



Bill of Materials for the NCV7685GEVB Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1	12	Ceramic Capacitor SMD	100nF, 50V, X7R	10%	CAP0603	KEMET	C0603C104K5RAC	Yes	Yes
Cx1, Cx2	2	Ceramic Capacitor SMD	12pF, 50V, X7R	10%	CAP0603	KEMET	C0603C120J5GAC	Yes	Yes
Cd5, Cd7	2	Ceramic Capacitor SMD	2.2uF, 10V, X7R	10%	CAP0603	MURATA	GRM188R71A225KE15D	Yes	Yes
C7	6	Ceramic Capacitor SMD	10uF, 50V, X7R	10%	CAP1206	MURATA	GRM31CR61H106KA12L	Yes	Yes
C7	1	Ceramic Capacitor SMD	6.8nF, 50V, X7R	10%	CAP0603	PHYCOMP	CC0603KRX7R9BB682	Yes	Yes
C8	1	Ceramic Capacitor SMD	470pF, 50V, X7R	10%	CAP0603	PHYCOMP	CC0603KRX7R9BB471	Yes	Yes
C40, C43	2	Ceramic Capacitor SMD	4.7uF, 6.3V, X5R	10%	CAP0603	PHYCOMP	CC0603KRX5R5BB475	Yes	Yes
C3, Coen	2	Ceramic Capacitor SMD	1nF, 50V, X7R	10%	CAP0603	EPCOS	B37931K5102K60	Yes	Yes
C14	1	Electrolytic Capacitor	220uF, 16V	10%	D8	PANASONIC	EEEFPC221XAP	Yes	Yes
C6	1	Electrolytic Capacitor	47uF, 50V	10%	UD_6x6	NICHICON	UUD1H470MCL1G5	Yes	Yes
D01A, D01B, D01C, D01D, D01E, D01F, D01G, D01H, D01I, D01J, D01K, D01L, D01M, D01N, D01O, D01P, D01Q, D01R, D01S, D01T, D01U, D01V, D01W, D01X, D01Y, D01Z	36	LED DIODE RED 200mA, 19lm	200mA, 1.8V	-	PLCC-6	OSRAM	LR G6SP-CADB-1-1	Yes	Yes
D60	1	LED DIODE RED 20mA	20mA	-	D0603	KINGBRIGHT	HSMS-C191	Yes	Yes
D61	6	LED DIODE GREEN	20mA	-	D0603	AVAGO TECHNOLOGIES	HSMG-C191	Yes	Yes
J1, J2, J3, J4, J5, J6, J7, J8, J9, J10, J11, J12, J13, J14, J15, J16, J17, J18, J19, J20, J21, J22, J23, J24, J25, J26, J27, J28, J29, J30, J31, J32, J33, J34, J35, J36, J37, J38, J39, J40, J41, J42, J43, J44, J45, J46, J47, J48, J49, J50, J51, J52, J53, J54, J55, J56, J57, J58, J59, J60, J61, J62, J63, J64, J65, J66, J67, J68, J69, J70, J71, J72, J73, J74, J75, J76, J77, J78, J79, J80, J81, J82, J83, J84, J85, J86, J87, J88, J89, J90, J91, J92, J93, J94, J95, J96, J97, J98, J99, J100	17	SIL HEADER 2 pins Tin plated	AWM 1000V 1000 II	-	SIL 2.54mm	TE CONNECTIVITY	5-826629-0	Yes	Yes
J100a/Sh	1	SIL HEADER 2 pins Tin plated	AWM 1000V 1000 II	-	SIL 2.54mm	TE CONNECTIVITY	5-826632-0	Yes	Yes
SWConf	1	Slider on/off	SPDT	-	X3APH-SLIDER	EOZ	09-03290.01	Yes	Yes
U1	1	LED Driver	NCV7685	-	SSOP24	ON Semiconductor	NCV7685DQR2G	No	Yes
U2	1	Buck Controller	NCV8853	-	SOIC8	ON Semiconductor	NCV885301D1R2G	No	Yes
U3	1	Low-Drop Voltage Regulator	5V, 400mA	2%	DPAK5	ON Semiconductor	NCV4276CDT50RKG	No	Yes
U4	1	Microcontroller	AT32UC3C256	-	QFN64_9x9	ATMEL	AT32UC3C25612C-Z2URCT-ND	Yes	Yes
EN, GN, GND, PwG	4	TestPIN True Hole	Black	-	H1.0	VERO	20-2137	Yes	Yes
CMP, DGEN, PwG	4	TestPIN True Hole	White	-	H1.0	VERO	20-313139	Yes	Yes
VBAT, VCC, VDD	3	TestPIN True Hole	Red	-	H1.0	VERO	20-313137	Yes	Yes
SCOPEGND1, SCOPEGND2	2	Wire Bridge	SCOPEGND	-	SCOPEGND	HARWIN	D3082F05	Yes	Yes
	1	SMD Resistor	620R, 1206, 250mW	1%	R1206	WELWYN	WCR1206-620RFI	Yes	Yes
	1	SMD Resistor	8.06k, 0603, 63mW	1%	R0603	MULTICOMP	MC0063W060318K06	Yes	Yes
I2Ca	1	SIL Header Right Angle	1x5 pins, 100 mils	-	X5APH	MULTICOMP	2211R-05G	Yes	Yes
I2Cb	1	SIL Header Straight	1x5 pins, 100 mils	-	X5APH	MULTICOMP	2211S-05G	Yes	Yes
Jusb	1	Micro USB B	micro USB type B Right Angle	-	Micro_USB_SM D	MOLEX	47346-0001	Yes	Yes
J_JTAG	1	Header Connector	2x5 pins, 1.27mm	-	SHF-105	AMPHENOL	20021111-00010T4LF	Yes	Yes
D40	1	BUS protector	Protection Diode Array	-	LLP75-7L_3D	VISHAY	VBUS053AZ-HAF	Yes	Yes
D12, D13	2	Shottky Diode	40V, 3A	-	SMA-2	ON Semiconductor	NRVBA340T3G	No	Yes
SP1, SP2, SP3, SP4	4	Spacer	3.0M, 5mm 6.6 Nylon	-	SPACER_3.0_5 mm	DURATOOL	D01487	Yes	Yes
L1	1	Inductor	15uH, 51mR, 2.2A	20%	SLF7055	TDK	SLF7055T-150M2R1-3PF	Yes	Yes

L40	1	Ferrite Bead	0.25R, 500mA	25%	L0805	TAIYO YUDEN	BK2125HM601-T	Yes	Yes
Q1	1	Transistor Power Mosfet	P-MOS, -60V, -2.6V	-	WDFN8	ON Semiconductor	NVTFSS116PLTAG	Yes	Yes
J_RST	1	Reset SWITCH	5x3mm SMD	-	SPST	C&K	KMR221G LFS	Yes	Yes
SW1	1	SMD Switch	Half-Pitch 4 ways	-	SWDIP-4-SMD	MULTICOMP	MCNHDS-04-T	Yes	Yes
J_MUSB	1	Mini USB A/B	SMD, RA, 5 contacts	-	MUSB-05-F	TE CONNECTIVITY	1734328-1	Yes	Yes
H_JTAG	1	Header Connector	2x5 pins, 1.27mm	-	SHF-105	SAMTEC	SHF-105-01-L-D-TH	Yes	Yes
R1	1	SMD Resistor	2k, 0603, 63mW	1%	R0603	PANASONIC	ER3AEB202V	Yes	Yes
R4, R40, R61, R64, R65, Rrs	6	SMD Resistor	10k, 50V, 63mW	5%	R0603	PHYCOMP	232270260103	Yes	Yes
R2, R8, R9, R60	3	SMD Resistor	8.06k, 75V, 100mW	1%	R0603	MULTICOMP	MCWR06X8061FTL	Yes	Yes
R3, R5, R6, R7, R33	5	SMD Resistor	22k, 50V, 63mW	5%	R0603	YAGEO	RC0603JR-0722KL	Yes	Yes
R21, R22	2	SMD Resistor	39R, 50V, 100mW	1%	R0603	YAGEO	RC0603FR-0739RL	Yes	Yes
Rrv	1	SMD Resistor	160k, 0603, 63mW	1%	R0603	MULTICOMP	MC0063W06031160K	Yes	Yes
R16	1	SMD Resistor	8.2k, 75V, 63mW	1%	R0603	VISHAY	CRCW06038K20FKEAHP	Yes	Yes
R63	1	SMD Resistor	3k0, 75V, 63mW	1%	R0603	PANASONIC	ERJ3EKF3001V	Yes	Yes
R30	1	SMD Resistor	330R, 50V, 0.1W	1%	R0603	YAGEO	RC0603JR-07330	Yes	Yes
R40	1	SMD Resistor	470R, 50V, 0.1W	1%	R0603	YAGEO	RC0603JR-07470	Yes	Yes
RB	1	SMD Resistor	3k9, 0603, 63mW	1%	R0603	VISHAY	CRCW06033K90FKEA	Yes	Yes
RA	1	SMD Resistor	30k, 0603, 63mW	1%	R0603	VISHAY	CRCW060330K0FKEA	Yes	Yes
R1	1	SMD Resistor	2k, 0603, 63mW	1%	R0603	PANASONIC	ER3AEB202V	Yes	Yes
R62, RL7, RL8	3	SMD Resistor	1.3k, 0603, 63mW	1.0%	R0603	PANASONIC	ERJ3GEYJ132V	Yes	Yes
R16	1	SMD Resistor	8k2, 0603, 63mW	1%	R0603	VISHAY	CRCW06038K20FKEAHP	Yes	Yes
R12	1	SMD Resistor	36mR, 0603, 63mW	1%	R0603	PANASONIC	ERJ3BWF036V	Yes	Yes
X	1	CRYSTAL	20MHz SMD	-	3.2x2.5mm	QUANTEK	QC3220.0000F12B12M	Yes	Yes
Supply	1	DC Power Connector	2.1mm, 2A, 12V	-	DC10AS	CLIFF ELECTRONIC	DC-10AS+DCPP1	Yes	Yes

Accessories:

Standoff	4	Spacer	3.0M, 10mm 6.6 Nylon	-	10mm	DURATOOL	D01489	Yes	Yes
Standoff	4	Spacer	3.0M, 5mm 6.6 Nylon	-	5mm	DURATOOL	D01487	Yes	Yes
Screw board	4	Machine Crew	M3, 10mm, Nylon 6.6 (Polyamide 6.6)	-	10mm	DURATOOL	119030010	Yes	Yes
Screw Plexi	4	Machine Crew	M3, 12mm, Nylon 6.6 (Polyamide 6.6)	-	12mm	DURATOOL	119030012	Yes	Yes
Nut	4	Hex Nut for Plexi shield	M3, Nylon 6.6	-	-	DURATOOL	1110030	Yes	Yes
Plexi Shield	1	https://www.koplast.org/	Custom Made	-	-	-	-	Yes	Yes
Jumper	18	Jumper (Busbar), Jumper Socket	M20 Connectors, 2 Ways, 2.54 mm	-	2.54mm	HARWIN	M7686-05	Yes	Yes