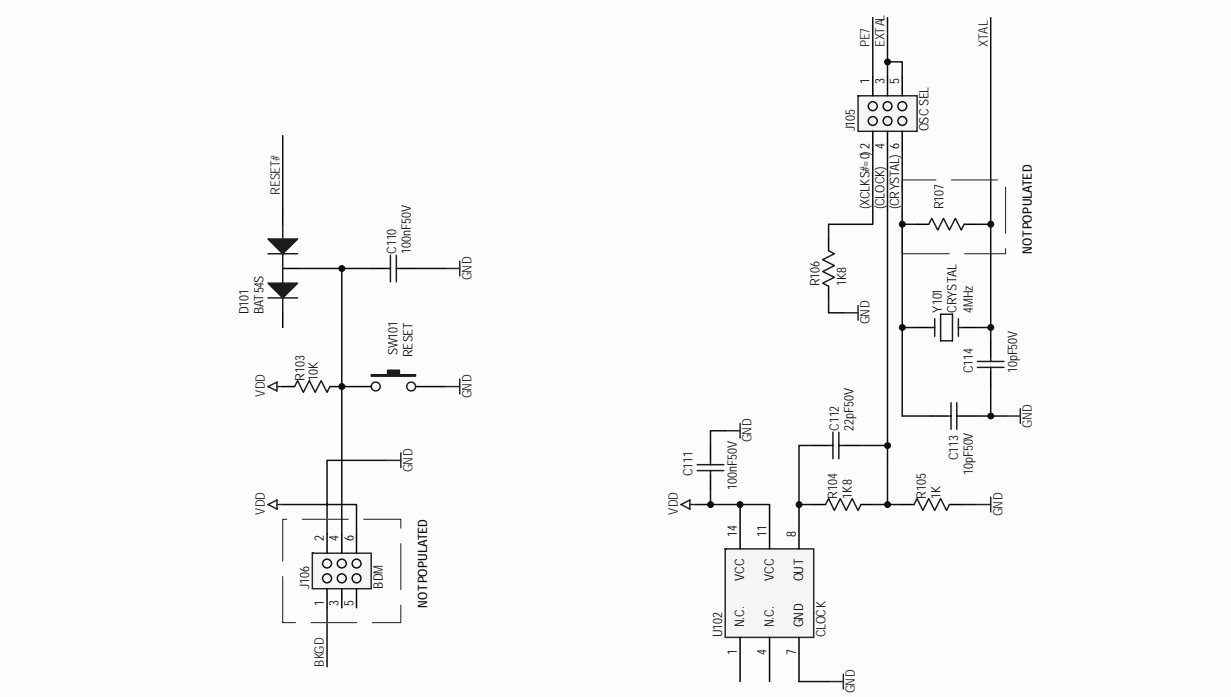
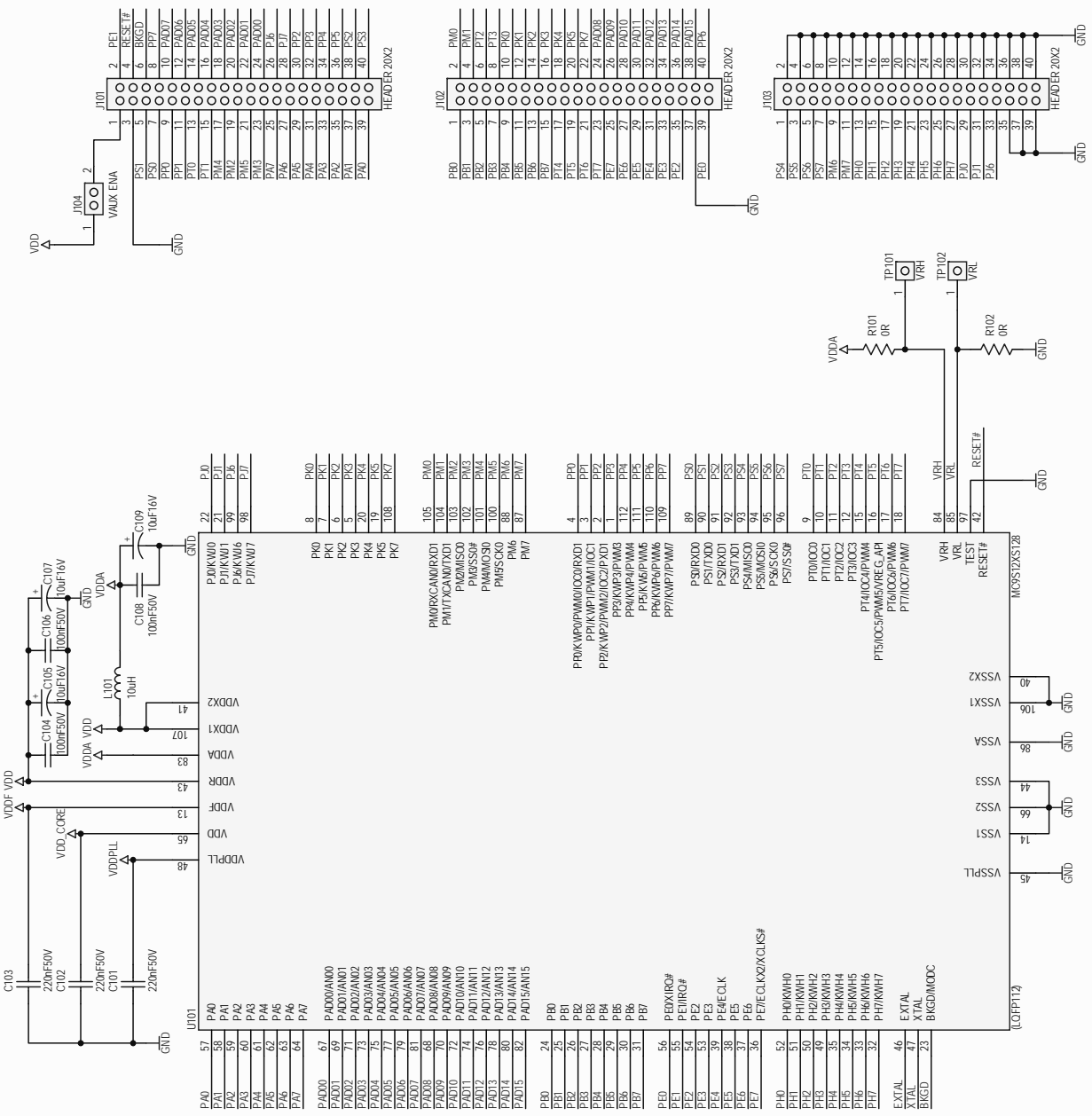
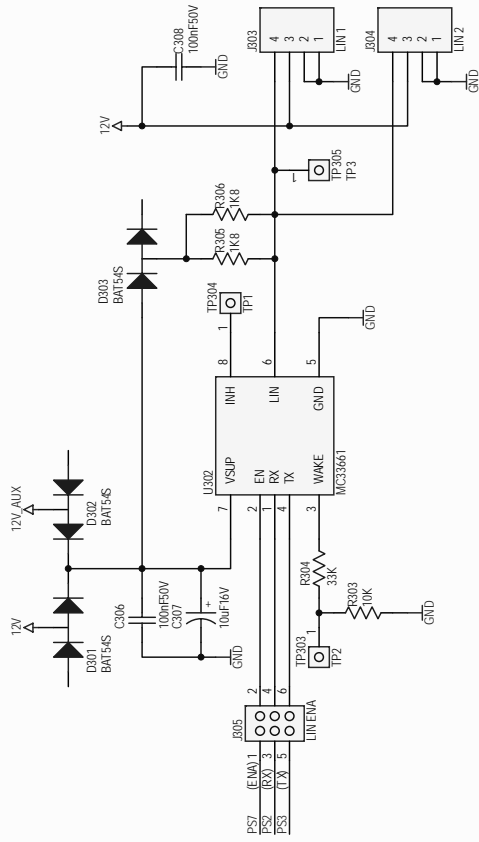
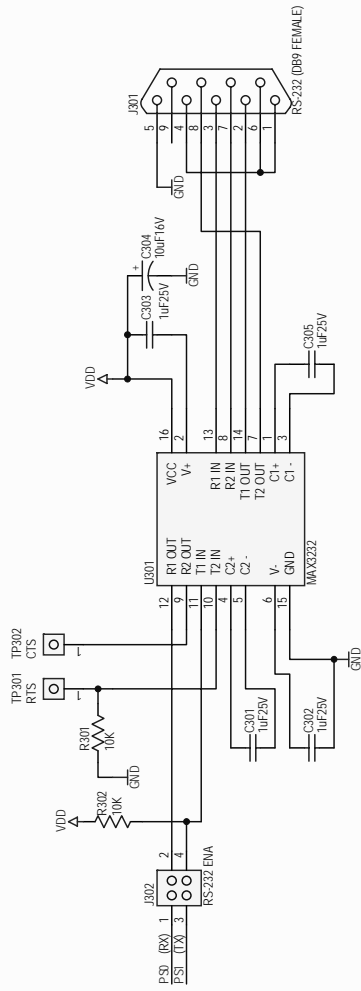


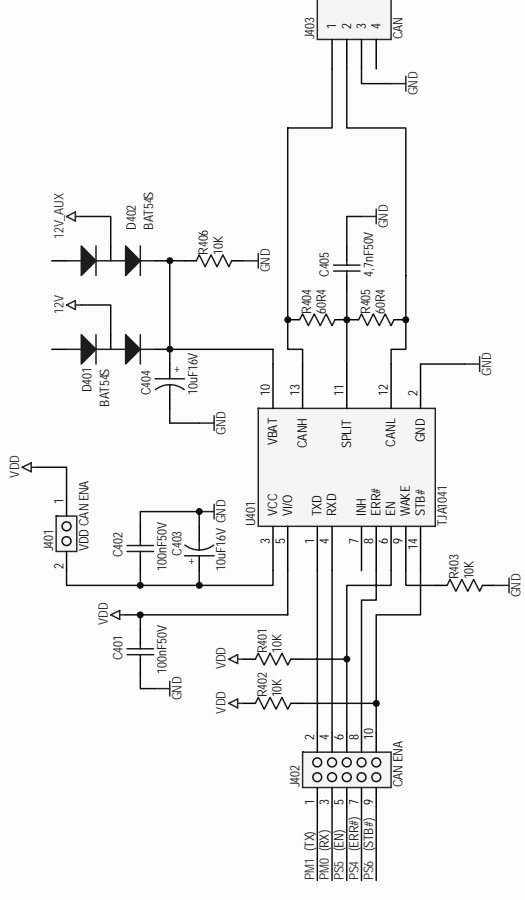
# **DEMO9S12XSFRAME**

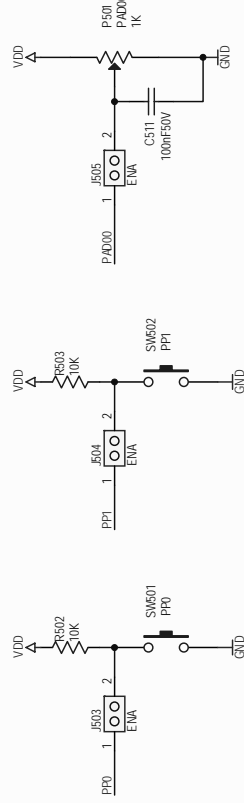
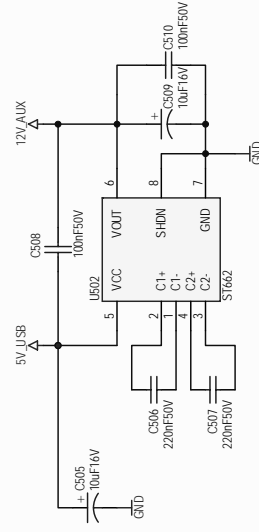
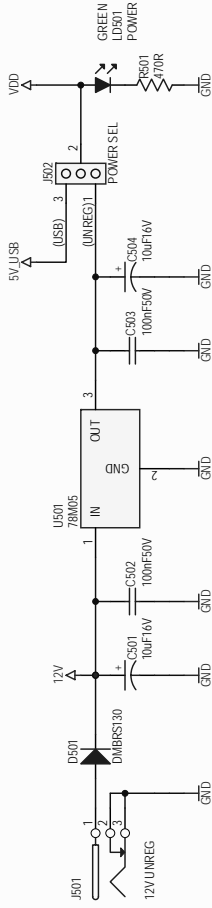
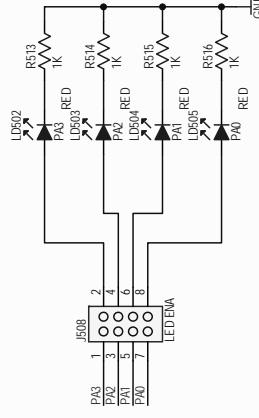
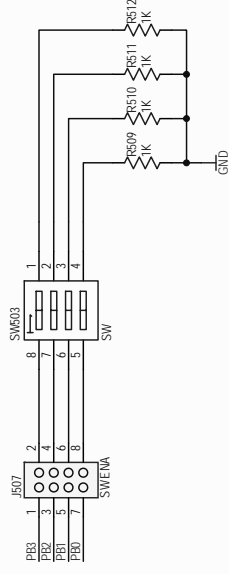
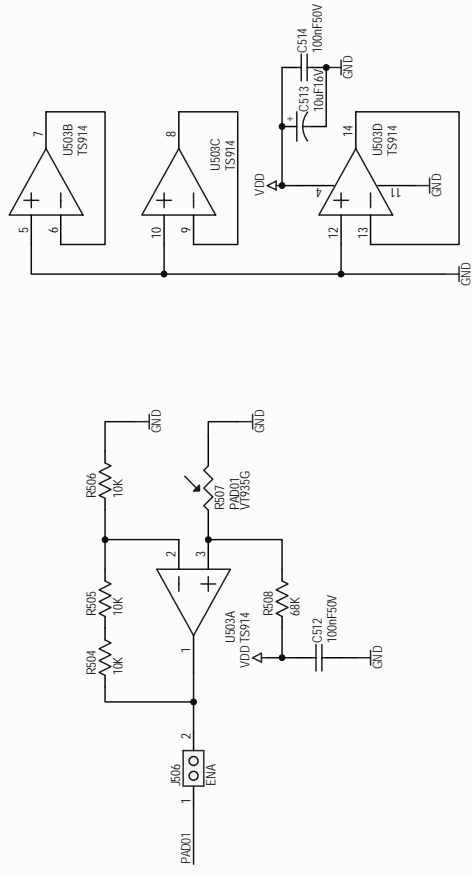
## **Schematic and Bill of Material**











# DEMO9S12XSFRAME Bill of Material

Qty	Description	Ref. Designators	Vendor Part#
<b>Capacitors</b>			
22	Ceramic Capacitor 100nF X7R 50V 0805	C104, C106, C108, C110, C111, C201, C202, C204, C206, C208, C211, C306, C308, C401, C402, C502, C503, C508, C510, C511, C512, C514	Walsin, 0805B104K500CT
2	Ceramic Capacitor 10pF X7R 50V 0805	C113, C114	Walsin, 0805N100K500CT
4	Ceramic Capacitor 1uF X7R 25V 0805	C301, C302, C303, C305	Walsin, 0805B105K250CT
5	Ceramic Capacitor 220nF X7R 25V 0805	C101, C102, C103, C506, C507	Walsin, 0805B224K250CT
3	Ceramic Capacitor 22pF NP0 50V 0805	C112, C209, C210	Walsin, 0805N220K500CT
1	Ceramic Capacitor 4,7nF X7R 50V 0805	C405	Walsin, 0805B472K500CT
15	Tantalum Capacitor 10uF 16V size B	C105, C107, C109, C203, C205, C207, C304, C307, C403, C404, C501, C504, C505, C509, C513	NIC Components, NTC-T106M16TRBF
<b>Connectors</b>			
1	DC Power Connector 2.1 mm male 90° PCB mounting	J501	Samar, 22HP037
1	D-Sub Connector female 90° 9-pin	J301	Coxoc, 205A-09FSTUBE3
6	Header Connector 2x1 pin male gold straight 6mm pitch 2,54mm	J104, J401, J503, J504, J505, J506	Coxoc, 307A-040GASAA3
2	Header Connector 2x2 pin male gold straight 6mm pitch 2,54mm	J202, J302	Coxoc, 307A-080GBSAA3
1	Header Connector 3x1 pin male gold straight 6mm pitch 2,54mm	J502	Coxoc, 307A-040GASAA3
2	Header Connector 3x2 pin male gold straight 6mm pitch 2,54mm	J105, J305	Coxoc, 307A-080GBSAA3
2	Header Connector 4x2 pin male gold straight 6mm pitch 2,54mm	J507, J508	Coxoc, 307A-080GBSAA3
1	Header Connector 5x2 pin male gold straight 6mm pitch 2,54mm	J402	Coxoc, 307A-080GBSAA3
2	Mini-Fit Connector Molex 5569 series 4 way 90° dual row pitch 4,20mm	J303, J304	Molex, 39-29-5043
1	Mini-Fit Connector Molex 5569 series 4 way 90° single row pitch 4,20mm	J403	Molex, 39-30-3047
29	Shunt jumper 2,54mmmm totally insulated black pitch 2,54mm		Coxoc, 308A02PGBA003
3	Socket Connector 40-pin SMD h=7mm pitch 2,54mm	J101, J102, J103	Samtec, SSM-120-L-DV-BE-K
1	USB Connector Receptacle Type B 90° 4-pin	j201	Coxoc, 317A-04PSB0003
<b>Crystals</b>			
1	SMD Crystal 12MHz HC-49USMD (11x5x3)	Y201	Megatec, HC49/USM4-012M000000CR
1	SMD Crystal 4MHz HC-49USMD (11x5x3)	Y101	Megatec, HC49/USM4-004M000000CR
<b>Diodes</b>			
7	Schottky Diode BAT54S SOT23	D101, D202, D301, D302, D303, D401, D402	Philips Semiconductors, BAT54S
1	Schottky Diode MBRS130L SMB	D501	On Semiconductor, MBRS130LT3G
1	Zener Diode BZX84 6.8V 1/4W SOT23	D201	Philips Semiconductors, BZX84-A6V8
<b>Inductors</b>			
1	SMD Inductor 10uH 150mA 1210	L101	TDK, NL322522T-100J
<b>Integrated Circuits</b>			
1	IC DC-DC Converter ST662 SOIC8	U502	STMicroelectronics, ST662ACD
1	IC Microcontroller MC9S12UF32 QFP100	U201	Freescale, MC9S12UF32PU
1	IC Microcontroller MC9S12XS128 LQFP112	U101	Freescale, MC9S12XS128CAL
1	IC OpAmp TS914ID SOIC14	U503	STMicroelectronics, TS914ID

Qty	Description	Ref. Designators	Vendor Part#
1	IC Transceiver CAN TJA1041 SOIC14	U401	Philips Semiconductors, TJA1041T
1	IC Transceiver LIN MC33661 SOIC8	U302	Freescale, MC33661D/R2
1	IC Transceiver RS-232 MAX3232 SOIC16	U301	STMicroelectronics, ST3232CD
1	IC Voltage Regulator LM78M05 5V TO252 (DPAK)	U501	National Semiconductor, LM78M05CDT
<b>LEDs</b>			
1	SMD LED Green 1206	LD501	Agilent Technologies, HSMG-C150
4	SMD LED Red 1206	LD502, LD503, LD504, LD505	Agilent Technologies, HSMH-C150
<b>Potentiometers</b>			
1	Potentiometer 1K vertical adjust	P501	Phier, PT10MVP102A2020
<b>Resistors</b>			
1	Photoresistor VT935G pitch 2,54mm	R507	PerkinElmer Optoelectronics, VT935G
2	SMD Resistor 0R 5% 1/8W 0805	R101, R102	Kamaya, RMC1/10JPTP
1	SMD Resistor 1,5K 1% 0805	R203	Kamaya, RMC1/10K1501FTP
4	SMD Resistor 1,8K 1% 0805	R104, R106, R305, R306	Kamaya, RMC1/10K1801FTP
1	SMD Resistor 100K 1% 0805	R208	Kamaya, RMC1/10K1003FTP
2	SMD Resistor 100R 1% 0805	R210, R211	Kamaya, RMC1/10K1000FTP
16	SMD Resistor 10K 1% 0805	R103, R206, R207, R209, R301, R302, R303, R401, R402, R403, R406, R502, R503, R504, R505, R506	Kamaya, RMC1/10K1002FTP
9	SMD Resistor 1K 1% 1/8W 0805	R105, R509, R510, R511, R512, R513, R514, R515, R516	Kamaya, RMC1/10K102FTP
1	SMD Resistor 1M 1% 0805	R205	Kamaya, RMC1/10K1004FTP
1	SMD Resistor 33K 1% 0805	R304	Kamaya, RMC1/10K3302FTP
2	SMD Resistor 33R 1% 0805	R201, R202	Kamaya, RMC1/10K33R0FTP
1	SMD Resistor 470R 1% 0805	R501	Kamaya, RMC1/10K4700FTP
1	SMD Resistor 510R 1% 0805	R204	Kamaya, RMC1/10K5100FTP
2	SMD Resistor 60,4R 1% 0805	R404, R405	Kamaya, RMC1/10K60R4FTP
1	SMD Resistor 68K 1% 0805	R508	Kamaya, RMC1/10K6802FTP
<b>Sockets</b>			
1	IC Socket Tulip pitch 2,54mm DIP14	U102	Preci-dip, 110-87-314-41-001101
<b>Switches</b>			
1	DIP Switch PTH low profile 4 positions DIP8	SW503	Tyco, 1-1437586-0
3	Pushbutton Switch SMD	SW101, SW501, SW502	Augat, FSM4JSMA