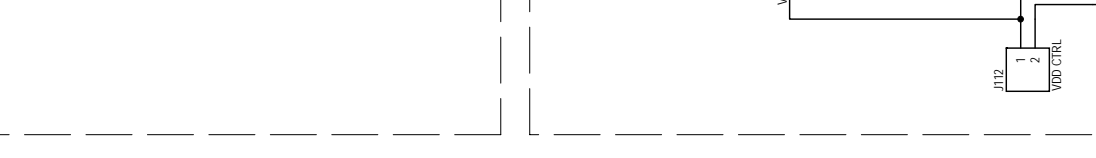
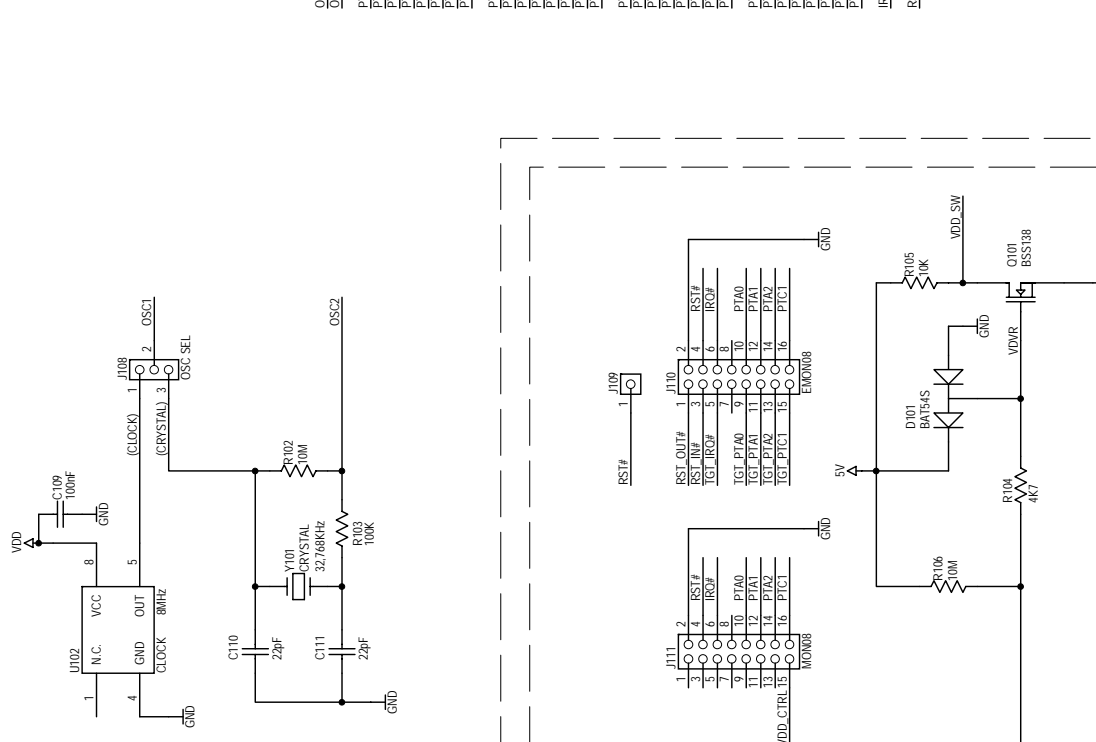
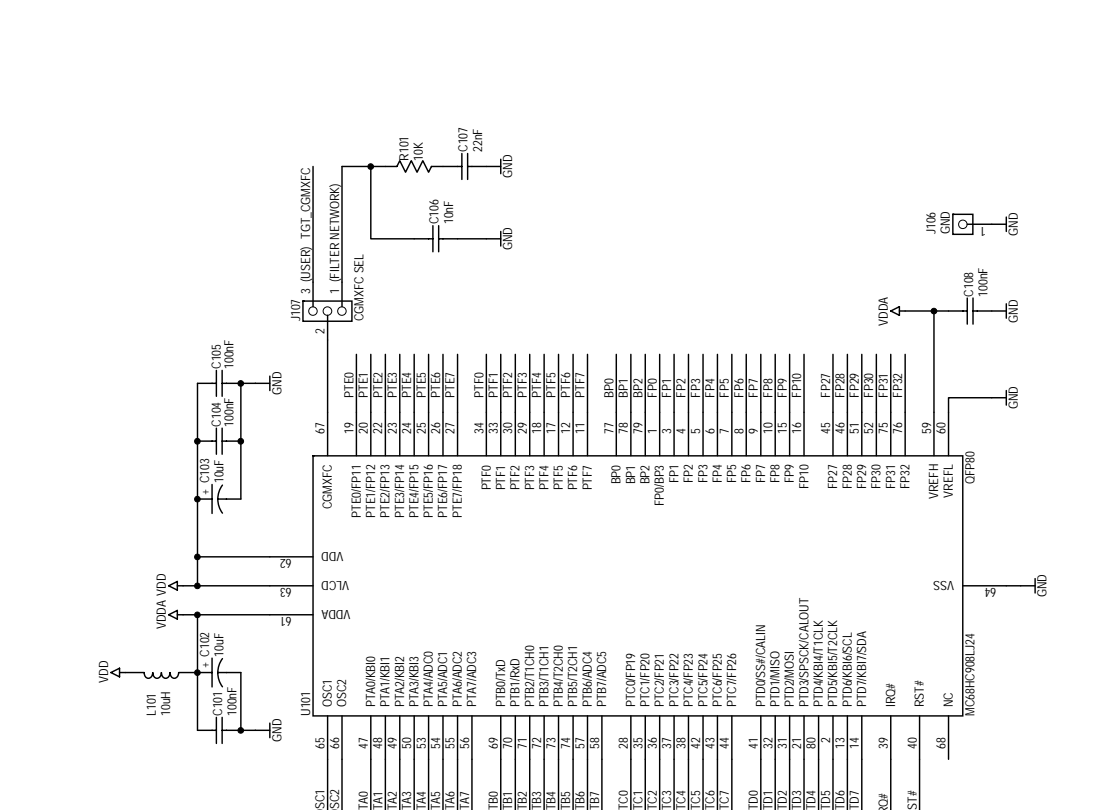
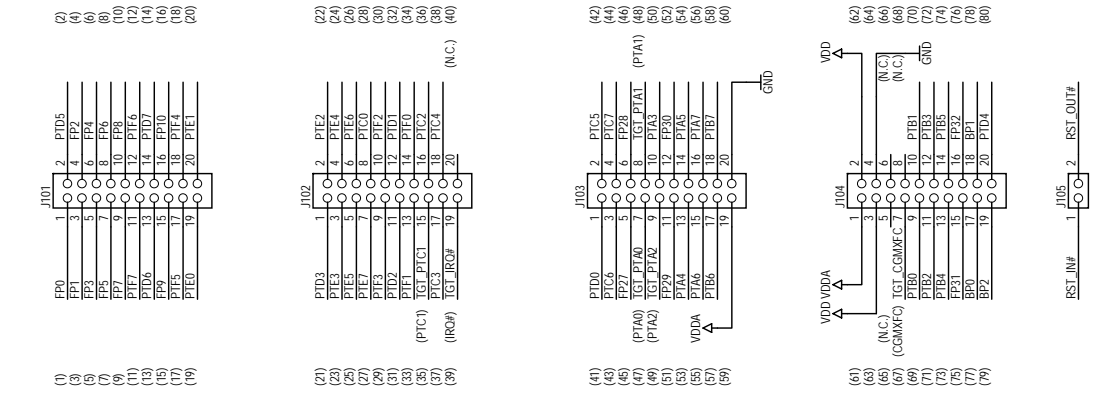


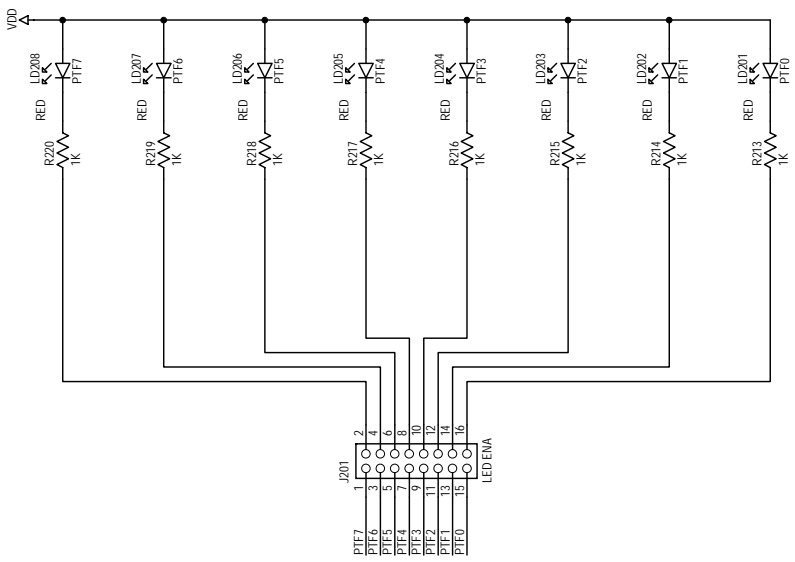
# **ZK-HC08LX-A**

## **Schematic and Bill of Material**



MCU

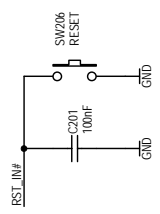
MON08 CONNECTORS



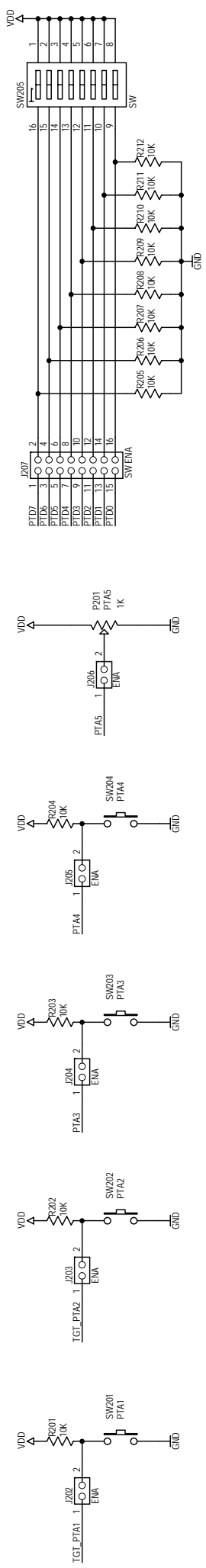
### OUTPUTS

LCD201	
FP1	15
FP2	16
FP3	21
FP4	22
FP5	13
FP6	14
FP7	23
FP8	24
FP9	11
FP10	12
FP11	25
FP12	26
FP13	9
FP14	10
FP15	27
FP16	28
FP17	7
FP18	8
FP19	29
FP20	30
FP21	5
FP22	6
FP23	31
FP24	32
FP25	3
FP26	4
FP27	33
FP28	34
FP29	1
FP30	2
FP31	35
FP32	36
FP33	20
FP34	19
FP35	18
FP36	17
FP37	COM1
FP38	COM2
FP39	COM3
FP40	COM4

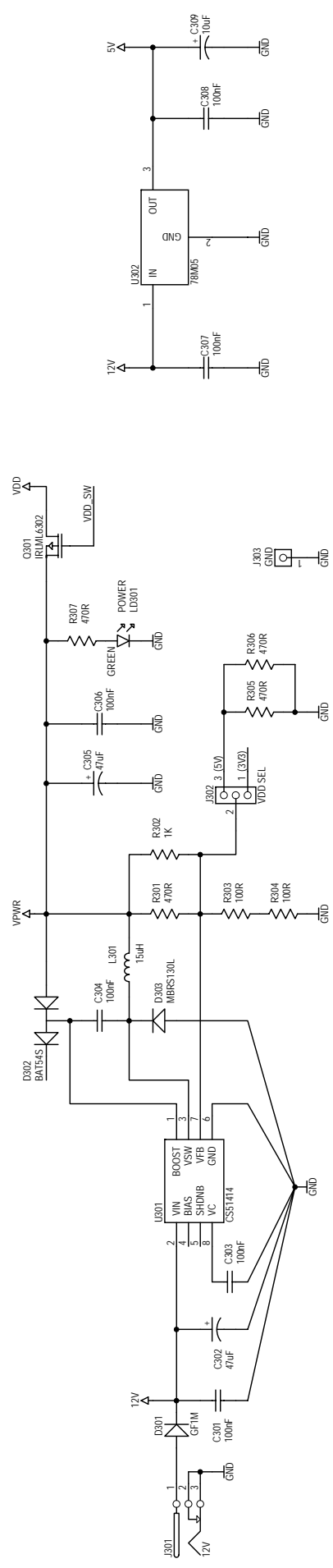
VIN878-DP-RC-SHV



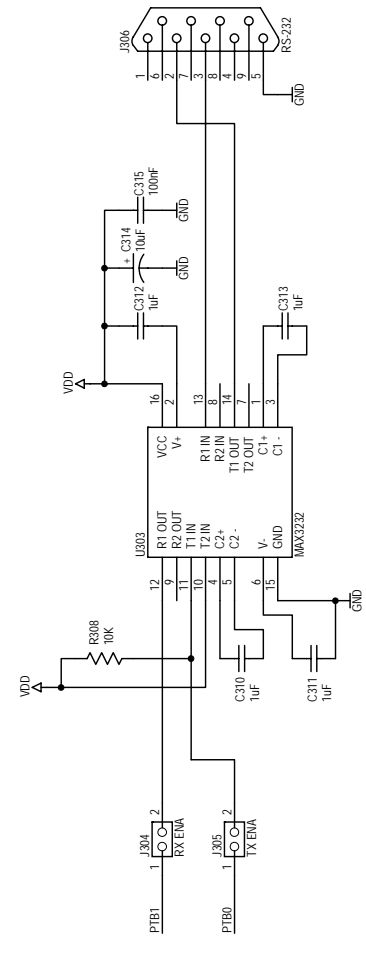
### RESET



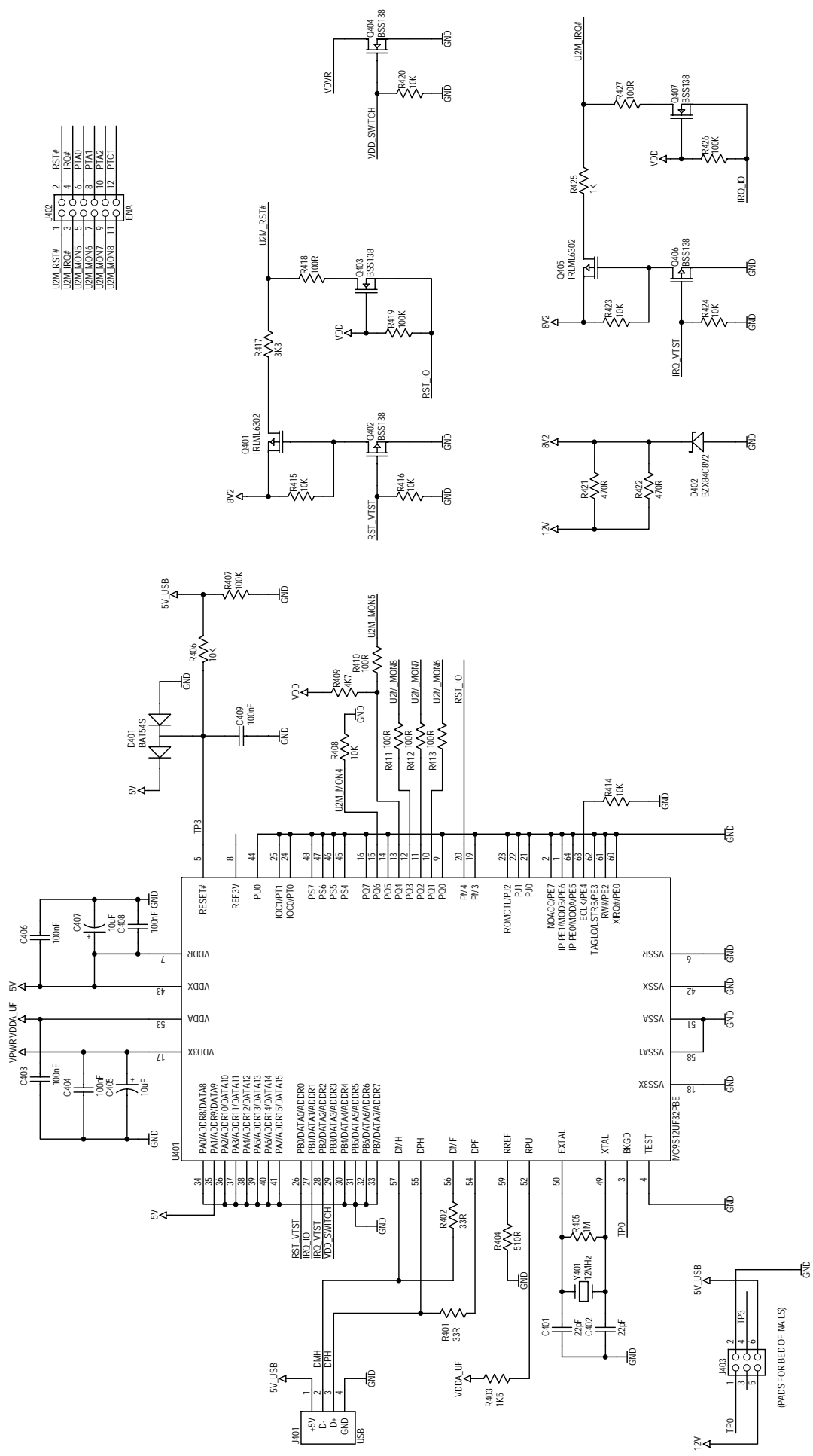
### INPUTS



### POWER SUPPLY



RS-232



USB TO MON08 INTERFACE

## 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