



Bill of Materials for the NCV7748GEVB Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1, C2, C10, C11	4	Oscillator Load Capacitors	20pF	5%	0805	KEMET	C0805C200J5GACTU	Yes	Yes
C3, C4, C5, C7, C8 C9, C12, C13, C14, C15	10	Bypass Capacitors	0.1uF	10%	0805	KEMET	C0805C104K5RACTU	Yes	Yes
C6	1	5V Regulator Output Capacitor	22uF	20%	1206	KEMET	C1206C226M4PAC7800	Yes	Yes
C16	1	LIN Bus Capacitor	100pF	5%	0805	KEMET	C0805C101J5GACTU	Yes	Yes
C17-C24	8	Output Capacitors	0.01uF	10%	0805	KEMET	C0805C103K5RACTU	Yes	Yes
DN1	1	LIN Bus Protector	---	---	SOT23	ON SEMICONDUCTOR	NUP1105LT1G	Yes	Yes
D1-D8	8	Relay LEDs	Red	---	PLCC2_LED	VISHAY SEMI OPTO	VLMS30K1L2-GS08	Yes	Yes
D9	1	Reverse Battery Diode	MRA4003	---	SMA_DIODE	ON SEMICONDUCTOR	MRA4003T3G	Yes	Yes
J1	1	RJ11 Right Angle Socket	LIN Aux	---	FCI 87180_044LF	MOLEX	432024101	Yes	Yes
J2-J9, J11, J24, J25	11	Jumper Posts 100 mil spacing	JUMPER	---	JMP	3M	961102-6404-AR	Yes	Yes
J2-J9, J11, J24, J25	11	Jumpers	---	---	N/A	SULLINS CONNECTOR SOLUTIONS	QPC02SXGN-RC	Yes	Yes
J10	1	16 Pin Header for LCD Module	---	---	SIP-16P	SULLINS CONNECTOR SOLUTIONS	PRPC016SAAN-RC	Yes	Yes
J12	1	2 Position Screw Terminal Block	VBB	---	MKDSN2	PHOENIX CONTACT	1729128	Yes	Yes
J13	1	DC Jack	VBB	---	PWRJACK	CUI, INC	PJ-102A	Yes	Yes
LS1, LS2, LS3, LS4	4	Dual Automotive Relay	25A	---	EX2_RELAY	KEMET NEC-TOKIN	EX2-2U1S	No	Yes
R9-R16	8	LED Resistors	10K	1%	0805	VISHAY DALE	CRCW080510K0FKEA	Yes	Yes
R1, R2, R7, R20	5	Pull-Up Resistors	10K	1%	0805	VISHAY DALE	CRCW080510K0FKEA	Yes	Yes
R3, R6	2	Oscillator Bias Resistors	1M	1%	0805	VISHAY DALE	CRCW08051M00FKEA	Yes	Yes
R4, R5	2	NAD and CONF Program Resistors	475	1%	0805	VISHAY DALE	CRCW0805475RFKEA	Yes	Yes
R17	1	LIN Pull-Up Resistor	1K	1%	0805	VISHAY DALE	CRCW08051K00FKEA	Yes	Yes
R18	1	LCD Backlight Resistor	220	1%	0805	VISHAY DALE	CRCW0805220RFKEA	Yes	Yes
R19	1	Thumbwheel Potentiometer	10K	20%	3352E_POT	BOURNS INC	3352E-1-103LF	Yes	Yes
SOCKET1, 2	2	28 Pin DIP Sockets for Arduinos	---	---	DIP28	ON SHORE TECHNOLOGY INC	ED281DT	Yes	Yes
SW1-SW4	4	Output Command DIP Switches	---	---	DIP14	GRAYHILL	76STC04T	No	Yes
SW5	1	Demo Mode Switch	---	---	MINITOGGLE	MULTICOMP	2MS1T2B2M2RE	Yes	Yes
SW6	1	Output Control Pushbutton	---	---	SW_6x6_TACTILE	TE CCONNECTIVITY ALCOSWITCH	1-1825910-0	Yes	Yes
SW7	1	Get Status Pushbutton	---	---	SW_6x6_TACTILE	TE CCONNECTIVITY ALCOSWITCH	1-1825910-0	Yes	Yes
SW8-SW15	8	OCN Pushbuttns	---	---	SW_6x6_TACTILE	TE CCONNECTIVITY ALCOSWITCH	1-1825910-0	Yes	Yes
TP13-TP20	8	Off-Board Load Turrets	---	---	TURRET	MIL-MAX	2501-2-00-44-00-00-07-0	Yes	Yes
TP21	1	LIN Bus Test Point	---	---	TP	KEYSTONE ELECTRONICS	5010	Yes	Yes
TP22, TP23	2	GND Test Points	---	---	TP	KEYSTONE ELECTRONICS	5010	Yes	Yes
U1	1	NCV7748 LIN Relay Driver	---	---	SOIC14_N	ON SEMICONDUCTOR	NCV7748D2R2G	No	Yes
U2	1	NCV4274A 5V Regulator	---	---	DPAK3_SMD	ON SEMICONDUCTOR	NCV4274ADT50RKG	Yes	Yes
U3	1	7407 Open-Collector Hex Buffer	---	---	SOIC14_N	TEXAS INSTRUMENTS	SN7407DR	Yes	Yes
U4	1	NCV7321 LIN Transceiver	---	---	SOIC8_N	ON SEMICONDUCTOR	NCV7321D11R2G	No	Yes
Y1, Y2	2	16MHz Microprocessor Crystals	20pF	30ppm	XTAL	CTS-FREQUENCY CONTROLS	ATS16A	Yes	Yes
LIN Generator	1	Arduino-Based Microprocessor	---	---	N/A	ATMEL	ATMEGA328P-PU	No	Yes
LIN Decoder	1	Arduino-Based Microprocessor	---	---	N/A	ATMEL	ATMEGA328P-PU	No	Yes
LCD	1	20x4 LCD Module	---	---	N/A	COFUFU	LCM TM204A	Yes	Yes