

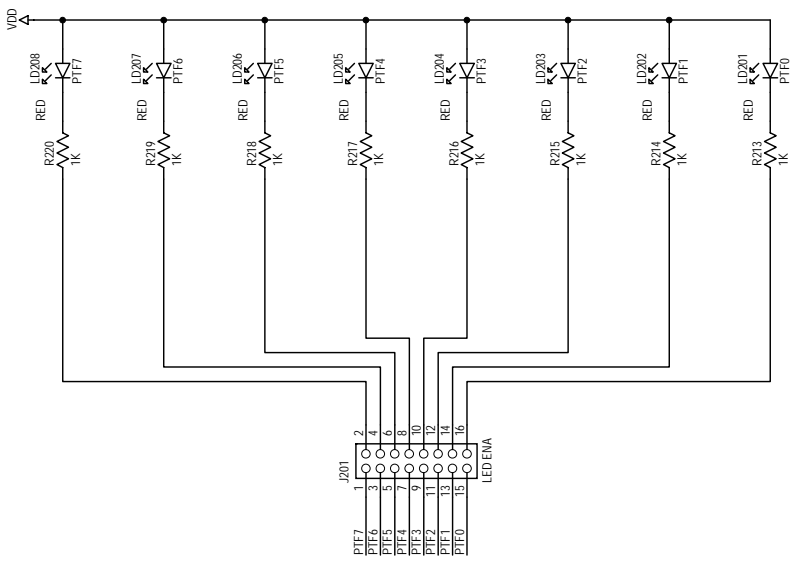
# **ZK-HC08LX-A**

## **Schematic and Bill of Material**

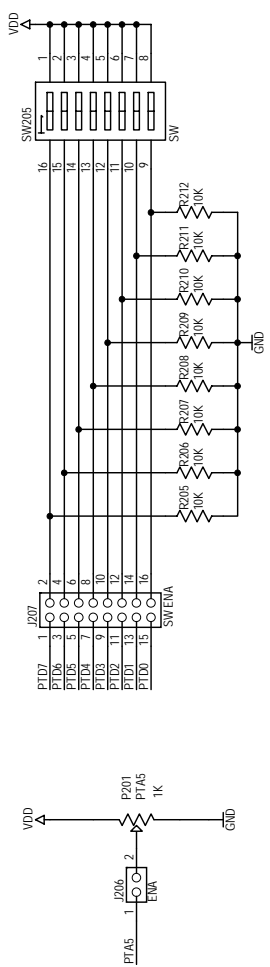


FP1	15	2X07F7E7D	6X6F6E6D	7	PT6
FP2	16	1U0U1K1N	5U5J5K5N	8	PT7
FP3	21	1A7B1C1D	5A5B5C5D	29	PT0
FP4	22	1H1G1U1M	5H4G5L5M	30	IGT_P1C1
FP5	13	3X2F2E2D	7X6F6E6D	5	PTC2
FP6	14	2U2K2N	6U6K6N	6	PTC3
FP7	23	2A2B2C2D	6A6B6C6D	31	PTC4
FP8	24	2H2G2L2M	6H6G6L6M	32	PTC5
FP9	11	4X3F3E3D	8X7F7E7D	3	PTC6
FP10	12	3U3K3N	7U7K7N	4	PTC7
FP11	25	3A3B3C3D	7A7B7C7D	33	FP27
FP12	26	3H3G3L3M	7H7G7L7M	34	FP28
PT6	9	5X4F4E4D	9X8F8E8D	1	FP29
PT7	10	4U4K4N	8U8K8N	2	FP30
PT8	27	4A4B4C4D	8A8B8C8D	35	FP31
PT9	28	4H4G4L4M	8H8G8L8M	36	FP32
COM1				20	BP0
COM2				19	BP1
COM3				18	BP2
COM4				17	FP0

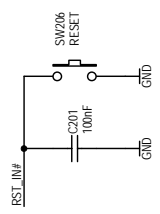
VIN878-DP-RC-SHV



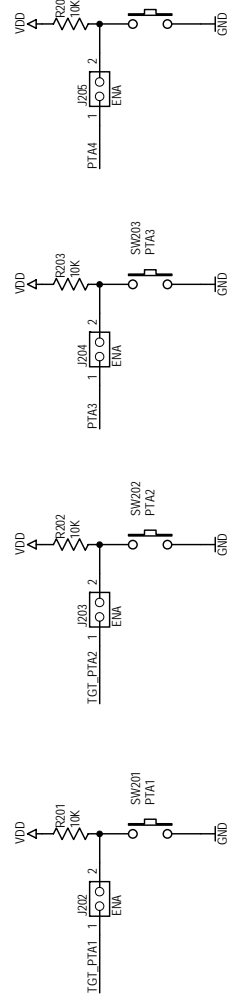
OUTPUTS

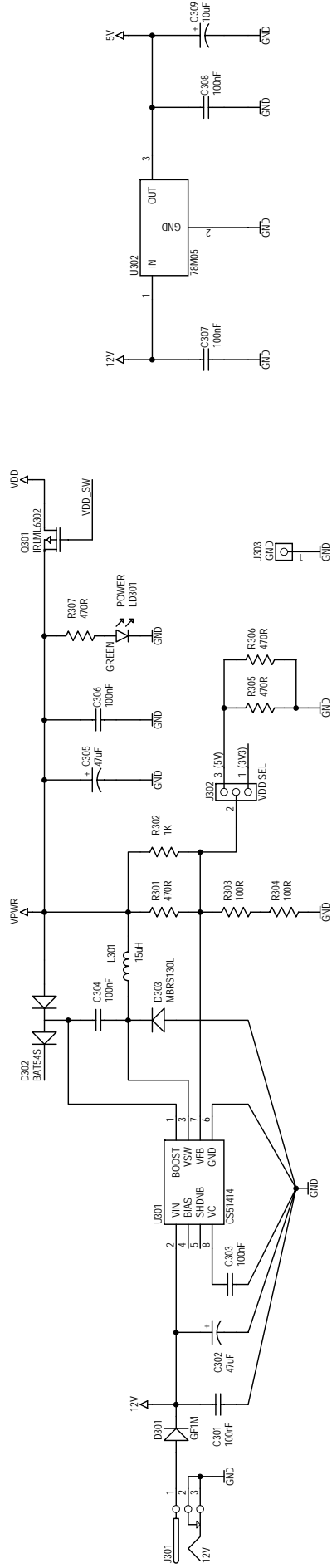


INPUTS

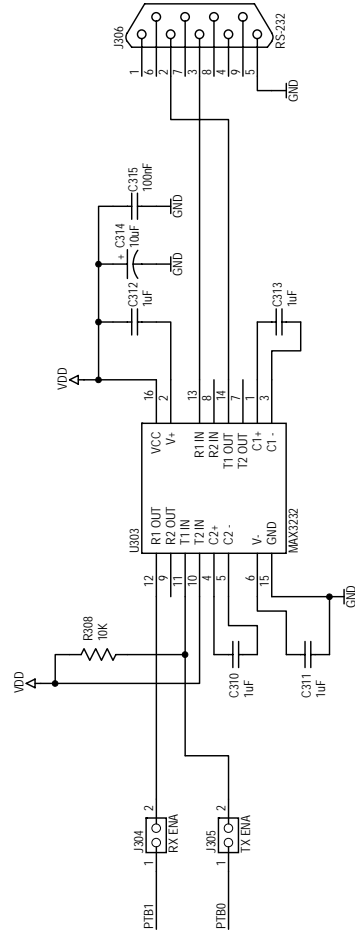


RESET





**POWER SUPPLY**



RS-232



# ZK-HC08LX-A Bill of Material

Qty	Description	Ref. Designators	Vendor Part#
<b>Capacitors</b>			
18	Ceramic Capacitor 100nF X7R 50V 0805	C101, C104, C105, C108, C109, C201, C301, C303, C304, C306, C307, C308, C315, C403, C404, C406, C408, C409	Walsin, 0805B104K500CT
1	Ceramic Capacitor 10nF X7R 50V 0805	C106	Walsin, 0805B103K500CT
4	Ceramic Capacitor 1uF X7R 25V 0805	C310, C311, C312, C313	Walsin, 0805B105K250CT
1	Ceramic Capacitor 22nF X7R 50V 0805	C107	Walsin, 0805B223K500CT
4	Ceramic Capacitor 22pF NP0 50V 0805	C110, C111, C401, C402	Walsin, 0805N220K500CT
6	Tantalum Capacitor 10uF 16V size B	C102, C103, C309, C314, C405, C407	NIC Components, NTC-T106M16TRBF
2	Tantalum Capacitor 47uF 16V (low ESR) size D	C302, C305	NIC Components, NTC-L476M16TRD
<b>Connectors</b>			
1	AMP MODU II Connector AMP 2X1 male 180° PCB solder 2-way	J112	AMP, 280370-1
1	DC Power Connector 2.1 mm male 90° PCB mounting	J301	Samar, 22HP037
1	D-Sub Connector 9 pin female 90°	J306	Coxoc, 205A-09FSTUBE3
4	Header Connector 10x2 pin male gold straight 6mm pitch 2,54mm	J101, J102, J103, J104	Coxoc, 307A-080GBSAA3
1	Header Connector 1x1 pin male gold straight 6mm pitch 2,54mm	J109	Coxoc, 307A-040GASAA3
8	Header Connector 2x1 pin male gold straight 6mm pitch 2,54mm	J105, J202, J203, J204, J205, J206, J304, J305	Coxoc, 307A-040GASAA3
3	Header Connector 3x1 pin male gold straight 6mm pitch 2,54mm	J107, J108, J302	Coxoc, 307A-040GASAA3
1	Header Connector 6x2 pin male gold straight 6mm pitch 2,54mm	J402	Coxoc, 307A-080GBSAA3
4	Header Connector 8x2 pin male gold straight 6mm pitch 2,54mm	J110, J111, J201, J207	Coxoc, 307A-080GBSAA3
2	PCB Terminal Connector black hole size 1,32mm 1-pin	J106, J303	William Hughes, 100-103
32	Shunt jumper 2,54mmmm totally insulated black pitch 2,54mm		Coxoc, 308A02PGBA003
2	Socket Connector female 18x1 gold straight solder h=4,2mm pitch 2,54mm		Preci-dip, 310-13-120-41-001001
1	USB Connector Receptacle Type B 90°	J401	Coxoc, 317A-04PSB0003
<b>Crystals</b>			
1	SMD Crystal 12MHz HC-49USMD (11x5x3)	Y401	Megatec, HC49/USM4-012M000000CR
1	SMD Crystal 32.768KHz (8X3.8) 4-pin	Y101	Citizen, CM200S-032K768000AS
<b>Diodes</b>			
1	Rectifier Diode GF1M SMA	D301	Fairchild Semiconductor, GF1M
3	Schottky Diode BAT54S SOT23	D101, D302, D401	Philips, BAT54S
1	Schottky Diode MBRS130L SMB	D303	On Semiconductor, MBRS130LT3G
1	Zener Diode BZX84 8.2V 1/4W SOT23	D402	Philips, BZX84-A8V2
<b>Displays</b>			
1	LCD 14-Segments Display 8 Digits 36-pin	LCD201	Varitronix Limited, VIM-878-DP-RC-S
<b>Inductors</b>			
1	SMD Inductor 10uH 150mA 1210	L101	TDK, NL322522T-100J
1	SMD Inductor 15uH 1,47A 2-pin	L301	Würth, 744777115
<b>Integrated Circuits</b>			
1	IC Microcontroller MC9S12UF32 LQFP64	U401	Freescale, MC9S12UF32PB
1	IC Transceiver RS-232 MAX3232 SOIC16	U303	STMicroelectronics, ST3232CD

Qty	Description	Ref. Designators	Vendor Part#
1	IC Voltage Regulator CS51414 SOIC8	U301	On Semiconductor, CS51414G
1	IC Voltage Regulator LM78M05 5V TO252 (DPAK)	U302	National Semiconductor, LM78M05CDT
<b>LEDs</b>			
1	SMD LED Green 1206	LD301	Agilent Technologies, HSMG-C150
8	SMD LED Red 1206	LD201, LD202, LD203, LD204, LD205, LD206, LD207, LD208	Agilent Technologies, HSMH-C150
<b>Oscillators</b>			
1	PTH Oscillator Module 8 MHz DIL8		Megatec, DH2100S
<b>Potentiometers</b>			
1	Potentiometer 1K vertical adjust	P201	Phier, PT10MVP102A2020
<b>Resistors</b>			
1	SMD Resistor 1,5K 1% 0805	R403	Kamaya, RMC1/10K1501FTP
4	SMD Resistor 100K 1% 0805	R103, R407, R419, R426	Kamaya, RMC1/10K1003FTP
8	SMD Resistor 100R 1% 0805	R303, R304, R410, R411, R412, R413, R418, R427	Kamaya, RMC1/10K1000FTP
23	SMD Resistor 10K 1% 0805	R101, R105, R201, R202, R203, R204, R205, R206, R207, R208, R209, R210, R211, R212, R308, R406, R408, R414, R415, R416, R420, R423, R424	Kamaya, RMC1/10K1002FTP
2	SMD Resistor 10M 1% 0805	R102, R106	Kamaya, RMC1/10K1005FTP
10	SMD Resistor 1K 1% 0805	R213, R214, R215, R216, R217, R218, R219, R220, R302, R425	Kamaya, RMC1/10K1001FTP
1	SMD Resistor 1M 1% 0805	R405	Kamaya, RMC1/10K1004FTP
1	SMD Resistor 3,3K 1% 0805	R417	Kamaya, RMC1/10K3301FTP
2	SMD Resistor 33R 1% 0805	R401, R402	Kamaya, RMC1/10K33R0FTP
2	SMD Resistor 4,7K 1% 0805	R104, R409	Kamaya, RMC1/10K4701FTP
6	SMD Resistor 470R 1% 0805	R301, R305, R306, R307, R421, R422	Kamaya, RMC1/10K4700FTP
1	SMD Resistor 510R 1% 0805	R404	Kamaya, RMC1/10K5100FTP
<b>Sockets</b>			
1	IC Socket 4(8) pin tulip for oscillator module DIP4	U102	E-tec, COS-084-S001-01
1	ZIF IC Socket QFP80	U101	Yamaichi, IC51-0804-956-2
<b>Switches</b>			
1	DIP Switch PTH low profile 8 positions DIP16	SW205	Tyco, 2-1437586-6
5	Push Button SMD	SW201, SW202, SW203, SW204, SW206	Augat, FSM4JSMA
<b>Transistors</b>			
6	NMOS Transistor BSS138 SOT23	Q101, Q402, Q403, Q404, Q406, Q407	On Semiconductor, BSS138LT1G
3	PMOS Transistor IRLML6302 SOT23	Q301, Q401, Q405	International Rectifier, IRLML6302TRPBF