402FT270R	Stackpole Electronics Inc.	R71, R74	
RESISTOR TF 270 OHM 1% 0.0625W 0402	1	RMCF0402FT270R	Stackpole Electronics Inc	R73	DNP
RES SMD 97.6K OHM 1% 1/16W 0402	1	RMCF0402FT97K6	STACKPOLE	R46	
RES SMD 23.2K OHM 1% 1/16W 0402	1	RC0402FR-0723K2L	YAGEO	R47	
Resistors pack 2010 (0804 Imperial) convex	2	CRA0450833RQJTD	Vishay/Dale	RNA1, RNA2	
SWITCH SLIDE DIP SPST 25MA 24V	1	1416131160808	Wurth Electronics	S1	
Round Test Point 1mm	65			TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP12, TP13, TP14, TP15, TP16, TP17, TP18, TP19, TP20, TP21, TP22, TP23, TP24, TP25, TP26, TP27, TP28, TP29, TP30, TP31, TP32, TP33, TP34, TP35, TP36, TP37, TP38, TP39, TP40, TP41, TP42, TP43, TP44, TP45, TPA1, TPA2, TPA3, TPA4, TPA5, TPA6, TPA7, TPA8, TPA9, TPA10, TPA11, TPA12, TPA13, TPA14, TPA15, TPA16, TPA17, TPA18, TPA19, TPA20	
TVS DIODE 5V 14V SOD523	2	PESD5V05IBB.115	Nexperia USA Inc.	TV1, TV2	
IC COMPARATOR RRIIQL SOT23-5	1	TLV3201ADBV	Texas Instruments	U1	
TVS DIODE 3.3V 5V DFN2510A-10	12	PUSP3AB4Z	Nexperia USA Inc.	U2, U3, U5, U6, U8, U11, U15, U16, U17, U18, UA5, UA6	
IC PWR SWITCH P-CHAN 1:1 16WLCS	3	NX593290UQZ	NXP USA Inc.	U4, U13, UA3	
IC PLUG AND TRUST SECURE ELEMENT 1.62-3.6V HX20FN20	1	SE050C2HQ1/20V13	NXP SEMICONDUCTORS	U7	
IC PWR SWITCH 1:1 42WLCS	1	NX20P3483UQAZ	NXP USA Inc.	U9	
IC INTERFACE SPECIALIZED 16HX20FN	1	PTN5110H0Z	NXP USA Inc.	U10	
IC INVERTER SCHMITT 1CH 5T5OP	1	74LV1C1G14GV.125	Nexperia USA Inc.	U12	
IC REG BUCK ADJUSTABLE 8A 120FN	1	MP8759GD-Z	Monolithic Power Systems Inc.	U14	
TVS DIODE 5.5V 6XSON SOT886	1	PTRT59V0L2F.115	Nexperia USA Inc.	U4A	
IC REG LIN POS ADJ 150MA SOT23-5	1	TPS73101DBVR	Texas Instruments	UA2	
IC USB SERIAL FULL UART 20OFN	1	FT231XQ-R	FTDI, Future Technology Devices International Ltd	UA4	